Ivan Kapitonov

A Grammar of Kunbarlang

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This grammar is a revised version of my 2019 University of Melbourne doctoral thesis. None of this would have been possible but for my supervisors Rachel Nordlinger and Ruth Singer. Throughout my work on that project, Rachel and Ruth were incredibly generous with inspiration, encouragement, and support, and have greatly influenced my thinking about language and about how to describe it. Thank you—it is a little hard to pack my gratitude to you into words.

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Last but not least, I thank my parents Sergey and Iraida, my sister Tanya, and my aunt Tatiana Sablina for their unfailing love and support and the faith they have had in me.

To Iraida and Sergey Kapitonov

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Abbreviations

1	first person
2	second person
3	third person
A	agent
AFOR	aforementioned
ALL	allative
ANIM	animate
AUX	auxiliary
BEN	benefactive
CAUS	causative
COLL	collectively
COM	comitative
COMP	complementizer
CONJ	conjunction
CONTR	contrastive
DAT	dative
DEM	demonstrative
DIST	distal
DISTR	distributive
DU	dual
ELA	elative
EMPH	emphatic
ENG	English
ERG	ergative
EXCL	exclusive
FUT	future
FV	final vowel
GEN	genitive
GEN	genitive
HITH	hither
I	class I
IGNOR	ignorative
II	class II
III	class III
INADV	inadvertitive
INCH	inchoative
INCL	inclusive
INCP	incomplete
INDF	indefinite
INTJ	interjection
IRR	irrealis
IV	class IV
LIM	delimitative
LL	land gender
LNK	linker
LOC	locative
M	masculine
MA	masculine gender
MED	medial
NEG	negative
NEUT	neuter class
NF	non-future
NM	noun marker
NMA	non-masculine
NP	non-past
NSG	non-singular
OBJ	object
OBL	oblique
PC	past continuous
PI	past imperfect
PL	plural
PLURAC	pluractionality
POSS	possessive
PP	past perfect
PRED	predicative
PROH	prohibitive
PROX	proximal
PST	past
Q	question particle
R	realis
RDP	reduplication
REFL	reflexive
REL	relative
SBJV	subjunctive
SG	singular
THITH	thither
TOP	topic
VEG	vegetable gender

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Within examples:

- the parentheses around some element indicate its optionality in the given context
- the asterisk * denotes an ungrammatical form of a word or sentence (except when used in context of historical reconstruction, where it denotes the reconstructed proto-form). The combination of parenthesis and asterisk reads as follows
  - $a\ (^{*}x)\ b$ indicates that the form x **cannot be used** in the context of a and b (with $a\ b$ being grammatical otherwise)
  - $a\ ^{*}(x)\ b$ indicates that the form x **cannot be omitted** in the context of a and b (that is: $a\ x\ b$ is good, but $a\ b$ is not)
- the hash-mark # denotes a form that is grammatical, but semantically anomalous in the given context (or inherently semantically inconsistent)
- the percentage sign % indicates a considerable variation in judgement among speakers
- the examples are given in the practical orthography (see §2.2) and separated into morphemes with hyphens (-); clitics are separated by the equals sign (=)
- audibly long pauses may be indicated in examples by a double pipe symbol (||)
- free translation line ends with a pointer to the source of the example, i.e. the archival collection, in the format [REC/TIME], where REC is the name of the archival item (from which fuller detail can be found out via the list of recordings), and the TIME is the location of the fragment in the recording as (HH:)MM:SS

An extra line above the example line is added in one of two cases: (i) when a phonetic transcription is in order, in which case the top line includes a transcription in the International Phonetic Alphabet (IPA); or (ii) when I wish to show the division of a longer example into clauses, in which case the practical orthography is used, but no morpheme breaks are made, and the clauses are separated by the pipeline symbol with upper indices (e.g., $|^{1}$).

Guide to recordings

This is the guide to recordings that have been used and referenced in this grammar.

There are two major sets of such recordings: those that I made between 2015 and 2018, and those made by Isabel O'Keeffe between 2006 and 2015. Moreover, there are several recordings made by Carolyn Coleman, three recordings made by Aung Si, and one by Ruth Singer.

The recordings that are of the format IK1-YYMMDD_XXXN are made by myself in the course of my field work (Kapitonov 2016a). They are to be found archived in PARADISEC at `https://catalog.paradisec.org.au/collections/IK1`. The YYMMDD field indicates the date when the recording has been made. The XXX field distinguishes different sessions within the day, typically with different speakers. Finally, the last digit ('N') distinguishes several parts within a single recording session (and if there was only one recording produced in a given session, it is trivially '1'). There are 192 recordings from my field work, made with 24 speakers of Kunbarlang. The audio files range from several lexical items to some very long (over an hour) elicitation sessions. Elicitations make up the majority of this part of my corpus; there are 13 narratives and dialogues in this collection, which are listed in Table 1 below.

The recordings that are of the format YYYYMMDD IB NN (e.g. 20060901IB03) and YYYYMMDD IOv NN (e.g. 20150413IOv01) are made by Isabel O'Keeffe. Recordings made by Aung Si are 20150212AS01, 20150212AS02, and 20150206AS03. They are archived with the Endangered Languages Archive (ELAR), see O'Keeffe et al. (2017), or see `http://hdl.handle.net/2196/00-0000-0000-0002-EF13-E@view` and `http://hdl.handle.net/2196/00-0000-0000-000F-BF4E-0@view`. There are over a hundred items in this collection, and they likewise include both grammatical elicitation and free narratives. The proportion is the opposite to my collection, i.e. narratives prevail. The recording made by Ruth Singer is RS1-140, and it is archived with ELAR at `http://hdl.handle.net/2196/00-0000-0000-0013-7C8C-A@view`.

Carolyn Coleman's recordings are archived with AIATSIS, see `https://aiatsis.gov.au/sites/default/files/catalogue_resources/coleman_c02_finding-aid.pdf`, and with ELAR, see `http://hdl.handle.net/2196/00-0000-0000-000F-BF4E-0@view`. When referenced here, they begin with `C01` or `C02`. Isabel O'Keeffe's efforts in obtaining copies of these recordings are acknowledged with much gratitude.

All recordings are subject to the speakers' discretion. They may be temporarily unavailable to public access.

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Tab. 1: List of spontaneous discourse recordings

Item	Topic	Speaker
IK1-150801_1PN4	Traveling along the coast	Paul Naragoidj
IK1-160510_0001	Shipwreck	†George Djidurinjmak
IK1-160513_0011	Feeding Fluffy	Sandra Makurlngu
IK1-160525_0001	Speaker's youth	Peter Waralak
IK1-160525_0011	Speaker's youth	Peter Waralak
IK1-160624_0001	Mission Centennial	Rita Djitmu and Linda Najinga
IK1-160624_0021	Outstation camping	Rita Djitmu and Linda Najinga
IK1-160719_0001	Mission Centennial	Sandra Makurlngu
IK1-160726_0011	Making damper	Sandra Makurlngu
IK1-160726_0021	Making damper	Sandra Makurlngu
IK1-170610_2SM1	Spot-the-Difference	S. Makurlngu and George Manmurulk
IK1-170615_1SY1	Feeding Fluffy	Solomon Yalbarr
IK1-170625_1PN1	Arrival of J. Watson to Mardbalk	Paul Naragoidj

1 The language and its speakers

This book is a description of Kunbarlang, an Australian Aboriginal language. The description and analysis are based on my original field work carried out in the Northern Territory, Australia, between 2015 and 2018, as well as build on the preceding body of work by other scholars. Carolyn Coleman did foundational work on Kunbarlang in central-western Arnhem Land from 1981, which resulted in the first grammar of the language (Coleman 1982). In her subsequent work in the area in the 1990s, she carried on with lexicographic research in Kunbarlang, Mawng and Maningrida languages. More recently, Dr. Aung Si (Universität zu Köln), Dr. Isabel O'Keeffe (University of Sydney), and Dr. Ruth Singer (University of Melbourne) made a number of recordings of Kunbarlang speakers at Maningrida, Warruwi, Minjilang and Darwin. These recordings provided an invaluable extension to the empirical basis of this grammar.

Kunbarlang is a nominative-accusative language with secundative indexing of objects. It belongs to the non-Pama-Nyungan Gunwinyguan language family, and like all Gunwinyguan languages is highly polysynthetic. This means that it has very rich verbal morphology: the morphosyntax of the verbal word is at the heart of the Kunbarlang structure. In fact, the verbs are so self-sufficient that any well-formed verb can be a full utterance in Kunbarlang. In the nominal domain, on the other hand, morphology is very economical—probably more so than in any other Gunwinyguan language.

However, there is much more to the Kunbarlang grammar than its polysynthetic nature and the contrasts in the morphosyntax of the verbal and the nominal domain. Kunbarlang is nowhere short of interesting properties, both from the Australianist perspective and from the broader typological point of view. In the sound system there is an unusual for an Australian language retention of retroflexion in heterorganic clusters (§2.5.2.1). Kunbarlang is agglutinating with little morphophonology, yet one finds interaction in nasal–nasal clusters that stands out against what is known as the norm of harmonic cluster resolution across Australian languages (§2.7.3).

In the area of nominal morphosyntax, Kunbarlang has a system of four noun classes (grammatical genders), which on par with Kunwinjku is the largest retained noun class system in the Gunwinyguan family (inherited from the proto-Gunwinyguan five-class system). Furthermore, Kunbarlang has two features that distinguish it within its family and indeed among most Australian languages: definite articles (§4.3.1) and a hierarchical noun phrase (§4.4.3). Kunbarlang also has a system of three cases. Although nouns do not have any case morphology of their own, there is an unusual construction with case-marked pronouns that allows nouns to be case-marked analytically (§4.2). In the course of my work I took care to investigate certain topics that do not traditionally receive close attention in grammar writing. For instance, in §4.7 I present a documentation of the wealth of quantificational devices, informed by semantic typology and theory.

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The verb, and more broadly, verbal constructions in Kunbarlang offer a wealth of interesting topics both in inflection and in derivation. Polypersonal agreement morphology of the verb presents exuberant paradigmatic complexity, at the same time standing out within the Gunwinyguan family in terms of its agglutinating separability of the subject and object prefixes (§5.2.1). This inflectional system appears to be in a transitioning phase, perhaps starting to fuse certain prefix combinations into portmanteaux, but currently individual morphemes are still divisible with barely any exceptions. This complexity is further increased by the fact that subject prefixes coordinate with verbal stems in so-called composite tense and mood encoding (§5.4). Valency-changing derivations and their interaction is an area of interesting micro-variation in a single morphosyntactic domain within a genetic group of languages.

Another aspect of predicate building that makes Kunbarlang different from the other Gunwinyguan languages is the coverb construction: a particular bipartite verbal structure that is clearly related to other predicate formation options found within the family, yet is formally distinct from constructions in those other languages (§6.5.1). Interestingly, the Kunbarlang coverb construction is formally very similar to the one found in Mawng, an Iwaidjan language which has been in especially close contact with Kunbarlang for the last hundred years. One more Kunbarlang construction that has a close correspondence in Mawng is the typologically rare analytical reciprocal construction with contrastive pronouns, probably developed from a biclausal structure (§6.1.3.2).

Word order in the Kunbarlang clause is constrained by information structure, rather than grammatical function of the constituents. It shows similarity to other Australian languages where there are particular prominent positions in the clause, viz. its edges. Moreover, Kunbarlang shows a noticeable tendency for the subject–verb–object order. There are no infinitives in Kunbarlang, but it has a small array of subordinate structures of various types: complement, relative, and adverbial clauses. Since morphological (or lexical) marking of these subordinate constructions is sparce, it is interesting to investigate the formal means signalling subordination (§§8.3.2–8.3.3) and diagnostics that can be used for it (e.g. §8.4.2 on relativisation diagnostics).

The grammar concludes with an appendix that presents a selection of three texts in different genres: a narrative, a procedural text, and a fragment of a (semi-spontaneous) dialogue.

The present chapter serves as a general introduction to the Kunbarlang people and their language. In what follows, I first briefly give some ethnographic background of the Kunbarlang society (§1.1). Then in §1.2 I situate Kunbarlang within the Gunwinyguan family of languages and discuss some of its typological properties. My data collection is described in §1.3. In §1.4, I overview the previous work and motivate the extended coverage and elaboration of analysis which the present grammar offers in comparison. Finally, §1.5 concisely outlines the topics covered here.

Fig. 1.1: Kunbarlang land and surrounding languages [Map courtesy of Ruth Singer]

1.1 The Kunbarlang people: background

The traditional lands of the Kunbarlang people are in central Arnhem Land in the area stretching along the coast of the Arafura sea from the Goomadeer river in the West to the Liverpool river delta in the East. See the map in figure 1.1. On those lands, they had bordered Mawng people in the West, Ndjébbana people in the East, and Bininj Kunwok speakers (specifically, speakers of the Eastern dialects Kune and Kuninjku) in the South.

The autonym, their own name for the people and the language, is *Barlang*, in isolation pronounced more often like *Warlang* due to the initial consonant lenition. Because of the grammatical structure of the language, it must take one of a number of prefixes, forming a more specific concept that refers to a Kunbarlang person (*nabarlang* for a male, *kinbarlang* for a female), or a group of people (*kinbaddabarlang*, or reduplicated and without prefixes, *barlangbarlang*, indicating a plurality of people), or the language (*ipse*: *Kunbarlang*). In everyday English conversation people would normally refer to themselves as *Kunbarlang people*, and throughought this book I shall use the word *Kunbarlang* as both the glottonym and ethnonym, i.e. to refer to the language and the people. In other sources, slightly different spellings may be found, and even the name without the prefix: Gunbalang, Gunbarlang, Warlang. The ISO639-3 code for Kunbarlang is WLG.

In the course of the 20th century, the Kunbarlang people have moved off their traditional lands and spread in two primary directions: West and East. The movement westwards began with the establishment of a Methodist mission on traditional Mawng lands in South Goulburn island (Warruwi) in 1916, which attracted a large number of Kunbarlang people. The eastwards trajectory formed with the establishment, across the Liverpool river, of the trade post of Maningrida (Manayangkarirra) after World War II, which in 1957 became a government-run settlement. This settlement grew rapidly

and also attracted a number of Kunbarlang people. Moving off of their traditional lands has probably been a factor accelerating linguistic assimilation, foremost by Ndjébbana speakers.

The exact number of speakers is not possible to establish,[1] but my best estimate is that today there are close to 30 Kunbarlang speakers living in Warruwi and around a dozen speakers in Maningrida. There is a fair amount of migration and marriage between people in Warruwi and Minjilang (Crocker island, located West of South Goulburn, near the Cobourg peninsula), and I know of at least two speakers who live in Minjilang. The city of Darwin is the major attracting hub in the area, providing access to healthcare, shops, nursing homes etc., and at the moment of writing I know of three people who permanently live in Darwin. The 2011 census reports 20 speakers of Kunbarlang in Australia, 19 of them in Warruwi.[2] In 1969, Kinslow Harris (1969b: 1) reported approximately 125 speakers of Kunbarlang.[3] In 1982, Coleman (1982: ii) reported an estimate of "probably fewer than one hundred first-language speakers" living primarily in Warruwi, Gunbalanya (Oenpelli) and Maningrida.

The ages of speakers range between late 20s and early 70s. As far as I can tell, no children are acquiring Kunbarlang at the moment. Likewise, not all Kunbarlang people speak the language. All speakers of Kunbarlang are fluent in Mawng: even the Kunbarlang people of Maningrida have childhood or other family connections to Warruwi. The Kunbarlang who live in Maningrida also speak Ndjébbana. Most adults are also fluent in Bininj Kunwok, and individual repertoires may include other Australian Aboriginal languages as well. All the speakers that I know of speak Aboriginal English, with somewhat varying degree of fluency. In the course of my work with Kunbarlang speakers I heavily relied on their competence in English, which I discuss in more detail in the methodology section (§1.3).

1.1.1 Social organization

1.1.1.1 Kinship

As in all Australian Aboriginal societies, kinship is the central organisational principle of social relations among the Kunbarlang people. Kin relations determine interpersonal behaviour models, and these kinship relations are extended beyond one's biological

1 Evans (2001) discusses the difficulties in determining the exact extent of speakers in a language with small numbers, from the point of view of how a given social system determines one's rights to count as a speaker.

2 Australian Bureau of Statistics website (http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/SSC70198?opendocument&navpos=220), retrieved on 2018/10/02.

3 Cf. her slightly smaller figure of "about 100 [Kunbarlang] speakers residing mostly at Goulburn Island and Maningrida, with smaller groups in Oenpelli, Mudginberry and around Goomadeer Creek" (Kinslow Harris 1969a: 4).

family to their entire social universe, with the potential to include strangers. This is known as 'classificatory kinship' or 'universal kinship', i.e. a system of relations where everyone in the social universe is classified as kin (see McConvell 2018 and references therein, as well as other papers in that volume). For instance, one's biological mother's sisters are classified as one's mothers—and further, by extension, their children (i.e., *cousins*, from the English-language point of view) are classified as one's siblings.

1.1.1.2 Language and land

The basic unit of social grouping and organisation is a patrilineal clan, or PATRICLAN, like elsewhere in western Arnhem Land (cf. Evans 2003a: 40 ff).[4] In Kunbarlang they are called *nguya* (cf. Kune *kun-nguya*). These patriclans have names and their own territories within the broader Kunbarlang country. One's ownership of a language is effectively mediated by their *nguya* in the following way: the language is directly associated with the land, and thus an individual inherits the rights to their father's language *through* their affiliation with the patrilineal clan's territory. When speaking English, my consultants would refer to the *nguya* as "mobs" or "tribes".

These are the patriclans that I have heard of (with the name of their land when it is known): Djindibi (Mawuludja), Djumbilirri, Kamulkbarn (Nakalarramba),[5] Kumungkurdu (Mayirri and Bat island), Kurduwala (Kubarnbangku), Kurikuri, Mandjulngunj (Mirrangkangku / King River),[6] Mardbarrdjiyi (Mayirri), Marrabandja (Karrabbu), Marrabangku, Mayirrkulij. Additionally, the dictionary mentions Marranumbu and Murruwarn patriclans (Coleman 2010: 66,78).

Although I have little to say about dialectal variation in Kunbarlang, it does appear that these patriclans are associated with some characteristic linguistic differences, i.e. *patrilects*. The only known differences are lexical. Thus, for instance, the word for 'dog' is *durduk* ([duɖuk]) in Kunkurduwala, but *nakarrken* ([naharken]) in Kunkamulkbarn; the Kunkamulkbarn word for 'rain' is *marnki* ([maŋgi]), while in other dialects it is *balmad* ([balmat]). While referring to members of a patriclan or to their patrilects, some of the clan names may take on class prefixes, according to the standard rules of noun class assignment: classes I/II for men and women, respectively, and class IV for the language (as in *Kunkurduwala* earlier in this paragraph). Interestingly, it seems that not all clan names allow this. I do not have the exhaustive picture, but to the best of my knowledge, prefixes can be attached to *Kamulkbarn*, *Kurduwala*, *Mardbarrdjiyi*, *Marrabandja* and *Marrabangku*, and may not be attached to *Mandjulngunj*.

4 A recent description of these topics with reference to western Arnhem Land can also be found in O'Keeffe 2016: §3.1

5 Also spelt *Nagalarramba*, this is the land where the photographer Axel Poignant took the celebrated series of shots in 1952 (Poignant 1996).

6 My understanding is that this clan connects Kunbarlang and Mawng people, since King River is west of the Kunbarlang traditional lands, in Mawng territory.

It is hard to tell if there are any differences in the sociolinguistic status of these different patrilects, and more generally what the speakers' perception of the lects is. My impression is that *Kunkurduwala* is often singled out for some reason. People will refer to it as the 'hard' (*kunrayek*) or 'real' (*djininj*) Kunbarlang, and often furnish it along the lines of "there are two tongues: Kurduwala and the other/plain one", also pointing out they are "different, but still the same"—which I interpret as acknowledging dialectal difference within one language, intelligible for everybody regardless of their *nguya*. The metaphor typically offered for the division between Kunkurduwala and other varieties of Kunbarlang is the goanna's (*nadjanarr*) split tongue. Besides the Kunkurduwala, in one of Isabel O'Keeffe's recordings (ID: 20060831IB03), a speaker also refers to Mandjulngunj as *kunrayek* 'hard'.

Besides the dialects and patrilects, there are also dedicated registers for special circumstances: the respectful trirelational kin term system of *kun-derbi*, the avoidance, or 'Mother-in-law', register *kun-kurrng*, and the bereavement register *marrdjukkun lerrk*, used by widows during the mourning period (O'Keeffe et al. 2017). Some kun-derbi and kun-kurrng terms are documented in Coleman (2010), but the sociolinguistic particulars of these special registers have not been described, and it is likely that their use is dramatically declining. Evans (2003a: 59–67) details the structure and use of the Bininj Kunwok registers *kun-debi* and *kun-kurrng*, and Garde (2013: ch.4) provides an in-depth ethnographic account of *kun-debi* in Bininj Kunwok; both give further references for the broader Australian context.

1.1.1.3 Subsections and moieties

The extension of kinship to the individuals outside of one's immediate family, and further still, outside of one's usual social network, is enabled by a more abstract overarching system of SUBSECTIONS, commonly known in Australia as 'skins'. In this part of Australia there are eight subsections, which determine marriageability, avoidance, terms of address and other aspects of social behaviour. One's subsection is determined based on that of one's mother, and in this way they form two disjoint matrilineal succession cycles (*Mardku* and *Ngarradjku*). These succession cycles form the binary system of *matrimoieties*. There is also a patrilineal counterpart to it, the *patrimoieties Duwa* and *Yirriddja*. While the matrimoiety system is ancient in western Arnhem Land, the patrimoiety system has been spreading as a borrowing from the Yolŋu in eastern Arnhem Land (Evans 2003a: 47–8).

The subsection system spread across northern Australia—the system which Kunbarlang also is a part of—includes eight named units ('skins') of people. This system is a product of amalgamation of two independent *section* systems (i.e. ones that have four named units) that came into contact, and in this combined state spread into Arnhem Land (McConvell 1985).

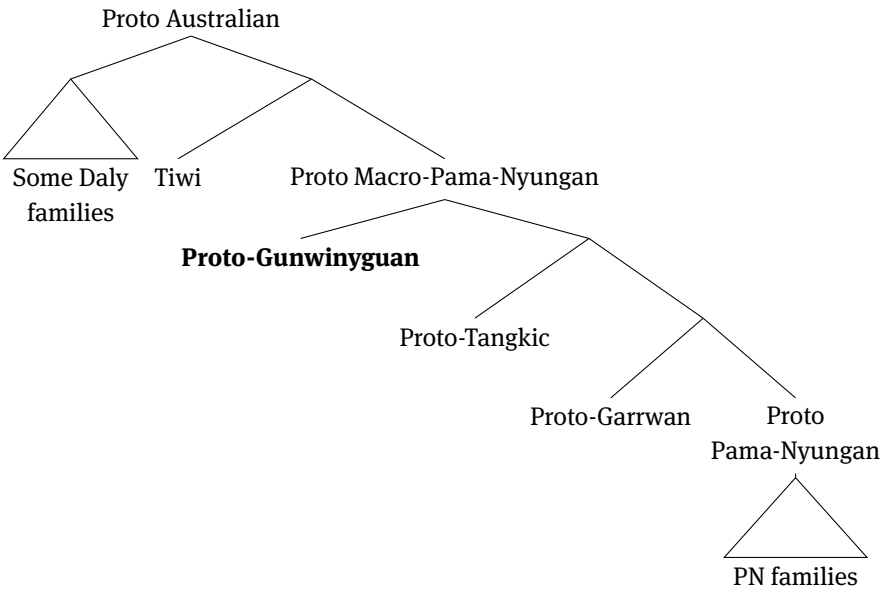

Fig. 1.2: "The Pama-Nyungan offshoot model", after Evans (2003b: 10)

1.2 Kunbarlang among the Gunwinyguan languages

Kunbarlang genetically belongs to the Gunwinyguan family, which is a non-Pama-Nyungan family of Australian languages spoken across Arnhem Land. Its similarity to "Gunwinggu" was already recognized by Capell (1940). The placement of the Gunwinyguan languages within the higher-level Australian family, according to the so-called "Pama-Nyungan offshoot model", is shown in figure 1.2.

I adapt a number of sources to illustrate the further subdivision of the Gunwinyguan family. This is primarily based on Alpher, Evans & Harvey (2003: 309), but also includes elaborations in B. Baker 2004 and van Egmond (2012: ch.9) concerning the Eastern/*bak* group. B. Baker (2004) also argues against the unity of the "*bak*"-group and against inclusion of Dalabon in the Central group; figure 1.3 presents Alpher, Evans & Harvey's (2003) analysis in these respects. The dashed lines reflect the tentative inclusion of Kungarakany and Mangarayi in the Gunwinyguan family. See Merlan 2003 for an argument that Mangarayi belongs to the Marra-Alawic family.

Kunbarlang is a fairly representative member of the family, sharing a number of characteristic typological traits with the other Gunwinyguan languages. They include:

- prevalence of head marking
- high degree of polysynthesis, in particular
  - noun and adverb incorporation
  - polypersonal agreement

  - valency-changing derivations
- templatic organisation of the verbal word
- noun class system
- discourse-configurationality

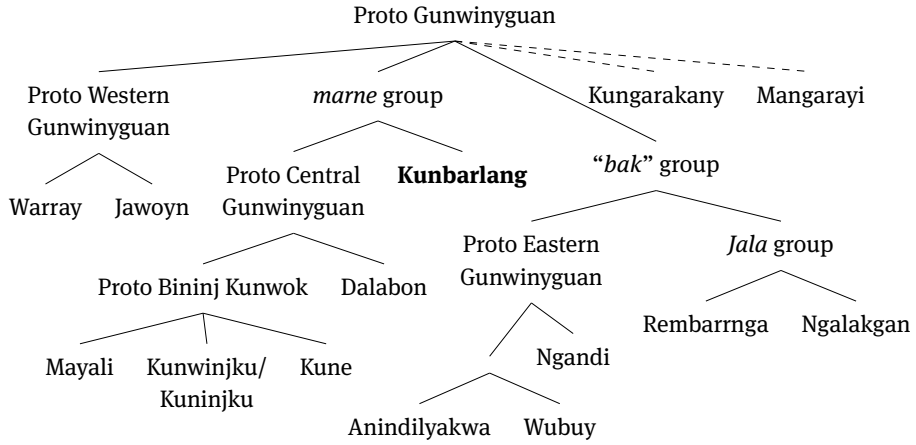

Fig. 1.3: The Gunwinyguan language family

Polysynthesis is one of the striking features of many non-Pama-Nyungan language families, the Gunwinyguan languages among them (Evans 2017). The elaboration of the verbal word is such that it allows one to express a full proposition with a fair amount of modifying details in a single phonological word. This is possible mainly due to the polypersonal agreement and incorporation. The former means that the person and number features of subject and (in case of the polyvalent verbs) an object are indexed in the verb (1.1a). The latter refers to the option of incorporation into the verb of a number of other lexical roots, both of nominal and of adverbial nature (1.1b).

(1.1) a. Ngunda **ngay**-**buddu**-wuni.
not 1SG.IRR.PST-3PL.OBJ-give.IRR.PST
'I didn't give it to them.' [IK1-160729_0001/03:20]

b. Ka-**nganj**-**kanak**-bingki.
3SG.NF-HITH-sun-exit.NP
'The sun is rising.' [IK1-160612_0011/10:34]

In (1.1a) the agent and the recipient of the giving event are encoded by prefixes on the verb. In (1.1b) there is a directional adverbial and the subject of the verb, both contained

within the verbal word. Moreover, some further argument relations can be encoded via verbal morphology, in particular the benefactive/implied (1.2) and the comitative participants.

(1.2) Nga-**ngun**-**marnanj**-kinjang neyang.
1SG.NF-2SG.OBJ-BEN-cook.PST food
'I cooked food for you.' [IK1-180522_2SM1/18:37]

On the other hand, there also are some important differences between Kunbarlang and the other Gunwinyguan languages. These include:
- different organisation of the TAM system
- coverb constructions
- minimal nominal morphology
- hierarchical noun phrase

Gunwinyguan languages feature rather complex TAM systems. They differ in whether there are any mood/modality distinctions in the agreement prefixes: Anindilyakwa, Kunbarlang, Mangarayi, Warray, Wubuy do have at least a realis/irrealis distinction, while Bininj Kunwok, Ngalakgan and Ngandi use suffixes instead (Verstraete 2005 via van Egmond (2012: 134)). Dalabon marks realis with a dedicated morpheme *-h-* that immediately follows the subject prefix (Evans 2006: 37). The specific inventory of TAM categories varies between languages, Kunbarlang's being one of the smallest and organised in a way different from others (§5.3 and also §5.4).

Kunbarlang has a type of complex predicate called coverb construction, which is a bipartite verbal construction. In (1.3), for example, there is a complex predicate that means 'to acquire', which is built from an inflecting verb *-rna* 'to sit', which inflects for tense, and an uninflecting element *bard*. Although it is related to the ways of forming complex predicates in the other Gunwinyguan languages, it is formally quite distinct and has a closer resemblance to the Iwaidjan language Mawng than any of the Gunwinyguan (§6.5).

(1.3) Neyang **ka**-**rninganj**=**bard** kandidjawa.
food 3SG.NF-sit.PST=acquire bread
'He bought food, flour.' [20060620IB04/11:59–12:03]

Although a number of inflectional categories are relevant for the Kunbarlang noun phrase, the nouns have scarcely any morphology, in stark contrast to the rich Kunbarlang verbs. At the same, the systematicity of word order patterns and interpretive effects associated with them betrays the very principled noun phrase structure. This is remarkable in comparison with other Gunwinyguan languages, where absense of noun phrase construal has been reported (see Evans (2003a: 229–31) for Bininj Kunwok

and Heath (1986) for Wubuy). Chapter 4 covers a variety of topics in the noun phrase, showing how much information can be expressed via syntactic means.

1.3 Fieldwork: consultants and methodology

Most of the present descripton is based on orginal field work carried out by the author in Darwin, Maningrida and Warruwi in 2015–2018. This work was done in four trips:

- July–August 2015 (two weeks, Warruwi and Darwin)
- April–August 2016 (four months, Warruwi, Maningrida and Darwin)
- May–June 2017 (six weeks, Warruwi and Darwin)
- May–June 2018 (six weeks, Warruwi and Darwin)

Additional invaluable data come from the recordings made by Dr. Isabel O'Keeffe, Dr. Aung Si and Dr. Ruth Singer in the period from 2006 to 2015 in Warruwi, Darwin, Maningrida and Minjilang. They generously made these recordings and the existing transcriptions available to me, which expanded considerably the amount of data, especially from the spontaneous production. These sources are outlined in the list of recordings below.

I have had a chance to work, at least briefly, with the majority of the present-day Kunbarlang speakers. At the same time, there was a small group of people who I worked with particularly intensively. Nakangila Solomon Yalbarr and Nakangila Paul Naragoidj have been tireless and patient teachers for me, and Kunbarlang data as they speak it constitute a considerable part of the empirical basis of this grammar. The wealth of linguistic repertoire of Ngalwamud Rita Djitmu is another major constituent in the recordings both of my own and by others. Ngalngarridj Sandra Makurlngu and Nakangila Douglas Djalanba have been sharing invaluable insights into the intricacies of meaning and use of Kunbarlang expressions. I cannot name every speaker individually here, but refer the reader to the acknowledgements.

My recordings have taken place in diverse settings, depending on the circumstances. Although I have always aimed to record indoors (e.g. at the Warruwi Language centre) for the best possible quality, some recordings have been made in people's front yards, or other outdoor settings. Thus, the text about making damper (bush bread) in appendix A.2 was recorded during a short bush trip.

My main method was elicitation, which was extensively complemented by the analysis of recordings of different genres (primarily narrative). The elicitation involved direct translation of English prompts into Kunbarlang and elicitation from non-verbal prompts (pictures, videos, construction blocks set-ups), as well as grammaticality judgements of word forms and sentences constructed by myself in order to test specific hypotheses in the process of work. Thus, the forms that were judged ungrammatical in the language constitute an important part of the analytical material in this work, and are used throughout the book to illustrate specific grammatical restrictions. The

notation used is customary in the field (see the list of abbreviations and conventions on page XX ff.). Another note is in order about glossing of examples. I choose to use consistent glosses for polysemous morphemes, rather than contextually appropriate ones. For instance, the verbal root *-djin* 'to consume' can be used to mean 'to eat', 'to burn' or 'to bake' on different occasions. Instead of using different glosses, I consistently gloss it with the concise 'eat'. Another verb where the gloss may not always be entirely transparent is *-ngundje* 'to say/do'. It is highly polyfunctional, with such meanings as 'to do', 'to be', 'to say', or 'to think', depending on the context, collocation, or its own morphological make-up. However, it is consistently glossed as 'do'.

When working on the matters crucially involving fine semantic judgements, I often employed the truth value judgement task (TVJT; Crain & Thornton 1998). This method involves constructing a model of a particular state of affairs in the real world, against which the target sentence is evaluated for acceptability. The model can be constructed via presenting a speaker with a verbal context, or a picture/video representation of the target situation. Then the speaker can be asked to describe the stimulus, but also, crucially, a particular form can be offered for the speaker to judge its appropriateness in that context. Thus aspects of semantics can be studied in a controlled fashion and without reliance on the analytical intuitions of the speaker or their competence in the intermediary language. A more detailed discussion of the TVJT with specific illustrations can be found in the section on quantifiers (§4.7).

The elicitation and the analysis of spontaneous speech recordings (narratives, dialogues, and storyboards) were employed in a complementary fashion. Direct elicitation was used to probe specific aspects of the Kunbarlang grammar in the minute detail, while text analysis helped broaden the scope of language constructions that may have been overlooked in elicitation for various reasons. Moreover, text analysis made it possible to estimate the actual rate of use of particular constructions, as well as the relative frequency in cases when competing forms of expression were available.

All samples of spontaneous production and all elicitation sessions were recorded in `.wav` format with the minimum sample rate of 44100Hz and the minimum bitrate of 16 bit.[7] The texts were also filmed with a digital camera (raw format `.MTS`, subsequently converted to `MP4 v2`). All of the recordings are archived with PARADISEC (see *Guide to recordings* above for details).

The time-aligned transcriptions of the recordings (full in case of texts, partial in case of elicitations) were created with the help of ELAN (ELAN 2020; ver. 4.8–6.0), and archived together with the audio files. Plain text files typed in the course of elicitation (or created later based on the notebook notes) also accompany the recordings in the archive. Acoustic analyses, i.e. the spectrograms and waveforms presented here, were done in Praat (Boersma & Weenink 2016).

7 Sometimes the speakers would hesitate to be recorded at the outset of a session, and in those cases I had to work only with text files or pen and paper until they were comfortable with the recorder on.

I have used a range of materials to aid both text collection and elicitation of particular grammatical topics. These were:

- MPI videos on reciprocal situations (Evans et al. 2004)
  - see http://fieldmanuals.mpi.nl/volumes/2004/reciprocals/
- storyboards from the Totem Storyboards Project
  - http://totemfieldstoryboards.org/; esp. TFS Working Group (2012)
- Nordlinger & Kidd's (2018) materials for word order production in picture description
- Kyuseva's (2020) Spot-the-Difference materials, which I used as a task to record dialogue
- Bruening's (2008) quantifier scope stimuli

These materials are mentioned in those sections where relevant for the data presented.

1.4 Previous work and the contribution of this grammar

As mentioned above, Arthur Capell (1940: 271–2) gave the earliest characterisation of Kunbarlang. He noted that the "general structure of the Gunba:lang language is similar to that of Gunwinggu", provided about 25 lexical items, and mentioned that there is incorporation and "a system of tenses and a negative indicated by variable suffixes, while the prefixes remain the same".

Joy Kinslow Harris carried out the first large-scope analysis of Kunbarlang: based on her field work at Maningrida, Oenpelli Mission (Gunbalanya) and Warruwi in 1965–66, she published a tagmemic grammar (Kinslow Harris 1969b), which is the only dedicated publication on Kunbarlang in the XX century. Combining data from narratives and elicitation, this grammar covers the basics of the verbal and nominal morphosyntax, as well as a range of phrasal and clausal level constructions, such as imperatives, interrogatives, adjectival predicates, and some clause combining strategies. Most of the generalisations are presented as formal statement of TAGMEMES, i.e. rewrite rules, which are supposed to comprise a generative grammar of the language: supplied by a dictionary of roots and affixes, such grammar would produce all well-formed sentence of the language. This description also comprises a chapter in her dissertation (Kinslow Harris 1969a), in which she uses Kunbarlang as the baseline for a comparative analysis of morphosyntactic constructions in a range of Arnhem Land languages: Bininj Kunwok (Kunwinjku, Kundjeyhmi, and Kundedjnjenghmi varieties), Dalabon, Jawoyn, Ndjébbana, Mengerrdji, and Mawng.

Kinslow Harris's preliminary grammar is rather brief and includes only a small data set, yet it is of considerable interest: her and my data collection occurred 50 years apart, and her data are the earliest available records. Thus, the constructions that Kinslow Harris cites provide a valuable diachronic point of reference. The fact that her generalisations are largely valid for the language in its present state suggests that—in

the areas of grammar she describes—Kunbarlang has been reasonably stable in these 50 years.

A specific aspect of that general interest concerns the possible influence of English on the grammatical structures of Kunbarlang. In the introduction to her dissertation, Kinslow Harris (1969a: 9) explains that in her data collection "Gunwinggu was used as the contact language and 'situation elicitation' was used instead of 'translation elicitation' in order to obviate English-conditioned responses". Additionally, she notes that the texts and the items of her questionnaire were recorded from non-English speakers, with only the (verbal) paradigms elicited from a speaker with some English competence (Kinslow Harris 1969b: §0.1). This, therefore, precludes not only the immediate 'translation bias', but also any direct contact influence of English on Kunbarlang. One of the relevant findings emerging from this is that the word order of subject–verb–object has been the neutral one (in the face of word order freedom) even prior to expansion of contact with English (see §7.1).

The fullest description, going into the detail of many core grammatical topics, is Carolyn Coleman's unpublished Honours thesis (1982), based her field work in Maningrida in 1981–82. It has a broad scope, including phonology, morphology and syntax. Its main focus, however, is grammatical relations as manifest both in the verb and in the phrasal level constructions, and the insightful treatment that many of them are given has influenced numerous aspects of my analyses in this book. Coleman's analysis is largely informed by Foley and Van Valin's Role and Reference Grammar, and the presentation frequently follows the logic of that framework, either unifying phenomena that belong to the same *layer* (nuclear, core, or peripheral), or to the same type of relation. Thus, cosubordinate nexus (Coleman's §2.3.4), which cross-cuts all layers, includes purposive constructions (at the peripheral layer; see §8.5.1 of the present grammar), viewpoint aspect constructions with an auxiliary posture verb (at the core layer; §7.2.1 here) and verbal reduplication (at the nucleus layer; §2.8.2 here).

Some of the aspects of Coleman's (1982) description have been summarised briefly in a manuscript (Coleman n.d.), which also includes more comprehensive paradigm tables and a discussion of various pronominals. Coleman has been compiling a comprehensive dictionary over the course of her work. It has not been published at the moment of writing this, but she generously made the manuscript available to me, and it will be drawn upon and referred to throughout this grammar as Coleman 2010.

I do not aim to give a summary, let alone a review, of the preceding work here in the introduction. Suffice it to say that despite that very important groundwork, a range of topics remained that were not covered in sufficient detail, or which were not covered at all, and the goal of this current grammatical description is to both broaden and deepen those previous ones, as well as verify the existant analyses. In a number of cases my work led me to revise previous analyses significantly. For instance, the area of pronominal prefixes and tense/mood suffixes of the verb has been completely reanalysed. Related to that, I describe pronominal prefix paradigms in transitive verbs that have never been described before (§5.2). I indicate throughout the text where I am

building on that preceding work, and where my data or interpretation differ from it. In citing data from those previous works, I retain the authors' transcription of Kunbarlang, but represent it in the orthography adopted in this book, and provide my own glossing for the cited examples.

Looking beyond the grammatical structures, Isabel O'Keeffe (2016) in a recent thesis in musicology investigates ceremony and musical practices in western Arnhem Land, in particular the Kunbarlang song tradition (*manyardi*). Further documentation work of the language is currently being carried out within an ELDP-funded project (O'Keeffe et al. 2017).

1.5 Overview of the grammar

This grammar consists of eight chapters and an appendix. Chapter 1 is the general introduction to the Kunbarlang people and their language, the data and methodological aspects of the present work. Chapter 2 is devoted to the sound inventory of Kunbarlang and its phonological and morphophonological processes. Chapter 3 gives an introductory grammatical overview and describes the Kunbarlang parts of speech. Chapter 4 focuses on the constituents of the noun phrase. That chapter also provides a discussion of the noun phrase constituency and the categories of noun class (grammatical gender) and case in Kunbarlang. Discussion of the verbal morphosyntax is divided between the two following chapters. Agreement and tense and mood, i.e. the inflectional categories, are described in Chapter 5, while Chapter 6 treats derivational morphology and constructions. Chapter 7 discusses the structure of a simple clause and the phenomena relevant at the clause level, such as negation and question formation. Finally, multiclausal constructions made either by coordinating or by subordinating clauses are presented in Chapter 8. Chapter 9 provides a summary and indicates directions for further research. The Appendix gives a selection of glossed Kunbarlang texts in different genres.

2 Phonetics and phonology

2.1 Segmental units: an overview

This section identifies the sets of consonantal and vocalic phonemes in Kunbarlang. Their phonetic characteristics and distribution, as well as phonotactics more generally, will be the subject of the following sections.

The 'long and thin' consonant inventory of Kunbarlang, with its many places of articulation but neither fricatives nor voice contrast in obstruents, is quite typical for an Australian language. The Kunbarlang vowel inventory is somewhat larger than the more standard three-vowel set, but is typical for the languages of the north. The distribution of vowels conforms to the standard vowel triangle. The consonant phonemic inventory of Kunbarlang is in table 2.1. Table 2.2 below gives the vowel inventory.

The consonantal inventory of Kunbarlang is similar to those of other Gunwinyguan languages. Kunbarlang lacks dental consonants (t̪, n̪, l̪) found in Ngandi and Wubuy, otherwise having all the consonants present in the maximal inventory of the family Harvey (2003: 206). The fortis/lenis contrast is found in Kunbarlang and in Bininj Kunwok (Evans 2003a, Stoakes 2013); see 2.4.1 for more on fortis. As is common in Australian languages (e.g. Fletcher & Butcher 2014: 101), there are no contrastive fricatives ([-son,+cont] in Chomsky & Halle 1968 style phonological features) and no phonemic voicing contrast in the stop series, but instead there are multiple place of articulation contrasts. Besides that, there is a corresponding nasal for every place of articulation. Thus, each of the five places of articulation (excluding glottal) shows the three-way stop contrast: lenis–fortis–nasal. There are also two glides (the labio-velar /w/ and the palatal /j/) and four liquids, comprising two laterals (the alveolar /l/ and the retroflex /ɭ/) and two rhotics (the alveolar tap/trill /ɾ/ and the retroflex /ɻ/). The labio-velar glide is placed in the labials (rather than velars) column throughout this chapter, and when quantitative measures are given, is counted together with labials. Given that labials and dorso-velar consonants are grouped together as 'peripherals' for most phonotactic purposes, there are no significant consequences of such treatment of /w/, as opposed to, say, counting it together with velars.

Tab. 2.1: Consonant phonemic inventory of Kunbarlang

	Labial	Alveolar	Retroflex	Palatal	Velar	Glottal
Lenis	p	t	ʈ	c	k	ʔ
Fortis	p:	t:	ʈ:	c:	k:	
Nasal	m	n	ɳ	ɲ	ŋ	
Lateral		l	ɭ			
Rhotic		ɾ	ɻ			
Glide	w			j		

https://doi.org/10.1515/9783110747058-002

Tab. 2.2: Vowel phonemic inventory of Kunbarlang

	Front	Central	Back
High	i		u
Mid	e		o
Low		a	

Kunbarlang has five out of six vowels attested in the Gunwinyguan family (table 2.2), i.e. all except the mid-high central vowel found in Dalabon and Rembarrnga. To sum up, there are 22 consonant and five vowel phonemes in Kunbarlang. Consonants demonstrate an apical contrast (between alveolar and retroflex coronals) without a laminal one (the so-called 'double-apical' pattern). In terms of manner, there is a phonemic distinction between lenis and fortis oral stops. Its peripherals include both labial and dorsal consonants. Peripherals (as opposed to coronals) form a recurring natural class in Australian phonologies (Dixon 2002: 63); in Kunbarlang, peripherals behave as a natural class in consonant clusters (see §2.5.1).

2.2 Practical orthography

The practical orthography adopted in this grammar is based on the conventions in the previous work by Coleman (1982, 2010) and is fairly standard for Australian linguistics. The orthography for vowels is straightforward and is the same as reflected in table 2.2. As for the consonants, velar fortis and lenis stops are written with the unvoiced series symbols, while stops in all other places of articulation employ voiced series symbols. This achieves a certain phonetic accuracy, as the velar stop's realisations are phonetically more often voiceless than those of other stops (which are typically closer to the voiced end of continuum). Further practical motivation comes from the need to disambiguate the velar nasal, spelled *ng*, from the nasal–stop cluster, spelled *nk*. The spelling of consonants is provided in table 2.3, with the IPA symbols in forward slashes (i.e. "/p/ b" means that the phoneme /p/ is spelled in the orthography as *b*). Note that the fortis consonants are spelled as the corresponding lenis doubled up, except retroflexion and palatalisation are only marked once, i.e. /ʈː/ is spelled *rdd*, not *rdrd*.

Stress is not systematically marked in the orthography, but where needed, primary stress will be indicated by an acute accent and secondary by a grave accent, on the relevant vowels. In what follows, this practical orthography will be used for rendering Kunbarlang, except for discussions of phonological rules and phonetic matters, where IPA symbols are used. These are enclosed in forward slashes (/a/) for phonemic and square brackets ([a]) for phonetic representations, as is customary. The practical orthography in the examples is used phonemically, not reflecting the variable phonetic

Tab. 2.3: Kunbarlang orthography

	Labial	Alveolar	Retroflex	Palatal	Velar	Glottal
Lenis	/p/ b	/t/ d	/ʈ/ rd	/c/ dj	/k/ k	/ʔ/ h
Fortis	/pː/ bb	/tː/ dd	/ʈː/ rdd	/cː/ ddj	/kː/ kk	
Nasal	/m/ m	/n/ n	/ɳ/ rn	/ɲ/ nj	/ŋ/ ng	
Lateral		/l/ l	/ɭ/ rl			
Rhotic		/r/ rr	/ɻ/ r			
Glide	/w/ w			/j/ y		

realisation of the phonemes (see the following two sections), nor the morphophonological processes (see §2.7).

2.3 Vowels

Table 2.4 provides counts of Kunbarlang vowel frequencies based on 1900 entries in the dictionary (Coleman 2010).

Tab. 2.4: Kunbarlang vocalic phoneme frequencies

	Front	Central	Back	Total	% of total
High	i, 1160		u, 1326	2486	43
Mid	e, 689		o, 428	1117	19
Low		a, 2226		2226	38
Total	1849	2226	1754	5829	
% of total	32	38	30		

The mean vowel frequency is 1165.8, with the high front /i/ being closest to that figure. The vowel with most occurences in the dictionary is the low central /a/. It can be seen from the table that the vowels are not uniformly distributed, with the mid vowels /e/ and /o/ being noticeably less frequent. While there do not seem to be any categorical restrictions in occurrence of the mid vowels in any position in stems, there is a dispreference against them appearing in stems with the vowels of another height, particularly high ones.

Phonetic realisations of vowels are overall rather straightforward. There is little or no variation in vowel quality depending on metrical strength (such as reduction or centralisation in unstressed syllables), which is similar to the findings in other Australian languages, in particular other Gunwinyguan languages (Kuninjku: Bishop 2002: 233; Dalabon: Fletcher & Evans 2002). All vowels appear nasalised after nasal consonants, especially after the velar nasal /ŋ/. There is, however, some variation in

the low vowel /a/. While most of the time it is pronounced as a low central [a], there are cases where it is realised as a higher and more front variant, closer to [æ] or [ɛ]. These, however, appear to be variable, rather than well-defined by the context (2.1): it does not occur systematically, but in random tokens.

(2.1) a. [kaˈkiɲʸaŋ] / [kaˈkiɲʸæ̃ŋ] ‘s/he cooked it’

b. [ˈmaɾɛk] / [ˈmɛɾɛk] ‘not’

c. [-d͡ʒalaɾk-] / [-d͡ʒalɛɾk-] ‘alive’ (bound morpheme)

An experimental phonetic study could reveal more about the vowel space and vowel acoustics in Kunbarlang, but this is outside the scope of the present grammar.

2.4 Consonants

Table 2.5 gives counts of consonantal phonemes frequency based on 1900 entries in the dictionary (Coleman 2010).

Tab. 2.5: Kunbarlang consonantal phoneme frequencies

	Labial	Alveolar	Retroflex	Palatal	Velar	Glottal	Total	% of total
Lenis	p, 894	t, 262	ʈ, 250	c, 598	k, 1183	ʔ, 74	3261	39
Fortis	pː, 104	tː, 32	ʈː, 28	cː, 43	kː, 186		393	5
Nasal	m, 820	n, 396	ɳ, 227	ɲ, 336	ŋ, 465		2244	26
Lateral		l, 557	ɭ, 280				837	10
Rhotic		ɾ, 733	ɻ, 82				815	10
Glide	w, 472			j, 363			835	10
Total	2290	1980	867	1340	1834	74	8385	
% of total	27	24	10	16	22	1		

With a grand total of 8385 phoneme tokens and 22 types, this gives a mean of 381 token per phoneme. The phonemes /n/ and /j/ are closest to the mean, on the upper and the lower sides, respectively. The most frequent consonant is /k/ (1183 tokens), and the least frequent one is /ʈː/ (28) tokens. It can be noticed that the fortis stops are all roughly by an order of magnitude less frequent than the corresponding lenis stops. Another remarkable contrast is between the two rhotics: the tap /ɾ/ is much more heavily used in the lexicon than the retroflex rhotic (733 vs. 82 tokens). The glottal stop /ʔ/ in Kunbarlang has a low count and does not form minimal pairs. Overall, in terms of the manner of articulation, lenis stops are the most frequent and fortis stops are the least frequent consonants. In terms of the place of articulation, labials are the most frequent and retroflex consonants are the least frequent ones.

2.4.1 Fortis consonants

Kunbarlang displays a contrast between audibly short and long oral stops at all places of articulation except glottal. The phonemic contrastive status emerges on the basis of minimal and near-minimal pairs in tautomorphemic contexts (§2.4.3.2). The phonotactic distribution of fortis consonants, however, is captured most economically if heterosyllabic attachment is assumed. This is the analysis I follow in the discussion of Kunbarlang syllable structure (§2.5). This analysis extends naturally to the distribution pattern of the fortis, which are found in morpheme-initial and morpheme-medial positions, but not morpheme-finally. The heterosyllabic attachment thus systematically creates complex codas with morpheme-initial fortis when the preceding syllable is closed. These resulting clusters generally follow the restrictions on admissible complex codas that are independently motivated in the analysis of Kunbarlang phonotactics. It should be borne in mind, however, that the precise phonetic nature of the long stops is open to further acoustic study, possibly one along the lines of Stoakes's (2013) acoustic and aerodynamic analysis of the corresponding consonants in Bininj Kunwok. One of the questions for such a study would be about the acoustic difference between phonemic fortis consonants (*nu**kk**a* 'he') and the heteromorphemic homorganic stop clusters (*-ku**k**-**k**arlyung* 'long'), which are also realised as audibly long stops.

2.4.2 Phonetic description and allophonic distribution of consonants

Since voicing is not a contrastive feature for obstruents, there is noticeable freedom of allophonic variation along that dimension. Just as in Bininj Kunwok (Evans 2003a: 79), oral lenis stops have a tendency to be realised as voiced syllable-initially and as voiceless syllable-finally. However, there is further variation by place of articulation: for instance, the velar /k/ seems more often voiceless, but the labial /p/ through to the palatal /c/ are more often realised as voiced. For instance, see (2.2a) for the voiced allophones of /k/ and /p/ in the syllable-initial position, and (2.2b) for the voiced allophone of /t/ and the voiceless allophone of /k/, again syllable-initially. A voiceless allophone of /t/ in the syllable-final position is shown in (2.2c).

(2.2) a. /ŋunci-ŋaŋ-kapuɾk-ka/ → [ˌŋuɲdʒ͡iŋaŋ**g**aˈ**b**uɾkːa] 'you two will come here' [IK1-160505_0011/28:41]

b. /ka-kitaŋ/ → [ˈ**k**a**k**i**d**aŋ] 's/he/it went' [IK1-150724_1SY1/16:22]

c. /na-wamut/ → [naˈwamu**t**] 'Nawamud [skin name]' [IK1-160829_0001/53:08]

Fortis stops are audibly longer than the lenis ones. They tend to be realised as voiceless, even though they only appear prevocalically (see §2.5 for more on syllable structure). Stops are usually unreleased word finally, especially the oral ones. Velar lenis and