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The Phonology and Morphology of Bachamal (Wogait)

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Thesis submitted as partial requirement for
the degree of Master of Arts of the
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Unless otherwise acknowledged in the text, this thesis represents the original work of the author.

LYSBETH JULIE FORD
PREFACE

My interest in Bachamal stems from a request from Wajiginy women that their language be recorded before the last speakers died. What follows sketches the phonology and morphology of Bachamal. The syntax, sentence intonation and genetic relationship of Bachamal to other Australian languages are not covered in this sub-thesis, but are to be investigated in a further study which will compare Bachamal and Emmi to establish the relationship of each language to each other, and to other neighbouring languages.
ACKNOWLEDGEMENTS

I would like to thank, firstly, the following speakers of Bachamal, Johnny Biyanamu, Bobby Lane, Agnes Lippo, Kitty Moffat and Jackie Woodie, for teaching me their language. I am especially indebted to Agnes Lippo, who proved a tireless informant and gifted story-teller, to Kitty Moffat, and to Josephine Rankin, who introduced me to Bachamal, but died before I could show her this record of her language. Thanks are also due to Betty Bilawuk, Alice Wunbirri and Ruby Yarrowin, for teaching me the Bachamal and Emmi names of plants and animals.

I need to thank Lorna Tennant, Belyuen Town Clerk, Harry Singh, former President of Belyuen Town Council, and Marjorie Bilbil, Adult Educator, Belyuen, for their continuing support, and for providing me with accommodation at Belyuen.

I am grateful to Nicholas Evans, Adrienne McConvell and Darrell Tryon, for making their data available to me, to Paul Black, Neil Chadwick and Kevin Ford, for their comments on the phonology chapter, to Ian Green, for detailed comments on a later draft, and to Bob Dixon and Avery Andrews, for careful supervisory help.
# CONTENTS

Preface ........................................ iii
Acknowledgements ............................... iv
List of map and tables ........................ ix
Abbreviations ................................ x

I THE LANGUAGE AND ITS SPEAKERS

1.1 Name of language .......................... 1
1.2 Traditional territory ....................... 3
1.3 The Wajiginy and Darwin ................. 5
1.4 Speakers .................................. 7
1.5 Previous work on the language ........... 9

2 BACHAMAL PHONOLOGY

2.1 Introduction ............................... 17
2.2 Summary of analysis ....................... 18
2.3 Consonant phonemes specified .......... 19
   2.3.1 Articulatory description of consonant
        phonemes ................................ 20
   2.3.2 Consonant allophony ................... 21
2.4 Vowel phonemes specified ............... 35
   2.4.1 Articulatory description of vowel
        phonemes ................................ 36
   2.4.2 Vowel allophony ...................... 36
2.5 Word-accent and sentence intonation .... 40
2.6 Alternative analyses compared .......... 43
2.7 Phonotactics ................................ 47
2.8 Feature specification  
2.9 Redundancy rules  
2.10 Allophonic-specification rules  
2.11 Phonological rules  
2.12 Morphophonemic rules

### 3 BACHAMAL MORPHOLOGY

3.1 Introduction  
3.2 Word classes  
3.3 Nominal morphology  
3.3.1 Noun morphology  
3.3.2 Adjective morphology  
3.3.2.1 Numerals  
3.3.3 Compound nominals  
3.3.4 Reduplicated forms  
3.3.5 Pronoun morphology  
3.3.5.1 Free pronouns  
3.3.5.2 Pronominal enclitics  
3.3.5.3 Deictics  
3.3.5.4 Interrogative pronouns  
3.3.5.5 Indefinite pronoun  
3.4 Verb morphology  
3.4.1 Transitivity  
3.4.2 Conjugations  
3.4.3 Type A verb structure  
3.4.3.1 Pronominal prefixes
3.4.3.1.1 Pronominal prefixes to intransitive verbs 121
3.4.3.1.2 Pronominal prefixes to transitive verbs 125
3.4.3.1.3 Relationship between pronominal prefix forms 131
3.4.3.2 Mood 132
3.4.3.3 Polarity 139
3.4.3.4 Aspect 139
3.4.3.5 Derivational suffix 146
3.4.4 Type B verb-stems 148
3.4.5 Compound verbs 149
3.4.6 Auxiliary verb complexes 156
3.4.7 Incorporated nominals 158
3.4.8 Interrogative verb 163
3.5 Adverb morphology 163
3.5.1 Temporal adverbs 163
3.5.2 Locative adverbs 164
3.5.3 Manner adverbs 164
3.5.4 Interrogative adverbs 165
3.6 Particle morphology 166
3.6.1 Free particles 166
3.6.1.1 Interjections 166
3.6.1.2 Free particles at sentence level 167
3.6.1.3 Free particles at phrase level 168
3.6.2 Clitic particles 169
<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Verbs</td>
<td>177</td>
</tr>
<tr>
<td>2 Irregular Verbs</td>
<td>187</td>
</tr>
<tr>
<td>3 Text</td>
<td>191</td>
</tr>
<tr>
<td>Bibliography</td>
<td>202</td>
</tr>
</tbody>
</table>
Map and Tables

Map 1  Wajiginy traditional territory  2
Table 1  CVC realisations  48
Table 2  CVCC realisations  50
Table 3  Systematic phoneme matrix  52
Table 4  Adjective inflections  89
Table 5  Free pronoun inflections  96
Table 6  D pronominal enclitic inflections  96
Table 7  IMPL pronominal enclitic inflections  103
Table 8  Deictic inflections  104
Table 9  Verb conjugations  111
Table 10 Bound pronominal prefixes to intransitive verbs  121
Table 11 Bound pronominal prefixes to non-future transitive verbs  123
Table 12 Bound pronominal prefixes to future transitive verbs  124
Table 13 Interrogative adverb inflections  165
Table 14 Order of co-occurring clitics  170
Table 15 Bound pronominal prefixes to irregular {wa-} verbs  186
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>agent, transitive subject</td>
</tr>
<tr>
<td>ABS</td>
<td>absolutive case-suffix</td>
</tr>
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<td>ADM</td>
<td>admonitory modal suffix</td>
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<tr>
<td>ag</td>
<td>'again' clitic particle</td>
</tr>
<tr>
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<td>allative case-suffix</td>
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<td>'another' clitic particle</td>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>C</td>
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</tr>
<tr>
<td>CAU</td>
<td>causal case-suffix</td>
</tr>
<tr>
<td>CAUS</td>
<td>causative verb</td>
</tr>
<tr>
<td>CM</td>
<td>conjugation marker</td>
</tr>
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<td>'empty' derivational suffix</td>
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</tr>
<tr>
<td>ever</td>
<td>'ever' clitic particle</td>
</tr>
<tr>
<td>ex</td>
<td>exclusive</td>
</tr>
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<td>'full of' derivational suffix</td>
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<td>group</td>
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<td>non-future tense</td>
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<td>noun incorporation</td>
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<td>'now' clitic particle</td>
</tr>
<tr>
<td>NP</td>
<td>noun phrase</td>
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<td>O</td>
<td>transitive object</td>
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<td>obl</td>
<td>'obligated' clitic particle</td>
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<td>perfective aspectual marker</td>
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<td>pl</td>
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<td>PLAC</td>
<td>place derivational suffix</td>
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<td>prnpx</td>
<td>pronominal prefix</td>
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<td>px</td>
<td>prefix</td>
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<tr>
<td>re</td>
<td>'really' clitic particle</td>
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REF/REC  reflexive/reciprocal derivational suffix
REFL    reflexive pronoun
S       intransitive subject
sam     'same' clitic particle
SEMB    semblative case-suffix
sg      singular
tang    tangible
then    'then' clitic particle
tr      trial
V       vowel
vis     visible
1       first person
2       second person
3       third person
$       syllable boundary
X       variable element, may be null
*Y      Y is ungrammatical
+ or -  morpheme-boundary
#       word boundary
[ ]     phonetic transcription
//      phonemic transcription
{ }     canonical form of morpheme
1. THE LANGUAGE AND ITS SPEAKERS.

1.1 Name of language. Bachamal [baccamal] is an Australian language, with about a dozen fluent speakers, most of whom live at Belyuen on the Cox Peninsula, west of Darwin. The oldest fluent female speakers live in Darwin; one fluent male speaker lives at Daly River Mission. All speakers contacted in the course of fieldwork were born into the Wajiginy [wajiyiŋ] tribe or reared by Wajiginy affines. Fluent Bachamal speakers call their mal 'language' Bachamal and reserve Wajiginy for the name of the tribe whose mal Bachamal is. A minority of semi-speakers use Wajiginy to describe tribe and language. Bachamal and Wajiginy are the spellings preferred by fluent speakers.

The Wajiginy are a saltwater people who describe themselves as [wɔyac] 'beach-dwellers' from the Bachamal word wakac, [wɔyac] 'beach'. The earliest written records refer to them as 'Wangites' (Herbert 1873:50), 'Waggites' (Wildey 1876:115), 'Wogites' (McKillop 1893:254), 'Waggait' (Parkhouse 1895:34), 'Wogait' (Basedow 1907:2), or 'Worgait' (Spencer 1912:14). Most subsequent records refer to the Wajiginy and their mal as 'Wogait'; the first Bachamal word-list is titled 'Wogait' (Basedow 1907:60). All the early anglicisations of wakac miss the final laminal stop and intervocalic fricative of the original.
Map 1: Wajiginy traditional territory
In Bachamal, word-final stops are always voiceless and, intervocally, peripheral stops become voiced fricatives.

1.2 Traditional territory. According to Bachamal speakers, Wajiginy territory was originally located on the shores of Anson Bay. Agnes Lippo and Kitty Moffat confirm that [bannakkula] and [bâŋayaya], south of the mouth of the Daly River, and [dr̩r̩k̩r̩rr̩k̩], [ɲikmiŋguŋ], [balŋal], [kajalurk], [banaŋguriŋi], and [bujuk], opposite the Peron Islands, are Wajiginy camp-sites. Map 1 shows the extent of Wajiginy traditional territory.

In the earliest written reference to the Wajiginy, dated 1874, surveyors exploring the hinterland of Darwin for the Overland Telegraph route note that 'the Waggites are located to the westward, about Anson's Bay' (Wildey 1876: 115). The 'Wangites' Reserve, proclaimed in 1892, granted the Wajiginy title to 388 sq. miles between the Finnis and Daly Rivers (South Australian Government Gazette, 1892, cited in NLC 1979:140). Father McKillop of the Uniya Mission knew the 'Wogites' as 'a powerful tribe' with land on the left bank of the Daly (McKillop 1893:254); Parkhouse (1895:634) described them as 'westerly neighbours' of the Larakiya, beyond Shoal Bay. In 1894, Knut Dahl explored the Daly with a 'Wogait' guide. Dahl recalls the 'Wogait' as 'a tribe entirely different from the Valli Valli (Daly)
people' and 'Wogait' territory as 'a very extensive coast area, reaching from the mouth of the Daly almost to Port Darwin' (Dahl 1927:15,128). Basedow (1907:2) locates the 'Wogait' to the west of the 'Larrekiya', from the Finniss River to Cape Ford. Stanner (1933:387) refers to them as 'a tribe which once lived in the Anson Bay district'. Tindale (1974:238) fixes the co-ordinates of 'Wogait' land as 130°15'E x 13°10'S.

Interruption with neighbouring tribes, the Emmiyanjal to the south, Kiyuk to the west, Warray inland to the east (Dahl 1927:129) and Larakiya to the north (Basedow 1907:4) brought the Wajiginy intimate knowledge of territory beyond their own. Basedow (1907:3) records them as speaking 'Larrekiya' and 'Berringin'. That 'Berringin' here refers to Emmi is clear from the accompanying 'Berringin' word-list, in which 23 out of 26 items are Emmi forms (Basedow 1907:60). In 1906, when Government Resident Herbert toured the coast between the Daly Smelter and Cape Ford to find a landing-site with fresh water, he took as guides 'Charlie and Cocky, two Wargite blacks from east of the Daly, who said they knew a marked tree of Mr Dashwood's near a well in the Amie (Emmi) country' (Herbert 1907:10).

To the west, the Wajiginy inherited custodianship of the Peron Islands, [bajalarr] and [børakpere], from the last of the Kiyuk (Ivory and Tapsell 1978:9; Kitty Moffat
and Margaret Rivers pers. com. 1989). From the Larakiya, whose country stretched from Darwin south to [cirrêôr], the mouth of the Finniss, the Wajiginy gained the right to hunt on Quail, Grose and Pelican Islands (Beckett 1916:6; Margaret Rivers in NLC 1979:197).

Larakiya land is the subject of a long-running land claim under the Land Rights Act. In the case, which is currently before the courts, Wajiginy elders are expert witnesses for Larakiya country because they have inherited custodianship of Larakiya sacred sites on the Cox Peninsula (Johnny Biyanamu pers. com. 1989).

1.3 The Wajiginy and Darwin. In 1893, twenty-four years after the founding of Darwin, a lighthouse was built at Point Charles, thirty kilometres from Darwin by sea, on the western tip of Darwin Harbour. The Wajiginy are linked with Point Charles by Basedow (1907:53) and Spencer (1913:45). Wajiginy men were employed to fetch firewood and carry mail for the lighthouse (Australia 1912 in NLC 1979:90). They grew crops on the land next to the lighthouse for the first lighthouse-keeper H.W.Christie, who wrote in a southern newspaper that he had been 'formally adopted a member of the Wogite tribe' (Christie 1906, quoted in NLC 1979:116). In the 1930’s, Wajiginy were employed on
Mitchelmore’s peanut farm near Point Charles (Johnny Biyanamu, Maggie Timber pers. com. 1989).

From 1911, the Wajiginy are recorded as labourers and domestic servants in Darwin (Kelly and Beckett 1911, in NLC 1979:90). They lived at Kahlin Compound on Cullen Beach until 1938, when the compound was demolished and its inmates moved a few kilometres to Bagot Compound. Early in World War II, Bagot was commandeered by the Australian Army and the Wajiginy were moved again, to Delissaville on the Cox Peninsula.

In 1936, A.P. Elkin had proposed a reserve for them ‘on the Peninsula opposite Fanny Bay... where there is plenty of Cypress Pine, native food on land and sea... and buffalo’ (quoted in NLC 1979:121). Elkin’s proposal was rejected in the following terms:

with regard to the proposed site on the Peninsula opposite Fanny Bay (presumably either Talc Head or West Point)... both these points are of strategic importance... the proximity of an Aboriginal settlement might prove distasteful. (Cook 1937, quoted in NLC 1979:121).

Instead, Delissaville, twenty kilometres inland, was chosen, because it was ‘reasonably close to Darwin but also... reasonably difficult of access to Darwin’
In 1942, the Japanese bombed Darwin and the Australian Army occupied Cox Peninsula. Most Wajiginy were trucked 125 kilometres south to an army camp at Adelaide River. Wajiginy men and all 'full-blood' women and children were then sent 200 kilometres further south to a 'control camp' at Katherine, where they spent the rest of the war. 'Half-caste' Wajiginy were sent to Adelaide (NLC 1979:101-102).

In 1946, the Wajiginy returned to Delissaville, but were denied access to hunting-grounds on Quail Island, which the RAAF used as a bombing-site from 1957 until 1979 (advice from RAAF, 17/6/90). In 1971, Radio Australia took over Point Charles and restricted access to the adjoining coast (NLC 1979:146-147). In 1977, Delissaville was gazetted a reserve and renamed Belyuen. Since then, the Wajiginy have enjoyed security of tenure at Belyuen, but are still denied access to traditional hunting-grounds.

1.4 Speakers. The number of Wajiginy fluent in Bachamal is small. I have located thirteen speakers aged from 48-82. Most speakers live at Belyuen, but spend time in Darwin, at Bagot or One Mile Dam; one speaker spends the
wet season in Darwin and the dry at Balgal. The immediate family of each fluent speaker includes relatives aged 47 or younger with passive competence in Bachamal, but no children learn Bachamal as their mother-tongue.

Speakers say this has been so since their wartime years in the 'control camp' where they were a minority among speakers of mutually-unintelligible Australian languages. Camp inmates used Aboriginal English (a non-standard variety of English with Aboriginal language influences) as a *lingua franca* and Wajiginy children born in the camp learnt Aboriginal English as their mother-tongue. When the Wajiginy returned to Delissaville in 1946, adults and children communicated through Aboriginal English. As a result, all speakers of Bachamal are bilingual in Bachamal and Aboriginal English and all Wajiginy born since 1942 speak Aboriginal English as their mother-tongue.

At Belyuen, fluent speakers of Bachamal are outnumbered by speakers of Emmi and Manda, classified by Tryon (1974:174) as closely-related dialects of Marranunggu. Speakers of all three say that Emmi and Manda are mutually unintelligible with Bachamal. Emmi and Manda speakers are bilingual in their mother-tongue and Aboriginal English. Five older speakers of both Emmi and Manda are also fluent in Bachamal. All fluent Bachamal speakers are fluent in Emmi. When addressed in Emmi, they respond in the same code, but may
then switch to Bachamal or to Aboriginal English. When at home, they speak Bachamal or Aboriginal English to immediate family.

Two fluent Bachamal speakers speak some Larakiya; the only surviving mother-tongue Larakiya speaker understands Bachamal but cannot speak it. Bachamal speakers regard Larakiya and Bachamal as mutually unintelligible.

Agnes Lippo's step-father, Daly Young, was one of the last speakers of Kiyuk. Agnes remembers Kiyuk as mutually unintelligible with Bachamal. There is no-one left with even passive competence in Kiyuk.

1.5 Previous work on the language. Very little has been published on Bachamal (Wogait). Relevant sources are summarised and discussed as follows:

(i) Basedow (1907:1-62) gives a 'Wogait' word list, (60); all 27 items are Bachamal words. Basedow cites a total of 40 'Wogait' words, 39 of which are Bachamal lexical items.

(ii) Spencer (1912:12-53) lists 'Worgait' kinship terms. All except one (Larakiya) item are still used by Bachamal speakers.

(iii) Spencer (1913:45) notes that 'Worgait' and 'Larakia'
are mutually unintelligible, commenting:

So far as the words are concerned, there is just as much difference between those in the language of two tribes such as the Larakia at Darwin and the Worgait at Point Charles, only a few miles away across the harbour, as there is between the French and German languages.

Spencer cites no data in support of this claim, but a comparison of Capell’s Larakiya data (Capell 1968:55-106) with my Bachamal data revealed minimal lexical correspondences between the two languages. Larakiya and Bachamal share 1% cognates in R.M.W. Dixon’s unpublished 91 item comparative word-list and 1.5% cognates in the same author’s unpublished 400 item comparative word-list. The cognate items comprised the following six monosyllabic verb stems:

<table>
<thead>
<tr>
<th>Larakiya</th>
<th>Bachamal</th>
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<tbody>
<tr>
<td>*na 'see'</td>
<td></td>
</tr>
<tr>
<td>*ci 'eat'</td>
<td></td>
</tr>
<tr>
<td>*p∅ 'hit'</td>
<td></td>
</tr>
<tr>
<td>mi 'sit'</td>
<td></td>
</tr>
<tr>
<td>*l∅ 'cry'</td>
<td>*r∅ 'cry'</td>
</tr>
<tr>
<td>*mal 'make'</td>
<td>wa 'make'</td>
</tr>
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</table>

Starred items are cognate with Dixon’s putative Proto-Australian verb roots (Dixon 1980:402-407).
(iv) Spencer (1914:157-162; 482; 496) cites terms used in 'Worgait' initiation ceremonies, lists 'Worgait' numerals and marks word-accent. Bachamal speakers confirm the accuracy of his data.

(v) Capell (1940) notes the voiced bilabial fricative and mid-front rounded vowel in 'Worgait'(249); exemplifies masculine/feminine word classes and a possessive suffix in 'Wogadj' (407-8); cites verb forms marked for tense and cross-referenced for subject and object by pronominal prefixes (409) and provides a 19 item word-list (411).

(vi) Capell (1956:43) lists 'Wogadj' noun-class prefixes and discusses plural concord-marking on verbs.

(vii) Capell (1963) terms 'Wogadj' 'almost extinct'.

(viii) Capell (1979:247) claims that 'Wadjiginj' verb morphology has no parallel in other Daly River languages, but close parallels in Northern Kimberley and east Arnhem-land languages.

(ix) Tryon (1968:21-46) lists 200 'Wadyiginy' lexical items in a comparative word-list of Daly family languages. These items are all Bachamal words.

(x) Tryon (1970:218-222) sketches noun-classes and concord
in 'Wadyiginy' and other Daly languages.

(xi) Tryon (1974:187-228) proposes 'Bricken-Wogaity' as one of the three 'groups' of the Daly language family. His 'Wogaity' 'sub-group' of 'Bricken-Wogaity' consists of a single 'language', 'Pungupungu' which he claims has three dialects; 'Pungupungu', 'Wadyiginy' and 'Batyamal'. Tryon assigns identical phonemes to 'Pungupungu' and 'Wadyiginy' (188; 207), but does not specify 'Batyamal' phonemes. He claims:

(a) 'Batyamal shares 90% cognates with Wadyiginy and has an almost identical grammatical structure' (207).

'Badyiginy and Batyamal may be taken as synonymous terms' (228).

(b) 'Pungupungu' shares 79% cognates with 'Wadyiginy' but 'Wadyiginy' 'shows morphological innovations that would certainly impede communication between Pungupungu and Wadyiginy speakers' (207).

Fluent Bachamal speakers refer to Pungupungu as kanjerra mal, 'bush-talk', and regard it as a different but related language. This view is confirmed by a comparison of Tryon's Pungupungu data with my Bachamal data, which yielded the following results:

(a) lexical evidence. Pungupungu and Bachamal share 60% cognates on R.M.W Dixon's unpublished 91 item word-list, and 45% cognates, including 20% verb cognates, on his
(b) morphological evidence. Puŋupuŋu and Bachamal share a common core of inflectional and derivational affixes, but Puŋupuŋu has less nominal and verbal affixes. Puŋupuŋu lacks the portmanteau pronominal prefixes which are obligatory on Bachamal transitive verbs.

(xii) Tryon (1976:673-691), surveying auxiliary verbs in Daly Family languages, claims:
(a) intransitive verbs in 'Wadyiginy' and 'Pungupungu' form identical verb classes (683),
(b) 'Each verb stem is obligatorily accompanied by an auxiliary unit appropriate to the particular verb class' indicating 'actor, tense and general action type' (683-4),
(c) 'Wadyiginy' transitive verbs lack auxiliary units (685) and are structured as follows:
'VPhr(Trans): +Subject/Object+Pred.(VS+tense)' (685),
(d) 'the pronoun subject and object are fused into a... portmanteau morpheme, a feature not found elsewhere within the Daly Family' (685).

Comparison of Tryon's Puŋupuŋu data with the Bachamal data presented in 3.4 of this thesis shows that
(a) 70% of Puŋupuŋu intransitive verbs consist of a 'free form verb stem' (Tryon:1974:193) compounded with an inflected intransitive auxiliary verb. In Bachamal,
compound verbs form a minority of intransitive verbs.
(b) Any Bachamal verb may be followed by an inflected intransitive auxiliary verb specifying the bodily orientation of the co-referential subject.
(c) 50% of Bachamal transitive verbs are compound verbs, formed from a type B verb (Tryon's 'free form verb-stem') + an inflected transitive auxiliary verb.

(xiii) Tryon (n.d.) is a 115 page draft grammar of 'Pungupungu' written in a tagmemic framework. Appended are a 555 item word-list and five texts with English translations.

(xiv) Tryon (1980:277-87) compares 'Wadyiginy' and 'Pungupungu' morphology and concludes that 'the dramatically different manner in which pronominal objects are marked with transitive verbs' militates against classifying them as dialects of the same language (285). He offers the following explanation, while admitting that the dearth of Pungupungu speakers renders it untestable:

Tradition has it that Pungupungu...was once used as a lingua franca within the Daly area. Possibly it too once had the same transitive/intransitive distinction described for Wadyiginy, the distinction being eroded by the exigencies of being a lingua franca in an area in which no other language
...belonging to the Daly Family observes the same type of distinction (285-6).

It appears from the Bachamal data now available that Puŋupuŋu and Bachamal are related but morphologically divergent languages.

(xv) Lippo (1987) is a Bachamal text, transcribed by Evans.

(xvi) Evans (1987a) is a draft phonemic analysis of 'Emi' and 'Watyiginy/Batjamal'.

(xvii) Evans (1987b) is an unpublished paper comparing the morphology of 'Wadjiginy' with 'Pungu-pungu' and 'Kungarrakany'. Evans concludes that 'Wadjiginy' and 'Kungarrakany' are 'Gunwinnguan', retaining archaic forms lost in many 'Gunwinnguan' languages, but that 'Pungu-pungu' has undergone extreme 'Dalyisation'.

(xviii) Evans (1989) is a revised draft of Evans (1987b).

The data supporting Evans' claims for 'Wajikiny/Batjamal' are superseded by that provided in my thesis, which takes into account all previous work on Bachamal. There is no evidence to suggest that Bachamal and Wajiginy are separate dialects. Comparative research outside the scope of my
study is needed to establish accurate sub-grouping for Puŋupuŋu and Bachamal. Only then will we be able to test Evans' claim that Bachamal is Gunwinguan but Puŋupuŋu 'Dalyised'.
2 BACHAMAL PHONOLOGY

2.1 Introduction. My analysis represents the speech of two women recommended by other Wajiginy as the most knowledgeable speakers of Bachamal. They are:

(i) Agnes Lippo, aged 60. Her father was Emmiyalal, her mother Wajiginy. Most of her life has been spent at Belyuen, married to a Wajiginy man, now deceased. Agnes is trilingual in Bachamal, Emmi and Aboriginal English, but regards Bachamal as her mother-tongue. She has passive competence in Larakiya.

(ii) Josephine Rankin, who died in December 1989, aged 66. Her Larakiya mother, Yiccin, died when she was a small baby and Lew Fatt, her Chinese-MalakMalak father abandoned her; she was brought up by Akuk, the last Wajiginy [dawarraŋrk] 'clever-man', who was husband to her mother's mother, Kiril, and uncle to Agnes Lippo. Josephine neither spoke nor understood Larakiya. She was trilingual in Bachamal, Emmi and Aboriginal English, but regarded Bachamal as her mother-tongue. She grew up on the Cox Peninsula coast, but spent her adult life at Bagot Reserve, married to Nipper Rankin, a Kiyuk man, now deceased. Neither Josephine nor her husband could speak or understand Kiyuk; they communicated in Bachamal, Emmi or Aboriginal English.
The pace of the speech analysed is approximately that of normal Bachamal conversation. This is considerably faster than the speed at which citation forms were uttered for the benefit of the learner.

2.2 Summary of analysis. Bachamal has 22 phonemes: five vowel phonemes and seventeen consonant phonemes. Vowel-length is not phonemic. Stops and nasals correspond to five places of articulation. There are two apical and one laminal series of stops, nasals and laterals, plus two peripheral series of stops and nasals. The laminal lateral approximant is interdental. There are four central approximants: apico-alveolar trill; apico-post-alveolar (retroflex) approximant; lamino-palatal approximant and labial-velar approximant.

Bachamal stops are underlyingly voiceless. All stops are voiced after nasals. Apical and labial stops are voiced word-initially, laminal and velar stops are not. Intervocally, apical and laminal stops are voiced; peripheral stops become voiced fricatives. After liquids, laminal stops are voiced; after a non-nasal sonorant, a peripheral stop lenites to a voiced fricative, unless it is followed by another stop, when voicing and lenition are blocked. All stop-clusters are voiceless.
Bachamal syllable-structure is such that sequences of identical stops, nasals and laterals may occur across syllable-boundaries. The canonical syllable-structure is: \((C<_{1}(C)>_{1}) \ V \ (<_{2}(C)>_{2}C)\), where \(<_{1}>_{1}\) precludes \(<_{2}>_{2}\) and vice versa. Syllable types are listed in 2.7. The most frequent syllable types are \(C_{1}V\) and \(C_{1}VC_{2}\). \(C_{1}\) of \(C_{1}V\) may be any consonant except a retroflex lateral. \(C_{1}\) of \(C_{1}VC_{2}\) may be any consonant except a retroflex nasal. \(C_{2}\) of \(C_{1}VC_{2}\) may be any consonant except a labial-velar approximant.

If a consonant-final syllable precedes a consonant-initial syllable, a homorganic or heterorganic consonant cluster results across a syllable-boundary. The corpus of 1061 words contains 920 polysyllabic words, 72 geminate stops, 11 geminate nasals and 7 geminate laterals.

### 2.3 Consonant phonemes specified.

<table>
<thead>
<tr>
<th></th>
<th>APICAL</th>
<th>LAMINAL</th>
<th>PERIPHERAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alveolar</td>
<td>Retro-</td>
<td>Inter-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>flex</td>
<td>dental</td>
</tr>
<tr>
<td>stop</td>
<td>t</td>
<td>ɭ</td>
<td>c</td>
</tr>
<tr>
<td>nasal</td>
<td>n</td>
<td>ɳ</td>
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<tr>
<td>liquid:</td>
<td></td>
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<td>lateral</td>
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<tr>
<td>rhotic</td>
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<tr>
<td>semi-vowel</td>
<td></td>
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</tbody>
</table>
2.3.1 Articulatory description of consonant phonemes.

(a) stops

(1) /t/ voiceless apico-alveolar
(2) /ts/ voiceless apico-postalveolar (retroflex)
(3) /c/ voiceless lamino-palatal
(4) /k/ voiceless dorso-velar
(5) /p/ voiceless bilabial

All stops contrast initially and medially:

{tilk} [drlk] wet
{tu\lks} [d\u015bk] whale; dreaming
{cilks-\u0133a-me} [cilk\u015c\u0133am\u015e] I ache/d
{kullak} [kullak] catfish sp.
{pilk-ye-p\u00f8} [br\u015cky\u015e\u00f8] Slap him!
{mitan} [m\u0153dan] forehead
{\u0162atal} [\u014danal] tongue
{gace} [\u0123aj\u0111] 1sg free pronoun
{gaparrkalamaj} [\u0123aparrkkalamaj\u0151] old woman

Word-final contrast between apical stops is neutralised:

{tit} [drt] inedible green ant
{tec} [d\u015ce] nit
{kak-} [kak-] leave
{pap} [bap] up
2.3.2 Consonant allophony

(1) phoneme /t/

2 allophones: [t] voiceless apico-alveolar stop
   [d] voiced apico-alveolar stop

Environments:

* * * * * * * * * * * * * * * t  t
d * d d * * * * * * * * * * * *
* t * * * * * * * * * * *  

/t/ ----→ [d] /

\[
\begin{align*}
\text{\#} & \quad \text{N} \quad \text{V} \quad \text{V} \quad \text{r} \quad \text{r} \quad \text{r} \quad \text{l} \quad \text{l} \quad \text{l} \quad \text{y} \quad \text{w} \quad \text{Stop} \quad \text{C} \\
\text{[t]} & \quad \text{[d]} & \quad \text{[t]} \\
\end{align*}
\]

\[
\begin{align*}
\text{\#} & \quad \text{[d]} & \quad \text{\#} \\
\text{[t]} & \quad \text{[t]} \\
\end{align*}
\]

e.g.

\begin{itemize}
\item \{tit\} \quad \text{[drt]} \quad \text{inedible green ant}
\item \{mitaŋ\} \quad \text{[m\textipa{d}aŋ]} \quad \text{forehead}
\item \{mattimatti\} \quad \text{[matt\textipa{m}atti]} \quad \text{slowly}
\item \{wutiwuti\} \quad \text{[wud\textipa{i}wudi]} \quad \text{crooked}
\item \{wuttut\} \quad \text{[wuttut]} \quad \text{brown frog}
\item \{w\textipa{g}rrakkata\} \quad \text{[w\textipa{g}rrakkada]} \quad \text{bush}
\item \{parrkkatta+gak\} \quad \text{[barrkkatta+gak]} \quad \text{two-edged}
\item \{gatta\} \quad \text{[gatta]} \quad \text{house}
\item \{puntirrik\} \quad \text{[bund\textipa{r}rrik]} \quad \text{octopus}
\item \{yarr-turra\} \quad \text{[yatturra]} \quad \text{we, excluding you,}
\item \text{lplexA.3sgmO+cook} \quad \text{cook/ed it (by P 1)}
\end{itemize}
(2) phoneme /t/

2 allophones: [t] voiceless retroflex stop  
[\d] voiced retroflex stop

Environments:

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<tr>
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<th>_</th>
<th>N</th>
<th>_</th>
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<th>V</th>
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</table>

/t/ ---->  
\[ [d] / \begin{cases} N \varepsilon \\ V \varepsilon V \\ [t] \end{cases} \]

e.g.

{tu¹k}  [dœl;k]  whale; dreaming
{pa¸pat}  [bœtpat]  grasshopper
{na¹al}  [ŋâdaal]  tongue
{pa¹ak}  [bâdak]  cheeky
{mu¹a}  [mœda]  night-bird sp.
{pœcema¹a}  [byjœmœda]  rainclouds
{intit¹}  [IND"it"i]  bitter
{pa¾tala}  [bânda¹a]  stringybark
{wanœac}  [wândac]  on the coals
{na®parr+¹at+mene}  [na®bâttatmeœ]  they bite/me

3plA.1sgmONF+bite+NF  (by P 1).

Variation between speakers occurs in the lexical item {muºa} 'star' and its compounds. All but two fluent speakers say [muºa] 'star', [muºameœ] 'egg', [muºarak] 'sky' with a
retroflex fricative. For them, the retroflex fricative is an allophone of the retroflex stop after /θ/. The two oldest speakers pronounce the same items as [mø-da], [mø-damø-jem], [mø-daraku], with an intervocalic voiced retroflex stop, as did Akuk on a tape-recording made thirty years ago (AIAS 1959: tape 320/3). Eighty years ago, Basedow transcribed {mø-ta} as ‘murre’ with an intervocalic trill (Basedow 1907:62).

(3) phoneme  /c/

2 allophones: [c] voiceless lamino-palatal stop
[j] voiced lamino-palatal stop

Environments:

```
/#_ _#_ N_ V_V rr_ r_ l_ l_ y_ w_ Stop_ _C
/ * *  j_ j_ j_ * * *  j_ * *  * *
./ c_ c_ * *  * *  * *  * *  * *  c_ c
```

/c/ ---->  [j] / { N____
         { V____V
         { liquid____
        [c]
```

e.g.
{cettak} [cëttak]  rock cod
{nic} [nic]  name
{mecak} [møjak]  neck
{garaca} [ŋaraja]  female ego’s daughter
{paccakapa} [baccaya]  spear
Nominals are marked instrumental with the suffix {-cene}.

After a nasal or liquid and between vowels, the suffix-initial laminal stop is voiced; elsewhere, it is voiceless.

(4) phoneme /k/
3 allophones: [k] voiceless velar stop
[g] voiced velar stop
[γ] voiced velar fricative

Environments:

<table>
<thead>
<tr>
<th>#</th>
<th>#</th>
<th>N</th>
<th>V</th>
<th>V</th>
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<th>l</th>
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<th>l</th>
<th>y</th>
<th>w</th>
<th>Stop</th>
<th>C</th>
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<td>k</td>
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</tbody>
</table>
Nominals are marked ergative with the case-suffix \{-karrar\}. After nasals the suffix-initial velar stop is voiced; intervocalically and after a liquid, it becomes a voiced fricative; elsewhere it is voiceless.

(5) phoneme /p/
3 allophones: [p] voiceless bilabial stop
   [b] voiced bilabial stop
   [β] voiced bilabial fricative
Environments:

\[
\begin{array}{cccccccccccccc}
\text{\#} & \text{\#} & \text{\#} & \text{N} & \text{V} & \text{V} & \text{rr} & \text{r} & \text{r} & \text{l} & \text{\_} & \text{\_} & \text{\_} & \text{l} & \text{\_} & \text{\_} & \text{V} & \text{w} & \text{Stop} & \text{\_} & \text{C} \\
b & * & b & * & * & * & * & * & * & * & * & * & * & * & * & * & * & * & p & p \\
\end{array}
\]

\[
/p/ \quad \longrightarrow \quad \begin{cases} 
[b] / \{ \# \} \\
N \} \\
\} V \} \{ \text{liquid} \\
\} [p] \\
\end{cases}
\]

\text{e.g.}

\{\text{p\textasciitilde}tup}\} [\text{b\textasciitilde}dup] \quad \text{cigarette}
\{\text{picpic}\} [\text{bicpic}] \quad \text{bird sp.}
\{\text{p\textasciitilde}lp\textasciitilde}l\} [\text{b\textasciitilde}l\beta\textasciitilde}l\} \quad \text{coucal (bird sp.)}
\{\text{pulppul}\} [\text{bulppul}] \quad \text{wild passion-fruit}
\{\text{mipec}\} [\text{m\textasciitilde}\beta\textasciitilde}c\} \quad \text{louse}
\{\text{mepperre}\} [\text{mepperre\textasciitilde}]} \quad \text{liver}
\{\text{merreppen}\} [\text{merreppen\textasciitilde}]} \quad \text{cabbage-palm}
\{\text{panpapanpa}\} [\text{banba\textasciitilde}anba\textasciitilde}]} \quad \text{flat}
\{\text{pappa}\} [\text{bappa\textasciitilde}]} \quad \text{father}
\{\text{pampac}\} [\text{bambac\textasciitilde}]} \quad \text{baby}
\{\text{munpem}\} [\text{mu\textasciitilde}\textasciitilde}nb\textasciitilde}em\textasciitilde}]} \quad \text{basket}
\{\text{karrpek}\} [\text{karr\textasciitilde}\textasciitilde}ek\textasciitilde}]} \quad \text{prickly gum tree}
\{\text{malpak}\} [\text{mal\textasciitilde}ak\textasciitilde}]} \quad \text{praying-mantis}
\{\text{kalppa}\} [\text{kalppa\textasciitilde}]} \quad \text{tail}
\{\text{camatpa}\} [\text{camatpa\textasciitilde}]} \quad \text{ashes for chewing}
\{\text{kutp\textasciitilde}p\textasciitilde}p\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\textasciitilde}r\} \quad \text{worried}
Nominals are marked for alienable possession with the Genitive allomorph /- póttuŋ/. Ego’s close non-affinal kin are marked as inalienable with the Genitive allomorph /-palak/. A kin-term eligible for marking with /-palak/ may be additionally marked with /-póttuŋ/ to show alienable possession, e.g. the last item in this list. The suffix-initial syllable of /-palak/ is elided with the identical stem-final syllable of {pappa} by haplology. Both Genitive allomorphs show the following allophony across morpheme-boundaries:

After a nasal, the suffix-initial bilabial stop is voiced. Intervocically and after a liquid, it becomes a voiced fricative; elsewhere, it is voiceless.

(b) nasals
(1) /n/ apico-alveolar nasal
(2) /ŋ/ apico-postalveolar (retroflex) nasal
(3) /ŋ/ lamino-palatal nasal
(4) /ŋ/ dorso-velar nasal
(5) /m/ bilabial nasal

Nasals contrast medially and finally:

{penterr} [benderr] sweet
{paŋtala} [bändala] stringybark
<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>{majlcewa!ac}</td>
<td>catfish sp.</td>
</tr>
<tr>
<td>{pəŋkanak}</td>
<td>sugar-cane</td>
</tr>
<tr>
<td>{pəmpaccak}</td>
<td>white apple</td>
</tr>
<tr>
<td>{katəman}</td>
<td>rotten</td>
</tr>
<tr>
<td>{kunkun}</td>
<td>curlew</td>
</tr>
<tr>
<td>{kankan}</td>
<td>eagle sp.</td>
</tr>
<tr>
<td>{ŋaparrkkalamanŋ}</td>
<td>old woman</td>
</tr>
<tr>
<td>{maŋ}</td>
<td>rock; money</td>
</tr>
<tr>
<td>{nem}</td>
<td>beeswax</td>
</tr>
</tbody>
</table>

Initial contrast between apical nasals is neutralised:

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>{nic}</td>
<td>name</td>
</tr>
<tr>
<td>{nik}</td>
<td>night-time</td>
</tr>
<tr>
<td>{ŋuk}</td>
<td>pandanus nut</td>
</tr>
<tr>
<td>{mik}</td>
<td>sore.</td>
</tr>
</tbody>
</table>

Apico-alveolar and dorso-velar nasals contrast medially in the following minimal pair:

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>{mankarra}</td>
<td>wattle sp.</td>
</tr>
<tr>
<td>{maŋkarra}</td>
<td>phlegm.</td>
</tr>
</tbody>
</table>

(c)-liquids

(1) /rr/ apico-alveolar trill
(2) /r/ apico-postalveolar (retroflex) approximant

Variation between speakers occurs in one lexical item. Older speakers pronounce the item {maranmaran} 'waterweed' with an intervocalic voiceless retroflex approximant. For them, but not for speakers under 50, there is a sub-minimal contrast between the following items:

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>{para}</td>
<td>arm, creek</td>
</tr>
<tr>
<td>{maranmaran}</td>
<td>waterweed.</td>
</tr>
</tbody>
</table>
The rhotics are in partial complementary distribution. Word-initially, only the retroflex continuant occurs; in medial clusters, only the trill occurs. Both rhotics contrast intervocalically, finally and as the first member of a final consonant cluster:

{murrunmurrun} [murrunmurrun] kidney
{maranmaran} [märänmärän] waterweed
{wɔrrak} [uɔrrak] grass
{wurak} [würak] near
{wirk-ka-me} [wirkkamɛ] he shrieks/shrieked
{wirrkwirrk} [wirrkwirrk] shark sp.
{piccirr} [biccirr] mudskipper (fish sp.)
{cirrir} [cirrir] bird sp.

Intervocalic contrast occurs between apico-alveolar stop and retroflex approximant, e.g.

{wutiwuti} [wudiwudi] crooked
{wuriwuri} [würiwüri] red ochre,
between retroflex stop and continuant, e.g.

{wuţak} [wüdak] saliva
{wurak} [würak] near
{paţak} [bāđak] cheeky
{para} [bāra] arm, creek
{kaljeţec} [kaljëđec] Milky Way
{karrcera} [karrjëra] water-lily,
and between retroflex stop and apico-alveolar trill, e.g.

{matawuk} [mäđawuk] crab sp.
{marrawuk} [marrawuk] cool wind.

(3) /l/ apico-alveolar lateral approximant
(4) /ɬ/ apico-postalveolar (retroflex) lateral approximant
(5) /l/ lamino-interdental lateral approximant
Laterals contrast medially, finally and as the first member of a final consonant cluster:

Laterals contrast medially, finally and as the first member of a final consonant cluster:

Apico-alveolar and laminal laterals contrast initially, medially, intervocally and finally, e.g.
Apico-alveolar liquids contrast intervocally, medially, finally, and as the first member of a final consonant cluster, e.g.

- walarra
- walala
- {gurrkkul}
- palkal
- {nalimpurrk}
- matpulk
- {mamurrg}
- {melgmel9}
- {cimmerr}
- cemmel
- {mekakkarr}
- {gurakal}

[hermit crab sp.]
[fish-wire tree]
[stick insect]
[place name]
[magpie goose]
[woman’s name]
[invitation to ceremony]
[cheeky yam]
[longbum (shell sp.)]
[Carpentaria acuminata]
[songman]
[young man.]

Apical and laminal liquids contrast intervocally:

- [-karraq]
- [kalq]
- [piper]
- [pøpel]

[ergative suffix]
[mother]
[ear]
[semen.]

(d) semi-vowels

(1) /y/ lamino-palatal approximant

Palatal stop and approximant contrast initially, finally and intervocally:

- cepcak
- yeŋcarrwa
- carrkkupa
- {yerrk-ye-pø}
- mecak
- meyak
- marruc

[milkwood tree]
[on one side]
[place name]
[Scrape it!]
[neck]
[Scrape it!]
[Grewia retussifolia]
[mud-crab]
The palatal approximant occurs word-finally only in the following items:

{walakaykay} \[ \text{walayayay} \] white shark
{pay} \[ \text{bay} \] ant sp.
{paypay} \[ \text{baybay} \] white.

The last item in this list is an exception to the rule by which peripheral stops fricativise intervocically or after an approximant.

Only fluent speakers maintain an initial palatal approximant in the following items:

{yine-me} \[ \text{yine-me} \] do what?
{yinmek} \[ \text{yinmek} \] tomorrow
{yilec} \[ \text{yilec} \] flame
{yila} \[ \text{yila} \] heron
{yinarren} \[ \text{yinarren} \] ringworm
{yinkarren} \[ \text{yinkarren} \] turtle sp.
{yikac} \[ \text{yikac} \] stingray sp.
{yikwar} \[ \text{yikwar} \] cockle.

(2) phoneme \(/w/\)
2 allophones: [u] voiced bilabial approximant
\[ \text{[w]} \] voiced labial-velar approximant

\(/w/ \rightarrow \{ [u] / \_ \_ i, e, \emptyset \}
\{ [w] / \_ \_ u, a \}

e.g.
{willerr} \[ \text{wllerr} \] crocodile
{wøtawel} \[ \text{wødawel} \] fat (noun)
{welerre}  [welerre]  spear, parcel
{watarraɲ}  [wadarraɲ]  witchetty grub
{wuạk}  [wũðak]  saliva.
{w} occurs word-finally only in the conjunction {aw} 'or', which is borrowed from English.

The labial stop and labial approximant contrast word-initially and intervocalically:

| {pik} | [bĩk] | rope |
| {wik} | [wĩk] | water |
| {pɔrak} | [bɔrak] | small |
| {wurak} | [wũrak] | near |
| {para} | [bãra] | arm, creek |
| {wara} | [wãra] | paperbark |
| {pipere} | [bɪpєrє] | ear |
| {wiwere} | [wũwєrє] | termite. |

In reduplicated forms, the velar stop and labial-velar approximant alternate, e.g.

{tirra+wucukkucuk}  [tirrawɔjʊkkʊjʊk]  (natica vitellus shell sp.)
{tirra+kucukkucuk}  [tirrawɔjʊkkʊjʊk]  shell sp.)
{wukkuk}  [wʊkkʊk]  owl.
Reduplication is discussed in 3.3.4.

The labial-velar approximant is never elided word-initially before a high back rounded vowel, e.g.

{wurak}  [wũrak]  near
{wulurruk}  [wulũrũk]  sweat.

The labial approximant is obligatory in the rare syllable-types $C_1C_2V$ and $C_1C_2VC_3$. In type $C_1C_2V$, $C_1$ must be a
bilabial nasal, $C_2$ the labial approximant, $V$ a high vowel.

In type $C_1C_2VC_3$, $C_1$ must be the bilabial stop, $C_2$ the labial approximant, $C_3$ a laminal or velar stop. $V$ must be a high vowel. The sequences /pw/ and /mw/ contrast with /p/ and /m/ in the following minimal and sub-minimal pairs:

| {pik}  | {bik}  | rope       |
| {wik}  | {urik} | water      |
| {pwik} | {burik} | bone       |
| {puc}  | {buc}  | smell (noun) |
| {pwuccaka} | {buuccayə} | strange |
| {miŋaŋ} | {miŋaŋ} | lover, dove |
| {mwigak} | {mʊrgak} | scrub-turkey |

It could therefore be suggested that /pw/ and /mw/ are distinct phonemes, but they occur only in these lexical items and their compounds, and other hypotheses must be considered:

(i) /pw/ and /mw/ derive from /puw/ and /muw/.

This must be rejected on two grounds:

(a) the corpus contains no instances of /puw/ and only one instance of /muw/: {muwinìŋka} [muwɨnɪŋga] 'rock python'.
(b) for a word-initial syllable which is also stem-initial to be elided is unlikely because this syllable carries word-accent. A phonological word is defined as one whose stem-initial syllable is accented, i.e. raised in pitch.

(ii) These lexical items are loanwords from Puŋupuŋu.

This argument rests on scanty and inconclusive evidence:

(a) {pwik}, {pik} and {wik} occur in Pugupuŋu (Tryon n.d.: 117, 129, 135), but Pugupuŋu {mulŋak} (Tryon n.d.:124) is
not cognate with Bachamal {mwigak}; no other relevant cognates are attested.

(b) if these items are loanwords, they may have been borrowed into Puŋupuju from Bachamal, or into both languages from another source. No cognates are attested in Larakiya or Emmi and until more data are available the question remains unresolved.

2.4 **Vowel phonemes specified.**

/ɪ/  high front unrounded
/ʊ/  high back rounded
/e/  mid front unrounded
/ø/  front rounded
/a/  low front unrounded

Vowels contrast medially and finally:

{mirraŋuk} knee
{murruppul+maŋ} white stone (quartz)
{merriki} bush carrot sp.
{mʊrrakara} yesterday
{marrapat} beard
{ka+mi} he sits/sat
{camu} longtom (fish sp.)
{currk-ka-me} it is/was charred
{cerrmø} catfish sp.
{gammama} deaf.
2.4.1 **Articulatory description of vowel phonemes**

<table>
<thead>
<tr>
<th>Unrounded</th>
<th>Rounded</th>
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<tr>
<td>high</td>
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<td>[i]</td>
<td>[Y]</td>
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<td>[ɛ]</td>
<td>[ɛ]</td>
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<td>low</td>
<td></td>
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<td>[a]</td>
<td>[ʊ]</td>
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<tr>
<td>[a]</td>
<td>[o]</td>
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</tbody>
</table>

2.4.2 **Vowel allophony**

(1) phoneme /i/

3 allophones: [i] high front unrounded vowel

[ɪ] slightly lowered and slightly centralised high front unrounded vowel

[ǐ] slightly lowered and centralised high front unrounded vowel

/i/ → [i] / [laminal cons] ___

___ [laminal cons]

___ #

[ǐ] / [retroflex cons]

{yik} [yik] fat, old

{tilk} [drlk] wet

{pancik} [banjik] reef
The present aspectual morpheme {-m-} assimilates to the same point of articulation as a following stop. See 3.4.3.3.(i).

/i/ occurs word-initially only in the form cited above for speakers aged 58 or over. For younger speakers, initial /i/ also occurs on lexical items listed in 2.3.2(d)(1).

(2) phoneme /u/

2 allophones: [u] slightly lowered and centralised high back rounded vowel

[ʊ] mid back rounded vowel

\[/u/ \longrightarrow \begin{cases} 
[ʊ] \\
[ʊ] 
\end{cases}\]

e.g.

{pu} [bo] medicinal grass

{wupupu} [wʊ̃ businessman

{parr+p+mu} [parrpəmə] they will sit

{muc} [mʊ̃ hole

{yura} [yʊ̱ra] wallaby

{wuyuŋ} [wʊ̃ businessman

{muntak} [mundak] old

{munnuk} [mʊ̃ businessman

{kuţʃk} [kʊ̃ short
(3) phoneme /e/
2 allophones: [ɛ] mid front unrounded vowel
       [ɛ] centralised mid front unrounded vowel

/e/ \(\longrightarrow\) \{[ɛ] / _____ [retroflex cons]
       [ɛ]

e.g.
{e} \hspace{1cm} [ɛ] \hspace{1cm} eh?
{eniŋ} \hspace{1cm} [ɛniŋ] \hspace{1cm} isn't it?
{eperre} \hspace{1cm} [ɛpɛrɛ] \hspace{1cm} migrant
{wettet/werret} \hspace{1cm} [wɛtɛt]/[wɛrɛt] \hspace{1cm} quickly
{ŋa+ye+pe} \hspace{1cm} [ŋayɛɛ] \hspace{1cm} I lie/lay
1sgS-lie-NF
{ŋawarrawete} \hspace{1cm} [ŋawarraweɛɛ] \hspace{1cm} sibling
{yereŋ} \hspace{1cm} [yɛrɛŋ] \hspace{1cm} skin, clothes
{werŋaŋ} \hspace{1cm} [wɛrŋaŋ] \hspace{1cm} gaping hole
{karrcerə} \hspace{1cm} [karrjɛra] \hspace{1cm} water-lily.
/e/ occurs word-initially only in the instances cited above, but is common word-finally.

(4) phoneme /ø/
2 allophones: [ø] mid front rounded vowel
       [γ] high front rounded vowel

/ø/ \(\longrightarrow\) \{[γ] / _____ [laminal cons]
       [laminal cons] _____
       [ø]

e.g.
{cøt} \quad {cøt} \quad \text{foot}
{cøwekpa} \quad {cøwekpa} \quad \text{milky plum}
{pøce} \quad {byje} \quad \text{head}
{merrepøce} \quad {mørrebyje} \quad \text{hair}
{cøŋka} \quad {cŋga} \quad \text{base}
{wørran} \quad {uørran} \quad \text{mosquito}
{ŋøl} \quad {ŋø1} \quad \text{milky mangrove}
{yan–pø–pø} \quad {yanbøøø} \quad \text{I will hit him/it}
{wøŋ} \quad {uøŋ} \quad \text{rain}
{møŋ} \quad {møŋ} \quad \text{buttocks}
{møna} \quad {møna} \quad \text{husband}
{tørr} \quad {dørr} \quad \text{tamarind tree}
{-pørran} \quad {-børran} \quad \text{3plD pronominal enclitic}
{pørack} \quad {børack} \quad \text{small}
{ŋaku̯ø} \quad {ŋayu̯ø} \quad \text{not}
{kunøpiyørrk} \quad {kunøpiyørrk} \quad \text{storm wind from sea.}

/ø/ \text{ occurs word-finally, but not word-initially.}

(5) phoneme \ /a/ \\
3 allophones: [a] low front vowel \\
\quad [å] slightly centralised low front vowel \\
\quad [a] low back vowel

\begin{align*}
/a/ & \quad \rightarrow \quad [å] / \quad \_\_\_ \quad \text{[retroflex cons]} \\
& \quad \quad \quad \left\{ \ egin{array}{c}
[a] / \quad w \quad \_\_\_ \quad \text{[velar cons]} \\
\end{array} \right. \\
\end{align*}

\begin{itemize}
\item \text{e.g.}
\item \{apepa\} \quad \{aβεβa\} \quad \text{deaf-mute}
\item \{walapic\} \quad \{walaβic\} \quad \text{flying-fox}
\item \{warapel\} \quad \{wáraβεl\} \quad \text{kangaroo sp.}
\item \{watarran\} \quad \{wadarraγn\} \quad \text{witchetty grub}
\end{itemize}
(i) Word-accent. Word-accent is predictable, the distinction being between accented and unaccented syllables. Accented syllables bear high pitch, unaccented syllables, low pitch. A phonological word is defined as one whose stem-initial syllable is prominent. Prominence is marked by raising the pitch level of the stem-initial syllable of a word, e.g.

{tec} ['dɛc] nit
{wara} ['wâ$ra] paperbark
{munnuk} ['mʊ$n$ʊk] toadfish
{warapel} ['wâ$ra$β$ɛl] kangaroo sp.
{panpapanpa} ['ban$ba$β$an$ba] flat
{kunçpiyʊrrk} ['ku$ŋ$ʊ$β$i$yʊrrk] storm wind from sea
{ŋaparrkkalamaj} ['ŋa$ʊ$ρ$ʁ$ka$ʃla$ma$β$n] old woman
{parrkkatta+malag} ['barrk$kat$ta$ma$la$ŋ] two
{kawen+tawarra} ['ka$ʊ$e$β$n$da$wa$rra] furious.
Where the stem-initial syllable is not word-initial, as on verbs, pitch-raising spreads leftwards from the initial syllable of the stem, e.g.

{yan’+pø+mene}  ['yaŋ$'bø$me$ne]  
1sgA.3sgmO-hit-NF  I hit him/it

{pilk+yan’+pø+mene}  ['bɪl$k$'yaŋ$'bø$me$ne]  
slap-1sgA.3sgmO-hit-NF  I slap/ped him/it

Inflectional and derivational suffixes are unaccented, e.g.

{yan’an’+pø-mene-makka}  ['ya$'ŋaŋ$'bø$me$ne$mak$ka]  
1sgA.3sgfO-hit-NF-PERF  I hit her

{nenpVrr+tparamene+m+kulø}  ['nɛn$'bʊ$'tɔ$me$ne$ku$lo]  
2plA.1sgO-leave-NF-PRES-Neg  Don’t leave me behind!

Clitic and host word form a single phonological unit, e.g.

{gace+rrakararr}  ['ga$je$rra$rra]  
1sgP-another  we used to hug each other

{morrrakarar+mini}  ['mø$ra$ya$ra$mr$ni]  
yesterday-then  yesterday, at that time

{kajp+mi+m+parrk}  ['ka$ŋ$'mr$mbarrk]  
3sgfSNF-sit-PRES-still  she’s still alive

{karr+pette+mente}  ['karr$'ɛt$'te$men$de]  
3plSNF-die-already  they’re already dead
she called out to them both.

they really will bite her.

The initial CV of the clitic particles {-pente} 'now', {-pakka} 'same/really', and {-pakkacca} 'obligated' elide after a host-final vowel, e.g.

osstracised rock-now

on the pandanus now

They've really been going

The initial syllable of the clitic particle {-t/rraŋkarra} 'another/again' elides after a host-final nasal, e.g.

I too (did/do X)

same with me

Compounds are treated as a single phonological unit, e.g.

furious

old man
Word–accent helps to distinguish a compound nominal from two nominals juxtaposed in possessive relation, e.g.

\{pampac+kalan\} \{'bam$bac$ka$lan\} woman with baby

\{pilawuk pampac\} \{'b$la$wuk#pam$bac\} Bilawuk’s baby.

(ii) \textit{Sentence intonation.} Sentence intonation falls outside the scope of this thesis, but preliminary investigation revealed the following:

(a) Non-questions normally end on a low pitch, e.g.

\{kama\$ga\} \{'ka$ma$n\$ga\} nothing

\{yakarra\} \{'ya$n$ya$r$r\} Oh, no!

\{jana$+kara$p+mene+makka\}

\text{man–ERG 3sgA/3sgfONF-hit-NF-PERF}

\{'ja$n$ga$rra$g\$\'p$b$me$n\$mak$ka\} the man hit her.

(b) Questions end on a high pitch, e.g.

\{kama\$ga\} \{'ka$ma$n$g\$\'ga\} nothing?

\{pine\} \{'b$ne\} where are they?

2.6 \textit{Alternative analyses compared.} The analysis of Bachamal stop consonants presented above must be argued for, because alternative analyses are possible. Three analyses have been proposed: the first, presented in this thesis; the second, suggested by Neil Chadwick (pers. com. 1989), the third, proposed by Evans (1987a). Only the
first analysis is the product of extended work on the language. The three analyses, presented in the above order, are compared as follows:

(i) **Bachamal has a single series of stop consonants.**
This series is underlyingly voiceless. Voicing occurs regularly only after nasals and between voiced segments. Bachamal syllable structure allows for consonant-clusters at syllable-boundaries. Homorganic consonant-clusters include sequences of identical stops, nasals and laterals. The advantages of this analysis are:
(a) simplicity: it means fewer phonemes than any competing analysis, and no extra complication in phonotactics;
(b) comprehensiveness: the rules proposed account adequately for all data up to word-level, including reduplications and polymorphemic compounds;
(c) a powerful syllable structure: all morpheme and word boundaries coincide with syllable boundaries. C₁ of C₁V may be any consonant except a retroflex lateral, C₁ of C₁VC₂ may be any consonant except a retroflex nasal. C₂ of C₁VC₂ may be any consonant except a labial-velar approximant. Restrictions on C₁C₂V, C₁C₂VC₃ and C₁VC₂C₃ are described in 2.7. The fact that many syllables may begin or end with a stop gives rise to stop-clusters, some of them geminate, across syllable-boundaries. All stop-clusters are voiceless and all occur across syllable boundaries.

(ii) **Bachamal has two series of stops: voiced and voiceless.**
The implications of this analysis are:

(a) lack of economy: ten stop-phonemes instead of five;
(b) uneven distribution of voiced and voiceless stops: voiced stops regularly occur only after nasals, voiceless stops only word-finally. There is no motivation for the word-initial voicing of apical and bilabial stops, while laminal and velar stops are voiceless, or for the voicing intervocalically of apical and laminal stops, but the voicing and fricativisation of peripheral stops;
(c) no simplification in syllable-structure;
(d) unmotivated devoicing rule required to account for the fact that, in reduplicated forms, an initial voiced stop is regularly repeated as voiceless, e.g.

\{pucpuc\} \[bucpuc\] bald
\{pirricpirric\} \[brrricprrric\] trevally.

(e) inability to account for stop-allophony across syllable- or morpheme-boundaries, e.g.

\{pøce\} \[byj\] head
\{merre+pøce\} \[merre$yj\] hair
\{ŋace+pøt\nuŋ\} \[ŋace$pretuŋ\] belonging to me
\{pappa+łak+pøt\nuŋ\} \[bap$pa$łak$pretuŋ\] my father's
\{kappuk+ŋa+puka\} \[kap$puk$ŋa$ya\] I bathe/d
\{kappuk+ŋa+p+puka\} \[kap$puk$ŋap$pu$ya\] I will bathe
\{ŋatpV+ŋat+me\} \[ŋat$pā$rat$me$ne\] s/he/they bit/e/s us, excluding you
\{ŋarranpV+ŋat+me\} \[ŋa$ran$bā$rat$me$ne\] s/he/they bit/e/s us, including you.

By M 1, a retroflex stop lenites to a continuant after a prefix-final vowel (see 2.12).
(iii) Bachamal has two series of stops: short voiced and long voiceless. The disadvantages of this analysis are:

(a) lack of economy: ten stop-phonemes instead of five;
(b) uneven patterning: according to this analysis, voiceless stops are the only long consonants in Bachamal. My study has shown that apical and bilabial nasals and all three laterals are open to analysis as long consonants. No reason is provided for the uneven patterning of the 'long' stops;
(c) uneven distribution: 'long' and 'short' stops contrast intervocalically and after liquids. My study has shown that 'long' and 'short' nasals and laterals contrast only between vowels. It is suspicious that long consonants do not occur word-finally. No motivation is offered for this limited distribution for the stop series;
(d) unmotivated restrictions on syllable-structure: 'long' stops are restricted to word-medial, syllable-initial position;
(e) inability to account for reduplicated forms;
(f) unmotivated rules to make 'long' stops into 'short' voiceless stops initially, finally and in heterorganic stop-clusters;
(g) inability to explain the manufacture of 'long' voiceless stops from 'short' voiced stops in poly-morphemic compounds, e.g. {yarr+turra} > [yatturra] we, excluding you, cook/ed it
By P 1, a trill hardens to a stop before an apico-alveolar stop (see 2.11).
\[\eta+par-a \rightarrow \eta\alpha\beta\eta\alpha\rangle \text{ I walk/ed} \]
\[\eta+p+pur-i\eta \rightarrow \eta\alpha p\eta p\eta\eta \text{ I will walk} \]
By M 2, the future tense allomorph /-p-/ and the initial consonant of the future verb stem /pur/ form a 'long' stop.

2.7 Phonotactics. Bachamal has the following canonical syllable-structure: (C< 1(C)> 1 ) V (< 2(C)> 2 C) where < 1 > 1 precludes < 2 > 2 and vice versa. This structure is realised in the following syllable-types:

<table>
<thead>
<tr>
<th>Syllable-type</th>
<th>V</th>
<th>CV</th>
<th>CCV</th>
<th>CVCC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VC</td>
<td>CVC</td>
<td>CCVC</td>
<td></td>
</tr>
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</table>

Syllable-type V is restricted to unrounded vowels. It is attested only in the following items:

- {e} eh? (English loanword)
- {eniŋ} isn’t it?
- {eperre} migrant
- {akuk} man’s name
- {anikine} when?
- {alana} woman’s name.

Syllable-type VC is rare. In the corpus, it is restricted to /i/ and /a/ followed by a non-retroflex stop or nasal, or, in one loanword, by a labial-velar approximant, e.g.

- {intiṭṭi} bitter
- {attu} cross-cousin
- {antanan} man’s name
- {acca} female ego’s sibling or father’s father’s father
- {accecca} ostentatious
### TABLE 1  CVC realisations

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>t'</th>
<th>c</th>
<th>k</th>
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Table 2: Phonemic realisations of C₁VC₂C₃

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- 'l' represents a voiceless lateral approximant.
- 'k' represents a word-final aspirated stop.
- 'ŋ' represents a glottal stop.
- 'r' represents a trill.
- 'p' represents a word-final plosive.
- 'w' represents a glide.
- 'ŋ' represents a nasal.
- 't' represents a plosive.
- 'm' represents a nasal.
- 'n' represents a nasal.
- 'l' represents a voiceless lateral approximant.
- 'r' represents a trill.
- 'p' represents a word-final plosive.
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- 'ŋ' represents a nasal.
- 't' represents a plosive.
- 'm' represents a nasal.
- 'n' represents a nasal.
The most frequently occurring syllable-types are $C_1V$ and $C_1VC_2$. $C_1$ of $C_1V$ may be any consonant except a retroflex lateral. $V$ may be any vowel. $C_1$ of $C_1VC_2$ may be any consonant except a retroflex nasal. The absence of a retroflex nasal in this environment is likely to be an accidental gap. $C_2$ may be any consonant except the labial-velar approximant. Table 1 lists phonemic realisations of $C_1VC_2$.

Syllable-type $C_1VC_2C_3$ occurs less often than types $C_1V$ or $C_1VC_2$, but is relatively common. $C_1$ of $C_1VC_2C_3$ may be any stop, semi-vowel, or non-retroflex nasal or lateral. $V$ may be any vowel. $C_2$ may be any liquid or a laminal approximant. $C_3$ may be any non-apical stop or a velar nasal. Table 2 lists phonemic realisations of $C_1VC_2C_3$.

Syllable-types $C_1C_2V$ and $C_1C_2VC_3$ are extremely rare. $C_1$ of $C_1C_2V$ must be a bilabial nasal, $C_2$ the labial-velar approximant, $V$ the high front vowel. This syllable-type is attested only in the token {mwiŋak} 'scrub-turkey'.

Syllable-type $C_1C_2VC_3$ is almost as rare. $C_1$ of $C_1C_2VC_3$ must be a bilabial stop or nasal, $C_2$ the homorganic approximant,
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Redundant values are enclosed in parentheses.
V must be /i/ or /u/, C a laminal or velar stop, e.g.
{pwuccaka} stranger
{wik} bone
{wik+karral} shin-bone
{wik+mitaŋ} blue-tongue lizard.

2.8 Feature specification. The features required to specify the systematic phonemes of Bachamal and their allophones are adapted from Ladefoged (1982:256-7), listed in Table 3 and defined as follows:

(i) [± syllabic]
Any sound marked [+syll] functions as the peak of the syllable. Syllabic segments are restricted to vowels.

(ii) [± consonantal]
Consonantal sounds are made when there is an obstruction in the vocal tract, amounting to a complete closure. This feature separates the open approximants from other phonemes.

(iii) [± continuant]
A sound is marked [+cont] when the airstream in the vocal tract is not completely blocked. Stops are marked [-cont] and thereby distinguished from all other phonemes.

(iv) [± nasal]
A sound is marked [+nas] when there is complete closure of the oral cavity, so that air can only escape through the
nose. This feature distinguishes nasals from all other phonemes marked [+cont].

(v) [+/-laminal]
A sound marked [+lam] is made with the tongue-blade articulating against the palato-alveolar region. In lamino-dental sounds, the tongue-tip protrudes between the upper and lower teeth. This feature distinguishes the laminal series from all other phonemes.

(vi) [+/-retroflex]
A sound marked [+retr] is made with the tongue-tip curled back, forming a stricture with the palate. This feature distinguishes the retroflex series from other phonemes.

(vii) [+/-lateral]
A sound marked [+lat] is an approximant. It is made when one side of the tongue makes contact with the roof of the mouth, allowing air to escape down the other side. This distinguishes laterals from other approximants.

(viii) [+/-peripheral]
A sound marked [+peri] is made in the labial or velar regions of the mouth.

(ix) [+/-back]
A sound is marked [+back] when the highest part of the
tongue-body is in the back of the mouth. This feature distinguishes velar from bilabial consonants, and back vowels from all other vowels.

(x) [+/-high]
A sound is marked [+hi] when the tongue is at or near the roof of the mouth. This feature distinguishes palatal consonants and high vowels from other phonemes.

(xi) [+/-low]
A sound is marked [+lo] when the body of the tongue is low in the mouth. This feature differentiates low vowels from all other phonemes.

(xii) [+/-round]
A sound marked [+ro] is made with lip-rounding. This feature distinguishes the labial approximant and rounded vowels from all other phonemes.

(xiii) [+/-voiced]
A sound is voiced when the vocal cords are vibrating. Only stops may be marked [-voic].

(xiv) [+/-wide]
A sound marked [+wide] has a widened pharyngeal cavity, correlating with a relatively higher tongue position in the mouth.
2.09 Redundancy rules

(1) IF [-cont] THEN [-lat] -nas
(2) IF [+cons] THEN [-low] [-ro]

(3) IF [+sy11] THEN [-cons] [+cont] -lat -nas -lam
(4) IF [+h1] THEN [-low] [aro]

(5) IF [+low] THEN [-h1]
(6) IF [+h1] [αback] THEN [aro]


(9) IF [+lat] THEN [-nas] [-back]
(10) IF [-peri] THEN [-nas] [-back]
2.10 Allophonic specification rules

(1a) /t/ \rightarrow [d] / \{ # \}
       \{ N \}
       \{ V V \}
       \{ +voice \}
       \{ [+] \}

(1b) /\dot{t}/ \rightarrow [g] / \{ # \}
       \{ N \}
       \{ V V \}
       \{ [+] \}

[-cont] [-peri] \rightarrow [+voice] / \{ [+nas] \}
       \{ [+syl1] ++ [+syl1] \}

(2) /c/ \rightarrow [j] / \{ N \}
       \{ V V \}
       \{ [+trill] \}
       \{ [c] \}

       \{ [+nas] \}
       \{ [+syl1] ++ [+syl1] \}
(3a)  \(/k/ \quad \longrightarrow \quad \{ [g] / \text{N} \quad \}
\quad \{ \gamma / \{ \text{V} \quad \text{V} \quad \}
\quad \{ \text{liquid} \quad \}
\quad \{ [k] \}
\)

(3b)  \(/p/ \quad \longrightarrow \quad \{ [b] / \{ \# \quad \}
\quad \{ \text{N} \quad \}
\quad \{ \beta / \{ \text{V} \quad \text{V} \quad \}
\quad \{ \text{liquid} \quad \}
\quad \{ [p] \}
\)

\[
[\text{-cont} \quad \text{+peri} \quad \text{1<back>1}] \quad \longrightarrow \quad \{ \text{[+voice]} / \{ \text{[+nasal]} \quad \}
\quad \{ \text{[+cont]} / \{ \text{[+syll]} \quad \text{[+syll]} \quad \}
\quad \{ \text{[+cons]} \quad \text{[+cont]} \quad \text{-nas} \quad \}
\]

(4)  \(/w/ \quad \longrightarrow \quad \{ [u] / \quad \text{l, e, } \emptyset \quad \}
\quad \{ [w] / \quad \text{u, a} \quad \}

\[
[\text{-syll} \quad \text{-cons} \quad \text{+back}] \quad \longrightarrow \quad [\text{-back}] / \quad \text{+syll} \quad \text{-back} \quad \text{-low} \quad \]

(5)  \(\text{V} \quad \longrightarrow \quad \forall y / \quad \text{[n]} \quad \)

\[
\emptyset \quad \longrightarrow \quad [\text{-cons} \quad \text{[+syll]} \quad \text{[+nas]} \quad \text{[+lamb]} \quad \]

(6)  \(\text{i} \quad \longrightarrow \quad \text{I} \quad \)
\(\text{u} \quad \longrightarrow \quad \text{i} \quad \)
\(\text{e} \quad \longrightarrow \quad \text{€} / \quad \text{[t, } \text{ð, l]} \quad \)
\(\emptyset \quad \longrightarrow \quad \emptyset \quad \)
\(\text{a} \quad \longrightarrow \quad \text{a} \quad \)
[+syll] ----> [+retr] / ____ [+retr]

(7)  

i ----> i } / \{ [laminal] _____  
ø ----> y } / \{ _____ [laminal]  

[+syll]  
+hi  
[back] ----> [wide] / \{ _____ [+lam]  

(8)  
u ----> o / C _____ #  

[+syll]  
+back  
----> [-hi] / [-syll]_____ #  

(9)  
a ----> a / w _____ k, ñ  

+back]  
[+cons]  

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2.11 Phonological rules

(P 1) \( rr \longrightarrow \{ t \} / \quad \{ t \} \)
\[
\begin{align*}
+\text{cons} \\
+\text{cont} \\
-\text{nas} \\
-\text{lat}
\end{align*}
\longrightarrow \begin{align*}
-\text{cont} \\
-\text{voic} \\
-\text{cont} \\
-\text{cont}
\end{align*}
\]

e.g. karr-turra > katturra
3plA.3sgmONF-cook they cook/ed

kappVrr-\( \text{tut} \)-mene > ka\( \text{ppu} \text{t} \text{t} \text{ut} \text{mene}
3plA.3sgfONF-leave-NF they leave/left her.

(P 2) \( n \longrightarrow \emptyset / \quad n \)
\[
\begin{align*}
+\text{nas} \\
+\text{lam}
\end{align*}
\longrightarrow \begin{align*}
\emptyset \\
\emptyset
\end{align*}
\]

e.g. yaga\( \text{n} \)-n-ene > yaga\( \text{n} \)anene
1sgA.3sgfO-see-NF I see/saw her

kap-nipe > kanipe
3sgA.3sgfONF-touch-NF s/he touches/touched her.

(P 3) \( n \longrightarrow \quad n / \quad r \)
\[
\begin{align*}
+\text{nas} \\
+\text{lam}
\end{align*}
\longrightarrow \begin{align*}
-\text{lam} \\
-\text{lam}
\end{align*}
\]

e.g. karr-turra > katturra
3plA.3sgmONF-cook they cook/ed

e.g. yaga\( \text{n} \)-n-ene > yaga\( \text{n} \)anene
1sgA.3sgfO-see-NF I see/saw her

e.g. kappVrr-\( \text{tut} \)-mene > ka\( \text{ppu} \text{t} \text{t} \text{ut} \text{mene}
3plA.3sgfONF-leave-NF they leave/left her.
e.g. kaŋ-rø-na > kanrøna
3sgfSNF-cry-NF she cries/cried.

(P 4) \[ \begin{array}{c}
\begin{array}{l}
\text{-syll} \\
\text{-cons} \\
\text{-lam}
\end{array}
\end{array} \]
\[ \longrightarrow \varnothing / \begin{array}{c}
\begin{array}{l}
\text{+nas} \\
\text{-peri} \\
\text{-lam} \\
\text{-retr}
\end{array}
\end{array} \]


\[ \text{gan-wac-ana} > \text{ganacana} \]
1sgA.3plO-immerse-NF I immerse/d them

P 3 and P 4 are ordered, e.g.
kan-rø-na > kanrøna

(P 5) \[ \begin{array}{c}
\begin{array}{l}
\text{+nas} \\
\text{+lam}
\end{array}
\end{array} \]
\[ \longrightarrow \begin{array}{c}
\begin{array}{l}
\text{+retr} \\
\text{-lam}
\end{array}
\end{array} / \text{-cont} \]

\[ \begin{array}{c}
\begin{array}{l}
\text{+nas}
\end{array}
\end{array} \]
\[ \longrightarrow \begin{array}{c}
\begin{array}{l}
\text{+retr}
\end{array}
\end{array} / \text{+lam} \]

\[ \begin{array}{c}
\begin{array}{l}
\text{+nas}
\end{array}
\end{array} \]
\[ \longrightarrow \begin{array}{c}
\begin{array}{l}
\text{+retr}
\end{array}
\end{array} / \text{+lam} \]
e.g. kaŋ-ṭat-mene > kaŋṭatmene
3sgA.3sgfONF-bite-NF s/he bites/bit her.

(P 6)
\[ \begin{array}{c}
\begin{array}{l}
\text{-syll} \\
\text{-cons} \\
\text{-retr}
\end{array}
\end{array} \]
\[ \longrightarrow \varnothing / \begin{array}{c}
\begin{array}{l}
\text{+nas} \\
\text{+lam}
\end{array}
\end{array} \]
e.g. kap-yepe > kapêpe
3sgfSNF-lie she lies/lay

dan-wukpica > kapukpica
3sgfSNF-call out she calls/called out.

(P 7)

\[
\eta \quad \rightarrow \quad \emptyset \quad / \quad \emptyset \quad [+nas] \quad [-cont] \quad [+cons] \\
\quad \rightarrow \quad \emptyset \quad / \quad \emptyset \quad [+back] \quad [+peri] \quad [+peri] \\
\quad \rightarrow \quad \emptyset \quad / \quad \emptyset \quad [-back] \quad [-back]
\]

e.g. yan-p-palama > yappalama
1sgA.3sgmO-FUT-cut I will cut him/it

yan-p-mara > yapmara
1sgA.3sgmO-FUT-kick I will kick him/it.

(P 8)

\[
p \quad \rightarrow \quad c \quad / \quad c \quad [+nas] \quad [-cont] \\
\quad \rightarrow \quad c \quad / \quad c \quad [+lam] \quad [-nas] \\
\quad \rightarrow \quad c \quad / \quad c \quad [-back] \quad [-back]
\]

e.g. yan-p-parrakka > yapaparrakka
1sgA.2sgO-FUT-pull I will pull you

yVrrVp-p-mara > yarracpmara
1plincA.3sgfO-FUT-kick we, including you, will kick her.
(P 9) \( p \quad \quad \rightarrow \quad \emptyset / n \quad \quad \rightarrow \quad \{ p \quad \rightarrow \quad \emptyset / m \)

\([-\text{cont}]\)  \( \rightarrow \quad \emptyset \quad \quad \rightarrow \quad [+\text{cons}] \quad \quad \rightarrow \quad [+\text{cons}] \\
[+\text{peri}] \quad \rightarrow \quad \emptyset \quad \quad \rightarrow \quad [-\text{peri}] \quad \quad \rightarrow \quad [+\text{peri}] \\
[-\text{back}] \quad \rightarrow \quad \emptyset \quad \quad \rightarrow \quad [-\text{retr}] \quad \quad \rightarrow \quad [-\text{back}] \\

e.g. \quad yVrrVn-p-mara > yarranmara \quad 1plincA.3plO-FUT-kick \quad \text{we, including you will kick} \quad \text{them}

(P 8) and (P 9) are ordered, \quad yarrac-p-mara > yarracmara

\( \emptyset \quad \rightarrow \quad gac-p-parrakka > gacparrakka. \)

2.12 Morphophonemic rules

(M 1) \( t \quad \quad \rightarrow \quad r \quad / \text{V}_p \text{x} \quad \quad \rightarrow \quad \emptyset \\
[+\text{cont}] \quad \rightarrow \quad [+\text{cont}] \quad \rightarrow \quad [\text{+syll}]_p x \quad \rightarrow \quad \emptyset \\
[+\text{peri}] \quad \rightarrow \quad [+\text{peri}] \quad \rightarrow \quad [\text{+back}] \quad \rightarrow \quad [+\text{syll}] \\
\)
e.g. \quad ka-\text{t}at-mene > karatmene \quad 3sgA.3sgmOFN-bite-NF \quad \text{s/he bites him.}

(M 2) \( w \quad \quad \rightarrow \quad \emptyset \quad / \text{pl}_p x \quad \rightarrow \quad \emptyset \quad / \text{V} \\
[\text{-syll}] \quad \rightarrow \quad [\text{-cont}] \quad \rightarrow \quad [\text{+peri}] \quad \rightarrow \quad [\text{+back}] \text{FUT} \rightarrow \quad [\text{+syll}] \\
\)
e.g. ŋa-p-wapa > ŋapaŋa
1sgS-FUT-dive I will dive

(M 3a) Vowel-insertion, monosyllables
\[ \emptyset \rightarrow V_1 / p \] _FUT_ \[stem C V_1 \] #

e.g. yan-p-pø > yanpøpø
1sgA.3sgmO-FUT-hit I will hit him

(M 3b) Vowel-insertion, polysyllables
\[ \emptyset \rightarrow V_1 / p \] _FUT_ \[non-labial C] _stem V_1 \] #

e.g. yan-p-kirrwa > yanpikirrwa
1sgA-3sgmO-dig I will dig it

(M 4) -pa _FUTcm_ \[ \emptyset / CV \] _FUT_ + [CV]_stem_ + ___
\[ \{ \]
\[ \} }
\[ pe / c]_stem_ }
\[ pa ...

(M 5) t \[ \rightarrow l / ___]_stem_ [ _FUT_ pa

(M 6) \[ \emptyset \rightarrow e / c \}
\[ rr \] _FUTstem_ #
(M 7) \( mene \) \(_{\text{NFCH}} \rightarrow \begin{cases} nene / ci \\ wene / ye \\ \{ \begin{array}{c} ene / c \\ n \\ rr \end{array} \} \\ mene \end{cases} \)

(M 8) \( \emptyset \rightarrow a / C \_\text{FUTstemconj2} \)

(M 9) \( \etaana \) \(_{\text{NFCH}} \rightarrow \begin{cases} \etaa / i \\ a \} \_\text{stem} \\ \{ \begin{array}{c} na / \emptyset \_\text{stem} \\ ana / c \\ rr \} \_\text{stem} \} \\ \etaana \end{cases} \)

(M 10) \( \{ y \_w \_r \} \rightarrow \emptyset / \{ \begin{array}{c} \eta \\ rr \} \_\text{px} \)

\begin{align*}
\text{[-syll]} & \quad \rightarrow \emptyset / \begin{cases} [+nas] \\ [+back] \\ \text{[-cons]} \end{cases} \\
\text{[-nas]} & \quad \text{[-peri]} \\
\text{[-lam]} & \quad \text{[-retr]} \end{align*}
e.g. yan-ya-ga > yaniga
1sgA.3sgmO-put down I put it down

yan-rikka > yanikka
1sgA.3sgmO-sort I sort/ed it

karr-wuc-mene > karrucmene
3plA.3sgmO-scold-NF they scold/ed him.

(M 11a) {-np-} prnpx ----> t / _____ [vbs stem p, m

e.g. kanp-marr-ana > katmarrana
3A.3plONF-paint-NF s/he/they paint/ed them

(M 11b) Ø ----> V1 / np _____ [vbs stem C V1

kanp-turra > kanputurra
3A.3plONF-cook s/he/they cook/ed them

(M 12a) {-tp-} prnpx ----> t / _____ [vbs stem p, m

e.g. gatp-palama > gatpalama
3A.1plexONF-cut s/he/they cut us

(M 12b) Ø ----> V1 / _____ [vbs stem C V1

e.g. gatp-tut-mene > gatpurutmene
3A.1plexONF-leave-NF s/he/they leave/left us
(M 13a) \[ \text{ADM}_x n \rightarrow \{ \langle g/\text{u} \rangle, \langle a/\text{vb} \rangle, \langle p/\text{i} \rangle, \langle \emptyset/\text{n} \rangle \} \text{vb stem} \{ \text{ADM}_x \} \]

(M 13b) \[ \text{V}_1 \rightarrow \{ \langle e/\text{i} \rangle, \langle \emptyset/\text{vb stem} \rangle \} \text{vb stem} \{ \text{ADM}_x \} \]

(M 13c) \[ \langle \text{ADM}_x n \rangle \text{V}_1 \rightarrow \langle \emptyset/\text{p} \rangle \text{V}_1 \text{vb stem} \]
3 BACHAMAL MORPHOLOGY

3.1 Introduction. Bachamal is an agglutinating language. Nominal suffixes mark syntactic and local case-relations, derive further nominal stems and make modifier phrases from complex NPs. Nominal prefixes on some kin-terms mark gender.

All core arguments are encoded on type A verbs; S/A and O by obligatory pronominal prefixes, D by pronominal enclitics.

Type A verb affixes mark mood, tense, aspect and polarity; reflexivity/reciprocality is marked by a derivational suffix.

Compounding of nominal and verbal stems occurs; verbs employ noun-incorporation. Compound verbs consist of an inflected verb stem (verb stem type A) acting as auxiliary verb to a verb stem unmarked for tense, bearing no pronominal prefix, or inflectional or derivational affixes (verb stem type B).

An inflected verb may be followed by one of six intransitive type A verbs acting as its auxiliary, specifying the bodily orientation of the co-referential subject and bearing in
addition to its own inflectional affixes, aspectual markers and pronominal enclitics governed by the main verb.

3.2 Word classes. Four word classes can be distinguished:

nominal: noun, adjective, free pronoun, deictic,
verbal: verb,
adverb: adverb,
particle: free particles (including interjections), clitic particles.

Each word class can be justified on semantic, syntactic and morphological grounds.

Semantically, lexical items in the nominal class denote entities or attributes; items in the verbal class denote actions or states. Adverbs specify the time, place or manner of the action/state expressed by the verb. Particles may add illocutionary force or specify the focus or polarity, obligatory nature, immediacy, similarity or complementarity of a word, phrase or sentence.

Turning to grammatical relations, nominals make up a noun phrase. Nominals in S/A or O function agree in person, number and gender with the pronominal prefix inflection encoded on their verb. Nominals or NPs inflect to show syntactic and local case-relations. Derivational suffixes
derive further nominal stems; derivational case-suffixes (Andrews 1985:92;96) make modifier phrases from complex NPs. Verbal inflections mark mood, tense, aspect and polarity. Nominal inflections are distinct from verbal inflections. Nominal and verbal stems take different derivational suffixes. Co-occurring aspectual suffixes are ordered; completive or purposive markers may be displaced from their regular post-verb stem position to cliticise sentence-initial or final nominals, uninflected verb stems or adverbs.

The interrogative adverbs {jinic} 'what?', {kine} 'where?' inflect to show causal, purposive and local case relations; other adverbs are invariable. All adverbs are restricted to sentence-initial or final position.

Free particles, including interjections but excluding negative particles, are invariable. All variable words may be modified by compatible clitics. Co-occurring clitics are ordered.

Within each major word class, sub-classes are semantically and morphologically motivated. Interrogatives are treated as nominal, verbal or adverbal, according to their morphology. The following sections define and illustrate each word class and their component sub-classes.
3.3 **Nominal morphology.** The major word class nominal contains the following sub-classes: noun, adjective, pronoun, deictic. Nouns and adjectives are open sub-classes with many members. Pronouns form a small closed system of free forms, pronominal enclitics, and interrogatives. Deictics are a small closed class of third person forms.

Although any nominal may function as the head of a noun phrase, nouns do so most commonly. Any nominal may function attributively, but adjectives and deictics regularly do so.

All pronouns are marked for person and number. One adjective is marked for number. Some nouns, one adjective and all third person singular pronouns are marked for gender.

All nominal stems inflect to show case relations. Derivational suffixes precede inflectional suffixes which precede clitics. Nouns and pronouns take identical derivational case-suffixes; adjectives combine with inchoative or causative verb stems to derive verb stems. Body part nouns are incorporated into verb stems to derive further verb stems.

Compounding of nominal stems is productive, e.g. the neologisms incorporating English loan lexemes in (103),
(107)-(108). Reduplication of nominals is productive, e.g. (115).

3.3.1 Noun morphology.

(i) Gender. The masculine or feminine gender of humans and higher animals is marked on a dependent verb in the third person singular. Additional marking occurs on nouns denoting close kin. Nouns denoting close male kin are marked by an initial alveolar nasal; nouns denoting close female kin are marked by an initial velar nasal. Gender-marking is fused into these items; segmentation into separate morphemes is not possible. Other idiosyncratic differences were noted in the following exhaustive list of gender-marked kin-terms:

(i) ñaraca female ego's daughter
(ii) neca female ego’s son, sister’s son or husband’s brother’s son
(iii) ñawak female ego’s daughter’s daughter, male ego’s daughter’s daughter’s daughter
(iv) niwak female ego’s daughter’s son
(v) ñacim female ego’s son’s daughter
(vi) niyem female ego’s son’s son
(vii) ñajamän female ego’s son’s daughter’s daughter
(viii) ñajamän female ego’s son’s daughter’s son
(ix) ñayi male ego’s daughter, either ego’s brother’s daughter
(x) niya male ego’s son, female ego’s elder brother’s son or husband’s sister’s son
(xi) ñaciŋka male ego’s sister’s daughter
(xii) niŋka male ego’s sister’s son
(13) ɲaŋarəŋ  wife, female ego’s father’s sister’s daughter
(14) ɲaŋarəŋ  husband, husband’s brother, husband’s father’s
   brother’s son.

(ii) Noun classes. Non-human nouns which are resources
in the natural world belong to one of three noun classes
and commonly occur with the appropriate generic noun class
marker. The noun classes and their markers (ncm) are:
   (a) meat: ncm {mecem} meat
   (b) edible vegetable: ncm {menep} edible vegetable (edveg)
   (c) tree: ncm {wiɲ} tree

Nominals denoting members of noun classes (a) and (b) follow
their class markers, as in (15) and (16); nominals denoting
members of noun class (c) precede theirs, as in (17).

(15)  mecem marruc  mud crab
(16) menep wuŋmarrac melgmelŋ long yam, cheeky yam
(17) garrik wiɲ medicinal tree sp.

(iii) Inflectional suffixes. Nouns inflect with any
one of the following syntactic or local case-suffixes:
   Absolutive  {-Ø}
   Ergative/Locative  {-karrag}
   Dative  {-nuŋ}
   Instrumental/Allative  {-cene}
   Causal/Ablative  {-makka}
   Locative  {-pene}
   Inflectional suffixes follow derivational suffixes, e.g.
   (30), (37), (42) and (62).
Absolutive [-∅]. A nominal in S or O function (Dixon, 1979:60) takes the zero-suffix [-∅], e.g., e.g. (18)-(19), for nominals in S role, and (20), (23)-(25) for nominals in O role.

(18) wik-∅ cirrcirr-wa-paŋka-∅
    water-ABS boil-3sgS-stabAUX-NF
    The water boils/boiled (T4:32).
The irregular verb {cirrcirr-paŋka} is discussed in Appendix 2.

(19) muc-∅-pente-kak kañ-par-a-m
    wallaby-ABS-now-Foe 3sgfSNF-walk-NF-PRES
    Wallaby is going now (T2:11).

Ergative/Locative [-karraŋ]. This morpheme is subject to allophonic variation according to the rules specified in 2.10.3a and exemplified in 2.3.2.(4).

(i) Ergative. [-karraŋ] regularly marks as ergative the human agent of a transitive verb, unless the sentence is counterfactual, as in (27).

(20) para-∅ ŋuk-kañ-i-ŋa
    arm-ABS break-3sgA.3sgf0NF-put downAUX-NF
    muc-∅-kak memempena-karraŋ
    wallaby-ABS-Foc porpoise-ERG

    Porpoise breaks/broke wallaby's arms (T2:43).

(21) cica-karraŋ ŋanaŋ ye-p-pøŋme-ŋarrkka
    3sgmDevis-ERG man 3sgA.3sgmOFUT-FUT-extinguish-1sgD
wip-Ø
gi~re-ABS

That man you can see will extinguish the fire for me (AL:12).

The sun, female in Bachamal mythology, is marked ergative when she is the agent of a transitive verb, e.g.

(22) pattura-kanpi-yi-ŋa kayik-karraŋ
dry-3A.3plONF-makeCAUS-NF sun-ERG
The sun dries/dried them (T5:45).

The inanimate agent of a transitive verb is marked ergative in non-future sentences only, e.g.

(23) wip-karraŋ ŋan-pajka-Ø ŋala-Ø
wood-ERG 3sgA.1sgO-stab-NF hand-ABS
A splinter pierces/pierced my hand (AL:23).

An inanimate agent may not be marked ergative if its verb is marked for future tense; sentence (24) is ungrammatical for this reason.

(24) *wip-karraŋ ŋala-Ø na-p-paka pal
fire-ERG hand-ABS 3sgA.2sgOFUT-FUT-stabFUT Get up!
Get up, the fire will burn you! (AL:72).

The agent of the functionally ditransitive verbs {me}, 'tell', {wukpica} 'call out to' and {wujmice} 'tell lie to' is regularly marked ergative, although the pronominal prefix to each verb marks it as intransitive, signalling S function only, e.g. (25). Transitivity is discussed in 3.4.1.
The whitefella told us: 'Go and pick pandanus!' (T5:1).

'Who's to go first?' 'Me!’, wallaby told her (T2:9).

In counterfactual sentences, e.g. (27), an agent nominal is not marked ergative, although the pronominal verbal prefix cross-references A and O roles.

Dugong can't see country now (T3:47).

(ii) Locative. In its locative sense, {-karrâŋ} means 'inside', occurring only in apposition to an NP suffixed by the commonly occurring Locative case-suffix {-pene}, e.g. (28)-(29).
(28) ɲatta-pene kəni-mi-ʊ-raŋ ɲanamulmul-karran
house-LOC 2sgSNF-sit-NF-HAB cave-LOC
You always sit around the house, in a corner (AL:80).

(29) cica menep-kak ka-cinpice-ʊ-pente-panja
3sgmDevis edveg-Foc 3sgmSNF-go in-NF-now-3sgfIMPL
yereŋmeca-ʊ mipe-pene ci-karran
skin-ABS eye-LOC 3sgmDetang-LOC
At once, that edible vegetable skin went into her eye, inside here (T3:48).

Dative/Allative [-nuŋ] ----→ \( /C_1\nuŋ/ / C_1 + \) \\
\( /\nuŋ/ \)

The dative case suffix is homophonous with the verbal purposive suffix and both may co-occur, e.g. (32).
Both suffixes mark the 'indirect object' or goal of an action, but the nominal suffix marks a 'passive' goal (cf. Dixon 1980:298), e.g. (30)-(31), (33), while the verbal suffix marks action intended to attain the goal, e.g. (32), (34).

(30) kutpəpərər-ɲa-mi-ʊ əcca-palak-kuŋ
anxious-lsgS-sit-NF sibling-GEN-DAT
I worry/worried for my sister (AL:40).

(31) pen-ce-parra werret kən-mə-gacag
2sgA.1sgO-giveFUT-RET quick 3sgfSNF-tell-3sgfIMP
'You give me (her) back quick so I can breast-feed her!' she told her (T2:31).

(32) menen-nun ḡaŋka-pe ḡaŋken-kirrwa-nun
edveg-DAT lduincS-go lduincA.3plo-dig-PUR
IMP IMP

'Let’s both go for edible vegetables, let’s both go to dig for them!' porpoise told her (T2:6)

(33) wik-kuŋ ja-rette-ŋ-m
water-DAT lsgS-die-NF-PRES
I’m dying for some water (JR:2).

(34) mecem-mun ka-pø-mene-ŋarrkka
meat-DAT 3sgA-3sgONF-kill-NF-1sgD

ye-ci-nun ka-me-ŋ-makka
2sgA.3sgOFUT-eatFUT-PUR 3sgmSNF-say-NF-PERF
IMP
He killed it for meat for me and said ‘Eat it!’

The Dative affix is used in an allative sense in the following customary greeting:

(35) Q: kine-nun ḡa-p-pur-iŋ
Where-DAT 2sgSFUT-FUT-walkFUT-FUTCM
Where are you heading? (JR:1).
Causal/Ablative {-makka}. In its ablative sense, the nominal suffix {-makka} marks direction away from a place, e.g. (36), or person, e.g. (37). In its causal sense, {-makka} marks the reason why something exists or occurs, e.g. (37)-(42). The nominal suffix {-makka} is homophonous with the perfective aspectual marker, which may cliticise a sentence-initial nominal, uninflected verb-root or adverb. In (37), commonsense tells us that the first instance of {-makka} is aspectual; the second {-makka} is truly ambiguous.

(36) kine-makka kàpe-pe-∅ putan-makka ŋa-pe-∅
Where-ABL 2sgSNF-go-NF town-ABL 1sgS-go-NF

(37) warrkati-makka yan-kunme-∅ kalan-palak-makka
dillybag-PERF 1sgA.3sgmO-bring-NF mother-GEN-ABL/CAU
I brought the dillybag from/in memory of my mother.

(38) nentu-makka kel-∅
horse-CAU path-ABS
A track made by horses (AL:3).

(39) calkma-nnte ŋaccur-makka
bad-now salty-CAU
He’s sick now from grog (AL:4).

(40) ŋamalik cica cøt-∅ wulli-makka
covered 3sgmDevis foot-ABS mud-CAU
That man’s foot is covered with mud (AL:199).

(41) pinic-makka kaŋ-pette-∅ maŋkarra-makka
What-CAU 3sgfSNF-die-NF phlegm-CAU
(42) ɲace ɲa-palam-ica-makka miłmak-Ø acca-pałak-makka
1sgP 1sgS-cut-REFL-PERF sorrycut-ABS sibling-GEN-CAU
I gave myself a sorry cut in memory of my brother.

Instrumental/Allative {cene}. This morpheme is subject
to allophonic variation according to the rules specified in
2.10.3 and exemplified in 2.3.2. In its instrumental sense,
{cene} marks the weapon used to hit a target, e.g. (43),
the tool used to perform an action, e.g. (44), the material
out of which something is made, e.g. (45)-(46), the language
used to convey a message, e.g. (47) or, metaphorically, the
organ with which one feels emotion, e.g. (48).

(43) cenmiyic-kak werŋaŋ pœce-Ø laŋkurr-cene
3sgfP-Foc gaping head-ABS club-INS
kap-pœ-mene-makka
3sgA.3sgfONF-hit-NF-PERF
She hit her on the head with a club and made a gaping
hole (T3:50).

(44) mipeŋala-cene ɲanaŋana-ka-cetpe-Ø
fingernail-INS split-3sgA.3sgONF-take outAUX-NF
kap-mi-ɲ-cœ
3sgfSNF-sitAUX-PRES-CONT
She’s sitting, continually splitting it with her
fingernail (T4:21).

(45) wekpec-Ø ɲørrec-cene mog-yeŋka-nœnme
basket-ABS pandanus-INS base-2plA.3sgmOFUT-start
Sit down and start making a basket out of pandanus!

They paint/ed me with white clay (AL:200).

Answer in language, both of you! (T3:14).

I hate that man with all my heart (AL:62).

In its allative sense, {-cene} always attaches to nominals denoting a location, e.g.

That mob walked along to the other side.

Locative {-pene}. This morpheme is subject to allophonic variation according to the rules expressed in 2.10.5. {-pene} marks location at, in, or on a place, e.g. (50)-(53). Locative {-karraŋ} further specifies the location as inside a place. {-karraŋ} only occurs in apposition to an
NP marked Locative by the suffix {-pene}, e.g. (28)-(29). There is no such restriction on the occurrence of {-pene}, e.g. (50)-(51).

(50) cepmiyic-pente  puc  kañ-par-a-cena
1sgfP-now  straight  3sgfSNF-walkAUX-NF-run

ŋalkin-pene
sea-LOC

As for her now, she ran straight into the sea (T2:58).

(51) win-Ø  wunŋarr-kak  mit-ka-wakaca-Ø
tree  ncm  yellow-Foc  pretty-3sgSNF-come out-NF

ŋørrec-pene-nte
pandanus-LOC-now

The yellow (dye) comes/came out pretty on the pandanus (T4:33).

Body part nominals + {-pene} form locative adverbials, e.g. (52)-(53).

(52) pepera-pene
back-LOC
Behind my back.

(53) manac-pene
chest-LOC
In front of me.

(iv) Derivational suffixes. These are of two types: type I, which derive a further nominal stem, and type II, properly termed derivational case-suffixes (Andrews 1985:92; 96),
because, suffixed to complex NPs, they make modifier phrases. Derivational suffixes precede core syntactic or local case-suffixes, e.g. (30), (37), (42), (66).

**Type I**

(a) [-maŋka] 'empty'. Suffixed to a noun stem, [-maŋka] derives a further noun stem, e.g. (54–55) or adjectival stem, e.g. (56). [-maŋka] is cognate with the negative particle {kamaŋka} 'nothing', which is discussed in 3.6.1.

(54) pepera-maŋka
back-EMP
Widower.

(55) pellem-maŋka
thigh-EMP
Man whose children are dead.

(56) peyik/ŋala-maŋka
bag/hand-EMP
Empty-handed.

b) {-maŋaŋ} 'full of'. Suffixed to a noun stem, {-maŋaŋ} derives a further noun stem, as in (57), or an adjectival stem, e.g. (58)–(59).

(57) ŋukac-maŋaŋ
feather-FUL
Bird (generic).

(58) parrkkatta-maŋaŋ
two-FUL
Two.
(59) kucuk-malaŋ
  vagina-FUL
  Sexy.

**Type II**

(a) One of a group  [-kaŋi]
(b) Comitative      [-maligmica]
(c) Place           [-nini]
(d) Semblative      [-kuttuŋ]
(e) Genitive        [-pøttuŋ]

(a) **One of a group** [-kaŋi]. The derivational case-suffix [-kaŋi] is homophonous with the pronominal enclitic [-kaŋi] which specifies a dual S/A or O. Derivational [-kaŋi] marks coordination within an NP, e.g. (60)-(61). There is no restriction on the number of coordinate nominals which may be marked with this suffix, e.g. (61). When a single nominal in S/A role is marked thus, its verb is cross-referenced for a dual subject with the pronominal enclitic [-kaŋi].

(60) ɲarrawete-kaŋi  ɲarra-par-a-kaŋi
  brother-one of gp  1duS-walk-NF
  My brother and I went.

(61) nakki-kaŋi  * waṯawu-kaŋi  kullak-kaŋi
  Nukkey-one of grp Wardawu-one of gp  Catfish-one of gp
  pilawuk-kaŋi  kaŋka-pe  pukpica
  Bilawuk-one of gp  2plSNF-go together

  You went together with Nukki, Wardawu, Catfish and Bilawuk.
(b) **Comitative** {-mali\_mica}. This suffix means 'with, as accessory', e.g. (62)-(64).

(62) mør rakara-makka nulkəwak-mali\_mica nə-pe-∅  
yesterday-PERF children-COM 1sgS-go-NF  
Yesterday I went, taking the children with me.

(63) ma\_tamala\_g turrkat-mali\_mica ya-kunme-ŋarrkka  
fish potato-COM 2sgA.3sgOFUT-bring-1sgD  
IMP  
Bring me fish with chips! (AL:69)

(64) wiŋ parrkattamala\_g-mali\_mica nə-pe-∅  
stick two-COM 1sgS-go-NF  
I walk with the aid of two sticks.

**Place** {-\_nini}. {-\_nini} means 'place associated with' and attaches to NPs denoting humans or entities deemed human in Bachamal mythology, e.g. (65)-(67). It precedes a locative case-suffix, e.g. (66).

(65) yelawen-\_nini  
wild onion-PLAC  
Wild onion dreaming site (AL:17).

(66) ŋarr-ŋaca-m-parra-kapi gal para  
1lduS-come-PRES-RET cheek creek  
ŋarrman-\_nini-pene ꪒulŋ  
bailershell-PLAC-LOC dreaming  

We're both coming back along the banks of the creek to the place of the bailer-shell dreaming (T5:9).

(67) pwuccaka ŋanaŋ karr-pettle-∅-makka  
strange man 3plSNF-die-NF-PERF
kane wewiɲ-ɲini rak
2sgP spiralshell-PLAC country

The strangers died in the country where you and Spiralshell, (Agnes), have your dreaming (AL:33).

Semblative /-kuttuŋ/ ~ /terric---kuttuŋ/ 'like'. An NP is suffixed by /-kuttuŋ/ and optionally prefixed with /terric-/ to make an adjectival phrase, e.g.

(68) terric-ɲatta parrkattamalaj-kuttuŋ pamalaŋ ūl̕k
SEMB-house two-SEMB big whale
A whale as big as two houses (AL:19).

(69) nawen-pa=lak-kuttuŋ yaγan-ukka
auntie-GEN-SEMB 1sgA.3sgO-copy
I look like my auntie (father's sister) (AL:342).

Genitive /-pøttuŋ/ ~ /-pa=/. Both allomorphs are subject to allophonic variation according to the rules expressed in 2.10.3b and exemplified in 2.3.2.(5).

/-pa=/ marks nominals denoting close kin as inalienably possessed, e.g. (30), (37), (42), (77). Kin-terms cited in (1)-(14) are eligible to be marked with /-pa=/. /-pøttuŋ/ marks alienably possessed entities, e.g. (70), (77). When ownership is emphasised, kin ineligible for marking with /-pa=/ may be marked with /-pøttuŋ/, e.g. (71)-(73).

The body parts of humans and higher animals are inalienably possessed. This is expressed by the juxtaposition of possessor and possessed nominals, e.g. (74)-(75), except in emphatic sentences, where the body parts of ego or another
may be marked alienable, e.g.: (48), (76).

(70) murray camuyic-pottom
    digging stick 3sgmP-GEN
    It’s his digging stick (AL:40).

(71) mona cemiyic-pottom
    husband 3sgfP-GEN
    That’s her husband (KM:3).

(72) yenere-kan-kunme kan-par-a
    steal-3sgA.3sgfONF-takeAUX 3sgfSNF-walkAUX-NF
    memempena-pottom pampac
    porpoise-GEN baby

    She went and stole porpoise’s baby (T2:58).

(73) jakulsg-pe gan-pe-ce cin pampac
    not-ever 1sgA.2sgO-FUT-give 3sgfDetang baby
    'nace-pottom-pe
    1sgP-GEN-ever

    I’ll never give you this baby. It’s mine for ever!
    (T2:29).

(74) kalppa muyin
    tail dog
    The dog’s tail.

(75) 'nace ca-kak gula
    1sgP 3sgmDevis-Foc finger
    That there is my finger (T4:31).
(76) nakki-pøttunj ṭala ci-kak
Nukkey-GEN finger 3sgmDetang-Foc
This here is Nukkey’s finger (T4:16).

When both allomorphs of the genitive suffix occur on the same item, /-pälak/ precedes /-pøttunj/, e.g. (77).

(77) muyijn pappa-šak-pøttunj
dog father-GEN-GEN
My father’s dog/s.

By haplology, the initial syllable of /-pälak/ is elided after the identical stem-final syllable of {pappa}.

{/pøttunj} overlaps with Dative when it marks an intended attribute, e.g. (78)-(79) and (87).

(78) ṭan-uka-m-pente pattura-pøttunj
1sgA.3plO-tie up-PRES-now dry-GEN
I’m tying up the ones intended to be dry (T4:33).

(79) mipemenen perr carakku-pøttunj-kak
seed 3plDetang good sgm-GEN-Foc
These are the seeds for a good (dye) (T4:50).

3.3.2 Adjective morphology. Adjectives specify the age, size, quantity, colour, smell, taste, feel, and appearance of concrete entities, and the physical, emotional and mental attributes of humans and higher animals.

(i) Word order. Adjectives precede or follow the noun they modify. A sequence of two adjectives is common, e.g. (80), but sequences of three are attested, e.g. (81).
(80) kucukkucuk  pöccalak  karrugmalajanaŋ
little girl  small  beautiful
She's a beautiful little girl (JR:2).

(81) guna ka-wakaca   carakku-nte wuriwuri
then  3sgmSNF-come out  good-now  red

wungarrwungarr  kalla
yellow  colour

Then a good red, a good yellow colour comes out
(T4:52).

(ii) Number and gender marking. The adjective {carakku}
'good', is marked for number, and singular gender, e.g.
(82)-(83). Forms are listed in Table 4. Number and 3sg
gender are marked on deictics and the interrogative adverb
allomorphs /cine/ ~ /cinjina/ ~ /pine/ 'where is he/? she?/
where are they?'. Identical marking occurs on the cognate
Pugupugu adjective, interrogative and deictics (Tryon n.d.: 104). Number- and gender-marking may have been borrowed
into Bachamal from Pugupugu, or may represent the start of a
Bachamal system that failed to be productive.

<table>
<thead>
<tr>
<th>Table 4: Adjective inflections</th>
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<tbody>
<tr>
<td>Singular</td>
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<tr>
<td>Masculine</td>
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<tr>
<td>Feminine</td>
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</table>

(82) perr    win-pakka  kul kamit-tuŋ    parakku-kak
3plDetang tree-same  pretty colours-DAT  good pl-Foc
These same trees are good (sources) for pretty dyes
(T5:49).
(83) canakku kapı-mi ḏaraca
   good sgf 2sgSNF-sit daughter
   Are you OK, daughter?

(iii) Case inflections. If an adjective is the final or only nominal in an NP, it inflects for case, e.g.

Absolutive.

(39) caļkma-nte ḏaccur-makka
   bad-now salty-CAU
   He’s sick from the grog (AL:4).

(84) mōŋkantalapine-Ố riŋ-kappaṭ-ṭut-mene-makka
   trailing-ABS pass by-3plA.3sgfONF-leaveAUX-NF-PERF
   They passed her by and left her trailing behind.

Ergative

(85) kap-ukpica-Ŏ kap-mi-m-pōrraŋ-kani yik-karraŋ
   3sgfSNF-call out-NF 3sgfSNF-sitAUX-PRES-3duD old-ERG
   The old woman is sitting, calling out to those two (T6:40).

Causal See (39)

Locative

(86) pamalaŋ-pene ḏarra-mi
   big-LOC 1plincS-sit
   We all sat in a big mob (JR:12).

(iv) Nominal derivational suffixes

Genitive

(87) wac paypay-pṭtuŋ pap pattura-ŋarrin-yi-ŋa-ŋ-cō
   some white-GEN up dry-lexA.3plO-make-NF-PRES-CONT
   Some (pandanus fronds), intended to be white, we’re drying on top (of bushes) (T4:46).
(v) **Verbalising derivational affixes**

(a) **Inchoative.** An adjective may be incorporated into the inchoative verb {me} 'become' to derive an intransitive verb, e.g. (88).

(88) yik-kape-me \(\tilde{\eta}na\tilde{\eta}meca\) menen \(\tilde{p}arra\)

\[\text{fat-2sgSNF-becomeINCH body edvec many}\]

\[\text{2sgA.3plO-eat-NF}\]

You got fat from eating too many vegetables (AL:213).

(b) **Causative.** An adjective may be incorporated into the causative verb {yi} 'make' to derive a transitive verb, e.g. (89).

(89) carakku-\(\tilde{n}\)en-i-\(\tilde{g}\)a-m

\[\text{good-2sgA.1sgO-makeCAUS-NF-PRES}\]

You’re cheering me up (JR:30).

3.3.2.1 **Numerals**

(90) \(\tilde{n}\)ancic \[\text{one}\]

(91) parrkkatta-malan \[\text{two}\]

(92) parrkkatta-\(\tilde{n}\)ancic \[\text{three}\]

(93) parra-\(\tilde{n}\)ancic \[\text{five}\]

Reduplicating a numeral doubles its value, e.g.

(94) parrkkatta-malan+parrkkatta-malan \[\text{‘four’}\]

(95) parra-\(\tilde{n}\)ancic+parra-\(\tilde{n}\)ancic \[\text{‘ten’}\]

(i) **Case-inflections.** If a numeral is the final or only nominal in an NP, it inflects for case, e.g.
Ergative

(96) ka-wukpica-Ø  ka-caga-Ø-m-parra-nøŋ
3sgmSNF-call out-NF  3sgmSNF-standAUX-NF-PRES-RET-3sgmD

ŋancic-karranŋ
one-ERG

Another stands and calls out to him in reply (T6:11).

Locative

(97) wijn  wungarr-pøttuŋ  ci  pilikan  ŋancic-pene
wood-yellow-GEN  3sgmDetang billycan one-LOC
Those with yellow dye are in this other billy-can
(T5:49).

3.3.3 Compound nominals. Compound nominals behave as a single phonological unit; prominence is marked by raising the pitch of the initial syllable of the first stem in the compound. Compound nominals are productive, viz. the neologisms incorporating English loan lexemes cited in (103), (107)-(108).

All compound nominals attested incorporate nominals denoting body parts or bodily functions. Body parts may be used literally, e.g. (107)-(108), metaphorically, in part-whole compounds describing anatomical details, e.g. (98), details of flora, e.g. (99)-(100), or features of the landscape, e.g. (101)-(103), to describe a kin relation, e.g. (104), or an emotional state, e.g. (105).
Compound nominals are of two types:

(i) noun + noun

(98) mipe+cøt 'toenail' = mipe 'eye' + cøt 'foot'.
(99) mipe+menen 'seed' = mipe 'eye' + menen 'edible vegetable'.
(100) cøt+wij 'root' = cøt + wij 'tree' + cøt 'foot'.
(101) ñal+para 'creek bank' = ñal 'cheek' + para 'creek'.
(102) tirra+kalkalk 'edge of cliff' = tirra 'tooth' + kalkalk 'cliff'.
(103) tirra+cimj 'edge of pavement' = tirra 'tooth' + cimj 'cement'.
(104) pwik+tawarra 'mother's brother's son or daughter' = pwik 'bone' + tawarra 'belly'.
(105) kawen+tawarra 'furious' = kawen 'blood' + tawarra 'belly'.
(106) panpurrk+cøt 'shoe' = panpurrk 'cover' + cøt 'foot'.
(107) pøce+øat 'hat' = pøce 'head' + øat 'hat'.
(108) put+cøt 'shoe' = put 'boot' + cøt 'foot'.

(ii) noun + adjective

(109) ñak+panpapanpa 'spoonbill (bird sp.)' = ñak 'mouth' + panpapanpa 'flat'.
(110) yik+øala 'thumb' = yik 'fat' + øala 'finger'
(111) yik+kurrma 'old man' = yik 'old' + kurrma 'snore'.
3.3.4 Reduplicated forms. Reduplicated forms are treated as a single phonological unit. They are productive, e.g. the neologism cited in (115). True reduplications are of two types:

(i) noun + noun. These include the nonce forms (112)–(114):

(112) gura+gura 'small boy', from gura 'penis'.
(113) kucuk+kucuk 'small girl', from kucuk 'vagina'.
(114) maŋ+maŋ 'base of rock', from maŋ 'rock'.
(115) para+para 'shirt', from para 'arm'.

(ii) adjective + adjective. The reduplicated form intensifies the original, e.g.

(116) pamalaŋ+pamalaŋ 'huge', from pamalaŋ 'big'.
(117) pøccalak+pøccalak 'tiny' from pøccalak 'small'.
(118) nulk+nulk 'bit by bit', from nulk- 'small'.

Onomatopoeic compounds are not true reduplications, because the unreduplicated form does not exist. They are nonce forms, imitating by repetition sounds that evoke the entities they denote, e.g.

(119) picpic 'bird which sings at dawn in the mangroves'.
(120) warkwark 'green tree-frog'.
(121) micijmicij 'sandpaper tree'. Its abrasive leaves are used to scrape off the scabs of ringworm sores.
3.3.5 Pronoun morphology. The core syntactic functions of this language are A, S, O, and D (dative). All core arguments are encoded on the verb: A/S and O by pronominal prefixes, D by pronominal enclitics. D enclitics mark oblique objects. Peripheral arguments are marked on the verb by third person IMPL (implicated) pronominal enclitics. Pronominal prefix forms are listed in Tables 10-12 and analysed in 3.4.3.1-3.

Pronominal verbal prefixes can be supplemented by free pronouns in A/S and O function. Free pronouns inflect for person and number and mark gender in 3sg and in each dual and trial category. Free pronoun forms are listed in Table 5 and analysed in 3.3.5.1. Free pronouns may act as the head of an NP, take nominal case-suffixes and combine with the nominal {nala} 'hand' to form reflexive pronouns; examples are provided.

Pronominal enclitics are discussed in 3.3.5.2.1-3. They frequently occur cliticised to a verb, but may cliticise an NP, e.g. (133)-(134). Pronominal enclitic forms are derivable from free pronoun forms. D pronominal enclitics inflect for person and number and mark gender in 3sg and in each dual and trial category. D forms are listed in Table 6 and discussed in 3.3.5.2.1. IMPL pronominal enclitics inflect for number and mark gender in 3sg. IMPL forms are listed in Table 7 and discussed in 3.3.5.2.2.

Deictics, restricted to third person forms, inflect for
Table 6: Free pronoun inflections

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<th>dual</th>
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Table 7: D pronominal enclitic inflections

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number, gender and case. They commonly occur in attributive function, but may act as the head of an NP. Deictic forms are listed in Table 8 and discussed in 3.3.5.3.

Interrogative pronouns inflect for causal and purposive cases. Interrogative pronouns are described in 3.3.5.4; the indefinite pronoun in 3.3.5.5.

3.3.5.1 Free pronoun forms analysed.
(a) First person is marked on all forms by {ŋa-}.
(b) All second person non-singular forms are marked by {n-}.
(c) All singular forms are suppletive.
(d) 3sg and plural forms are compounds of the morpheme \{-mVyic\} prefixed by /ce_p-/ for 3sg feminine, by /ca-\ for 3sg masculine, and by /parr-/ for 3pl, e.g. (70), (71), (122). V of \{-mVyic\} is predictable: after /i/, /e/ or /ə/, the suffix-initial vowel is /i/. Elsewhere, it is /u/, e.g.

(70) murrąŋ camuyic-pọttuŋ
digging stick 3sgmP-GEN
It's his digging stick (AL:40).

(71) mọna ceŋmiyiic-pọttuŋ
husband 3sgfP-GEN
He's her husband (KM:3).

(122) parrmuyic-taŋkarra mirak-parr-p-muyarŋ
3plS-another dance-3plSFUT-FUT-danceFUTAUX
These other women, they'll dance.

(e) Dual forms combine a plural form with the enclitic dual.
morpheme {-kaŋi}, e.g. (123). Enclitic {-kaŋi} may co-occur with the homophonous nominal derivational case-suffix {-kaŋi} 'one of a group', e.g. (60), but the structural possibilities of each differ and ambiguity does not occur.

(f) Trial forms combine a plural form with an enclitic trial marker, e.g. (123). The trial marker is a calque of the 3sg IMPL pronominal enclitic + the dual morpheme {-kaŋi}. Trial allomorphs are gender-marked: /-penakaŋi/ is marked masculine by {-n-}; /-paŋakaŋi/ is marked feminine by {-ŋ-}.

(123) ɲarr-pe-ŋ-kaŋi ɲarrakaŋi pinpin
       lduexs-go-PRES lduP Binbin

wanpirri ɲarrapaŋakaŋi
Wanbirri ltrfP

I'm going with Binbin; we're both (going) with Wanbirri (T4:15).

The following are examples of free pronoun usage:

(i) **Case-inflections**: Free pronouns inflect for case, e.g.

Absolutive. A free pronoun marked absolutive may function as the head of an NP in a locative question, e.g. (124), govern the person and number of a transitive verb, e.g. (126), or be the object of a transitive verb, e.g. (125).

(124) ɲanjaŋ-ọ kalalak-ọ ɲace-ọ
    person-ABS black-ABS 1sgP-ABS
    I'm a blackfella (AL:31).

(125) naka ka-pọ-mene ɲace-ọ
    Who 3sgA.3sgmONF-hit-NF 1sgP-ABS
    Q: Who did he hit? A: Me.
**Ergative.** Ergative-marking is not obligatory on free pronoun agents of transitive verbs, e.g.

(126) kamangka, ɲace(-karraŋ)-makka yan-pø-mene
nothing 1sgP-ERG-PERF 1sgA.3sgmO-hit-NF
No, it was me that hit him (JM:9).

(ii) Derivational suffixes. Free pronouns take derivational suffixes, e.g.

**Place**

(127) kane-nini-pente rak wa-nic-ene-nøŋ
2sgP-PLAC-now country 3A.3O-wait for-NF-3sgmD

ɲawen-palak-karraŋ
auntie-GEN-ERG

My auntie (father’s sister) waited for him at your place (JR:26).

**Semblative**

(128) ɲace-kuttuŋ-karra
1sgP-SEMB-another
Same with me (T3:2).

**Genitive.** Free pronouns occur most commonly in genitive constructions, eg. (70)-(71), (73).

(iii) Function in discourse. The use of a free third person pronoun to mark a new referent in narrative is obligatory, e.g.

(129) cenmiyic kuca cenmiyic kacu
3sgfP that way 3sgfP this way

cenmiyic kacucu kap-par-a
3sgfP out of sight 3sgfSNF-walk-NF
X walked that way, Y walked this way, Z walked out of sight (T4:14).

(iv) Reflexive pronouns. A free pronoun co-referential with the subject of its verb combines with the noun {ŋala} 'hand' to form a reflexive pronoun, e.g.

(130) kappuk-ŋa-puka ŋace-ŋala
wash-1sgS-batheAUX 1sgP-hand
REFL

I had a shower (JR:31).

(131) muttukka ka-yika-ŋ ka-par-a
car 3sgmSNF-go down-PRES 3sgmSNF-walkAUX-NF

camuyic-ŋala
3sgmP-hand
REFL

The car is travelling of its own accord (JR:33).

Reflexive pronouns reinforce a verb marked with the derivational reflexive suffix, e.g.

(132) k̃-marr-ica ceŋmiyic-ŋala
3sgfSNF-rub-REF 3sgfP-hand
REFL

She painted herself (BL:2).

3.3.5.2 Pronominal enclitics. In the corpus, pronominal enclitics occur most often as the final element of a verb, but may attach to a nominal, e.g. (190), or NP, e.g. (133)–(134), (143).

(133) ŋa-par-a-merre narra kamanja rak-manja-ŋacaŋ
1sgS-walk-NF-again but nothing place-EMP-3sgfD
I went again, but in vain. She wasn’t there (AL:333).
3.3.5.2.1 **D pronominal enclitics.**

(i) Comparison of Tables 5 and 6 reveals the following similarities in the underlying stems of free pronouns and D pronominal enclitics:

(a) First person forms share \{ŋa-\}.
(b) All singular forms are suppletive.
(c) Masculine gender is marked on 3sgm \{nøŋ\} by \{n-\}, e.g. (127), (135). Feminine gender is marked on 3sgf \{ŋacaŋ\} by \{ŋ-\}, e.g. (133), (136). The same gender-marking occurs on the nominals denoting kin-terms cited in (1)-(14).

(134) wik ka-wakaca-∅ pøce-pene-paŋa
water 3sgSNF-come out-NF head-LOC-3sgfIMPL
Water came out of her head (T2:50).

(135) yjmek-pente ŋal-yerren-paka
tomorrow-now sew-lplincA.3plO-stabFUTAUX
IMP
ŋarra-mu ŋarr-me-nøŋ perrekut
lplincS-sitFUTAUX lplexS-tell-3sgmD whitefella
IMP
cawana-kak 3sgmDeaud-FOC

'Let us sit and sew them first thing tomorrow' we said to that whitefella (T4:57).

(136) kane-nte pe-pe menep kañ-me-ŋacaŋ
2sgP-now 2sgSFUT-go edveg 3sgfSNF-tell-3sgfD
IMP

'It's your turn to go for edible vegetables!' she told her (T2:16).
(d) Non-singular D underlying stems are derivable from corresponding free forms by the addition of the oblique suffix \{-(u)ŋ\}. The allomorph \/-uŋ/ occurs only in lduincD. \{-ŋaŋk+uŋ\}. Elsewhere, the oblique suffix is realised as \/-ŋ/. Dual D forms are exemplified in (137), trial in (138), plural in (139).

(137) wula ḵancic-mini ḷa-wakacq-∅-nawarrakqani
year one-then 1sgS-arrive-NF-2duD
It was last year, when I came to you both (JM:2).

(138) mecem ka-ye-wene-porranpamqakani
meat 3sgA.3sgONF-give-NF-3trfD
He gives/gave meat to the three women.

The irregular verb \{ce\} 'give' is discussed in Appendix 2.

(139) cinca ḷawulaŋ-karraŋ penta-qi-kirrwa-ŋarraran
3sgmDevis woman-ERG 3A.3plOFUT-FUT-dig-1plincD
That woman you can see will dig them for us all.

(ii) D pronominal enclitics are used for the Recipient-like argument of ditransitive verbs, e.g. (63), (138), (140) and for oblique objects, e.g. (133), (135), (137), (139), (141).

(140) perren-mqnce-ŋarraŋ
2plA.3plO-send-1plexD
IMP
Send them to us!

(141) mecem nen-ye-wene-ŋarrkka
meat 2sgA.3plO-give-NF-1sgD
You gave them meat on behalf of me/ belonging to me (AL:311).
3.3.5.2.2 IMPL pronominal deictics.

Table 7: IMPL pronominal enclitic inflections

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>3m</td>
<td>-pena</td>
<td></td>
</tr>
<tr>
<td>3f</td>
<td>-paŋa</td>
<td>-pørra</td>
</tr>
</tbody>
</table>

(i) Dual forms are plural forms + {-kapi}

(ii) Trial forms are plural forms + /-penakapi/ /paŋakapi/.

(iii) Comparison of Tables 5 and 7 reveal the following similarities in the underlying stems of free pronouns and IMPL pronominal enclitics:

(a) The free pronoun trial marker is a calque of a gender-marked allomorph of the 3sg IMPL pronominal enclitic plus the dual morpheme {-kapi}.

(b) 3sg free pronoun forms and IMPL, pronominal enclitic allomorphs show similar but not identical gender-marking.

(c) 3 trial free pronoun and IMPL pronominal enclitic forms are identical.

(ii) IMPL pronominal enclitics denote peripheral arguments, which are implicated in the action/state expressed by their verb, e.g. (134), (142)-(143), (190).

(142) kak-ŋarr-ika ŋarr-pe-ŋ-cø-pena
    go away-1plexS-go down 1plexS-goAUX-PRES-CONT-3sgmIMPL
    We keep on going off down with him (T5:3).

(143) kaŋ-guccica muc-karranŋ-papa pampac-∅
    3sgfs-withhold wallaby-ERG-3sgfIMPL baby-ABS
    Wallaby withheld the baby girl (from her) (T2:34).
3.5.5.3 Deictics. Bachamal speakers distinguish three sets of third person deictics, according to their degree of distance from the speaker. Entities within reach are classed as tangible (tang), e.g. (73), those within hearing as audible, (aud), e.g. (299)-(301), those within view as visible, (vis), e.g. (29), (40), (139), (145), (148)-(149).

Deictics inflect for number, and mark gender in 3sg. Forms are listed in Table 8 and illustrated in (144)-(145), (148)-(149).

Deictics occur most often in attributive function, e.g. (21), (29), (48), (73), (75)-(76), (82), (97), (139), (149), but may occur independently of a nominal, in S function, e.g. (40), (49), (144), or in A function, marked ergative, e.g. (145).

Audible deictics most commonly occur cliticised by the focal clitic particle {-kak} to denote a previously mentioned entity, e.g. (49), (135), (144).

Table 8: Deictic inflections

<table>
<thead>
<tr>
<th></th>
<th>tangible</th>
<th>audible</th>
<th>visible</th>
</tr>
</thead>
<tbody>
<tr>
<td>3sgm</td>
<td>ci</td>
<td>cawana</td>
<td>cica</td>
</tr>
<tr>
<td>3sgf</td>
<td>cin</td>
<td>cepena</td>
<td>cinca</td>
</tr>
<tr>
<td>3pl</td>
<td>perr</td>
<td>parrana</td>
<td>pørra</td>
</tr>
</tbody>
</table>

(144) karrugmalaganaŋ pampac cepmiyic-pøttunŋ-kak
beautiful baby 3sgfD-GEN-Foc
Porpoise's child was beautiful; wallaby's was no good, that one you've heard about was no good (T2:54).

That woman always digs up edible vegetables for us.

3.3.5.4 Interrogative pronouns. Interrogative pronouns {naka} 'Who?' and {yinic} 'What?' always occur utterance initially. Both may take some nominal inflections.

(i) {naka} 'Who?'.

Absolutive

(146) naka-∅ kane
who-ABS 2sgP

Who are you? (JR:2).

Ergative. Ergative-marking is not obligatory on interrogative pronoun agents, e.g.

(147) naka-(karraŋ) warrk-ka-me-∅ ya
who-ERG win-3sgSNF-beINCH I don't know

Genitive

(148) naka-pøttun ci-kak
who-GEN 3sgmDetang-Foc

Who does this belong to? (JR:6).
(ii) \{pinic\} 'What?' Interrogative \{pinic\} inflects to show dative, causal and instrumental case relations, e.g.

**Dative**

(149) \_pinic-cug-pe _pen-pø-mene-makka pørra ḡanaŋ
what-DAT-ever 2sgA.3pl0-hit-NF-PERF 3plDevis man
Whatever did did you hit those men for? (JR:16).

**Causal**

(37) \_pinic-makka kan-pette-∅
what-CAU 3sgfSNF-die-NF
What did she die of? (AL:25).

**Instrumental**

(150) \_pinic-cene wekpec mørakmala-ka-wa-∅
what-INS basket make-2sgA.3sgONF-makeAUX-NF
What are you making/did you make the basket out of?

({wa} 'make' is an irregular verb, discussed in Appendix 2).

3.3.5.5 Indefinite pronoun. In its indefinite sense, \{pinic\} may be attributive or predicative. If it is attributive, it precedes the noun it qualifies. Indefinite \{pinic\} occurs only in absolutive case, and only in lists, e.g. (151)-(152).

(151) menen wujmarrac-∅ _pinic-∅ menen-∅ melŋmelŋ-∅
edvegncm long yam-ABS IND-ABS edveg-ABS cheeky yam-ABS

kanpi-kIRRwa-∅ karr-pe-g-kapi
3A.3plONF-dig-NF 3duSNF-goAUX-PRES

They're both going and digging long yams, cheeky yams, any edible vegetable (T3:16).
Goanna she kills/killed, or possum, or bandicoot, any meat (T2:19).

3.4 Verb morphology. Bachamal verb stems are of two types. Type A bears tense-marked pronominal prefixes, inflects for tense, mood, aspect and polarity and may carry a reflexive/reciprocal derivational suffix (see 3.4.3.1-5). Type B bears no pronominal prefixes, does not inflect for tense, mood or polarity, and may not carry a derivational suffix. Type B stems may function as a complement to a verb, and bear nominal derivational suffixes (see 3.4.4).

The corpus of 271 verbs contains 134 simple verbs, consisting of Type A verb stems, and 137 compound verbs, in which a type A verb acts as an auxiliary to a type B verb stem. All verbs attested are listed in Appendix 1. Compound verbs are discussed in 3.4.5.

27 type A verb stems and 4 type B verb stems incorporate nominals in O function to form further verb stems, e.g. {pik-nipe} 'gaol', from {pik} 'rope' and type A verb root {nipe} 'hold'. See 3.4.7 for a discussion of incorporated nominals.
In Pupupu, (Tryon n.d.:35; 1974:193)), all transitive verbs, and most intransitive verbs are compound verbs with the structure: verb stem + inflected intransitive auxiliary verb.

Pupupu auxiliary verbs may occur independently as simple intransitive verbs and have the structure: pronominal prefix + (tense) + stem + aspect.

Bachamal has as many simple as compound intransitive and transitive verbs; it is the converse of Pupupu in requiring for its compound transitive verbs the structure: type B verb stem + transitive type A verb as auxiliary.

In Bachamal, a simple or compound verb may be followed by one of five intransitive auxiliary verbs in an auxiliary verb complex, where the auxiliary specifies the bodily orientation of the co-referential subject and bears in addition to its own inflectional suffixes, aspectual suffixes and pronominal enclitics governed by the main verb.

Verbs may be classified according to transitivity (3.4.1), or conjugation (3.4.2). 3.4.3 analyses simple (=type A) verb structure; 3.4.4 describes type B verb stems; 3.4.5 describes compound verbs. 3.4.6 discusses auxiliary verb complexes; 3.4.7 deals with incorporated nominals. 3.4.8 describes the interrogative verb.
3.4.1 **Transitivity.** Transitivity is the notion of 'an A "doing something to" a patient' (Hopper and Thompson 1980:274). The pronominal prefixes to all Bachamal verbs mark participants; for almost all verbs, this equates with transitivity. The corpus contains single argument, two argument and three argument verbs. Verbs admit of three case-frames:

(i) **Intransitive:** On 40% of verbs in the corpus, the pronominal prefix marks a single participant, the intransitive subject (S). Oblique objects are marked by a D pronominal enclitic, e.g. (137).

(ii) **Transitive:** On the remaining 60% of verbs in the corpus, the pronominal prefix marks two arguments: transitive subject (A) and transitive object (O). If an agent nominal is overtly expressed, it is marked ergative, unless the sentence is counterfactual, or the agent is inanimate and the verb inflected for future tense. 4% of transitive verbs are ditransitive, e.g. {ce} 'give, {kunme} 'bring', {ka} 'take', {mọnce} 'send'. These verbs may be additionally marked for a third argument with a D pronominal enclitic denoting a human Recipient, e.g. (63), (138), (140), or oblique object, e.g. (139), (141).

(iii) **Semitransitive:** In 4% of transitive verbs, e.g. {purra} 'look for', {nic} 'wait for', the A has no effect on the patient, which is marked by a D pronominal prefix, although the pronominal prefix to the verb marks A and O,
e.g. (175) and an agent nominal is marked ergative, e.g. (127).

On the two argument verbs, {me} 'tell', {wunjmice} 'tell lie to', {wukpice} 'call out to', a human third argument is marked by a D pronominal enclitic. On the verb {juuccica} 'withhold', an IMPL pronominal enclitic marks the (animate) object withheld. The presence of a pronominal enclitic on these semi-transitive verbs causes ergative case-marking on an agent nominal, but this is not cross-referenced on the pronominal verbal prefix, which marks a single participant only. The reason for this may lie in the low transitivity of the verbs in question; alternatively, these verbs may be in the process of changing their transitivity.

3.4.2 Conjugations. Verbs are marked for future or non-future tense, and, on the basis of these inflections, can be grouped into four conjugations. Conjugations are analysed in Table 9. Tense-inflections pattern as follows:

(a) Future

\{-p- + stem + -pa\} Conjugation 1
\{-p- + stem + -ag\} Conjugation 3
\{-p- + stem + -Ø\} Conjugations 2,4.

The various realisations of the future tense morphemes are derived by the following ordered morphological rules:
Table 9: Verb conjugations

<table>
<thead>
<tr>
<th>Conjugation no.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total members:</td>
<td>41</td>
<td>36</td>
<td>46</td>
<td>148</td>
</tr>
<tr>
<td>% transitive:</td>
<td>100%</td>
<td>94%</td>
<td>8%</td>
<td>38.5%</td>
</tr>
</tbody>
</table>

**monosyllabic members:**
- *pa* 'hit'
- *ma* 'pick up'
- *ka* 'fetch'
- *can* 'stand'
- *n* 'see'
- *r̪* 'cry'
- *ci* 'eat/drink'
- pa 'smash'
- ce 'give'

**disyllabic members:**
- *ŋawe* 'hear'
- *paŋka* 'stab'
- *pəŋme* 'smell'

By (M 2) w ----> Ø / p [Vx] V

**Vowel-insertion before monosyllabic verb stems**

By (M 3a) Ø ----> V1 / p [FUT] [stem CV1]#

**Vowel-insertion before polysyllabic verb stems**

By (M 3b) Ø ----> V1 / p [FUT] [non-labialC]stem V1

(b) Non-future

<table>
<thead>
<tr>
<th>stem + { -mene }</th>
<th>Conjugation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>stem + { -jana }</td>
<td>Conjugation 2</td>
</tr>
<tr>
<td>stem + { -e/a }</td>
<td>Conjugation 3</td>
</tr>
<tr>
<td>stem + { -Ø }</td>
<td>Conjugation 4</td>
</tr>
</tbody>
</table>

e.g.

**Conjugation 1**

yaŋ-țut-mene
lsgA.3sgmO-leave-NF
I leave/left him/it.

yaŋ-pu-țul-pa
lsgA.3sgmO-FUT-leaveFUT-FUT
I will leave him/it.

**Conjugation 2**

yan-ma-ŋana
lsgA.3sgmO-pick up-NF
I pick/ed him/it up.

yaŋ-pu-mu
lsgA.3sgmO-FUT-pick upFUT
I will pick him/it up.

**Conjugation 3**

ŋa-pinc-e
lsgS-climb up-NF
I climb/ed up.
Conjugation 4

yo-a-p-pin-clear-ap
1sgS-FUT-climb up-FUT
I will climb up.

Conjugation 4

yaq-kirrwa-∅
1sgA.3sgmO-dig-NF
I dig/dug it.

yaq-pi-kirrwa
1sgA.3sgmO-FUT-dig
I will dig it.

The following processes explain the derivation of the surface forms of the four conjugations:

Conjugation 1

stem + NF = stem + -mene

stem + FUT = -p- + stem + -pa

Morpheme-realisation in future

Ordered M 2, M 3 and M 4 operate:

(M 4) -pa_{FUT CM} \longrightarrow \left\{ \begin{align*}
\emptyset & / \text{CV}_{FUT} + \{ \text{CV} \}_{stem} + \_ \\
\text{pe} & / \text{n} \\
\text{c} & \\
\text{pa} & 
\end{align*} \right\}

e.g.

pØ \longrightarrow -pØ-pØ_{FUT} \quad 'hit' 

ce \longrightarrow -pe-ce-pe_{FUT} \quad 'give' 

cen \longrightarrow -pe-cen-pe_{FUT} \quad 'insert' 

wuc \longrightarrow -p-uc-pe_{FUT} \quad 'scold' 

tørrp \longrightarrow -pØ-tørrp-pa \quad 'roast in sand'.

\text{g-Ø-p-pinc-ap}
Exceptions

nic look after; wait for
pinc hang up
pirr chop do not take -pa suffix.

Adjustment

By (M 5) t ----→ l / _____ ]_{stem} [FUTCM pa

Stem-vowel addition

By (M 6) β ----→ e / c } \ FUTstemconj 1 _____ #

Morpheme-realisation in non-future

By (M 7) mene_{NF,CM} ----→ {nene / ci _____

wene / ye _____

{ene / c _____

n _____

rr _____

mene

Exceptional vowel-change in non-future

-ene}_{NF} ----→ ine / pirr]_{stem} _____

e.g. (Irregular verbs are marked I)

<table>
<thead>
<tr>
<th>stem + NF</th>
<th>stem + FUT</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ci-pene</td>
<td>-pi-ci</td>
<td>eat</td>
</tr>
<tr>
<td>ci-pene</td>
<td>-pi-ci</td>
<td>drink (I)</td>
</tr>
<tr>
<td>n-ene</td>
<td>-pe-na</td>
<td>see</td>
</tr>
<tr>
<td>ye-wene</td>
<td>-pe-ce-pe</td>
<td>give (I)</td>
</tr>
</tbody>
</table>
pirr-ine -p-pirr-e chop
nic-ene -pi-nic-e look after
nicene -pi-nice wait for (I)
pînc-ene -p-pînc-e hang up
tôrrp-mene -pô-tôrrp-pa roast in sand
țat-mene -pa-țal-pa bite
țut-mene -pu-țul-pa leave
cap-mene -pa-cap-pa stretch
cen-mene -pe-cen-pe put in
pô-mene -pô-pô hit
wara-mene -pa-ra-pe join
wu-mene -pu-pa spear
wuc-mene -p-uc-pe scold
wun-mene -p-upn-pe throw

41 verbs are attested in Conjugation 1: the 18 simple verbs cited above + 10 further simple verbs formed from a type A verb stem + incorporated nominal; 11 compound verbs + 2 further compound verb formed from a type B verb stem + incorporated nominal. Conjugation 1 is listed in full in Appendix 1.

Conjugation 2 stem + NF = stem + -ganana
stem + FUT = -p- + stem + -ô

Morpheme-realisation in future

By (M 3a),

pa ----> pa-pa<sub>FUT</sub> 'smash'
ô ----> ô-ô<sub>FUT</sub> 'cry'

Stem-vowel-addition

By (M 8) ô ----> a/ C<sub>FUT</sub>stem<sub>conj 2</sub> #
e.g. marr ----> p-marr-a<sub>FUT</sub> 'paint'
Morpheme-realisation in non-future

By (M 9) \( \eta \)ana\(_{NFcM} \) ----> \( \eta \)a / i
\( \alpha \)/ \( \beta \)\(stem \) _____
na / \( \phi \)\(stem \) _____
ana / \( c \)
\( rr \)\(stem \) _____
\( \eta \)ana

Exceptional vowel-change in non-future

-ana\(_{NF} \) ----> una/ purr\(stem \) _____

e.g.

<table>
<thead>
<tr>
<th>stem + NF</th>
<th>stem + FUT</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>rø-na</td>
<td>-pø-rø</td>
<td>cry</td>
</tr>
<tr>
<td>yi-ña</td>
<td>-pu-yu</td>
<td>put down</td>
</tr>
<tr>
<td>ma-ña</td>
<td>-pu-mu</td>
<td>pick up</td>
</tr>
<tr>
<td>pa-ña</td>
<td>-pa-pa</td>
<td>smash</td>
</tr>
<tr>
<td>purr-una</td>
<td>-p-purr-a</td>
<td>hit with missile</td>
</tr>
<tr>
<td>purr-una</td>
<td>-p-purr-a</td>
<td>look for (I)</td>
</tr>
<tr>
<td>marr-ana</td>
<td>-p-marr-a</td>
<td>paint</td>
</tr>
<tr>
<td>mac-ana</td>
<td>-p-maca</td>
<td>be scared of</td>
</tr>
<tr>
<td>wuc-ana</td>
<td>-p-uc-a</td>
<td>carry</td>
</tr>
<tr>
<td>wac-ana</td>
<td>-p-ac-a</td>
<td>immerse.</td>
</tr>
</tbody>
</table>

36 verbs are attested for Conjugation 2; the 10 simple verbs cited above + 9 further simple verbs formed from a type A verb stem + incorporated nominal; 17 compound verbs. Conjugation 2 is listed in full in Appendix 1.

Conjugation 3

<table>
<thead>
<tr>
<th>stem + NF = stem + -e/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>stem + FUT = -p- + stem + -(a)(η)</td>
</tr>
</tbody>
</table>
Morpheme-realisation in future

M 2 and M 3 operate, e.g.

\[
\begin{align*}
\text{wuŋc-e }_{\text{NF}} & \rightarrow \text{-p-uncture-aŋ }_{\text{FUT}} \quad \text{defecate} \\
racc-e & \rightarrow \text{-pa-racc-an }_{\text{FUT}} \quad \text{go} \\
cinpic-e_{\text{NF}} & \rightarrow \text{-pi-cinpic-aŋ }_{\text{FUT}} \quad \text{go in.}
\end{align*}
\]

Exceptional vowel-change in future

\[
\begin{align*}
\text{par-a }_{\text{NF}} & \rightarrow \text{pur-i }_{\text{FUT}} \quad \text{walk}
\end{align*}
\]

Exceptional forms in future

\[
\begin{align*}
\text{yep-e }_{\text{NF}} & \rightarrow \text{-pe-y-aŋ }_{\text{FUT}} \quad \text{lie} \\
\text{ka-pca }_{\text{NF}} & \rightarrow \text{-pa-ka-ŋ }_{\text{FUT}} \quad \text{take}
\end{align*}
\]

e.g.

<table>
<thead>
<tr>
<th>stem + NF</th>
<th>stem + FUT</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>racc-e</td>
<td>-pa-racc-aŋ</td>
<td>go</td>
</tr>
<tr>
<td>cinpic-e</td>
<td>-pi-cinpic-aŋ</td>
<td>go in</td>
</tr>
<tr>
<td>cappay-a</td>
<td>-pa-cappay-aŋ</td>
<td>stretch</td>
</tr>
<tr>
<td>yicc-a</td>
<td>-pi-yicc-aŋ</td>
<td>ask</td>
</tr>
<tr>
<td>ye-pe</td>
<td>-pe-y-aŋ</td>
<td>lie</td>
</tr>
<tr>
<td>ka-pca</td>
<td>-pa-ka-ŋ</td>
<td>take</td>
</tr>
<tr>
<td>piŋc-e</td>
<td>-p-piŋc-aŋ</td>
<td>climb up</td>
</tr>
<tr>
<td>par-a</td>
<td>-p-pur-iŋ</td>
<td>walk</td>
</tr>
<tr>
<td>maŋcin-e</td>
<td>-p-maŋc-aŋ</td>
<td>get up</td>
</tr>
<tr>
<td>wecc-a</td>
<td>-p-ecc-aŋ</td>
<td>give birth</td>
</tr>
<tr>
<td>wuŋc-e</td>
<td>-p-wuŋc-aŋ</td>
<td>defecate.</td>
</tr>
</tbody>
</table>

46 verbs are attested for Conjugation 3: the 11 simple verbs cited above + 4 further simple verbs, formed from a type A verb stem + incorporated nominal; 22 compound verbs + 9 further compound verbs formed from a type B verb stem + incorporated nominal. Conjugation 3 is listed in full in Appendix 1.
Conjugation 4  stem + NF = stem + Ø

stem + FUT = -p- + stem

Morpheme-realisation in future
M 2 and M 3 operate.

Exceptions to M 3.

\[
\begin{align*}
\text{mi} & \rightarrow \text{-pmu}_{\text{FUT}} \\
\text{pe} & \rightarrow \text{-ppe}_{\text{FUT}}
\end{align*}
\]

Exceptional vowel-change in future

\[
\text{mi} \rightarrow \text{mu}_{\text{FUT}} \quad \text{sit}
\]

Exceptional consonant-changes in future

\[
\begin{align*}
\text{pette} & \rightarrow \text{pere}_{\text{FUT}} \quad \text{die} \\
\text{pagka} & \rightarrow \text{paka}_{\text{FUT}} \quad \text{pierce}
\end{align*}
\]

Exceptional form in future

\[
\text{cağa} \rightarrow \text{cağ}_{\text{FUT}} \quad \text{stand}
\]

e.g.

<table>
<thead>
<tr>
<th>stem + NF</th>
<th>stem + FUT</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>turra</td>
<td>-pu-turra</td>
<td>cook</td>
</tr>
<tr>
<td>nipe</td>
<td>-pi-ripe</td>
<td>hold (I)</td>
</tr>
<tr>
<td>rikka</td>
<td>-pi-rikka</td>
<td>sort</td>
</tr>
<tr>
<td>rîna</td>
<td>-pi-rîna</td>
<td>fall, be born</td>
</tr>
<tr>
<td>cetpe</td>
<td>-pe-cetpe</td>
<td>take out</td>
</tr>
<tr>
<td>ğaca</td>
<td>-pa-ğaca</td>
<td>return</td>
</tr>
<tr>
<td>cağa</td>
<td>-pa-cağ</td>
<td>stand</td>
</tr>
<tr>
<td>currka</td>
<td>-pu-currka</td>
<td>jump</td>
</tr>
<tr>
<td>yika</td>
<td>-pi-yika</td>
<td>come down</td>
</tr>
<tr>
<td>kîrrwa</td>
<td>-pi-kîrrwa</td>
<td>dig</td>
</tr>
<tr>
<td>kaca</td>
<td>-pa-kaca</td>
<td>bake</td>
</tr>
<tr>
<td>karriñmice</td>
<td>-pa-karriñmice</td>
<td>play</td>
</tr>
</tbody>
</table>
kapica -pa-kapica discard
kunme -pu-kunme bring
ŋawe -pa-ŋawe hear
ŋawa -pa-ŋawa recognise
ŋuccica -pu-ŋuccica withhold
ŋuka -pu-ŋuka blow (I)
pe -p-pe go
pette -p-pere die
ŋnome -p-ŋnome smell; extinguish
ŋorrice -p-ŋorrice scratch
ŋome -p-ŋome hug
panpa -p-panpa be ignorant of
panwica -p-panwica go to sleep
palama -p-palama cut
parrakka -p-parrakka pull
pajka -p-pajka stab
mi -p-mi sit
me -p-me tell, become
mŋnce -p-mŋnce send
mŋpica -p-mŋpica swallow
mara -p-mara kick
werepice -p-werepice speak
waja -p-waja drown
wakaca -p-wakaca arrive
wu -------- grab (I)
wunme -p-wunme deceive
wunjmice -p-wunjmice tell lie to
wuka -p-wuka tie up
wukka -p-wukka copy
wukpica -p-wukpica call out

148 verbs are attested for Conjugation 4: the 42 simple verbs cited above + 30 further verbs formed from a type A verb + incorporated nominal; 62 compound verbs + 14 further compound verbs formed from a type B verb stem + incorporated nominal. Conjugation 4 is listed in full in Appendix 1.
3.4.3 Type A verb structure. A simple Bachamal verb contains the following ordered elements (bracketed elements are optional):


\[
egin{align*}
1 & = \text{pronominal prefix} \\
(2) & = \text{future tense prefix} \\
3 & = \text{verb stem} \\
(4) & = \text{future conjugation marker} \\
(5) & = \text{non-future tense suffix} \\
(6) & = \text{reflexive/reciprocal suffix} \\
(7) & = \text{admonitory suffix} \\
(8) & = \text{present aspectual suffix} \\
(9) & = \text{negative suffix} \\
(10) & = \text{return aspectual suffix} \\
(11) & = \text{continuous aspectual suffix} \\
(12) & = \text{perfective aspectual marker} \\
(13) & = \text{habitual aspectual suffix} \\
(14) & = \text{purposive aspectual marker} \\
(15) & = \text{clitic particle} \\
(16) & = \text{clitic particle} \\
(17) & = \text{pronominal enclitic}
\end{align*}
\]

Tense affixes were analysed in 3.4.2. Pronominal prefixes are described in 3.4.3.1. Modal affixes are described in 3.4.3.2, the polarity suffix in 3.4.3.3, aspectual affixes in 3.4.3.4, and the derivational suffix in 3.4.3.5.
3.4.3.1 **Pronominal prefixes.** Morphological and phonological rules referred to in this section are expressed and exemplified in sections 2:11-2:12.

3.4.3.1.1. **Pronominal prefixes to intransitive verbs.**
Forms are listed in Table 10 and then analysed.

**Table 10: Bound pronominal prefixes to intransitive verbs**

<table>
<thead>
<tr>
<th></th>
<th>Non-future</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>ga-</td>
<td></td>
</tr>
<tr>
<td>2sg</td>
<td>kajV-</td>
<td>jV-</td>
</tr>
<tr>
<td>3sgm</td>
<td>ka-</td>
<td>yV-</td>
</tr>
<tr>
<td>3sgf</td>
<td>kaj-</td>
<td>yVγ-/yVc-</td>
</tr>
<tr>
<td>1duinc</td>
<td>ŋaŋka-</td>
<td></td>
</tr>
<tr>
<td>1duex</td>
<td>ŋarra-kapi</td>
<td></td>
</tr>
<tr>
<td>1pinc</td>
<td>ŋarra-</td>
<td></td>
</tr>
<tr>
<td>1plex</td>
<td>ŋarr-</td>
<td></td>
</tr>
<tr>
<td>2pl</td>
<td>kajka-</td>
<td>jerr-</td>
</tr>
<tr>
<td>3pl</td>
<td>karr-</td>
<td>parr-</td>
</tr>
</tbody>
</table>

(i) Dual forms, except 1duinc, are marked by the enclitic dual morpheme {-kapi}, e.g. (123), (151), (153).

(153) parr-p-pur-iŋ-kapi
3duSFUT-FUT-walkFUT-FUTCMP
They'll both go (AL:57).

(ii) Trial forms are marked by the trial enclitic {-pVNakapi}, e.g. (154).

(154) parr-p-pur-iŋ-penakapi
3trmSFUT-FUT-walkFUT-FUTCMP
The three men will go.

(iii) Tense-marking is neutralised on first person forms.
(iv) Vowel alternation in 2sgSNF {kapV-} is predictable:
Prefix-final V copies the vowel in the next syllable, e.g.

```
kapV-mi-∅ > kanimi
2sgSNF-sit-NF you sit/sat
kapV-me-∅ > kaneme
2sgSNF-say-NF you say/said
kapV-rø-na > kanørna
2sgSNF-cry-NF you cry/cried
kapV-par-a > kanapara
2sgSNF-walk-NF you walk/ed
kapV-wuŋc-e > kanuwunce
2sgSNF-defecate-NF you defecate/d.
``` 

(v) 2sgFUT {ŋV-}; 3sgmFUT {yV-}; 3sgfFUT /yVp-/ ~ /yVc-./.
Prefix V is predictable: If the vowel in the next syllable is /i/, /e/ or /∅/, it is /e/; otherwise, it is /a/, e.g.

```
ŋV-p-yicc-aŋ > ŋepiyiccaŋ (by M 3b)
2sgSFUT-FUT-ask-FUTCM you will ask
yVp-p-me > yepmeye (by M 3a)
3sgfSFUT-FUT-say she will say
yV-p-rø > yepörø (by M 3a)
3sgmSFUT-FUT-cry he will cry
ŋV-p-racc-aŋ > ŋeperaccaŋ (by M 3b)
2sgSFUT-FUT-go-FUTCM you will go
yVp-p-waŋa > yapąŋa (by M 2)
3sgfSFUT-FUT-drown she will drown
yV-p-wuŋc-aŋ > yapuŋcaŋ (by M 2)
3sgmSFUT-FUT-defecate-FUTCM he will defecate
yVp-p-maŋc-aŋ > yacmancaŋ (by P 8, P 9)
3sgfSFUT-FUT-get up-FUTCM she will get up
yVp-p-pur-ŋą > yacpurįŋ (by P 8, P 9)
3sgfSFUT-FUT-walk-FUTCM she will walk.
```
### Table 11: Bound pronominal prefixes to non-future transitive verbs

<table>
<thead>
<tr>
<th></th>
<th>S I N G U L A R</th>
<th>D U A L</th>
<th>P L U R A L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sgA</td>
<td>2sgA</td>
<td>3sgm/fA</td>
<td>1incA</td>
</tr>
<tr>
<td>1sg0</td>
<td>nen-</td>
<td>gan-</td>
<td>yan-</td>
</tr>
<tr>
<td>2sg0</td>
<td>yan-</td>
<td>kan-</td>
<td>kan-</td>
</tr>
<tr>
<td>3sgm0</td>
<td>yan-</td>
<td>kanca-</td>
<td>kanca-</td>
</tr>
<tr>
<td>3sgf0</td>
<td>yan-</td>
<td>kanca-</td>
<td>kanca-</td>
</tr>
<tr>
<td>1duinc0</td>
<td>nen(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
</tr>
<tr>
<td>1duex0</td>
<td>nen(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
</tr>
<tr>
<td>1plinc0</td>
<td>nen(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
</tr>
<tr>
<td>1plex0</td>
<td>nen(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
<td>yrr(pv)-jrr-</td>
</tr>
<tr>
<td>2pl0</td>
<td>nen-</td>
<td>nen-</td>
<td>yan-</td>
</tr>
<tr>
<td>3pl0</td>
<td>yan-</td>
<td>kan-</td>
<td>kan-</td>
</tr>
</tbody>
</table>
Table 12: Bound pronominal prefixes to future transitive verbs

<table>
<thead>
<tr>
<th></th>
<th>S I N G U L A R</th>
<th>D U A L</th>
<th>P L U R A L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sgA</td>
<td>2sgA</td>
<td>3sgm/fA</td>
<td>1duincA</td>
</tr>
<tr>
<td>1sg0</td>
<td>nen-</td>
<td>nan-</td>
<td>nan-</td>
</tr>
<tr>
<td>2sg0</td>
<td>nan-</td>
<td>yV-</td>
<td>yanka-</td>
</tr>
<tr>
<td>3sgm0</td>
<td>yan-</td>
<td>yV-</td>
<td>yanka-</td>
</tr>
<tr>
<td>3sgf0</td>
<td>yana-</td>
<td>yence-</td>
<td>yanka-</td>
</tr>
<tr>
<td>1duinc0</td>
<td>netta-kani</td>
<td>nanka-</td>
<td>nanka-</td>
</tr>
<tr>
<td>1duex0</td>
<td>netta-</td>
<td>natta--kani</td>
<td>natta--kani</td>
</tr>
<tr>
<td>1plinc0</td>
<td>netta-</td>
<td>narranta-</td>
<td>narranta-</td>
</tr>
<tr>
<td>1plex0</td>
<td>netta-</td>
<td>natta-</td>
<td>natta-</td>
</tr>
<tr>
<td>2pl0</td>
<td>nen-</td>
<td>penta</td>
<td>yankVn-</td>
</tr>
<tr>
<td>3pl0</td>
<td>nen-</td>
<td>penta</td>
<td>yankVn-</td>
</tr>
</tbody>
</table>

Note: The table represents the bound pronominal prefixes to future transitive verbs in the singular, dual, and plural person-number agreement contexts.
3.4.3.1.2 Bound pronominal prefixes to transitive verbs.

(i) Non-future forms are listed in Table 11, future forms in Table 12. Forms neutralised for tense are enclosed in both tables. For dual forms, except those marking 1duincA, a verb is cliticised by the dual enclitic {-kani}, e.g. (178), (189), (237). For trial forms a verb is cliticised by the trial marker, e.g.

(155) pørra-karran-kani net-pø-mene-m-pañakañi
3duDevis-ERG 3A.2trfONF-hit-NF-PRES
Those two hit you three women (AL:31).

(ii) lsgA.3sgmOFUT /yaŋ-/
yañ-p-wuc-pe I will scold him.
yañ-p-palama I will cut him/it
yañ-p-mara I will kick him/it.

(iii) lsgA.3sgfOFUT /yaŋan-/~yaŋac-/
yañan-p-pøme I will hug her
yañan-p-marr-a I will paint her.

(iv) lsgA.2plO /nVn-/
Prefix V is predictable: If the vowel of the next syllable is /i/, /e/ or /ø/, it is /e/; otherwise, it is /a/, e.g.

nVn-marr-ana I paint/ed you mob
nVn-p-pø I’ll hit you mob
nVn-p-mu I’ll pick you mob up.
Prefix V is predictable: If the vowel in the next syllable is /i/, /e/, or /ø/, it is /e/, otherwise it is /a/, e.g.

\begin{itemize}
  \item \textbf{yV-}kirrwa \quad \rightarrow \quad \textbf{ye}kirrwa
  \item 2sgA.3sgmOFUT-hold \quad \rightarrow \quad \text{Hold him/it!}
  \item \textbf{yV-}cetpe \quad \rightarrow \quad \textbf{yec}etpe
  \item 2sgA.3sgmOFUT-take out \quad \rightarrow \quad \text{Take it out!}
  \item \textbf{yV-}pø \quad \rightarrow \quad \textbf{yep}ø
  \item 2sgA.3sgmOFUT-hit \quad \rightarrow \quad \text{Hit him!}
  \item \textbf{yV-}mara \quad \rightarrow \quad \textbf{yama}ra
  \item 2sgA.3sgmOFUT-kick \quad \rightarrow \quad \text{Kick him/it!}
  \item \textbf{yV-}mu \quad \rightarrow \quad \textbf{yamu}
  \item 2sgA.3sgmOFUT-pick up\textsc{FUT} \quad \rightarrow \quad \text{Pick him/it up}
\end{itemize}

(vi) 3sgA.3sgmONF /ka-/.

\begin{itemize}
  \item \textit{ka-}t\textit{ut-mene} \quad \rightarrow \quad \textit{karutmene} \quad \text{(by M 1)}
  \item 3sgA.3sgmONF-leave\textsc{NF} \quad \rightarrow \quad \text{s/he leaves/ left him/it.}
\end{itemize}

(vii) 3sgA.3sgfOFUT /\textbf{yV}\textsc{p-}/ \sim /\textbf{yVc-}/

Prefix V is predictable: If the vowel of the next syllable is /i/, /e/ or /ø/, it is /e/; otherwise it is /a/, e.g.

\begin{itemize}
  \item \textbf{yV\textsc{p-}}p-nipe \quad \rightarrow \quad \textbf{yeppi}rirpe \quad \text{(by M 3b)}
  \item 3sgA.3sgfOFUT-FUT-hold \quad \rightarrow \quad \text{s/he will hold her}
  \item \textbf{yV\textsc{p-}}p-cetpe \quad \rightarrow \quad \textbf{yeppec}etpe \quad \text{(by M 3b)}
  \item 3sgA.3sgfOFUT-FUT-take out \quad \rightarrow \quad \text{s/he will take her out}
  \item \textbf{yV\textsc{p-}}p-na \quad \rightarrow \quad \textbf{yepp}ena \quad \text{(by M 3b)}
  \item 3sgA.3sgfOFUT-FUT-see \quad \rightarrow \quad \text{s/he will see her}
  \item \textbf{yV\textsc{p-}}p-\text{tal-pa} \quad \rightarrow \quad \textbf{yap}p\text{atal}pa \quad \text{(by M 3b)}
  \item 3sgA.3sgfOFUT-FUT-bite\textsc{FUT-FUTCM} \quad s/he will bite her
  \item \textbf{yV\textsc{p-}}p-kunme \quad \rightarrow \quad \textbf{yap}p\text{kunme} \quad \text{(by M 3b)}
  \item 3sgA.3sgfOFUT-FUT-take \quad \rightarrow \quad \text{s/he will take her}
  \item \textbf{yV\textsc{p-}}p-pirr-e \quad \rightarrow \quad \textbf{yec}pirre \quad \text{(by P 8, P 9)}
  \item 3sgA.3sgfOFUT-FUT-chop\textsc{FUT} \quad s/he will chop her up
  \item \textbf{yV\textsc{p-}}p-pønme \quad \rightarrow \quad \textbf{ye}c\text{pønme} \quad \text{(by P 8, P 9)}
  \item 3sgA.3sgfOFUT-FUT-smell \quad s/he will smell her
\end{itemize}
yVp-p-palama > yacpalama (by P 8, P 9)
3sgA.3sgfOFUT-FUT-cut > s/he will cut her
yVp-p-mu > yacpumu (by M 3a, P 8, P 9)
3sgA.3sgfOFUT-FUT-pick upFUT s/he will pick her up.

(viii) lduincA.3plO NF=FUT /yaŋkVn-/
Prefix V is predictable: If the vowel of the next syllable
is /i/, /e/, or /ə/, it is /e/; otherwise, it is /a/, e.g.
yaŋkVn-kirrwa-Ø > yaŋkenkirrwa
1duincA.3plO-dig-NF you and I dig/dug them
yaŋkVn-cetpe-Ø yaŋkencetpe
1duincA-3plO-take out-NF you and I take/took them out
yaŋkVn-pø-mene > yaŋkenpømene
1duincA.3plO-hit-NF you and I hit them
yaŋkVn-panka-Ø yaŋkanpanka
1duincA.3plO-stab-NF you and I stab/bed them
yaŋkVn-turra-Ø yaŋkanturra
1duincA.3plO-cook-NF you and I cook/ed them.

(ix) 1plexA.3sgmO NF=FUT /yVrr-/
1plxincA.3sgO NF=FUT /yVrrV-/
1plxincA.3sgfO NF=FUT /yVrrVn-/
1plxincA.3plO NF=FUT /yVrrVn-/

Prefix V is predictable: If the vowel in the next syllable
is /i/, /e/, or /ə/, it is /e/; otherwise it is /a/, e.g.
yVrr-kirrwa-Ø > yerrkirrwa
1plexA.3sgmO-dig-NF we, excluding you, dig/dug it
yVrr-cetpe-Ø yerrcetpe
1plexA.3sgmO-take out-NF we, excluding you, take/took it out
yVrr-pø-mene > yerrpømene
1plexA.3sgmO-hit-NF we, excluding you, hit him/it
yVrr-mara-Ø yarrmara
1plexA.3sgmO-kick-NF we, excluding you, kick/ed him
yVrr-turra-Ø > yatturra (by P 1)  
1plexA.3sgmO-cook-NF  
yVrrV-rikka-Ø > yerrerikka  
yVrrV-nene > we, excluding you, cook/ed it  
yVrrV-pœ-mene > we, including you sort/ed it  
yVrrV-see-NF > yerrenene  
yVrrV-hit-NF > we, including you, hit him  
yVrr-turra-Ø > yarraturra  
yVrrV-cook-NF > we, including you, cook/ed it  
yVrrVn-p-nipe > yerreppiripe (by M 3b)  
yVrrVn-p-mara > we, including you, will hold her  
yVrrVn-p-mara > yarracmara (by P 8, P 9)  
yVrrVn-p-turra > we, including you, will cook them  
yVrrVn-p-kirrwa > yerrenpikirrwa (by M 3b)  
yVrrVn-p-mara > we, including you, will dig them  
yVrrVn-p-turra > we, including you, will cook them  

Prefix V copies the vowel in the next syllable, e.g.  
møg-ønepVrr-tœrp-mene > møg-ønepøtœrrpmene (by P 1)  
buttocks-2plA.1sgO-roast-NF you push/ed me.

A trill assimilates to a following retroflex stop by P 1;  
prefix–final V then takes on retroflex colouring before the
retroflex stop, by allophonic specification rule 6, e.g.

\[
\begin{align*}
\text{ganpVrr-} & \text{tat-mene} \quad \Rightarrow \quad \text{ganpaṭṭatmene} [\text{ganbāṭṭatmene}] \\
3\text{plA.1sgO-bite-NF} & \quad \Rightarrow \quad \text{they bit/me me} \\
\text{kappVrr-} & \text{tut-mene} \quad \Rightarrow \quad \text{kanpuṭṭutmene} [\text{kānbuṭṭutmene}] \\
3\text{plA.3sgfONF-leave-NF} & \quad \Rightarrow \quad \text{they leave/left her.}
\end{align*}
\]

(xi) 3A.1duincONF /gaṅkanpV-~/ ~ /gaṅkat-/ 
3A.1plincONF /garranpV-~/ ~ /garrat-/ 
3A.3plONF /kanpV-~/ ~ /kat-/ 

By M 11b, prefix-final V copies the vowel in the next syllable, e.g.

\[
\begin{align*}
\text{kanpV-yi-} & \text{ña} \quad \Rightarrow \quad \text{kanpiyiña} \\
3\text{A.3plONF-put down-NF} & \quad \Rightarrow \quad \text{s/he/they put them down} \\
\text{kanpV-} & \text{cen-mene} \quad \Rightarrow \quad \text{kanpecenmene} \\
3\text{A.3plONF-put inside-NF} & \quad \Rightarrow \quad \text{s/he/they put them inside} \\
\text{mōg-} & \text{gaṅkanpV-tśorrp-mene} \quad \Rightarrow \quad \text{mōg- gaṅkanpōtśorrpmene} \\
\text{buttocks-3A.1duincONF-roast-NF} & \quad \Rightarrow \quad \text{s/he/they push/ed you and me} \\
\text{kanpV-} & \text{kapica-Ø} \quad \Rightarrow \quad \text{kanpakapica} \\
3\text{A.3plONF-throw away-NF} & \quad \Rightarrow \quad \text{s/he/they throw/threw them away} \\
\text{kanpV-} & \text{turra-Ø} \quad \Rightarrow \quad \text{kanputurra} \\
3\text{A.3plONF-cook-NF} & \quad \Rightarrow \quad \text{s/he/they cook/ed them} \\
\text{gaṅkanpV-} & \text{wuka-Ø} \quad \Rightarrow \quad \text{gaṅkanpuka} \quad \text{(by M 2)} \\
3\text{A.1duincONF-tie-NF} & \quad \Rightarrow \quad \text{s/he/they tie/d you and me up} \\
\text{gaṅkanpV-} & \text{pō-mene} \quad \Rightarrow \quad \text{gaṅkatpōmene} \quad \text{(by M 11a)} \\
3\text{A.1duincONF-hit-NF} & \quad \Rightarrow \quad \text{s/he/they hit you and me} \\
\text{garranpV-} & \text{palama-Ø} \quad \Rightarrow \quad \text{garratpalama} \quad \text{(by M 11a)} \\
3\text{A.1plincONF-cut-NF} & \quad \Rightarrow \quad \text{s/he/they cut us, including you} \\
\text{gaṅkanpV-} & \text{marr-ana} \quad \Rightarrow \quad \text{gaṅkatmarrana} \quad \text{(by M 11a)} \\
3\text{A.1duincONF-paint-NF} & \quad \Rightarrow \quad \text{s/he/they paint/ed you and me} \\
\text{garranpV-} & \text{mara-Ø} \quad \Rightarrow \quad \text{garratmara} \quad \text{(by M 11a)} \\
3\text{A.1plincONF-kick-NF} & \quad \Rightarrow \quad \text{s/he/they kick/ed us, incl. you} \\
\text{kanpV-} & \text{pa-} & \text{ña} \quad \Rightarrow \quad \text{katpāña} \quad \text{(by M 11a)} \\
3\text{A.3plONF-smash-NF} & \quad \Rightarrow \quad \text{s/he/they smash/ed them} \\
\text{kanpV-} & \text{ma-} & \text{ñana} \quad \Rightarrow \quad \text{katmañana} \quad \text{(by M 11a)} \\
3\text{A.3plONF-pick up-NF} & \quad \Rightarrow \quad \text{s/he/they pick/ed them up.}
\end{align*}
\]
By M 12b, prefix-final V copies the vowel in the next syllable, e.g.

\[ \text{gatpV-nipe-Ø} \quad \rightarrow \quad \text{gatpiripe} \]

\[ \text{3A.1plexONF-hold-NF} \quad \rightarrow \quad \text{s/he/they hold/held us, not you} \]

\[ \text{netpV-n-ene} \quad \rightarrow \quad \text{netpenene} \]

\[ \text{møŋ-gatpV-tørrp-mene} \quad \rightarrow \quad \text{møŋ-gatpøtørrpmene} \]

\[ \text{buttocks-3A.1plexONF-roast-NF} \quad \text{s/he/they push/ed us, not you} \]

\[ \text{netpV-ka-ncə} \quad \rightarrow \quad \text{netpakəncə} \]

\[ \text{2A.1plexONF-take-NF} \quad \rightarrow \quad \text{you take/took us} \]

\[ \text{netpV-wuŋme-Ø} \quad \rightarrow \quad \text{netwuŋme} \quad \text{(by M 2)} \]

\[ \text{2A.1plexONF-lie-NF} \quad \rightarrow \quad \text{you lie/d to us} \]

\[ \text{netpV-palama-Ø} \quad \rightarrow \quad \text{netpalama} \quad \text{(by M 12a)} \]

\[ \text{2A.1plexONF-cut-NF} \quad \rightarrow \quad \text{you cut us} \]

\[ \text{netpV-marr-ana} \quad \rightarrow \quad \text{netmarrana} \quad \text{(by M 12a)} \]

\[ \text{2A.1plexONF-paint-NF} \quad \rightarrow \quad \text{you paint/ed us}. \]

If the vowel in the next syllable is /i/, /e/, or /ø/, the first V of the prefix is /e/, otherwise it is /a/. By M 12b, prefix-final V copies the vowel in the next syllable, e.g.

\[ \text{nVnpV-nipe-Ø} \quad \rightarrow \quad \text{nenpiripe} \]

\[ \text{3A.2plONF-touch-NF} \quad \rightarrow \quad \text{s/he/they touch/ed you mob} \]

\[ \text{nVnpV-n-ene} \quad \rightarrow \quad \text{nenpenene} \]

\[ \text{3A.2plONF-see-NF} \quad \rightarrow \quad \text{s/he/they see/saw you mob} \]

\[ \text{møŋ-nVnpV-tørrp-mene} \quad \rightarrow \quad \text{møŋ-nenpøtørrpmene} \]

\[ \text{buttocks-3A.2plONF-roast-NF} \quad \text{s/he/they push/ed you mob} \]

\[ \text{nVnpV-ka-ncə} \quad \rightarrow \quad \text{nanpakəncə} \]

\[ \text{3A.2plONF-take-NF} \quad \rightarrow \quad \text{s/he/they take/took you mob} \]

\[ \text{nVnpV-mara-Ø} \quad \rightarrow \quad \text{natmara} \quad \text{(by M 12a)} \]

\[ \text{3A.2plONF-kick-NF} \quad \rightarrow \quad \text{s/he/they kicked you mob.} \]

\[ \text{nVnpV-kunme-Ø} \quad \rightarrow \quad \text{nanpukunme} \]

\[ \text{3A.2plONF-fetch-NF} \quad \rightarrow \quad \text{s/he/they fetch/ed you mob} \]

\[ \text{nVnpV-wuŋme-Ø} \quad \rightarrow \quad \text{natwuŋme} \quad \text{(by M 12a)} \]

\[ \text{3A.2plONF-lie-NF} \quad \rightarrow \quad \text{s/he/they lie/d to you mob}. \]
3.4.3.1.3 Relationship between pronominal prefix forms.

(i) Tense is neutralised on prefixes marking 1sg, 1duinc, and 1plinc in A or O function.

(ii) All prefixes marking 3sgfO show a laminal nasal, e.g.

\[
\begin{array}{ll}
\text{NF=FUT} & 1\text{sgA.3sgfO} \quad \text{yaŋaŋ-} \\
\text{NF} & 2\text{sgA.3sgfO} \quad \text{kaŋca-} \\
\text{FUT} & \text{yeŋce-} \\
\text{NF} & 3\text{sgA.3sgfO} \quad \text{kaŋ-} \\
\text{FUT} & \text{yVŋ-} \\
\text{NF=FUT} & 1\text{duincA.3sgfO} \quad \text{yaŋkəŋ-} \\
\text{NF=FUT} & 1\text{plincA.3sgfO} \quad \text{yVrVŋ-} \\
\text{NF} & 1\text{plexA.3sgfO} \quad \text{ŋararŋ-} \\
\text{FUT} & \text{yVrVŋ-} \\
\text{NF} & 2\text{plA.3sgfO} \quad \text{kaŋkəŋ-} \\
\text{FUT} & \text{yeŋkəŋ-} \\
\text{NF} & 3\text{plA.3sgfO} \quad \text{kaŋpVrr-} \\
\text{FUT} & \text{yeŋpVrr-} .
\end{array}
\]

(iii) The following prefixes are related:

(a) 3sgA.2sgONF \{kaŋa-\} derives from 2sgSNF \{kaŋV-\};
(b) 3sgA.3sgONF \{ka-/kaŋ-\} derive from 3sgSNF \{ka-\/kaŋ-\};
(c) 3sgA.2sgOFUT \{ŋV-\} derives from 2sgSFUT \{ŋV-\};
(d) 3sgA.3sgOFUT \{yV-/yVŋ-\} derive from 3sgSFUT \{yV-/yVŋ-\};
(e) 2A.1plexONF \{ŋet(pV)-\} derives from 2sgSFUT \{ŋV-\} + -t(pV)-;
(f) 2A.1plexOFUT \{ŋetta-\} derives from 2plSFUT \{ŋerr-\} + -ta- by P 1;
(g) 3A.1duincONF \{ŋaŋkəŋpV-/ŋaŋkə-\} derives from 1duincS \{ŋaŋka-\} + -ŋpV-/−t-;
(h) 3A.1plincONF \{ŋarrəŋpV-\} derives from 1plincS \{ŋarra-\} + -ŋpV-;
(i) 3A.3plONF \{kanpV-/kat-\} derives from 3sgSNF \{ka-\} + -ŋpV-/−t-;
(j) 3A.1duincOFUT \{ŋaŋkənta-\} derives from 1duincS \{ŋaŋka-\} + -nta-;
(1) 3A.lplincOFUT {garranta} derives from lplincS {garra-} + -nta-;
(m) 3A.lplexOFUT {gatta-} derives from lplexS {garr-} + -ta- by P 1.

3.4.3.2 Mood. Type A verbs distinguish imperative, indicative and admonitory moods. Imperative mood is used to express positive imperatives, indicative mood to express declarative sentences and prohibitions, admonitory mood to express admonitions.

In imperative mood, the verb stem is inflected for future tense. It carries no future prefix and may be followed by a limited range of aspectual markers, and the reflexive/reciprocal suffix (REF/REC).

In indicative mood, the verb is fully inflected for tense, aspect and polarity.

In admonitory mood, the admonitory suffix (ADM) is added to a verb stem inflected for future tense, but bearing a non-future pronominal prefix. This suffix may be preceded by the reflexive/reciprocal suffix and followed by a limited range of aspectual suffixes.

(i) Imperative mood. Positive imperatives have the following structure:

(type B verb stem + prnpx + vbstem + (FUT CM) + (REF/REC) + (ASPECT) + (prnsx)
Pronominal prefix and verb stem are future forms or neutralised for tense, e.g.

\[ \text{ŋ́v-pe} \quad > \quad \text{ŋ́pe} \]
\[ 2\text{sgSFUT-go} \quad > \quad \text{ŋ́errpe} \]
\[ \text{ŋ́err-pe} \quad > \quad \text{ŋ́errpe} \]
\[ 2\text{plSFUT-go} \quad > \quad \text{ŋ́ajkape} \]
\[ \text{ŋ́agka-pe} \quad > \quad \text{ŋ́ajkape} \]
\[ 1\text{duincS-go} \quad > \quad \text{ŋ́arrape} \]
\[ \text{ŋ́arra-pe} \quad > \quad \text{ŋ́arrape} \]
\[ 1\text{plincS-go} \quad > \quad \text{ŋ́arrape} \]
\[ \text{ýv-mara} \quad > \quad \text{ŋ́amara} \]
\[ 2\text{sgA.3sgmOFUT-kick} \quad > \quad \text{ŋ́amara} \]
\[ \text{yégka-mara} \quad > \quad \text{ŋ́amara} \]
\[ 2\text{plA.3sgmOFUT-kick} \quad > \quad \text{ŋ́amara} \]
\[ \text{yénčê-tulpa} \quad > \quad \text{ŋ́amara} \]
\[ 2\text{sgA.3sgfOFUT-leave} \quad > \quad \text{ŋ́amara} \]
\[ \text{pen-}_{\text{p}}\text{r} \text{rice} \quad > \quad \text{ŋ́amara} \]
\[ 2\text{sgA.1sgO-scratch} \quad > \quad \text{ŋ́amara} \]
\[ \text{\text{ŋ́v}n-mu} \quad > \quad \text{ŋ́amara} \]
\[ 2\text{sgA.3plO-pick upFUT} \quad > \quad \text{ŋ́amara} \]
\[ \text{pilk-}_{\text{yénčê-p}} \text{p} \quad > \quad \text{ŋ́amara} \]
\[ 2\text{sgA.3sgfOFUT-hit} \quad > \quad \text{ŋ́amara} \]
\[ \text{yaŋk} \text{en-kirrwa} \quad > \quad \text{ŋ́amara} \]
\[ 1\text{duincA.3plO-dig} \quad > \quad \text{ŋ́amara} \]
\[ \text{ŋ́erren-yu} \quad > \quad \text{ŋ́amara} \]
\[ 2\text{plA.3plO-put downFUT} \quad > \quad \text{ŋ́amara} \]

In a continuative imperative, the verb may be preceded or followed by the free particle \{pupuy\} Go!, e.g.

(156) pupuy \quad ye-\text{kirrwa} \quad Go! \quad 2\text{sgA.3sgmOFUT-dig} \quad \text{IMP} \quad Go on digging! (AL:111).

If the action is to be continued indefinitely, the continuous aspectual suffix \{-c̣ọ\} follows the verb stem, e.g.
If the continuative imperative forms part of an auxiliary verb complex, the complex-final auxiliary verb carries the continuous aspectual suffix governed by the main verb, e.g.

(159) ya-marra pa-mu-puuy
2sgA.3sgmOFUT-paint 2sgSFUT-sitFUTAUX-CONT
IMP
Sit down and keep painting it! (AL:302).

An imperative may be marked with the 'return' suffix {-parra}, e.g. (47).

For a reflexive or reciprocal imperative, the reflexive/reciprocal suffix is added to the verb stem, deriving an intransitive verb. The pronominal prefix marks S function. Reflexive imperatives only are followed by a co-referential reflexive pronoun, e.g.

pVrr-pørrice-cica nawarra-gala Scratch yourselves!
2plSFUT-scratch-REF 2plP-hand
IMP REFL

(ii) Indicative mood. In indicative mood, a verb is fully inflected for tense, aspect and polarity. It is used to express declarative sentences and prohibitions. This
section describes the morphology of prohibitions.

Prohibitions are of two types. Type 1 is expressed thus: The verb-phrase is prefaced by the free negative particle {ŋaku₁∅} 'not'. A pronominal prefix marked future or neutralised for tense precedes a future prefix which precedes a verb stem marked future or neutralised for tense. For a reflexive/reciprocal prohibition, the verb stem is suffixed by the reflexive/ reciprocal suffix {-cica}. In a continuative prohibition, the verb stem is suffixed by the continuous aspectual suffix {-c∅}, e.g.

(160) ŋaku₁∅ _perr-p-pe-kaŋi
      Neg   2duSFUT-FUT-go
      Don’t you two go!

(161) ŋaku₁∅ ya-p-mara
      Neg   2sgA.3sgmOFUT-FUT-kick
      Don’t kick him!

(162) ŋaku₁∅ yeŋce-pŋ-pŋ-c∅
      Neg   2sgA.3sgfOFUT-FUT-hit-CONT
      Don’t keep hitting her!

(163) ŋaku₁∅ _perren-pu-yu
      Neg   2plA.3plOFUT-put downFUT
      Don’t put them down!

(164) ŋaku₁∅ _kutti-perr-p-uc-pe-cica-kaŋi
      Neg   fight-2duSFUT-FUT-scoldAUX-FUTCM-REC
      Don’t you two fight each other!

Prohibition type 2 is expressed as follows:
The pronominal prefix to the verb stem is marked for non-future or tense-neutral. It immediately precedes the verb
stem, which is marked for future or tense-neutral and is followed by a non-future tense suffix, present aspectual marker and negative suffix \{-ku\~\}, e.g.

(165) kaŋka-pe-ŋ-ŋ-kulø-kaŋi
   2duSNF-go-NF-PRES-Neg
   Don’t both go!

(166) ka-mara-ŋ-ŋ-kulø
   2sgA.3sgONF-kick-NF-PRES-Neg
   Don’t hit him!

(167) kaŋca-ps-mene-ŋ-kulø
   2sgA.3sgfONF-hit-NF-PRES-Neg
   Don’t hit her!

(168) penpuŋ-tut-mene-ŋ-kulø
   2plA.1sgO-leave-NF-PRES-Neg
   Don’t leave me behind! (AL:400)

The negative suffix \{-ku\~\} may be attracted from its usual position to encliticise a sentence-initial adverb, e.g.

(169) wurak-kulø kaŋa-ŋaca-m-parra
   near-Neg  2sgSNF-come-PRES-RET
   Don’t come back near (me)! (AL:93).

(iii) Admonitory mood. Admonitions have the following structure:

A pronominal prefix marked non-future or tense neutral is followed by the future tense prefix, which is followed by a verb stem marked future or tense-neutral. This is followed by the admonitory suffix \{-NV_1\ rV_1\} and the 'obligated' clitic particle \{-pakkacca\}. In reflexive/reciprocal admonitions, the reflexive/reciprocal suffix comes between verb stem and admonitory suffix, e.g. (176).
In continuative admonitions, the admonitory suffix is followed by the continuous aspectual suffix.

**Admonitory suffix**: \{-nV₁ \₁ \rV₁ \₁ \}

**Morpheme-realisation**

(M 13a) \[ \text{ADMSX} n \rightarrow \begin{cases} \text{g / u} \text{ } \text{v}_b \\ \text{a} \text{ } \text{v}_b \\ \text{n / i} \text{ } \text{v}_b \\ \varnothing / n \text{ } \text{v}_b \end{cases} \]

(M 13b) \[ V₁ \rightarrow \begin{cases} \text{e / i} \text{ } \text{vbstem} \text{ } \text{ADMSX} \text{ } \text{a} \end{cases} \]

(M 13c) \[ \text{ADMSX} \text{nV₁} \rightarrow \begin{cases} \varnothing / \text{p} \text{ } \text{vbstem} \text{ } \text{V₁} \text{ } \text{k} \end{cases} \]

(170) ɲakulø kane-pø-rø-nere-kkacca
Neg 2sgSNF-FUT-cry-ADM-obl
You shouldn't cry/ have cried (AL:307).

After a host-final vowel, the initial CV of the clitic particle \{-pakkacca\} elides.

(171) ɲana-yaŋ-pe-cetpe-re-kkacca
split-lsgA.3sgO-FUT-take out-ADM-obl
I should split/have split it (AL:308).
(172) ŋaŋ-ka-p-paka-ra-kkacca
   sew-2sgA.3sgONF-FUT-stabFUTAUX-ADM-obl

kàna-p-mu-ŋara
2sgSNF-FUT-sitFUTAUX-ADM

You ought to sit and sew it/have sat and sewn it (AL:337).

(173) ka-p-mu-ŋara-kkacca
   3sgA.3sgmONF-FUT-pick upFUT-ADM-obl

She should pick/have picked him/it up (AL:309).

(174) ŋa-pe-yaŋ-ara-kkacca  narra  kamaŋka
   1sgS-FUT-lieFUT-ADM-obl  but  nothing

I should have lain down, but I didn’t (AL:441).

A pronominal enclitic is verb-final, e.g.

(175) wa-p-purr-a-ŋara-kkacca-ŋŋ
   1sgA.3sgmO-FUT-look for-FUT-ADM-obl-3sgmD

I ought to look/have looked for him.

Irregular verb {purra} 'look for' is analysed in Appendix 2.

In a negative admonition, the clitic particle {-pakkacca} may cliticise the sentence-initial free negative particle {ŋakułø}, e.g. (176)-(177).

(176) ŋakułø-kkacca  ŋak-ŋaŋka-p-uc-pica-ŋara
   Neg-obl  mouth-1duincS-FUT-scold-REC-ADM

We ought not to kiss/have kissed each other.

In continuative admonitions, the admonitory suffix is followed by the continuous aspectual suffix, e.g.

(177) ŋakułø-kkacca  kaŋkac-p-pø-nere-cø
   Neg-obl  2plA.3sgFONF-FUT-hit-ADM-CONT

You mob shouldn’t keep hitting/have kept hitting her!
3A.3plO allomorph /kanta-/ , 3A.3duO /kanta--kaṇi/ and 3A.3trO /kanta--pVNa kaṇi/ occur only in admonitions, e.g. (178) pellem kanta-p-u-pa-ra- kkacca-kaṇi thigh 3sgA.3duONF-FUT-spear-FUTCM-ADM-obl He ought to spear/have speared the two of them in the thigh (AL:311).

3.4.3.3 **Polarity.** Positive sentences bear no marker; negative sentences are marked with the negative particles {ṇakuṇḍa}, or {kamaṇḍa} or the negative suffix {-kuṇḍa}, which occurs only in type 2 prohibitions, e.g. (165)-(169).

3.4.3.4 **Aspect.** Bachamal distinguishes six aspectual markers:

{-m-} Present
{-parra} Return
{-cō} Continuous
{-makka} Perfective
{-nuγ} Purposive
{-rran} Habitual

A verb may carry any one aspectual marker, or none, or a combination of those which co-occur. Present, purposive and habitual markers are mutually exclusive. Purposive, habitual and perfective markers are mutually exclusive. There are at least the following combinations of aspectual markers:

present before any or all of return, continuous, perfective;
continuous after any or all of present, return;
perfective after any or all of present, return, continuous;
return after present, but before other aspectual markers.

(i) **Present** {−m} \(\rightarrow\) \{
\begin{align*}
\{−\eta\} & / \quad \text{c} \\
\{−\eta\} & / \quad \text{k} \\
\{−\text{m}\} \\
\end{align*}
\}

{−m} marks an event or action as happening at the same time as the utterance, except when followed by the perfective suffix, when it marks an action as having been completed, or by the continuous and perfective suffixes, as in (188), when it marks an action as having been in progress.
The present suffix always follows the non-future tense suffix, and co-occurs most often with the clitic particle {−pente} 'now', e.g. (19), (179). {−m} may be followed by the return suffix, e.g. (66), (96), (169), by the perfective and/or continuous suffixes, e.g. (180), (188), by the negative suffix, e.g. (165)-(168), and by a pronominal enclitic, e.g. (180).

(179) pørra kak-pente-karr-pe-m
3plP leave-now-3plSNF-go-PRES
They're going now (AL:410).

(180) 𝜏a-me-ŋ-cø-wiŋ
1sgS-tell-PRES-CONT-2sgD
I'm telling you (KM:22).

(ii) **Return** {−parra}. {−parra} marks direction back to the location of the speaker on verbs inflected for future or non-future tense and is attested in declarative sentences, e.g. (66), (96), (181), in prohibitions, e.g. (169), and on
a verb inflected for imperative mood, e.g. (47). \{-parra\}
may be followed by compatible clitic particles, or a
pronominal enclitic, e.g. (96). On verbs inflected for non-
future tense, \{-parra\} follows a homorganic allomorph of
the present aspectual suffix and may itself be followed by
the continuous and/or perfective suffixes. Unless preceded
by the present suffix, \{-parra\} may be followed by the
purposive or habitual suffixes.

(96) ka-wukpica-Ø       ka-caŋa-Ø-m-parra-nøŋ
3sgmSNF-call out-NF 3sgmSNF-standAUX-NF-PRES-RET-3sgmD
He stood up and called back to him (T6:10).

(181) ḋarr-pente ḋa-pa-jaca-parra-nuŋ-pakka
later-now 1sgS-FUT-come-RET-PUR-re
I really will come back later.

(iii) Continuous \{-cø\}. \{-cø\} marks action in progress.
On verbs inflected for non-future tense, it is always
preceded by a homorganic allomorph of the present aspectual
suffix \{-m\}, e.g. (44), (180), (182), (185).

(182) penterr-ka-yi-ŋa-n-cø
sweet-3sgA.3sgmONF-makeCAUS-NF-PRES-CONT
He’s in the process of sweetening it (AL:50).

\{-cø\} may co-occur with the future tense affix in
declarative sentences, e.g. (183)-(186), when it implies
that the intended action/state will be continuous, or in
type 1 prohibitions, e.g. (162). On a verb inflected for
imperative mood, it marks a continuative imperative, e.g.
(157)-(159). \{-cø\} may be followed only by the perfective
marker, e.g. (188) and by compatible clitics, e.g. (180).
(183) penta-pu-turra-cø kak-parr-p-pe-cø  
3A.3plOFUT-FUT-cook-CONT leave-3plSFUT-FUT-go-CONT  
They’ll be cooking it and going away later (AL:77).

(184) deli yaj-pu-turra-nuŋ ṭa-p-mu-cø  
Wait! 1sgA.3sgmO-FUT-cook-PUR 1sgS-FUT-sitFUT-CONT  
Wait! I’m going to be sitting down to cook it (AL:76).

In the auxiliary complexes (185)-(186), {-cø} is governed by both verbs, but cliticises only the complex-final auxiliary.

(185) karr-pø-mene-ŋ karr-pe-ŋ-cø  
3plSNF-hit-NF-PRES 3plSNF-goAUX-PRES-CONT  
They keep hitting him as they go (AL:52).

(186) pipere-nuŋ-pente yaj-pa-ŋawe  
ear-DAT-now 1sgA.3sgmO-FUT-hear  
itorio-p-pe-cø mipe kamaŋka  
1sgS-FUT-go eye nothing  
I’m going to keep listening with my ears. My eyes are useless (T3:49).

(iv) Perfective {-makka}. This marker signals that the action or state expressed by a verb inflected for non-future tense has been completed, e.g. (37), (42), (187)-(192). It is homophonous with the nominal Ablative/Causal case-suffix (see 3.3.1). Perfective {-makka} regularly follows the non-future tense suffix, e.g. (187), (189) and may follow the present, continuous, and return aspectual suffixes, e.g. (188). Perfective {-makka} may be followed only by compatible clitics, e.g. (187) and (189).
Perfective {-makka} may be attracted from its usual position to cliticise a sentence-initial nominal, eg. (190), (204), (213).

(190) cińca-karraŋ-makka  yepere-kat-ma-ŋana

That woman stole them in front of him (JR:29).

Perfective {-makka} commonly cliticises a sentence-initial temporal adverb with non-future reference, eg.

(191) ġurraca-makka  wərrarə  nulkpara  ɲaŋpať-ţat-mene

Tiny mosquitoes bit me last night (AL:57).

(192) pelappuy-makka  kat-turra-Ø-ŋ

This morning, they sat and cooked them (AL:56).
The aspectual purposive marker is homophonous with the nominal Dative case-suffix (see 3.3.1). Purposive {-nuŋ} marks action intended to secure a goal, e.g. (193)-(199) and regularly occurs suffixed to a verb inflected for declarative or imperative mood, when it may be followed only by compatible clitics, e.g. (194)-(196).

(193) tarranmalanŋ-ŋan-pu-yu-nuŋ
cool-1sgA.2sgO-FUT-makeFUTCAUS-PUR
I’ll make you cool (KM:32).

(194) ḥa-pe-me-nuŋ-pe ḥa-p-pe
1sgS-FUT-become-PUR-ever 1sgS-FUT-goAUX

ŋace memempena
lsgP porpoise

As for me, I’m going to become porpoise for ever!

(195) ye-p-pere-nuŋ-pakka yakkuy
3sgmSFUT-FUT-dieFUT-PUR-re Probably!
Q: Is he really going to die? A: Probably! (JR:21)

(196) panta-pi-rime-nuŋ-pente-wiŋ wik
3A.3OFUT-FUT-fetch-PUR-now-2sgD water
They’ll bring you back water (AL:76).

Purposive {-nuŋ} marks a complement, e.g.

(197) mipe cica yan-cetpe-nuŋ
eye 3sgmDevis 1sgA.3sgmO-take out-PUR

ŋa-me-ŋ-kak
lsgS-try-PRES-Foc
I’m trying to take that thing out of my eye (T3:49).
Purposive {-nuŋ} may cliticise a verb-initial type B verb stem, e.g. (198)-(199).

(198) kappuk-kuŋ-na-p-puka yiphmek bathe-PUR-1sgS-FUT-wash tomorrow  
I’ll bathe tomorrow (JR:14).

(199) kak-kuŋ-pente-ne-pe leaye-PUR-now-2sgSFUT-goAUX IMP
Go away right now! (JR:13)

(vi) Habitual {-rraŋ}. {-rraŋ} marks as habitual the state/action expressed by a verb inflected for future or non-future tense, e.g. (28), (200)-(203). It follows tense inflections, and the return aspectual suffix and may itself be followed only by compatible clitics.

(200) caŋkma manac pe-p-pe-rraŋ bad heart 2sgSFUT-FUT-go-HAB  
You’ll always be sorry (AL:81).

(201) cepmiyic ŋak-ssh-ka-me-rraŋ 3sgfP mouth-ssh-3sgA.3sgmONF-say-HAB  
mememencarrmul-kak  
dugoŋ-Foc
Dugong always whispers (T3:62).

(202) wulapatwuŋlapat wŋg mərrakmala-karr-wa-ŋ long ago rain make-3plA.3sgmONF-makeAUX-NF  
karr-mi-ŋ-rraŋ 3plSNF-sitAUX-NF-HAB  
Long ago, they used to sit and make rain (T1:18).
3.4.3.5 Derivational suffix. The reflexive/reciprocal suffix {-cica} derives an intransitive verb from a transitive stem.

{-cica} ----→ \{/-ica/ / C _____

\{/-ca/ / φ _____

\{-cica/

{-cica} attaches directly to the verb stem. It may be followed by the admonitory suffix, e.g. (176), aspectual suffixes, e.g. (207)-(209) and compatible clitics, e.g. (208)-(212). Reflexive {-cica} marks self-directed action, e.g. (42), (204)-(207).

(204) qace-makka ŋa-pörric-ica
1sgP-PERF 1sgS-scratch-REF
I scratch/ed myself (AL:82).

(205) ñe-n-ica ñe-n-ica
2sgSFUT-see-REF 2sgSFUT-see-REF
IMP IMP
Watch yourself! Watch yourself! (JB:1).

(206) yaŋaraŋ-ci: ŋa-palam-ica ŋa-mi-m
today-3sgmDet-tmg 1sgS-cut-REF 1sgS-sitAUX-PRES
merrepöce
hair

Right now, I’m sitting, cutting my hair (AL:88).
Suffixed to a verb whose pronominal prefix specifies a singular subject, {-cica} can only be reflexive. To avoid ambiguity in utterances where the pronominal prefix to the verb specifies a non-singular subject, speakers add a reflexive pronoun co-referential with the subject of the verb, e.g. (207).

(207) karr-pø-ca-makka-kaŋi parrmiyic-ŋala
   3duSNF-hit-REC-PERF 3plP hand

They hit themselves (AL:91).

In (208)-(212), {-cica} marks a reciprocal action.

(208) karr-pø-ca-makka-kaŋi
   3duSNF-hit-REC-PERF
Those two fought each other (T2:2).

(209) yiŋmek-pente ŋaŋka-palam-ica-nuŋ-pakka
   tomorrow-now 1duincS-cut-REC-PUR-re

ŋaŋka-mu
1duincS-sitFUTAUX

Tomorrow let’s both sit and cut each other’s hair! (AL:89)

(210) mipe-kaŋka-wukk-ica-ŋ-kaŋi
   eye-2duSNF-copy-REC-PRES
You look like each other (AL:114).

(211) parr-p-u-pica-nug-pakka-kaŋi
   3duSFUT-FUT-spear-REC-PUR-re
They’re really going to spear each other (AL:82).

The verb {-pøme} ‘hug’ takes the exceptional reflexive/reciprocal allomorph /-piclca/, e.g.
3.4.4 **Type B verb stems.** Compound verbs consist of a type A verb stem acting as auxiliary to a type B verb stem. Most type B verb precede their auxiliary verb, but a minority may precede or follow an intransitive auxiliary, e.g. (213), (188). Compound verbs are listed in 3.4.5.

(213) menep cağam-makka-kka edveg ncm kurrajong-PERF-re

$pöce-pöcce-karr-pe-p-cø$

head-carry-3plSNF-goAUX-PRES-CONT

The kurrajong they’ve been carrying on their heads
(T3:25).

(188) karr-pe-p-cø-makka-menep-pöce-pöcce

3plSNF-goAUX-PRES-CONT-PERF-edveg-head-carry

They’ve been head-carrying the edible vegetables
(T3:29).

On some compound verbs, a second, verb-final, type B verb stem occurs as a complement, e.g.

(214) gåkulø ten-yaŋ-pø-mene-kannak

Neg stop-1sgA.3sgmO-hitAUX-NF-laugh

I couldn’t stop laughing (AL:511).

Type B verb stems may incorporate immediately preceding nominal(s) in object function, e.g. (188), (213) and (180) and see 3.4.7.

Type B verb stems may bear nominal derivational suffixes,
A minority of verb-initial type B verb stems may be cliticised by the purposive aspectual marker, e.g. (198)–(199).

3.4.5 **Compound verbs.** In the corpus, 37 type A verb stems (21 transitive, 16 intransitive) act as auxiliaries to 115 type B verb stems to form 136 compound verbs. The following type B verb stems co-occur with more than one auxiliary:

(i) \{gac\} 'hide', co-occurs with the transitive auxiliary \{kapica\} 'throw away', in the transitive compound verb \{gac-kapica\} 'hide something', and with the intransitive auxiliary \{par\} 'walk' in the intransitive compound verb \{gac-par\} 'hide oneself'.

(ii) \{kak\} 'leave' co-occurs with three intransitive auxiliaries: \{yika\} 'go down', \{pe\} 'go', \{par\} 'walk'.

---

e.g. (215)–(217).

(215) munmun-malaŋ pluck-FUL Luxuriant.

(216) perr pøtcøt mirak-pøttuŋ 3plDetang shoe dance-GEN These are shoes for dancing (AL:400).

(217) celme-pøcce-pøttuŋ ŋa-p-pur-iŋ warrkati shoulder-carry-GEN 1sgS-FUT-walkFUT-FUTCM dillybag I’ll go with this bag for carrying on my shoulder (AL:434).
(iii) \{kittirak\} 'peel', co-occurs with two transitive auxiliaries: \{yi\} 'put down/make' and \{rikka\} 'sort'.

(iv) \{galapala\} 'lose', co-occurs with two transitive auxiliaries: \{kunme\} 'bring' and \{ma\} 'pick up'.

(v) \{pocce\} 'carry' co-occurs with two intransitive auxiliaries \{pe\} 'go' and \{par\} 'walk'. \{pocce\} is always immediately preceded by an incorporated body-part nominal.

(vi) \{mununuk\} 'dance' (by men) co-occurs with the transitive auxiliary \{mara\} 'kick' and the intransitive auxiliaries \{pe\} 'go' and \{par\} 'walk'.

(vii) \{mirak\} 'dance' (by women) co-occurs with the intransitive auxiliaries \{muy\} 'move', \{pe\} 'go' and \{par\} 'walk'.

For many compound verbs, there is semantic motivation for the collocation of auxiliary and type B verb stem. Both denote actions/states. The type B verb stem delimits the type of action/state specified by the auxiliary. The corpus contains the following auxiliary verbs and co-occurring type B verb stems:

<table>
<thead>
<tr>
<th>Transitive auxiliaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>turra</td>
</tr>
<tr>
<td>tut</td>
</tr>
<tr>
<td>n</td>
</tr>
</tbody>
</table>
nipe  touch, hold
rikka  sort
ci     eat
ce     give
cetpe  take out
yi     put down
karrjme  turn sthg over
ka     take
kapica  throw away
kunme  bring
pø     hit
pa     smash
panka  stab
purr   beat
ma     pick up
mara   kick
wa     make

(a) turra  cook
pullup-turra  boil-cook  >  cook
wul-turra  smoke-cook  >  fumigate house
(b) tut  leave
rip-tut  pass by-leave  >  leave behind
(c) n  see
kikkilili-n  tickle-see  >  tickle
pø-n  blow on-see  >  blow on
(d) nipe  hold
tup-nipe  grip-hold  >  hold tight
cirr-nipe  squeeze-hold  >  squeeze
recca-nipe  want-hold  >  desire
(e) rikka  sort
kittirak-rikka  peel-sort  >  peel and sort
(f) ci  eat
cam-ci  devour-eat  >  eat up
(g) ce  give
mepec-ce  share-give  >  share
(h) cetpe  take out
lug-cetpe  extract-take out  >  extract
munmun-cetpe  pluck-take out  >  pluck
(i) ye cut out  put down, functions as a causative
in some compounds.

(ii) ye put down  functions as

(iii) ye cut out  put down, functions as

(iv) ye cut out  put down, functions as

(v) ye cut out  put down, functions as
ŋal-paŋka sew-stab  > sew
(q) purr hit with missile
cikmiic-purr sneeze-hit with missile> sneeze
(r) ma pick up
yeñere-ma steal-pick up  > steal
ŋalawa-ma help-pick up  > help
ŋalapala-ma drop-pick up  > lose
wat-ma trip-pick up  > trip
(s) mara kick
mununuk-mara dance-kick  > dance (men)
(t) wa make
môrrakmala-wa build-make  > build

Intransitive auxiliaries
racc go
citpice break
canja stand
yicc ask
yika go down
ye lie
kape laugh
pe go
pette die
pelepa vomit
par walk
puka bathe
mi sit
me say, be
mey work for
mânc rise
muy move

(a) racc go
ŋawi-racc crawl-go  > crawl
picip-racc travel-go  > go on a journey
(b) citpice break
ŋana-citpice split-split  > split
(c) cana stand, functions as a stative verb in its compounds:
ciccinili-caña  be on feet-stand > stand up all day  
cat-caña   rise-stand > stand  
terrk-caña  be wedged-stand > be wedged  
ŋalak-caña  be bogged-stand > be bogged  
pilpima-caña  be alight-stand > be alight  
pulk-caña  be slack-stand > be slack  
(d) yicc  ask  
pickul-ø-yicc  change shape-ask > change into animal  
purr-yicc  wail-ask > wail  
(e) yika  go down  
rin-yika  flow-go down > flow down  
curr-yika  climb down-go down > climb down  
kak-yika  go away-go down > go off down  
warrup-yika  flow-go down > flow (of tide)  
(f) ye  lie, functions as a stative auxiliary in its compounds.  
kurrrma-ye  snore-lie > snore  
pønc-ye  dream-lie > dream  
pørec-ye  sleep-lie > sleep  
(g) kape  laugh  
kannak-kape  laugh-laugh > laugh  
(h) pe  go  
cejllme-pe  relieve self-go > go and relieve oneself  
njncamalli-me  be unlucky-go > be unlucky hunting animals  
yanulac-pe  go spear-fishing  
kak-pe  leave-go > leave, go away  
kawełec-pe  urinate-go > urinate  
ŋala/pøce/mecak/celme/pepere/manac/carrwa/lenti-pøcce-pe  
hand/head/neck/shoulder/back/chest/flank/hip-carry-go > go, carrying in one's hand/on one's head/neck/back/chest/flank/hip.  
parrac-mecak-pøcce-pe astride-neck-carry-go > go, carrying astride one's neck  
mirak-pe  dance-go > go dancing (of women)  
mørrø-pe  be lucky-go > be lucky getting vegetables  
mununuk-pe  dance-go > go dancing  
muguyil-pe  paddle-go > go, paddling  
(i) pette  die  
cerrpine-pette  starve-die > be starving  
marrcic-pette  freeze-die > be cold  

(j) pelepa | vomit
---|---
ŋakali-pelepa | ?-vomit > vomit
(k) par | walk
 cena-par | run-walk > run
cenme-par | relieve self-walk > go and relieve oneself
yanulac-par | spear-fishing-walk > travel, spear-fishing
kak-par | leave-walk > leave
kawelec-par | urinate-walk > go and urinate
ŋac-par | hide-walk > hide
ŋala/poscope/mecak/celme/pepere/manac/carrwa/lenti-poscope-par
hand/head/neck/shoulder/back/chest/flank/hip-carry-walk > walk, carrying in the hand/on the head, neck, shoulder, back, chest, flank, hip
parrac-mecak-poscope-par astride-neck-carry-walk > walk, carrying astride one’s neck
mirak-par | dance -walk > go dancing (of women)
murraj-par | inform on-walk > inform on someone
mununuk-par | dance-walk > go dancing (of men)
muguyil-par | paddle-walk > paddle
(1) puka | bathe
kappuk-puka | wash-bathe > bathe
(m) mi | sit
tut-mi | sit down-sit > sit down
cinci-mi | squat on heels-sit > squat on heels
camaya-mi | chew-sit > chew
cøtpiyc-mi | chat-sit > chat
malwarran-mi | tell story-sit > tell story
ŋurrkgurrkwa-mi | sniff-sit > sniff
ŋalapiyc-mi | clap-sit > clap
ŋala/poscope/manac-poscope-mi hand/head/neck-carry-sit > sit, carrying in the hand/on the head/chest
(n) me | say, be, functions as an inchoative verb in some compounds.
rij-kar-me | flow-dribble > dribble
cilk-me | ache-say > ache
currk-me | be charred-be > be charred
yu-me | change shape-be > change into animal
kara-me | drip-be > drip
ŋalanjalala-me | cough-say > cough
3.4.6 Auxiliary verb complexes. In an auxiliary verb complex, a simple or compound transitive or intransitive verb is regularly followed by one of the following five intransitive auxiliary verbs:

-çaña  stand
-yepe  lie
-pe    go
-par   walk
-mi    sit.

These auxiliary verbs specify the bodily orientation of the subject of the main verb, e.g.

-çaña (96), (220);
-yepe  (219);
-pe    (25), (32), (142), (151), (185), (186), (194), (221);
Choice of auxiliary is limited by the nature of the action/stat
expressed by the main verb; the actions described in (44)-(45)
must be performed sitting; that ordered in (25) cannot. When
logically possible, a main verb may collocate with any of these
five auxiliaries, e.g.

(218) kalaŋ-palak  kan-∅-na  kan-mi-∅
mother-GEN  3sgfSNF-cry-NF  3sgfSNF-sitAUX-NF
My mother sits and cries/sat and cried.

(219) kalaŋ-palak  kan-∅-na  kan-epe-∅
mother-GEN  3sgfSNF-cry-NF  3sgfSNF-lieAUX-NF
My mother lies and cries/lay and cried.

(220) kalaŋ-palak  kan-∅-na  kan-caŋa-∅
mother-GEN  3sgfSNF-cry-NF  3sgfSNF-standAUX-NF
My mother stands and cries/stood and cried.

(221) kalaŋ-palak  kan-∅-na  kan-pe-∅
mother-GEN  3sgfSNF-cry-NF  3sgfSNF-goAUX-NF
My mother cries as she goes/cried as she went.

(222) kalaŋ-palak  kan-∅-na  kan-par-a
mother-GEN  3sgfSNF-cry-NF  3sgfSNF-walkAUX-NF
My mother cries as she walks/cried as she walked.

The pronominal prefix to the auxiliary cross-references
as S, the A cross-referenced on the main verb. An auxiliary
inflects for tense, mood and aspect to match its main verb,
e.g. (172). Aspectual suffixes applicable to the main verb
cliticise a complex-final auxiliary, e.g. (44), (96), (185)
-(186).
(44) **ganəganə-ka-cetpe-∅**  | **kap-mi-n-c∅**
| split-3sgA.3sgONF-take out-NF  | 3sgfSNF-sitAUX-PRES-CONT  
She’s sitting, continually splitting it (T4:21).

A complex-final auxiliary bears, in addition to its own inflectional and derivational affixes, enclitic pronominal suffixes governed by the main verb, e.g. (85), (96).

(85) **kap-ukpica-∅**  | **kap-mi-∅-m-pʊrraŋkaŋi**
| 3sgfSNF-call out-NF  | 3sgfSNF-sitAUX-NF-PRES-3duD  
yik-karraŋ
old-ERG

The old woman is sitting, calling out to those two (T6:34).

3.4.7 **Incorporated nominals.** 27 type A and 4 type B verb stems incorporate immediately preceding nominals in object function, to form 75 lexical compounds, which cannot be predicted. Some are fossilised idioms incorporating body-part nominals, e.g.

(223) **cʊt-nʊnme** = foot-start > prevent  
(224) **kawep-ce** = blood-give > hate  
(225) **pipere-ɲun-me** = ear-forget-do > forget  
(226) **pepera-purr** = back-hit with missile > cover  
(227) **pʊce-p∅** = head-hit > kindle  
(228) **mipemipe-me** = eyes-say > not know how to  
(229) **mipemipe-ma** = eyes-pick up > be lost  
(230) **mipe-wica** = eye-pull > repeat  
(231) **mʊŋ-tʊrrp** = buttocks-roast > push  
(232) **mʊŋ-nʊnme** = buttocks-start > start  
(233) **mʊŋ-karrjtmice** = buttocks-play > wander  
(234) **wice-n** = nose-see > hate  
(235) **ganəŋ-karrjtmice** = person-play > change into animal  
(236) **mal-ʊce-p∅** = talk-head-hit > make noise.
Other lexical compounds are transparent. These are listed at the end of this section.

33 different lexemes are incorporated. Of these, 15 denote body-parts, e.g.

(237) melŋmelŋ wuŋmarrac mipe-kat-pø-mene-kani
    cheeky yam long yam eye-3duA.3ONF-hit-NF
    They both found cheeky yams, long yams (T3:15).

4 incorporated nominals denote tangible entities, e.g.

(238) pik-karr-ipe-makka ŋawulanŋ-makka
    rope-3plA.3sgmONF-hold-PERF woman-CAU
    kæŋ-pø-mene
    3sgA.3sgfONF-hit-NF
    They gaoled him for killing a woman (AL:166).

2 incorporated nominals denote audible, intangible entities: mal 'noise', paŋan 'song'. 12 incorporated nominals denote physical attributes, (239), or value judgements, (240).

(239) mit-yerren-paka ŋarra-mu
    pretty-1plincA.3plO-stabFUTAUX 1plincS sitFUTAUX
    Let's all sit and dye them pretty! (T5:27)

(240) yarrŋ-kanja-me
    straight-2sgSNF-say
    You said the truth! (AL:13).

When an incorporated nominal is incorporated into an intransitive verb, the resulting lexical compound is thought of as a unitary concept, e.g.
(241) pepera-cilk-ŋa-me
    back-ache-1sgS-be
My back is aching (JR:17).
(242) is a syntactic paraphrase of (241).

(242) mempit ʒan-nipe-Ø pepera
    cramp 3sgA.1sgO-hold-NF back
I've got cramp in my back (JR:44).

A nominal is incorporated into a transitive verb is
always in object function. Incorporation deprives a nominal
of syntactic salience and leaves the object slot vacant for
another nominal in O function, e.g. (31), (48), (184),
(213), (237)-(238), (243).

(48) kawen-yaŋ-e-wene cica ŋanaŋ
    blood-1sgA.3sgmO-give-NF 3sgmDevis man
    manac-gace-pøttuŋ-cene
    heart-1sgS-GEN-INS
I hate that man with all my heart (AL:62).

(243) çenmiyic kαŋ-mi-Ø mŋŋ-ka-nønme-Ø
    3sgfP 3sgfS-sit-NF buttocks-3sgA.3sgmONF-start
    çancic
    another one
She sits down and starts (weaving) another (band of
colour) (T4:91).

In her typology of noun incorporation (NI), Mithun (1984:856,
878) defines four types of NI. In type I, NI derives lexical
compounds perceived as unitary concepts, with syntactic
paraphrases. In type II, the noun is incorporated in object
function, losing syntactic salience, and leaving the object slot free for another nominal to fill. Type II NI is predicated on the existence of type I. Incorporated nouns in Bachamal fit types I and II of Mithun's classification.

The corpus contains the following lexical compounds whose meaning is transparently derived from an incorporated nominal:

- (244) terrpmin-me = narrow-be > shrink
- (245) tarranmalan-yi = cool-make > cool
- (246) tul-me = angry-be > be angry
- (247) nitirr-pe = line-go > go fishing
- (248) nitirr-par = line-walk > go off fishing
- (249) nitirr-mi = line-sit > sit fishing
- (250) celme-pøcce-pe = shoulder-carry-go > go, carrying on the shoulder
- (251) celme-pøcce-par = shoulder-carry-walk > walk, carrying on the shoulder
- (252) carrwa-pøcce-pe = rib-carry-go > go, carrying on the flank
- (253) carrwa-pøcce-par = rib-carry-walk > walk, carrying on the flank
- (254) carakku-yi = good-make > cheer up
- (255) lenti-pøcce-pe = hip-carry-go > go, carrying on one's hip
- (256) lenti-pøcce-par = hip-carry-walk > walk, carrying on one's hip
- (257) yirril-pikica = shell-pick at > shed shell
- (258) yik-me = old-be > grow up
- (259) yik-yi = old-make > rear
- (260) yarrq-me = straight-say > tell the truth
- (261) kel-cetpe = path-take out > take the lead
- (262) kel-mønme = path-climb > climb
- (263) nak-pellerrme = mouth-open > yawn
- (264) gala-pøcce-pe = hand-carry-go > go, carrying in the hand
- (265) gala-pøcce-par = hand-carry-walk > walk, carrying in one's hand
(266) ṅala-poscce-mi = hand-carry-sit > sit, carrying in the
hand
(267) naŋka-pø = clapsticks-hit > play clapsticks
(268) njak-cetpe = mouth-take out > open
(269) njak-panŋka = mouth-stab  > hook fish
(270) pik-nipe = rope-hold  > gaol
(271) pipere-celkme = ear-think  > think about
(272) penterr-yi = sweet-make > sweeten
(273) pepera-poscce-pe = back-carry-go > go, carrying on back
(274) pepera-poscce-par = back-carry-walk > walk, carrying on
one's back
(275) poscce-poscce-pe = head-carry-go > go, carrying on head
(276) poscce-poscce-par = head-carry-walk > walk, carrying on
one's head
(277) pattura-yi = dry-make > dry
(278) panaŋ-pjnc = song-climb > sing
(279) parrac-mecak-poscce-pe = astride-neck-carry-go > go, carry
astride one's neck
(280) parrac-mecak-poscce-par > walk, carrying
astride one's neck
(281) mit-marr = pretty-paint > paint pretty
(282) mit-wakaca = pretty-come out > turn out pretty
(283) mit-panja = pretty-stab > make pretty
(284) mipe-cetpe = eye-take out > open
(285) mipe-pellerrme = eye-open > open eyes
(286) mipe-pø = eye-hit > find
(287) mipe-wakaca = eye-arrive > look on the surface
(288) mipe-wukka = eye-copy > look like
(289) mecak-poscce-pe = neck-carry-go > go, wearing round
one's neck
(290) mecak-poscce-par = neck-carry-walk > walk, wearing round
one's neck
(291) mecak-poscce-mi = neck-carry-sit > sit, wearing round
one's neck
(292) mọŋ-mara = buttocks-kick > catch up with
(293) manac-poscce-pe = chest-carry-go > go, carry on chest
(294) manac-poscce-par = chest-carry-walk > walk, carrying on
one's chest
(295) wice-pikica = nose-pick at > pick one's nose
(296) wirrk-yi = finished-make > finish.

3.4.8 Interrogative verb. The interrogative particle {yine-} 'how?/what?' is incorporated into the verb {-me} 'do' to derive the interrogative verb {yine-me} 'do what?', e.g.

(297) yine-kane-me-makka
what-2sgSNF-do-PERF
What did you do? (AL:172)

When followed by another verb, {yine-me} means 'do how?', e.g.

(298) yine-kane-me-makka mœrrakmala-ka-wa
how-2sgSNF-do-PERF build-2sgA.3sgONF-makeAUX
How did you make it? (AL:171)

3.5 Adverb morphology. Adverbs specify the time, place and manner of the action or state expressed by the verb. Interrogative adverbs always occur sentence-initially. Temporal adverbs and adverbs of manner occur sentence-initially or finally. Locative adverbs occur anywhere in the sentence. Temporal adverbs may be marked with perfective or purposive aspectual suffixes; locative adverbs may be marked with local case-suffixes. Interrogative adverbs may carry dative or ablative, purposive or causal suffixes. Temporal adverbs may bear compatible clitic particles.

3.5.1 Temporal adverbs.
wułaput wułaput some years ago
wulaput
wuŋaŋancic
morrakara
morrakaraŋancic
ŋurraca
yagarag
pelappuy
yagarag-ci
palkpalk
ŋarr
kulkamorrara
yijmek
yijmekŋancic
naŋana
ŋuna
naŋkarra

some time ago
year-one = last year
yesterday
yesterday-one = day before
yesterday
last night
today
early
today-3sgmDetang = right now
already
later
at dusk
tomorrow
day after tomorrow
first
then
again

3.5.2 Locative adverbs.
warangkal
wurak
waŋancic
kaŋa
çolup
majmac
kayarrra
paŋkulka
posição
pap
kacu
kuca
kacucu

far
near
behind
on top
inside
outside
along
in the middle
round the corner
up
towards the speaker
away from the speaker
out of sight of the speaker.

3.5.3 Manner adverbs.
mattimatti
slowly
wettet/werret  quickly
rømetmet  heartbrokenly
yencarrwa  on one's side
puc  straight.

3.5.4 Interrogative adverbs.
anikine  when?
pinewica  how many/much?
kine  where?

Sentence-initial interrogative adverbs may be cliticised by purposive or perfective aspectual markers. {kine} 'where?' may bear a Locative case-suffix and inflects for number and 3sg gender. These forms, listed in Table 13, occur only in locative questions, where they agree in gender and number with a following audible deictic, e.g. (299)-(301).

<table>
<thead>
<tr>
<th>Table 13: Interrogative adverb inflections</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Singular</strong></td>
</tr>
<tr>
<td>3m  cine</td>
</tr>
<tr>
<td>3f  ciŋina</td>
</tr>
</tbody>
</table>

(299) cine  cawana  ɲanaŋ
Where3sgm  3sgmDeaud  man
Where is that man?

(300) ciŋina  ceŋena  ɲawulanŋ
Where3sgf  3sgfDeaud  woman
Where is that woman?
3.6 **Particle morphology.** Bachamal distinguishes free and clitic particles. Free particles occur sentence- or phrase-initially or -finally, and may be modified only by compatible clitic particles. Interjections form an invariable sub-class of free particle; each interjection constitutes a sentence. Clitic particles cannot occur independently, but an otherwise independent word. Clitic particles attach to members of every word class.

Particles add illocutionary force to a word, phrase or sentence. They specify its focus or polarity, whether an entity, or action/state is additional, obligatory, deliberate, whether or not it has already occurred, and when, or if it is still occurring.

### 3.6.1 Free particles.

#### 3.6.1.1 Interjections.

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>teli</td>
<td>Wait!</td>
</tr>
<tr>
<td>ya</td>
<td>I don't know</td>
</tr>
<tr>
<td>yakarra</td>
<td>Oh, no!</td>
</tr>
</tbody>
</table>
yakkuy        probably
kawa          Come!
ŋa             Yes!
ŋutpe          Never mind!
perrmeŋ         Finished!
mepaŋ             OK!

3.6.1.2 Free particle operating at sentence or phrase level.
{kamaŋka}       Nothing!

{kamaŋka} may derive historically from the 3sgmSNF form
of the verb {maŋka} 'be lacking', which is not attested in the
corpus. Cognate with {kamaŋka} is the nominal derivational
suffix {-maŋka} 'empty'. {-maŋka} and {kamaŋka} may co-occur,
e.g. (133). {kamaŋka} negates nominals, e.g. (186), (302).

(302) kamaŋka maŋ
       Nothing money
       I've no money (JB:3).

In (302), {kamaŋka} operates at phrase level, but it may by
itself replace a verb, e.g. (174), (303).

(303) mipe cica yag-cetpe-nuŋ ga-me-ŋ-kak
eye 3sgDevis lsgA.3sgmO-take out-PUR lsgS-try-PRES-Foc

      kamaŋka-nte-pe
      nothing-now-ever

      I'm trying to get that thing out of my eye; I'll
      never do it (T3:49).

{kamaŋka} may be modified only by the clitic particles {-pente}
'now', {-pe} 'ever', e.g. (303), or (-pakka), e.g. (304), or {-karrac}, e.g. (305).

(304) kamaŋka-kka
Nothing-re
No way! (AL:501)

(305) kamaŋka-karrac
Nothing-at all
Nothing at all (AL:509).

3.6.1.3 Free particles operating at phrase-level.

- **enŋ**
  isn't it?

- **ŋakuŋø**
  not

- memmep--pupuy
  keep doing, without stopping.

(i) **Interrogative particle.** {enŋ} 'isn't it?' occurs most often as a sentence-final tag question, e.g. (306)

- wøŋ ye-pi-yika-nuŋ enŋ
  rain 3sgSFUT-FUT-come down-PUR isn't it
  It's going to rain, isn't it?

(ii) **Negative particle.** {ŋakuŋø} 'not'.

{ŋakuŋø} occurs sentence-initially and may thus be cliticised by the purposive and perfective aspectual suffixes. It is modified only by clitic particles. {ŋakuŋø} negates positive declarative sentences, e.g.

(307) ŋakuŋø-nte-pe ye-p-pakaca
  Neg-now-ever 3sgSFUT-FUT-come out
  It will never come out (T3:51).

{ŋakuŋø} negates positive admonitions, e.g. (170), (176)-(177) and introduces type 1 prohibitions, e.g.
\[(308) \text{ŋaku} \text{ŋ} \quad \text{ye-pe-ceŋ-pe} \]
\[
\text{Neg} \quad 2\text{sgA.3sgmOFUT-FUT-put in-FUTC}M
\]
\[
\text{Don’t put it in! (AL:412)}
\]

\[
\{\text{ŋaku} \text{ŋ}\} \text{ does not occur in type 2 prohibitions. These are marked negative by the negative suffix } \{-\text{ku} \text{ŋ}\} \text{ which attaches to a verb inflected for non-future tense, prefixed by a non-future prefix, e.g (165-169 and (309).}
\]

\[(309) \text{ka-ceŋ-mene-ŋ-ku} \text{ŋ} \]
\[
\text{2sgA.3sgmONF-put in-NF-PRES-Neg}
\]
\[
\text{Don’t put it in! (AL:413)}
\]

(iii) **Continuative particles.** \{memmę\} - \{pupuy\} 'keep doing without stopping'. The invariable particles \{memmę\} - \{pupuy\} frame the verb they qualify, e.g.

\[(310) \text{memmę yag-pi-kirrwa} \quad \eta-a-p-pe-\text{cō} \quad \text{pupuy}
\]
\[
\text{stop 1sgA.3sgm-FUT-dig 1sgS-FUT-go-CONT go}
\]
\[
\text{I won’t stop digging (AL:477).}
\]

3.6.2 **Clitic particles.** Bachamal clitic particles encliticise members of any word class. They follow all derivational and inflectional suffixes and may themselves be cliticised by pronominal enclitics. Table 14 shows the order of co-occurring clitics.

Clitics differ from derivational suffixes in that they cannot create words (cf. Klavans 1982:15). Clitic and host word form a single phonological unit. The initial syllable of the clitic particle \{-t/rragkarra\} 'another', and the initial CV of the clitic particles \{-pente\} 'now', \{-pakka\} 'same/
really' and {-pakkacca} 'obligated' elide after a host-final vowel. A word may be cliticised by up to two clitic particles, the final one always being the focal clitic {-kak}. The clitic particle {-mepe} 'never' is restricted to a sentence-initial host; other clitic particles attach to sentence or phrase-initial and -final words; the focal clitic {-kak} may encliticise a word in any position in the sentence.

Table 14: Order of co-occurring clitics

(I, II, II = first, second, and third order clitics)

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>-pente</td>
<td>(ii)</td>
<td>-kak</td>
</tr>
<tr>
<td>(iii)</td>
<td>-pe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv)</td>
<td>-mepe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(v)</td>
<td>-karrac</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vi)</td>
<td>-pakkacca</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vii)</td>
<td>-pakka</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(viii)</td>
<td>-t/rra9karra</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ix)</td>
<td>-merre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(x)</td>
<td>-mini</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(xi)</td>
<td>-mente</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(xii)</td>
<td>-parrk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(xiii)</td>
<td>-cukkaca</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

{-pente} 'now' frequently cliticises sentence-initial pronouns, e.g. (127), (136), nouns, e.g. (19), (186), (311), adjectives, e.g. (312), verbs, e.g. (29), (199),
adverbs with future reference, e.g. (135), free particles, e.g. (303). {-pente} behaves like Yidip {a/la}, (Dixon 1977:236-9), in that, attached to nominals, it usually implies 'it's my/your/his/her/our/their turn' e.g. (19), (136), (311)-(312), while, attached to verbs or adverbs, it means 'immediately', e.g. (29), (135), (179), (199).

(311) win-nuŋ{-pente} kapaŋ-ukpica-ŋacan
milk-DAT-now 3sgfSNF-call out-3sgfD
She calls out to her for milk (T2:21).

(312) psokka-nte kapaŋ-pe
clean-now 3sgfSNF-go
It's her turn to be clean (AL:387).

(199) kak-kug{-pente}-perr-pe
go away-PUR-now-2plSFUT-goAUX
IMP
Go away right now! (BL:14)

{-pente} co-occurs with the focal clitic {-kak}, e.g. (19), or the particle {-pe} 'ever', e.g. (303), (307). It is followed by a pronominal enclitic in (29).

(ii) {-kak} 'focal'. {-kak} topicalises a previously mentioned referent and frequently cliticises a deictic, e.g. (135), (144). The clitic particle {-kak} is homophonous with the type B verb stem {kak-} 'go away', but they have different occurrence possibilities and ambiguity never arises.

(iii) {-pe} 'ever' cliticises nominals, eg. (73), verbs, e.g. (194), but most often the free negative particles {ŋakuŋ}, e.g. (73), (307), or {kamaŋka}, e.g. (303).
(73) ṇaku!¢-pe ṇa-p-pe-ce cīn pampac
Neg-ever 1sgA.2sgO-FUT-give 3sgfDetang baby

ŋace-pottuŋ-pe
1sgP-GEN-ever

I’ll never give you this baby. It’s mine for ever! (T2:29).

(194) ṇa-pe-me-nuŋ-pe ṇa-p-pe ṇace memempena
1sgS FUT-become-PUR-ever 1sgS-FUT-goAUX 1sgP porpoise
As for me, I’m going to become porpoise for ever! (T2:62)

(iv) {-mepe} 'never' only occurs attached to the sentence-
initial negative particle {naku!¢}, in sentences whose verb is
inflected for non-future tense, e.g.

(313) ṇaku!¢-mepe pappa ka-me-ŋ ka-pe-r-raŋ
Neg-ever father 3sgmSNF-do-PRES 3sgmSNF-goAUX-HAB
Father never used to do that (AL:488).

(v) {-karrac} 'at all. This clitic particle modifies the
negative particle {kamaŋka} 'nothing', e.g. (305).

(vi){-pakkacca} 'obligated'. This clitic particle only occurs
in admonitions, e.g. (170)-(178).

(vii) pakka ----> { /-kka/ / V _____

/-pakka/
Cliticised to nominals, e.g. (314), {-pakka} means 'same'.

(314) peyik-pakka muntak ka-ka-jca kap-pe-m
bag-same old 3sgA.3sgONF-take-NF 3sgfs-goAUX-PRES
She’s going, taking the same old bag (AL:240).

Cliticised to the present or purposive aspectual suffixes, e.g.
(315), (195), to an adverb, e.g. (316), or to the negative particle {kamaŋka}, e.g. (304), {-pakka} means 'really'.

(315) pul-ka-me-m-pakka  rak  ci-kak
hot-3sgmSNF-be-PRES-re  country 3sgmDetang-Foc
This place is really hot (AL:250).

(316) kuca-makka-kka  pickuŋ-ø-ka-yicca
over there-PERF-re  change shape-3sgmSNF-askAUX
Over there, he really did change into an animal (T2:1).

(viii) {-t/rraŋkarra} ----> /-karra/  /ŋ____

{-t/rraŋkarra}, 'another' cliticises nouns, pronouns, verbs and some clitic particles, behaving like Dyirbal {-ru}, (Dixon 1972:266). It occurs most frequently after a noun or pronoun, e.g.

(317) cica  ŋanaŋ-karaŋ-karra  kap-pø-mene
3sgmDevis man-ERG-another  3sgA.3sgfONF-hit-NF
That man was another that hit her (AL:321).

(168) penpu-ṭut-mene-ŋ-kulŋ  ŋace-karaŋ-karra
2plA.1sgO-leave-NF-PRES-Neg  1sgP-ERG-another

ŋa-pe-ŋ-cø
1sgS-go-PRES-CONT

Don't leave me behind, I'm coming too! (AL:492)

(318) kane-rraŋkarra  nperr-pur-iŋ-kaŋi
2sgP-another  2duSFUT-walkFUT-FUTCM
IMP
You go too, the pair of you! (AL513)
Cliticised to a verb, {-t/rraŋkarra} means 'another time', e.g.

(320) karr-par-a-rraŋkarra
3plSNF-walk-NF-another
They went one more time (AL:322).

(321) cepmiyic-taŋkarra kaŋ-mi-m-taŋkarra
3sgfP-another 3sgfSNF-sit-PRES-another
Another woman is sitting another time (T5:21).

(322) pɔrra-rraŋkarra kittirak-kanpi-rikka-parra-rraŋkarra
3plP-another peel-3A.3plONF-sortAUX-RET-another
Another mob sorted and peeled them another time.

(ix) {-merre} 'also/again' commonly cliticises verbs, e.g. (133), (323), but may cliticise sentence-initial nominals, e.g. (324).

(323) pɔrra-rraŋkarra kanpu-turra-merre karr-mi
3plP-another 3A.3plONF-dig-also 3plSNF-sitAUX
Another mob sat and cooked them (AL:124).

(324) qaŋce-merre recca-yaj-nipe
1sgP-also like-1sgA.3sgmO-hold
I like him too (AL:241).

In (325), {-merre} is attracted from verb-final position to cliticise a sentence-initial adverb.

(325) mɔrrakara-merre ka-wu-mene-makka
yesterday-also 2sgA.spear-NF-PERF
You were among those who speared it yesterday (AL:280).

(x) {-mini} 'at that time'. {-mini} is a past punctual particle which cliticises sentence-initial adverbs or
complex-initial verbs, e.g. (137), (326)-(327).

(326) mɔrракa–mini ka-pa-kaca-ŋara-kkacca
yesterday-then 2sgA.3sgmO-FUT-bake-ADM-obl
You should have baked it yesterday.

(327) kiwilŋ jenren–purr–ine–mini kaŋka–caŋa
coolibah 2plA.3plO-chop-NF-then 2plSNF-standAUX
At that time, you stood and chopped down the coolibah trees (AL:577).

(xi) {-mente} 'already'. {-mente} cliticises sentence- or phrase- initial or final nominals, verbs or adverbs, e.g.

(328) kaŋ–pette–mente kamaŋka–kkka
3sgfSNF-die–already Nothing-re

(329) ḡace–mente yəŋ–ci–jene ŋa–mi–makka
1sgP-already 1sgA.eat-NF 1sgS-sitAUX-PERF
I've already eaten (AL:270).

(xii) {-parrk} 'still'. {-parrk} cliticises a sentence- or phrase- final verb, e.g. (330).

(330) kaŋ–mi–m–parrk te-li cepiya
3sgfS-sit-PRES-still Wait!'alive
Wait now, she's still alive! (AL:603).

(xiii) {-cukkaca} 'only'. {-cukkaca} attaches to nominals, verbs or adverbs, e.g.

(331) pampac–cukkaca
child only
Only child.

(332) camuyic–cukkaca parrkŋ yə-p-puriŋ
3sgmP-only by himself 3sgmSFUT–FUT-walk–FUTCM
Only he will go, by himself.
She just stood (all day).
Appendix 1: Verbs

Simple verbs
A pronominal prefix immediately precedes a type A verb stem inflected for non-future tense. When a type A verb stem is inflected for future tense, the pronominal prefix precedes the future tense prefix. The pronominal prefix is omitted in the following list of verbs.

Compound verbs
A type B stem typically immediately precedes the pronominal prefix of the type A stem which acts as its auxiliary. Type B stems are cited only in the stem + NF column.

Incorporated nominals
A nominal incorporated by a type A verb immediately precedes the pronominal prefix. A nominal incorporated by a type B verb stem immediately precedes the type B verb stem. Incorporated nominals are underlined and cited only in the stem + NF column.

Irregular verbs
In Appendix 1, irregular verbs, classified by the letter I, are listed by conjugation. In Appendix 2, the irregularities of each verb are specified.
<table>
<thead>
<tr>
<th>Conjugation 1</th>
<th>stem + NF</th>
<th>stem + FUT</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ci-pene</td>
<td>-pi-ci</td>
<td>eat</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>-ci-pene</td>
<td>-pi-ci</td>
<td>drink</td>
</tr>
<tr>
<td>cam-ci-pene</td>
<td>-pi-ci</td>
<td>eat up</td>
<td></td>
</tr>
<tr>
<td>-n-ene</td>
<td>-pe-na</td>
<td>see</td>
<td></td>
</tr>
<tr>
<td>cewerr-n-ene</td>
<td></td>
<td>be jealous of</td>
<td></td>
</tr>
<tr>
<td>kikkilili-n-ene</td>
<td></td>
<td>tickle</td>
<td></td>
</tr>
<tr>
<td>wice-n-ene</td>
<td></td>
<td>hate</td>
<td></td>
</tr>
<tr>
<td>pø-n-ene</td>
<td></td>
<td>blow on</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>-ye-wene</td>
<td>-pe-ce</td>
<td>give</td>
</tr>
<tr>
<td>I</td>
<td>kawen-ye-wene</td>
<td></td>
<td>hate</td>
</tr>
<tr>
<td>I</td>
<td>mepec-ye-wene</td>
<td></td>
<td>share</td>
</tr>
<tr>
<td></td>
<td>-pirr-ine</td>
<td>-p-pirr-e</td>
<td>chop</td>
</tr>
<tr>
<td></td>
<td>-nic-ene</td>
<td>-pi-nic-e</td>
<td>look after</td>
</tr>
<tr>
<td>I</td>
<td>-nic-ene</td>
<td>-pi-nic-e</td>
<td>wait for</td>
</tr>
<tr>
<td></td>
<td>-pinc-ene</td>
<td>-p-pinc-e</td>
<td>hang up</td>
</tr>
<tr>
<td></td>
<td>-tørrp-mene</td>
<td>-pø-tørrp-pa</td>
<td>roast in sand</td>
</tr>
<tr>
<td>møn-tørrp-mene</td>
<td></td>
<td>push</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-tøt-mene</td>
<td>-pa-tøt-pa</td>
<td>bite</td>
</tr>
<tr>
<td></td>
<td>-tut-mene</td>
<td>-pu-tut-pa</td>
<td>leave behind</td>
</tr>
<tr>
<td>rip-tut-mene</td>
<td></td>
<td>pass by</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-cap-mene</td>
<td>-pa-cap-pa</td>
<td>stretch</td>
</tr>
<tr>
<td></td>
<td>-cen-mene</td>
<td>-pe-cen-pe</td>
<td>put in</td>
</tr>
<tr>
<td></td>
<td>-pø-mene</td>
<td>-pø-pø</td>
<td>hit</td>
</tr>
<tr>
<td>ten-pø-mene</td>
<td></td>
<td>stop (doing X)</td>
<td></td>
</tr>
<tr>
<td>pinin-luk-pø-mene</td>
<td></td>
<td>behave badly</td>
<td></td>
</tr>
<tr>
<td>cørepncørep-pø-mene</td>
<td></td>
<td>rub</td>
<td></td>
</tr>
<tr>
<td>yerrk-pø-mene</td>
<td></td>
<td>scrape, comb</td>
<td></td>
</tr>
<tr>
<td>nanka-pø-mene</td>
<td></td>
<td>play clapsticks</td>
<td></td>
</tr>
<tr>
<td>pill-pø-mene</td>
<td></td>
<td>slap</td>
<td></td>
</tr>
<tr>
<td>per-pø-mene</td>
<td></td>
<td>make cool</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>pøce-pø-mene</td>
<td></td>
<td>heap up kindling</td>
</tr>
<tr>
<td>I</td>
<td>mal-pøce-pø-mene</td>
<td></td>
<td>make noise</td>
</tr>
<tr>
<td>mipe-pø-mene</td>
<td></td>
<td>find</td>
<td></td>
</tr>
<tr>
<td>mipe-karac-pø-mene</td>
<td></td>
<td>look at cross-eyed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-wara-mene</td>
<td>-p-ara-pa</td>
<td>join</td>
</tr>
<tr>
<td></td>
<td>-wu-mene</td>
<td>-pu-pa</td>
<td>spear</td>
</tr>
<tr>
<td></td>
<td>-wuc-mene</td>
<td>-p-uc-pa</td>
<td>scold</td>
</tr>
<tr>
<td>Verb</td>
<td>Meaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>kutti-wuc-mene</td>
<td>argue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ṇak-wuc-mene</td>
<td>kiss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-wup-mene</td>
<td>throw</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conjugation 2**

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>-rø-na</td>
<td>cry</td>
</tr>
<tr>
<td>-yi-ŋa</td>
<td>put down</td>
</tr>
<tr>
<td>tarranmalan-yi-ŋa</td>
<td>cool</td>
</tr>
<tr>
<td>cera-ŋa</td>
<td>burn</td>
</tr>
<tr>
<td>çol-ŋa</td>
<td>put down on ground</td>
</tr>
<tr>
<td>carakku-ŋa</td>
<td>cheer up</td>
</tr>
<tr>
<td>yik-ŋa</td>
<td>rear</td>
</tr>
<tr>
<td>yinkulk-ŋa</td>
<td>sweeten</td>
</tr>
<tr>
<td>yele-ŋa</td>
<td>taste, test</td>
</tr>
<tr>
<td>ktitirak-ŋa</td>
<td>peel and put down</td>
</tr>
<tr>
<td>kut-ŋa</td>
<td>miss</td>
</tr>
<tr>
<td>ŋuk-ŋa</td>
<td>break</td>
</tr>
<tr>
<td>penterr-ŋa</td>
<td>sweeten</td>
</tr>
<tr>
<td>pattura-ŋa</td>
<td>dry</td>
</tr>
</tbody>
</table>

**I**

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>para-ŋa</td>
<td>swim</td>
</tr>
<tr>
<td>ŋanaperrak-ŋa</td>
<td>block (view)</td>
</tr>
<tr>
<td>marrce-la-ŋa</td>
<td>ask question</td>
</tr>
<tr>
<td>wirrk-ŋa</td>
<td>finish</td>
</tr>
<tr>
<td>wuccuc-ŋa</td>
<td>pick and put down</td>
</tr>
<tr>
<td>wupucpupuc-ŋa</td>
<td>gather</td>
</tr>
<tr>
<td>-pa-ŋa</td>
<td>smash</td>
</tr>
<tr>
<td>mipene-pa-ŋa</td>
<td>shut</td>
</tr>
<tr>
<td>-purrr-una</td>
<td>hit with missile</td>
</tr>
</tbody>
</table>

**I**

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>-purrr-una</td>
<td>look for</td>
</tr>
<tr>
<td>cikmiyic-purrr-una</td>
<td>sneeze</td>
</tr>
<tr>
<td>pepera-purrr-una</td>
<td>cover</td>
</tr>
<tr>
<td>-ma-ŋana</td>
<td>pick up</td>
</tr>
<tr>
<td>yeñere-ma-ŋana</td>
<td>steal</td>
</tr>
<tr>
<td>ŋalawa-ma-ŋana</td>
<td>help</td>
</tr>
<tr>
<td>ŋalapala-ma-ŋana</td>
<td>lose</td>
</tr>
<tr>
<td>ŋipemipe-ma-ŋana</td>
<td>lose one’s way</td>
</tr>
<tr>
<td>wat-ma-ŋana</td>
<td>trip</td>
</tr>
<tr>
<td>-marr-ana</td>
<td>paint</td>
</tr>
<tr>
<td>mit-marr-ana</td>
<td>paint pretty</td>
</tr>
</tbody>
</table>
**Conjugation 3**

<table>
<thead>
<tr>
<th>-mac-ana</th>
<th>-p-mac-a</th>
<th>be scared of</th>
</tr>
</thead>
<tbody>
<tr>
<td>-wac-ana</td>
<td>-p-ac-a</td>
<td>immerse</td>
</tr>
<tr>
<td>-wuc-ana</td>
<td>-p-uc-a</td>
<td>carry</td>
</tr>
<tr>
<td>-racc-e</td>
<td>-pa-racc-aŋ</td>
<td>go</td>
</tr>
<tr>
<td>ŋawi-racc-e</td>
<td></td>
<td>crawl</td>
</tr>
<tr>
<td>picip-racc-e</td>
<td></td>
<td>go on a journey</td>
</tr>
<tr>
<td>-cinpic-e</td>
<td>-pi-cinpic-aŋ</td>
<td>go in</td>
</tr>
<tr>
<td>-cappay-a</td>
<td>-pa-cappay-aŋ</td>
<td>stretch</td>
</tr>
<tr>
<td>-yicc-a</td>
<td>-pi-yicc-aŋ</td>
<td>ask</td>
</tr>
<tr>
<td>pickulŋ-yicc-a</td>
<td></td>
<td>change shape</td>
</tr>
<tr>
<td>purr-yicc-a</td>
<td></td>
<td>wail</td>
</tr>
<tr>
<td>wurakwurak-yicc-a</td>
<td></td>
<td>tug either end</td>
</tr>
<tr>
<td>-ye-pe</td>
<td>-pe-y-aŋ</td>
<td>lie</td>
</tr>
<tr>
<td>kurrma-y-e-pe</td>
<td></td>
<td>snore</td>
</tr>
<tr>
<td>pønec-y-e-pe</td>
<td></td>
<td>dream</td>
</tr>
<tr>
<td>pørrec-y-e-pe</td>
<td></td>
<td>sleep</td>
</tr>
<tr>
<td>-ka-ŋca</td>
<td>-pa-ka-ŋ</td>
<td>take</td>
</tr>
<tr>
<td>war-ka-ŋca</td>
<td></td>
<td>lift</td>
</tr>
<tr>
<td>pirippirip-ka-ŋca</td>
<td></td>
<td>turn sthg round</td>
</tr>
<tr>
<td>-piŋc-e</td>
<td>-p-piŋc-aŋ</td>
<td>climb up</td>
</tr>
<tr>
<td>pønøpøn-piŋc-e</td>
<td></td>
<td>sing</td>
</tr>
<tr>
<td>-par-a</td>
<td>-p-pur-ŋ</td>
<td>walk</td>
</tr>
<tr>
<td>nitirr-par-a</td>
<td></td>
<td>go fishing</td>
</tr>
<tr>
<td>cena-par-a</td>
<td></td>
<td>run</td>
</tr>
<tr>
<td>cenme-par-a</td>
<td></td>
<td>go and relieve self</td>
</tr>
<tr>
<td>celme-pøcce-par-a</td>
<td></td>
<td>walk, carrying on the shoulder</td>
</tr>
<tr>
<td>carrwa-pøcce-par-a</td>
<td></td>
<td>walk, carrying on one’s flank</td>
</tr>
<tr>
<td>yanulac-par-a</td>
<td></td>
<td>go spear-fishing</td>
</tr>
<tr>
<td>lenti-pøcce-par-a</td>
<td></td>
<td>walk, carrying on one’s hip</td>
</tr>
<tr>
<td>kak-par-a</td>
<td></td>
<td>walk away</td>
</tr>
<tr>
<td>kawelec-par-a</td>
<td></td>
<td>go and urinate</td>
</tr>
<tr>
<td>ŋac-par-a</td>
<td></td>
<td>hide (self)</td>
</tr>
<tr>
<td>ŋala-pøcce-par-a</td>
<td></td>
<td>walk, carrying in the hand</td>
</tr>
</tbody>
</table>
pepera-pecce-par-a  walk, carrying on
pocce-pecce-par-a  one's back
parrac-mecak-pecce-par-a  walk, carrying
mirak-par-a  on the head
mecak-pecce-par-a  walk, carrying
manac-pecce-par-a  astride one's neck
murra-par-a  go dancing (women)
muguyil-par-a  one's neck
mununuk-par-a  walk, wearing round
meyecma-mey-e  one's neck
kel-mØnm-e  walk, wearing on
-manc-ine  the chest
-p-manc-ine  inform on
-manc-ine  paddle
mirak-muy-e  go dancing (men)
-wecc-a  get up
dance (women)
-wunci-e  get up
give birth
defecate

Conjugation 4
-turra  cook
-pu-turra  stew
pullup-turra  fumigate house
wul-turra
I
-nipe  hold, touch
-pi-ripe  gaol
pik-nipe  hold tight
tup-nipe  squeeze
cirr-nipe  like, desire
recca-nipe  fetch water
wik-nime  prevent
-pi-rime
-cot-nØnme  start barking
-pØ-nØnme  start sthg
recca-nipe
I perkperk-nØnme
mØg-nØnme  sort
-rikka  peel and sort
-pi-rikka
kittirak-rikka  fall
-pi-riña
-riña  take out
-pecetpe
<table>
<thead>
<tr>
<th>luŋ-cetpe</th>
<th>extract</th>
</tr>
</thead>
<tbody>
<tr>
<td>kel-cetpe</td>
<td>take the lead</td>
</tr>
<tr>
<td>ɲak-cetpe</td>
<td>open</td>
</tr>
<tr>
<td>ɲanaɲana-cetpe</td>
<td>split</td>
</tr>
<tr>
<td>mipe-cetpe</td>
<td>open</td>
</tr>
<tr>
<td>munmun-cetpe</td>
<td>pluck</td>
</tr>
<tr>
<td>pipere-celkme</td>
<td>think about</td>
</tr>
<tr>
<td>-caŋa</td>
<td>stand</td>
</tr>
<tr>
<td>cat-caŋa</td>
<td>stand</td>
</tr>
<tr>
<td>terrk-caŋa</td>
<td>be wedged</td>
</tr>
<tr>
<td>ɲalak-caŋa</td>
<td>be bogged</td>
</tr>
<tr>
<td>pilpima-caŋa</td>
<td>be alight</td>
</tr>
<tr>
<td>pulk-caŋa</td>
<td>be floppy</td>
</tr>
<tr>
<td>-currka</td>
<td>jump</td>
</tr>
<tr>
<td>-yika</td>
<td>go down</td>
</tr>
<tr>
<td>kak-yika</td>
<td>go away down</td>
</tr>
<tr>
<td>curr-yika</td>
<td>climb down</td>
</tr>
<tr>
<td>-kirrwa</td>
<td>dig</td>
</tr>
<tr>
<td>-kaca</td>
<td>bake</td>
</tr>
<tr>
<td>-karriŋmice</td>
<td>play</td>
</tr>
<tr>
<td>ɲana-kaŋaɲme</td>
<td>turn sthg over;</td>
</tr>
<tr>
<td></td>
<td>follow sthg,</td>
</tr>
<tr>
<td>kannak-kape</td>
<td>laugh</td>
</tr>
<tr>
<td>-kapica</td>
<td>throw away</td>
</tr>
<tr>
<td>yanac-kapica</td>
<td>throw on</td>
</tr>
<tr>
<td>ɲac-kapica</td>
<td>hide sthg</td>
</tr>
<tr>
<td>put-kapica</td>
<td>throw in</td>
</tr>
<tr>
<td>-kunme</td>
<td>bring</td>
</tr>
<tr>
<td>I ɲalapala-kunme</td>
<td>lose</td>
</tr>
<tr>
<td>-ŋaca</td>
<td>return</td>
</tr>
<tr>
<td>-ŋawe</td>
<td>hear</td>
</tr>
<tr>
<td>-ŋawa</td>
<td>recognise</td>
</tr>
<tr>
<td>-ŋuccica</td>
<td>withhold</td>
</tr>
<tr>
<td>I ɲuka</td>
<td>blow (wind)</td>
</tr>
<tr>
<td>yirril-pikica</td>
<td>shed skin</td>
</tr>
<tr>
<td>wice-pikica</td>
<td>pick one’s nose</td>
</tr>
<tr>
<td>-pe</td>
<td>go</td>
</tr>
<tr>
<td>Item</td>
<td>Meaning</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>nitirr-pe</td>
<td>go fishing</td>
</tr>
<tr>
<td>nincamallii-pe</td>
<td>be unlucky hunting game</td>
</tr>
<tr>
<td>cenme-pe</td>
<td>relieve oneself</td>
</tr>
<tr>
<td>celme-pocce-pe</td>
<td>go, carrying on one's shoulder</td>
</tr>
<tr>
<td>carrwa-pocce-pe</td>
<td>go, carrying on one's flank</td>
</tr>
<tr>
<td>lenti-pocce-pe</td>
<td>go, carrying on one's hip</td>
</tr>
<tr>
<td>yanulac-pe</td>
<td>go spear-fishing</td>
</tr>
<tr>
<td>kak-pe</td>
<td>go away</td>
</tr>
<tr>
<td>kawelec-pe</td>
<td>urinate</td>
</tr>
<tr>
<td>nala-pocce-pe</td>
<td>go, carrying in one's hand</td>
</tr>
<tr>
<td>pepera-pocce-pe</td>
<td>go, carrying on one's back</td>
</tr>
<tr>
<td>pocce-pocce-pe</td>
<td>go, carrying on one's head</td>
</tr>
<tr>
<td>parrac-mecak-pocce-pe</td>
<td>go, carrying astride one's neck</td>
</tr>
<tr>
<td>mecal-pocce-pe</td>
<td>go, wearing round one's neck</td>
</tr>
<tr>
<td>mirak-pe</td>
<td>go dancing (women)</td>
</tr>
<tr>
<td>morror-pe</td>
<td>be lucky getting vegetables</td>
</tr>
<tr>
<td>manac-pocce-pe</td>
<td>go, wearing on one's chest</td>
</tr>
<tr>
<td>muguyl-pete</td>
<td>paddle</td>
</tr>
<tr>
<td>mununuk-pete</td>
<td>go dancing (men)</td>
</tr>
<tr>
<td>-pette</td>
<td>die</td>
</tr>
<tr>
<td>cerrpine-pette</td>
<td>be starving</td>
</tr>
<tr>
<td>marrcic-pette</td>
<td>be freezing</td>
</tr>
<tr>
<td>nakali-pelepap</td>
<td>vomit</td>
</tr>
<tr>
<td>pak-pellerrme</td>
<td>yawn</td>
</tr>
<tr>
<td>mipe-pellerrme</td>
<td>open eyes</td>
</tr>
<tr>
<td>-pognme</td>
<td>smell; extinguish</td>
</tr>
<tr>
<td>-pome</td>
<td>hug</td>
</tr>
<tr>
<td>-panka</td>
<td>stab</td>
</tr>
</tbody>
</table>
I cirrcirr-paŋka
ceŋcaŋ-paŋka
cak-paŋka
cur-paŋka
ŋal-paŋka
ŋak-paŋka
mit-paŋka
-panpa - p-panpa
-palama - p-palama
-pørrice - p-pørrice
-parrakka - p-parrakka
kappuk-puka - p-puka
-mi - p-mu
nitirr-mi
camaya-mi
cstpiyic-mi
kutpøpørør-mi
ŋalapiyic-mi
ŋala-pøcce-mi
ŋurrkŋurrkwa-mi
parrac-mecak-pøcce-mi
mecak-pøcce-mi
malwarraŋ-mi
-me - pe-me
terrpmin-me
tul-me
cilk-me
currk-me
vik-me
yu-me
yarrŋ-me
nukku-me
ŋalaŋala-me
ŋulma-me
pipere-ŋun-me
perkperk-me
boil
itch
erupt
sting
sew
hook fish
make pretty
be ignorant of
cut
scratch
pull
bathe
sit
sit, fishing
chew
tell story
be anxious about
clap
sit, carrying in
one’s hands
sniff
sit, carrying astride
one’s neck
sit, wearing round
one’s neck
chat
say, tell, do
shrink
be upset, angry
ache
be charred
grow up
change shape
be right
tell lie
cough
be very sick
forget
bark
pø-me
parrparr-me
palk-me
pul-me
malk-me
mipemipe-me
wirk-me
war-me
warrk-me
warrun-me
-µnce
-mµgpica
-mara
møn-mara
mununuk-mara
mipe-wica
-werepice
-wa
mørrakmala-wa
cøt-mørrakmala-wa
-wakaca
mit-wakaca
mipe-wakaca
-wanja
I
-wu
-wuµme
-wuµnµce
-wuµka
-wuµkka
mipe-wuµkka
-wuµkpica

-smoke
-shiver
-swell up
-be hot
-sit on ground
-not know how to
-shriek
-float
-win
-miss
-send
-swallow
-kick
-catch up
-dance (men)
-repeat
-speak
-make

-build, make
-explain
-come out, arrive
-come out pretty
-check sthg out
-drown, dive
-grab
-deceive
-tell lie to
-tie up, sting
-copy
-look alike
-call out.
Table 15: Bound pronominal prefixes to future and non-future transitive \( \{ \text{wa-} \} \) verbs

<table>
<thead>
<tr>
<th></th>
<th>S I N G U L A R</th>
<th>D U A L</th>
<th>P L U R A L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1sgA</td>
<td>2sgA</td>
<td>3sgm/fA</td>
</tr>
<tr>
<td>all persons</td>
<td>wa-</td>
<td>wa-</td>
<td>wa-</td>
</tr>
</tbody>
</table>
Appendix 2: Irregular verbs

(i) wa- verbs
Person and number are neutralised on pronominal prefixes shown in Table 15 for the following irregular verbs:

**Conjugation 1**

<table>
<thead>
<tr>
<th>Person</th>
<th>Number</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>-nic-ene</td>
<td>-pi-nice</td>
<td>wait for</td>
</tr>
<tr>
<td>-ci-ñene</td>
<td>-pi-ci</td>
<td>drink</td>
</tr>
<tr>
<td>pöce-pö-mene</td>
<td>-pö-pö</td>
<td>light a fire</td>
</tr>
<tr>
<td>mal-pöce-pö-mene</td>
<td></td>
<td>make a noise.</td>
</tr>
</tbody>
</table>

**Conjugation 2**

<table>
<thead>
<tr>
<th>Person</th>
<th>Number</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>para-yi-ña</td>
<td>-pu-yu</td>
<td>swim</td>
</tr>
<tr>
<td>-purr-una</td>
<td>-p-purra</td>
<td>look for</td>
</tr>
<tr>
<td>ŋalawa-ma-ŋana</td>
<td>-pu-mu</td>
<td>help</td>
</tr>
<tr>
<td>ŋalapala-ma-ŋana</td>
<td></td>
<td>lose.</td>
</tr>
</tbody>
</table>

**Conjugation 4**

<table>
<thead>
<tr>
<th>Person</th>
<th>Number</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>wik-nime</td>
<td>-pi-rime</td>
<td>fetch water</td>
</tr>
<tr>
<td>perkperk-nöme</td>
<td>-pö-nöme</td>
<td>start barking</td>
</tr>
<tr>
<td>ŋalapala-kunme</td>
<td>-pu-kunme</td>
<td>lose</td>
</tr>
<tr>
<td>-ŋuka</td>
<td>-pu-ŋuka</td>
<td>blow (wind)</td>
</tr>
<tr>
<td>cirrcirr-paŋka</td>
<td>-p-paka</td>
<td>boil</td>
</tr>
<tr>
<td>-wu</td>
<td></td>
<td>grab</td>
</tr>
</tbody>
</table>

Transitive wa- verbs obligatorily cross-reference the person, number and 3sg gender of human object nominals in a pronominal enclitic, e.g.

waŋ-nic-ene-nöŋ I wait/ed for him
waŋ-nic-ene-nacaŋ I wait/ed for her
waŋ-nic-ene-pørraŋ you/s/he will help them
wik wa-rime-ŋarrkka Fetch me water!
ŋalawa-wa-pu-mu-pørraŋ you and I will help him.

Other variants are peculiar to individual wa-verbs.
(a) \{wu\} 'grab'.

Tense, person, number and gender are neutralised totally in \{wawu\}, the only form attested for this verb.

(b) \{pœce-pœ\} 'heap up kindling'

\{mal-pœce-pœ\} 'make noise'.

Speakers regularly omit the verb stem of \{pœce-pœ\} 'heap up kindling' and \{mal-pœce-pœ\} 'make a noise' in lplincA.30, pœce-werre-pœ-mene \(\rightarrow\) pœcewerremene

head-lplincA.30-hit-NF \quad \text{we all heap/ed up kindling.}

(ii) \{ci\} 'eat' \{ci\} 'drink'. The verb \{ci\} 'eat' is eligible to bear any pronominal prefix listed in Tables 11-12. The verb \{ci\} 'drink' bears only pronominal prefixes listed in Table 15.

For both verbs, the stem-initial laminal stop lenites to an approximant intervocally in non-future indicative and admonitory moods, e.g.

**Indicative mood, non-future:**

\begin{align*}
2/3sgA.3sgmO & \quad ka-yi-jene \quad you/s/he eats/ate it \\
2/3A.30 & \quad wa-yi-jene \quad you/s/he drink/s/drank it/them
\end{align*}

Between high front vowels, the laminal approximant elides, eg.

\begin{align*}
lplincA/3sgmO & \quad yerrV-yi-jene \quad we all eat/ate it \\
3A.3pl0 & \quad kanpV-yi-jene \quad s/he/they eat/ate them
\end{align*}

**Admonitory mood:**

In admonitory mood, the laminal approximant is not elided:

\begin{align*}
lplincA.3sgO & \quad yerre-pi-yi-jere \quad we should all eat/have eaten it \\
3A.3pl0 & \quad kat-pi-yi-jere \quad s/he/they should eat/have eaten them
\end{align*}
(iii) {ce} 'give'. The stem-initial laminal stop lenites to an approximant in all indicative non-future and admonitory forms, e.g.

**Indicative mood, non-future:**

3sgA.3sgmO ka-ye-wene s/he gives/gave him

1plincA.3sgmO yerre-ye-wene we all give/gave him

**Admonitory mood**

A regular verb inflected for admonitory mood has the structure: NFpronprx + FUT + Verb stem+FUT + Admonitory suffix.

The future verb stem {ce} 'give' elides in all admonitory forms, e.g.

ka-ce-pe-ce- nere> kancepenere you should/have give/n her

2sgA.3sgfONF-IRR-giveFUT-Adm

(iv) {nipe} 'hold'.

After a prefix-final vowel, the stem-initial apico-alveolar nasal of the verb {-nipe} 'hold' lenites to a retroflex approximant, e.g.

ka-nipe-Ø > karipe

3sgA.3sgmONF-hold-NF s/he holds/held him

(v) {wa} 'make'. Future forms lack a future prefix in all forms except 1sgA.3sgmOFUT:

1sgA.3sgmOFUT yaq-p-a

2/3sgA.3OFUT ya-wa

1duincA.3OFUT yaqka-wa

1duexA.3OFUT yerr-wa-kapi
1plincA.3OFUT  yerra-wa
1plexA.3OFUT  yerr-wa
2plA.3OFUT    jerr-wa
3plA.3OFUT    yarr-wa
Appendix 3: Text

Text 2: How porpoise and wallaby got their shapes

Agnes Lippo and Johnny Biyanamu recorded this, the best-known Wajikiny myth, at Belyuen 13/9/89. Duration 8 minutes.

(1) muc pannakkula way ka-yepe-cø

wallaby Bannakkula way 3sgmSNF-lie-CONT

kuca-makka-kka pickulø-ka-yicca

that way-PERF-re change shape-3sgmSNF-askAUX

Wallaby was Bannakula way; over there he actually changed into an animal. (way is an English loan lexeme)

(2) ɣa karr-pø-ca-makka-kaŋi

Yes 3duSNF-hit-REC-PERF

Yes, they fought each other.

(3) kane kawanakka ɣa-puriŋ kancerra ɣace-nuŋ kacu

2sgP there 2sgS-walkFUT bush 1sgP-PUR this way IMP

ɣa-puriŋ ɣalkin-pene kanŋ-me-ŋacaŋ

1sgS-walkFUT sea-LOC 3sgfSNF-tell-3sgfD

'You go off there into the bush, for me to go this way, to the saltwater’ she told her.

(4) ɣa karr-me-ŋ-kaŋi

yes 3duSNF-say-PRES

'Yes!', they both say.

(5) meneq-ŋuŋ ɣeqaka-pe karr-me-ŋ-kaŋi

edveg-DAT 1duincS-go 3duSNF-say-PRES

IMP

'Let's both go for edible vegetables!’ they both say.
'Yes, let’s both go for vegetables!' porpoise told her.

'Yes, come on! Let’s both go away' wallaby tells her back.

They both walk off and sit in the bush.

'Who’s to go first?' 'Me,' wallaby told her.

Wallaby goes now.

'Yes, come on! Let’s both go away' wallaby tells her back.
The small children, porpoise's and wallaby's, she sat and looked after, for them both.

(12) kan-par-a  kanpi-kirrwa  kan-pei-m
3sgfSNF-walk-NF  3A.3plONF-dig  3sgfSNF-goAUX-PRES

menen wuŋmarrac melŋmelŋ  ninic  menen
edveg long yam  cheeky yam  any kind edveg

She walked and went and dug long yams, cheeky yams, any kind of edible vegetable.

(13) ɲarran  ka-pø-mene  aw cecarec
goanna  3sgA.3sgmONF-kill-NF  or possum

aw  ninic  mecem  røcaŋ
or any kind meat  bandicoot

She killed goanna, or possum, or bandicoot, any meat.

(14) e  kawa kawa-parra  ci-rak
eh! Come! Come!-RET  3sgmDetang-country
Eh! Come! Come back here!

(15) mepaŋ  kanpu-turra  kan-mi
OK  3A.3plONF-cook  3sgfSNF-sitAUX

kanpi-Ø-nene  kan-mi-m  cepmiyiŋ  muc
3A.eat-NF  3sgfSNF-sitAUX-PRES  3sgfP wallaby

OK, wallaby, she sat and cooked them; she sits and eats them.

(16) kane-nте pe-pe  menen  kan-mer-ŋacanŋ  muc-karraŋ
2sgP-now  2sgSFUT-go  edveg  3sgfSNF-tell-3sgfD wallaby ERG IMP

'It's your turn to go for tucker!' wallaby told her.
'It's your turn to go' she told her. 'Let me sit and hold your baby, porpoise's baby, for you!' wallaby said to her.

Then porpoise walks off, it's her turn for long yam, cheeky yam, baby yam.

Her baby keeps on crying.

She cried out to her for milk.

She keeps asking as she goes.

She's crying heartbrokenly.
She is asking as she walks.

Porpoise arrives and asks for her.

'You give me my baby back now!' porpoise told her.

Wallaby keeps her back from her now.

'I don’t know Neg I’ll never give you this baby. It’s mine forever!'

She (the baby) keeps crying.
(31) pen-ce-parra werret kaŋ-me-ŋacaj
2sgA.give-RET quick 3sgfSNF-tell-3sgfD

wiŋ-ŋuŋ ŋak-yaŋaŋ-paka
milk-DAT mouth-1sgA.3sgfO-stab

'You give me (her) back quick so I can breast-feed her', she told her.

(32) kamaŋka
Nothing.

(33) kaŋ-guccica muc-karraŋ-paŋa
3sgfSNF-withhold wallaby ERG-3sgfIMPL
Wallaby withheld her.

(34) wiŋ wa-wu-cø ceŋmiyic memempena
stick 3A.30-grab-CONT 3sgfP porpoise
Porpoise was grabbing a stick.

(35) purr-kaŋ-icca pamapac pø rak
howl-3sgfSNF-askAUX baby little
The little baby howls.

(36) wiŋ wa-wu-cø
stick 3A.30-grab-CONT
She was grabbing a stick.

(37) kutti-nuŋ-mente yaŋaŋ-pø-nuŋ kaŋ-me
fight-DAT-now 1sgA.3sgfO-hit-PUR 3sgfSNF-say
'I'm going to kill her', she said.

(38) ceŋmiyic muc wa-wu-parra laŋkurr
3sgfP wallaby 3sgA.30-grab-RET club
Wallaby's response was to grab a club.

(39) ceŋmiyic laŋkurr gancic
3sgfP club one
She (porpoise), (grabbed) another club.
Come on! 3plSNF-hit-REC 3duSNF-goAUX-PRES

Come on! They keep clouting each other.

It's the children's turn to sit and cry, wallaby's and porpoise's.

They both keep on hitting each other.

Suddenly, porpoise broke wallaby's arms.

She broke wallaby's arms, she broke her arms with a stick.
She hit her because wallaby took a slice out of her head first.

(46) memempena wik ka-wakaca-m ce-pene yura porpoise water 3sgmSNF-come out-PRES 3sgmDetang-LOC hole Water came out of porpoise at this hole.

(47) nagkarra-nte kan-pø-mene again-now 3sgA.3sgfONF-hit-NF

memempena-karraŋ para ŋuk-kaŋ-i-ŋa porpoise-ERG arm break-3sgA.3sgfONF-put downAUX-NF

So porpoise hit her and broke her arms.

(48) pampac-pente-kak kan-kunme child-now-Foc 3sgA.3sgfONF-take She took the child.

(49) pickuŋø-karr-icca-ŋ-kaŋi-pente change shape-3duSNF-askAUX-PRES-now At once, they’re starting to change shape.

(50) muc-kak pickuŋø-kaŋ-icc-a wallaby-Foc change shape-3sgfSNF-askAUX-NF

pampac ka-ma-ŋana-m memempena-pøttuŋ-kak baby 3sgA.3sgmONF-pick up-NF-PRES porpoise-GEN-Foc

kaŋ-currka kan-currka-m-pente kan-par-a 3sgfSNF-jump 3sgfSNF-jump-PRES-now 3sgfSNF-walkAUX-NF

Wallaby changes shape, picks up porpoise’s child and hops off.

(51) ŋa-pe-me-nuŋ-pe ŋa-p-pe ŋace kaŋ-me-ŋacaŋ 1sgS-FUT-be-PUR-ever 1sgS-FUT-goAUX 1sgP 3sgfSNF-tell-3sgf ‘I’m going to be me for ever’, she told her.
(52) ceŋmiyiŋ-pente pampac kan-ŋ-na
   3sgfP-now baby 3sgfSNF-cry-NF

kaŋ-mi-m-parra muc-pøttuŋ
3sgfSNF-sitAUX-PRES-RET wallaby-GEN

As for wallaby's baby, her response was to sit and cry.

(53) kaŋ-ṭut-mene yeŋere-kaŋ-kunme
   3sgA.3sgfONF-leave-NF steal-3sg.3sgfONF-takeAUX

kaŋ-par-a memempena-pøttuŋ pampac
3sgfSNF-walkAUX-NF porpoise-GEN baby
(Wallaby) abandoned her, and went and stole porpoise's baby.

(54) karruŋmalananaŋ pampac ceŋmiyiŋ-pøttuŋ-kak
   beautiful baby 3sgfP GEN Foc

memempena-pøttuŋ muc-pøttuŋ-kak ceŋulukpa
porpoise GEN wallaby-GEN-Foc no good

ceŋulukpa pampac ceŋena
no good baby 3sgfDeaud

Her baby, porpoise's was beautiful; wallaby's was no good— that one was no good.

(55) ka-n-ene-ŋ kaŋ-mi pampac
   3sgA.3sgfONF-see-NF-PRES 3sgfSNF-sitAUX baby

memempena-karraŋ kaŋ-kunme-ŋ parrkkatta
porpoise-ERG 3sgA.3sgfONF-take-NF two

karral kaŋ-kapica ŋorrrec-pene
leg 3sgA.3sgfONF-throw away pandanus-LOC

Porpoise sits and looks at the child; she picked her up by both legs and chucked her away into the pandanus.
Then that baby of wallaby cried and became white frog in the pandanus.

It’s porpoise’s turn to run straight into the sea.

She jumped up, she dived, she surfaced and looked.

Water came out of her head.

She’s diving one more time.

She surfaced, looked and water came out.

1sgS-FUT-be-PUR-ever 1sgS-FUT-goAUX 1sgP
'As for me, I'm going to be porpoise for ever' she says.

The baby she throws away into the pandanus, that white frog, wallaby's baby, always lies in that place, for her, that white one, wallaby's child.

Then porpoise goes, (saying): 'As for me, I'm going to be porpoise for ever'.

The end.
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