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A GRAMMAR  
OF THE  
BAKAIRI LANGUAGE

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VRIJE UNIVERSITEIT

**A GRAMMAR OF THE BAKAIRI LANGUAGE**

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Geraldo Faria  
November 2021

“Later, reading her flower book, examining the plant more closely, she discovered that it wasn’t a forget-me-not at all. Its leaves were all wrong, and it was too tall. It was probably a borage, hairy borage—and after a while, she settled for green alkanet. *Anchusa sempervirens*. ‘Small clusters of flat white-eyed bright blue flowers, rather like a forget-me-not or speedwell...’ Yes, that was it. *Rather like*. Rather like, but not identical. Similar, but not the same. This distinction delighted her. She would forget it, she knew, but for the moment it delighted her. She was not very good at flowers, and forgot most of the names she so painstakingly established. At her age she found it difficult to retain new information, almost impossible to enlarge her store of certainties from the hundred names she had learned...” (Drabble 2011: 160)

---

In this excerpt from the *Merry Widow*, Margaret Drabble depicts an elderly woman who passionately studies her flowers, making lists, going on fieldtrips, enjoying every discovery to realize too soon afterwards that she can no longer retain any new information, and she is facing the same conflicting desire to investigate it over again. Like this widow, I create lists, study them, and take enormous pleasure in the discovery of the nuances and peculiarities of the Bakairi language. But I also know that I can do little more than leave this study for the next generation of scholars; it is my hope that they will put this study to wise use and make great strides forward.



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## 10 A Grammar of the Bakairi Language

## Abbreviations

A	agent of transitive verb	MIR	mirative
ABL	ablative	NEG	negation
ABTT	abilitative	-N- / <i>n.</i>	noun
ACT	active	NP	noun phrase
ADV	adverb	NPOS	non-possessed, dispossessed
ADVR	adverbializer	NZR	nominalizer
ALL	allative	NVSL	non-visual evidential
AN	animate	O	object of transitive verb
ATTR	attributivizer (essive marker)	PER	perlative
AUG	augmentative marker	PL	plural
BEN	benefactive	POSS	possessed, possession marker
BP	Brazilian Portuguese	PRB	probabilitative
CAUS	causative	PRHB	prohibitive
COLL	collective	PROX	proximal
COM	comitative	PRS	present
COP	copula	PST	past
CPLT	completive	PTCL	particle
DAT	dative	PTC	participle
DESI	desiderative	PURP	purposive
DETR	detransitivizer	QST	interrogative marker
DIM	diminutive marker	RECP	reciprocal
DIST	distal	REM	remote
EMPH	emphatic	REV	reversative
ENT	entitative	RSTR	restrictive
EXC	exclusive	S	subject of intransitive verb
FOC	focus	SG	singular
FRUST	frustrative	<i>sp.</i>	<i>species</i>
FUT	future	TOP	topic
EXIST	existential marker	TRNS	transitive
HORT	hortative	TRVR	transitivizer
HRSY	hearsay	-V- / <i>v.</i>	verb
IMM	immediate	Ṽ	nasalized underspecified vowel
IMP	imperative	VEN	venitive
INAN	inanimate	VP	verb phrase
INC	inclusive	VBZ	verbalizer
INSTR	instrumental	①	Eastern Bakairi data
INTRNS	intransitive	②	Western Bakairi data
INTS	intensity marker	1	first person
IPFV	imperfective	2	second person
ITE	iterative	3	third person
LOC	locative	→	becomes
MED	medial	>	more than

## 12 A Grammar of the Bakairi Language

## Summary

The Bakairi language is a member of the Carib family, comprising around forty languages spoken mostly within north-central South America. It is the southern-most Carib language, spoken in two large settlements of around 1000 people. These settlements correspond to its dialects which differ predominantly in phonology and lexicon, though the morphology more sporadically also varies. As it is actively spoken by fewer than the 1000 residents of the two settlements, Bakairi is an endangered language.

Intended as a documentation of the fundamental features of the language, this grammar starts with a description of the Bakairi culture. The following chapters discuss its phonology, morphology, and syntax.

Two points stand out in its phonology: sonorant consonants that contrast voice must be devoiced word-initially and a word is allowed only one devoiced realization word-internally. Therefore, any given word can have a maximum of two devoiced sonorant consonants.

Bakairi is a highly agglutinative language with a strong tendency for suffixing. Apart from the usual suffixes that express aspect, modality, and plurality, other suffixes add the sense of repetition, totality, evidentiality, and truth. Affixes, in general, are used to create new words (e.g., a noun created from another noun) and transform words into a different class (e.g., a verb created from a noun). In the morphology of verbs, the most remarkable point is a clear distinction in verbal suffixes. When a verb is transitive, it must adhere to one set of suffixes which differs from another set of suffixes for intransitive ones. What is especially noteworthy is that nouns that are intrinsically possessed, such as body parts, are incorporated into the verbs. This creates verbs such as to handwash, to toothbrush, to hairpaint, which must be bordered by additional affixes. In the nominal morphology, past nominal suffixes indicate that the characteristics of the noun are no longer relevant in the present, for instance, a deceased person, or an abandoned house.

Previously, it was believed that the default word order of object-verb-agent did not exist in any spoken language. Hixkaryana, another Cariban language, is the first documented language that uses OVA as its default word order. Today, only nine of the world's documented languages have been proven to be OVA, and Bakairi is part of this group. Lacking nominative-accusative or ergative-absolutive markers, necessary features to classify it as ergative, the Bakairi verbal person prefixation interestingly is aligned like those in split-ergative constructions.

The aim of this preliminary work is not only to preserve the language but also to motivate linguists to go out into the field and document languages that are threatened by extinction.

## 14 A Grammar of the Bakairi Language

## Chapter 1

### Introduction to the Bakairi Language and Its Speakers

#### 1.1 Remarks on the origins of the word “Bakairi”

The word ‘bakairi’ [baka.i’ri] refers both to the indigenous people and the language spoken in twelve villages scattered across the State of Mato Grosso, Brazil. The first textual allusions to the word appear in notes and documents written by notary officers, priests, and *bandeirantes* (Brazilian pioneers) during the middle of the eighteenth century (Lemos 1751; Duarte *et alli* 1771; Carvalho 1863: 19; Pedrosa 1879: 222; Rodrigues 1879; these and other references *apud* Barros 2003: 65-70). The word probably originates from *língua geral da Amazônia*, a *lingua franca* used in the central to northern regions of South America for about two hundred years beginning in the late seventeenth century. Non-indigenous Brazilians (or *karaiwa*) most likely used the word ‘bakairi’ originally in a collective reference to the Bakairi people and their villages. Additionally, it has since become an autonym for the people themselves when they communicate with outsiders. The etymology of the word seems to be a reduction of [i.ba’kai.ri] ‘he who belongs to the Pakai.’ However, the word ‘pakai’ is an unidentified toponym. It is worth mentioning that the word ‘bakairi’ violates the phonotactic constraints of the language (see 2.5.1).

#### 1.2 Linguistic overview

Bakairi belongs to the Pekodian branch (Gildea, Hoff & Meira, 2010: 97 in Berez, Andrea, *et al.*) of the Cariban family (Ethnologue 17-3631, classified ISO 6393 as **bkq**). The language comprises two main dialects, the Pakuera and the Santana, which differ mainly in phonology and lexicon. Their phonological inventory consists of fourteen contrastive consonants. While the Eastern dialect (i.e., the one spoken in the Pakuera region) has fourteen (seven oral and seven nasal) vowels, the Western dialect (i.e., the one spoken in the Santana region) has a twelve vowel-system (with six oral and six nasal vowels). The language has a simple (C)V syllable structure. Mora (or syllable weight) plays a role in the assignment of stress. Nominal roots and verbal stems tend to be disyllabic. The language is not tonal and lacks a complex accent system. Segments are nasalized mainly through backward spreading. Phonological processes range from assimilation to lenition, vowel lengthening, and approximant insertion.

Being a highly agglutinative language, the morphological processes are realized through prefixes and suffixes. Two major word classes are *verbs* and *nouns*, which are more easily identifiable. Besides these two groups, there are *particles* (grammatical and lexical), *adverbs* (a group that includes traditional adverbial



concepts, such as locatives, temporals, and manner words as well as what Indo-European languages classify as adjectives), and *postpositions*. Morphophonological processes include insertion, deletion, vowel harmony, ablaut, and voicing.

In the verbal morphology, aspect-mood, negative, plural<sup>1</sup> and collective markers, as well as adverbial affixes are attached to verbs. The distribution of the person inflection is either agent-oriented (A-oriented) or object-oriented (O-oriented).

In the nominal morphology, nouns are characterized by their ability to accept personal prefixes and possessum suffixes (although other words also take suffixes, and some classes of nouns, like pronouns, cannot take them).

If followed by a personal pronoun, the core constituent orders are VS (verb-subject) for intransitive clauses and OVA (object-verb-agent) for transitive clauses. Rarely does a particular clause include all three constituents. Those that do are usually discourse-initial sentences. As the core constituents have no postpositions, their syntactic positioning indicates whether they are the object, subject, or agent. Copula clauses are expected with negation. While adverbs often occur before the core sentence constituents, nominalizations (i.e., functioning adjectives) follow nouns.

The Bakairi's lexicon is extensive, especially in its regional fauna and flora, food, as well as kinship lexemes.

### 1.3 Linguistic alterations between the two dialects

The Western Bakairi dialect (Santana, indicated as ② in the interlinear texts) is isolated geographically and politically from the Eastern dialect (Pakuera, indicated as ① in the interlinear texts); the two dialects exhibit different phonological realizations. In Western Bakairi, (a) spirantization is more significant, (b) glottal stops are used instead of voiced fricatives and glottal fricatives, and (c) the high central vowel [i] is lacking, even though [i] is a common trait in Carib languages (Derbyshire 1999: 29, Gildea, Hoff & Meira 2007: 93 in Berez, Andrea *et al*). The Eastern [i] sound is realized as [i] or [ə] in the Western dialect. Additionally, Western Bakairi makes use of non-contrastive long vowels more noticeably, because [h] is dropped when identical vowels flank it.

The Eastern dialect appears to have undergone more diachronic changes because of the mobility of the people in the region. As the Eastern villages are in proximity to the Xingu Indigenous Reservation (Parque Indígena do Xingu) and some of their members once lived there, contact-induced linguistic changes have most likely occurred. Moreover, the Eastern dialect has two additional vowels [ĩ] and [ĩ], which are used extensively.

Although long (oral and nasal) vowels may have once been contrastive, currently in both dialects, identical vowels are separated by:

- (a) the sound /h/ as in [əhə], [uhu] or [aha]②,
- (b) /z/ as in [aza]①, [eze]①, [izi]① or [əhə] or
- (c) /ʔ/ as in [eʔe]② or [iʔi]②.

<sup>1</sup> Aspect-mood and evidentiality are indicated not only through verbal morphology but also through past tense particles (see 4.2.7). There are also negative elements and plural markers that are independent words.

Despite their phonological and lexical differences, the two dialects are, for the most part, mutually intelligible. Their morphology and syntax are substantially identical.

#### 1.4 Studies on the Bakairi people and language

In 1884, the Bakairi became known in academic circles when Karl von den Steinen (a German explorer, physician, and ethnologist) traveled through Mato Grosso on an expedition to reach the Xingu region, a then-inaccessible land of which little was known. Steinen hired indigenous people as local guides to assist him on his journey into the treacherous Xingu region; among these guides was Antoninho Kuikare, a young Bakairi man who could speak some of the Xinguan languages (Steinen 1886). Steinen's first expedition in Brazil lasted less than a year. In 1887, he returned to Brazil to study the Bakairi. This trip prompted him to write a 400-page book in German, in which he initially describes this second expedition, to a Bakairi village. In his book, he adds an explanation of a few grammatical features of the language and a wordlist alongside some local legends (Steinen 1892).<sup>2</sup> In this book, Steinen refers to a Carib grammar by Yangués (1676), which led him to believe that Bakairi was a Cariban language.

James Wheatley, a Christian missionary, lived together with his family among the Bakairi people from the 1960s to 1980s. He cooperated in the writing of some schoolbooks for the Eastern villages, as well as published grammatical sketches and articles on the culture (1969: 80-100; 1973: 105-115, 2009). In 2011, Liccardi and Camp, also Christian missionaries, updated some of Wheatley's primers for schools and promoted the translation of the New Testament *Deus Itaumbyry* (2011) from a Brazilian Portuguese (BP) version of the Bible with the help of native speakers.

Two scholars have conducted anthropological fieldwork studies of the Bakairi culture: Barros, in 1976 and 1977, as well as Picchi, during four visits between 1979 and 1999. Their studies resulted in two books: Barros's work describes the social organization of the Bakairi society (Barros 2003) and Picchi's study focuses on the anthropological changes in the society (Picchi 2000).

From a linguistic perspective, Souza wrote about the discourse structure, consonantal harmony, and 'ergativity' of the Bakairi language (1994; 1994: 29-51). Wetzels published two articles on the markedness of the voice feature of the language, where [+ VOICE] seems to be the unmarked feature (1997; 2002: 13-29). At the time of the writing of this dissertation, the most recent publications on the language are by Meira who visited the two settlements to assess the mutual intelligibility of the two dialects (2004). In his latest publication, Meira compares Bakairi with other Carib languages and proposes a proto-Bakairi sound system based on a comparison of contemporary data against Steinen's nineteenth-century texts (2006).

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<sup>2</sup> When I shared Steinen's book with five native Bakairi teachers, the Eastern speaker said that the language in the book resembled Western Bakairi. In contrast, four Western speakers felt that the stories were told by Eastern speakers. For the most part, the text was intelligible to speakers of both dialects.

### 1.5 Bakairi orthography compared with that of Brazilian Portuguese

According to Meira (2004), the writing system for the language has been an ongoing project since the 1960s. At first, texts were strictly transcribed according to the BP spelling rules. As members of the community learned how to read and write in BP, they applied the same orthographic rules to Bakairi. However, BP has relatively complex spelling rules, which reflect properties from other Romance languages through the incorporation of borrowed vocabulary. Using only BP to write Bakairi is an unrealistic option.

A second problem arises with the regional BP. In the Mato Grosso region, BP is spoken with seven contrasting vowels in a stress position, five in pre-stress, but only three in the post-stress syllables (*cf.* Wetzels in Goldsmith *et al.*, 2011: 331-360, for the southern Brazilian dialects). It can be concluded that the BP vowel system is unfit to represent the twelve or fourteen vowel systems of the Bakairi dialects.

In recent Bakairi primers, many graphemes used in the orthography of schoolbooks correspond to IPA symbols whereas others do not. The following list shows this correlation between the contemporary Bakairi orthography and the IPA symbols.

TABLE 1.2: BAKAIRI-IPA CORRELATION

Bakairi symbol		IPA symbol
'	=	/ʔ/
gu + e, i, y	=	/g/
gü + e, i, y	=	/gu/
x	=	[ʃ]
j	=	[ʒ]
nh $\tilde{V}$	=	/i $\tilde{v}$ /
V + n	=	/ $\tilde{v}$ /
V + n-h <sup>3</sup>	=	/ $\tilde{v}$ .h/
â	=	/ə/
y	=	/i/

No educational materials written in Eastern Bakairi could adequately be used in the Western villages. However, all teaching materials utilized in the Western villages were produced in Eastern Bakairi. Moreover, the educational materials are severely limited in number and quality. They are written using a wide array of phonetic variations with little effort to standardize the orthography.

### 1.6 Historical background

Most Cariban groups live north of the Amazon River, and only four groups speak Cariban languages in Southern Amazonia. As the Bakairi are the southernmost group of all documented Cariban languages, it is unlikely that the Bakairi people came

<sup>3</sup> The hyphen is used to mark a syllable boundary and to differentiate it from 'nh $\tilde{V}$ '.

to this region through the land. There are two probable routes of the 2000 km journey from the northern banks of the Amazon River used to arrive in the State of Mato Grosso: either via the Tapajós River or the Xingu River.

At the beginning of the eighteenth century, officials and explorers mentioned the Bakairi in Mato Grosso. The group initially settled on the banks of the river Tapajós, in a place called Salto (Barros 2003: 65-74). It is possible that from there the Bakairi split into three groups. Oral stories told by the elderly describe how the Western group searched for a location that was closer to Cuiabá, where they would be able to sell arts and crafts. The Eastern group, which later split, moved east to the Paranatinga region. The third group, which emerged from the Eastern group, approached, and lived on the banks of the Xingu River, between 300 and 500 km northeast of Paranatinga.

In the 1920s, the Serviço de Proteção aos Índios (SPI, a former governmental office accountable for indigenous' matters in Brazil from 1910 to 1967) created the Área Indígena Santana (for the Western group) and the Área Indígena Bakairi (for the Eastern group), where the groups then settled. Later, the SPI reunited the Bakairi from the Xingu Park with those living in the Área Indígena Bakairi.<sup>4</sup>

## 1.7 The Bakairi territory

The Bakairi territory consists of twelve villages located in the state of Mato Grosso, within 400 km of the capital Cuiabá. Reaching the Bakairi territory from the state capital takes approximately a day's trip through dirt roads, paths, and marshlands.

Having 61,405 hectares, nine Eastern villages in the Área Indígena Bakairi are located approximately 100 km west of the city of Paranatinga. At latitude 14° 30' 0" S, longitude 54° 62' 0" W, some villages are close to five major tributary rivers that join in forming the Xingu River while others are close to the Paranatinga River, which is a tributary of the Tapajós River, itself a major tributary of the Amazon River. These Eastern villages are located in a mountain range known as Serra Azul. Part of the land has been depleted of natural vegetation to raise cattle. Other parts are covered with dense forests. There are various river dams, which are used for irrigation and hydroelectric power plants. Additionally, there are numerous waterfalls along smaller streams. The land is about 421 meters above sea level.

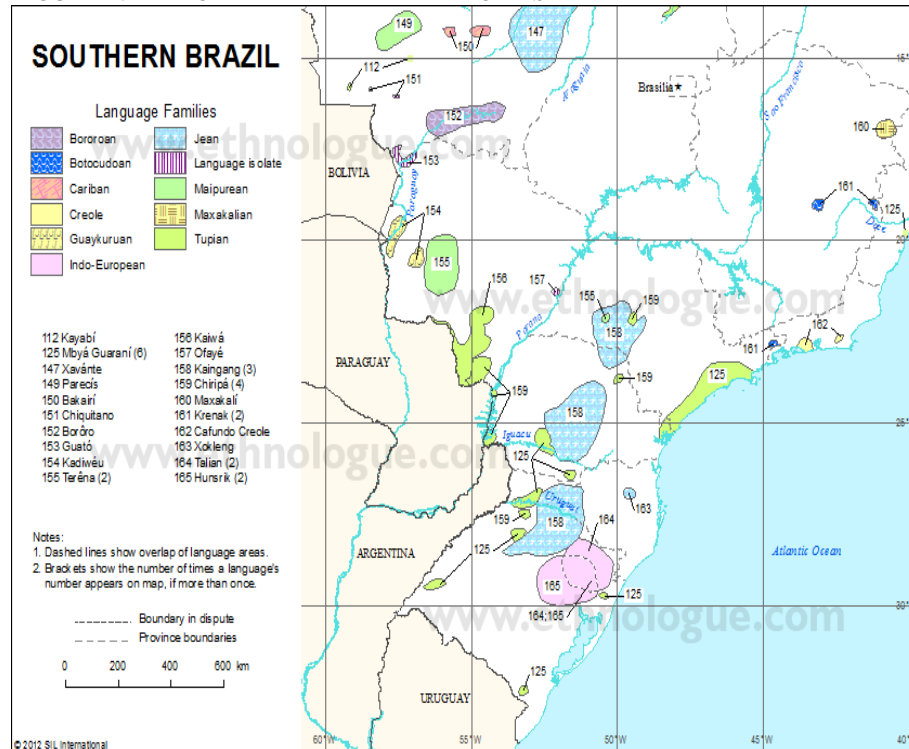
The Eastern villages are:

1. Painkun
2. Kaiahoalo
3. Pakuera
4. Alto Ramalho
5. Painkun Âtuby
6. Aturua
7. Iahudo (recently created)
8. Kuiakuare (recently created)
9. Akieti (recently created)

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<sup>4</sup> For further information on the anthropological and historical backgrounds on the Bakairi, cf. Barros (2003).

FIGURE 1: MAP OF THE BAKAIRI TERRITORIES



The Bakairi reservations are located northeast of the capital Cuiabá. One settlement is located in the Planalto da Serra, which does not appear on the map above.<sup>5</sup>

The Western Bakairi territory with two villages is situated at latitude 14° 20' 0" S, longitude 55° 47' 0" W, elevation 673m. These two villages are located in the Área Indígena Santana about 150 km northeast of the city of Nobres, in proximity to two tributaries of the Tapajós River as well as to the headwaters of the Cuiabá River.

Having 35,479 hectares in the Área Indígena de Santana, the Western villages, which are only 4 km apart, are:

10. Santana
11. Nova Canaã

In Planalto da Serra, there is a twelfth village, which is to the south of the two enclaves:

12. Sawâpa

The Pantanal, a wetland in the southern half of the state of Mato Grosso, keeps the air relatively warm and moist during the brief winter season, while the Amazon jungle to its north, with its many tributaries, keeps the long summer season warm,

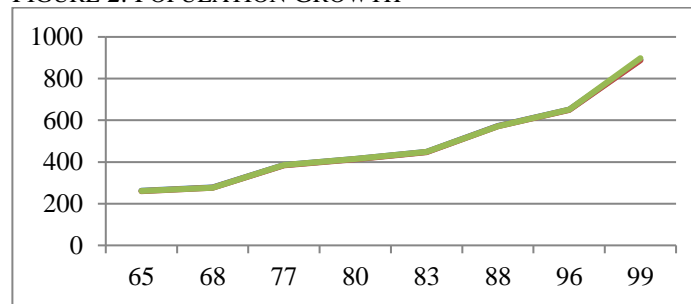
<sup>5</sup> This image was retrieved from www.ethnologue.com on February 27, 2014, under the SIL fair use.

rainy, and humid. The winter is short and dry. Daytime temperature variation is minimal throughout the year, ranging between 32°C and 35°C. Temperature variation is greater during the night, averaging around 20°C from September to June. Temperatures drop to about 17°C or lower in the dry winter months of June, July, and August.

### 1.8 Demographic distribution

It is estimated that there were between 200 and 250 Bakairi people in 1947 when Oberg (1953) traveled through the region. Figure 2 compiles data from the national census and data recorded by Taukane (1999: 47), from the years 1965 to 1999.

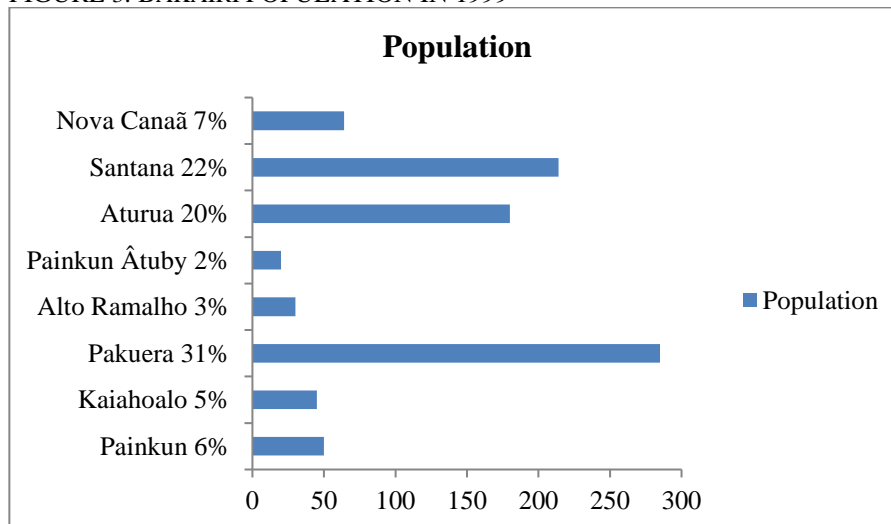
FIGURE 2: POPULATION GROWTH



Currently with over 1,000 individuals, the Bakairi are classified as a ‘minor’ ethnically and politically autonomous group. They are politically autonomous because the Foundation of National Indians in Brazil (FUNAI) does not control the traffic flow in and out of the villages, nor does it provide health caretakers or teachers to them. Instead, trained Bakairi nurses and teachers carry out these activities.

The graph below shows the population distribution in the villages. In Figure 3, three groups stand out Pakuera, Santana, and Aturua. The Eastern villages represent 61% of the total Bakairi population.

FIGURE 3: BAKAIRI POPULATION IN 1999



### 1.9 The Bakairi in the 2010 census

When the Portuguese arrived in Brazil in the year 1500, the indigenous population was estimated at 2.5 million individuals (Hemming 1978: 235), speaking approximately 350 different languages (Rodrigues 1986). The Instituto Brasileiro de Geografia e Estatística (IBGE)<sup>6</sup> released the national census of the indigenous segment of Brazilian society in 2010. According to the report, 896,900 indigenous people occupy 12.5% of the Brazilian territory (264 million acres) speaking 274 languages. The North and Mid-West Regions of Brazil account for more than 80% of the indigenous people in the country. There, most indigenous people still live on indigenous lands. On most indigenous lands (93.6%), more than 50% of the population is younger than 25 years old. Living off the land and fisheries, most indigenous groups lack any source of financial income. Most of the indigenous population nationwide (71.8%) is deemed inactive economically.

Furthermore, according to the census, 66.6% of those living on the allocated lands show a degree of literacy. While literacy has increased in villages that are located in the *periphery* of the Amazon region, isolated villages in the *center* of the Amazon tend to have less access to education. The Bakairi are among the most literate, between 75.1% and 100% literacy depending on the villages.

Among 940 Bakairi interviewed, seven said they did not speak BP at home, 933 said that they used BP at home alongside Bakairi, 743 stated that the language of choice at home was Bakairi, and 197 mentioned that the language of choice at home was BP.

<sup>6</sup> The IBGE is the institute in charge of the official census of the country.

TABLE 1.1: LANGUAGE OF CHOICE AT HOME

Language spoken at home	Refuse to speak BP	Prefer native language	May use BP
Bakairi	<1%	79%	20%
Arara do Pará	17.3%	59%	39%
Ikpeng	12%	92%	7.8%
Kuikuro	75%	98%	<2%

Four tribes speak Carib languages south of the Amazon River: Arara do Pará, Ikpeng, Kuikuro, and Bakairi. The Arara do Pará, located over 1,000 km north of the other three groups, are in danger of losing their mother tongue to BP, as less than half of its population already uses BP exclusively in the village. The Arara do Pará, the Ikpeng, and the Kuikuro consist of fewer than 500 individuals each. The Bakairi, the Ikpeng, and the Kuikuro showed a preference for the use of the native language at home.

Of 1055 Bakairi people whose gender was recorded, 523 (49.6%) were men, whereas 532 (50.4%) were women. Most men worked the land, whereas women lived in urban settings, where they are usually domestic workers. All newborn children from the Bakairi villages were putatively registered in the notary offices.<sup>7</sup>

### 1.10 Anthropological remarks

Due to their proximity to different tribes, the Eastern villagers have promoted more intermarriages with members of outside cultures, such as the Batovi, Parabubure, Sangradouro, Menure, Areões, and the peoples of the Xingu Territory. Not only different customs but also linguistic features have been assimilated through these exogamous marriages.

Even though the Eastern and the Western groups are geographically separated, most villages have similar basic infrastructure (electricity, water mains, and sewage systems). In the past, the Bakairi used to live in large communal houses in circular villages, but it has become common practice to live in detached houses around a central square. Plots of land are now divided among the families. It is common for the husband to move in with the spouse's family until the birth of their first child. Only after the first child is born, they move out.

Over the years, village leaders and FUNAI officials have requested that new residences be built apart from others. This was done for three reasons: (1) to facilitate the possession of their own gardens for plantation; (2) to assure that more distant land is protected from outside invaders; and (3) to minimize conflict between internal groups or families.

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<sup>7</sup> Until the 1990s, newborn indigenous children were killed because of a handicap, social pressure or supernatural demands. Since then, there has been a movement to stop infanticide by registering them in notary offices as soon as they are born. Infanticide is in many ways analogous to abortion; it is a taboo, and it is done without any witnesses. Its aim is also very similar to abortion: to get rid of an unwanted child. As abortion is not an easy practice, with threats to the life of the mother, indigenous groups resort to killing the child after it is born.



### 1.11 Religious groups promoting literacy

Up until 1960, the Bakairi did not engage in the practice of reading. When missionary work intensified, literacy became vital. With the introduction of European religious<sup>8</sup> practices,<sup>9</sup> the Bakairi were trained in reading and writing in BP as well as in their language. Literacy and education started rising in the mid-1970s. By the end of the following decade, around 25% of the members of the Eastern group were literate.

The presence of missionaries on indigenous reservations has been a heated topic for Brazilian academics over the past decades. For instance, former deals between the Summer Institute of Linguistics and national academic institutions (such as the Universidade de Brasília, the Universidade de Campinas, the Museu Nacional do Rio de Janeiro, and the Museu Goeldi) were invalidated in the late 1980s. By the mid-1990s, governmental officials intensely pressed for the exclusion of all, other than Catholic, missionary work in the country.

Nonetheless, within the community, a small team of native speakers worked on the translation of the Bible from BP into Bakairi, which was completed in 2011.

### 1.12 Data collection

This study is based on personal recordings of interviews with native language consultants. The initial contact and further consultations were carried out with speakers of the Eastern dialect from May to November of 1991. The data obtained during that period mainly consisted of elicited paradigms and basic word-formation patterns. The *Formulário de Vocabulário Padrão from Museu Nacional do Rio de Janeiro* (a comparative wordlist of language items deemed pertinent to Indigenous languages in Brazil) was the framework of the initial study at this time.

Further follow-up visits for data collection have been undertaken in 2012, 2013, 2018, 2020, and 2021. Since 2009, regular consultations through Skype and e-mail with five consultants of the Western dialect have occurred. In this past decade, data for this grammar and clarification of pending issues have been the main goal of the research. Bowen's guideline (1972) for the construction of a grammar through fieldwork has been a constant reference point.

### 1.13 Limitations of the study

The amount of fieldwork was insufficient to provide a comprehensive analysis of the grammar against leading theoretical frameworks. Owing to the complexity of

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<sup>8</sup> Here, the expression 'European religions' indicate segments of Christianity: such as Catholic and Protestant denominations. Under the belief that religion is a matter of choice and privacy, no members were asked if they had affiliations to churches.

<sup>9</sup> Native Bakairi religious practices are rare and need further documentation. Few practices that predate intruding European religions exist today. Some religious terminology or terms referring to the supernatural are either considered taboo or avoided by practicing members of European religious groups. Mythology and religion are out of the scope of this research.

some of the aspects of the grammar alongside the relative paucity of data, some linguistic phenomena receive only a preliminary analysis (for example, the extensive person prefixation system among others).

In describing the grammatical constructions that are used, I refrained from making evaluative judgments about their standing in the Bakairi society. However, this grammar has adopted an authoritative tone in areas where the usage is divided, and it describes conventions relating to the socially correct use of the language.

Even though I do not subscribe to any religious denomination, in the process of writing this grammar of Bakairi, I checked the biblical text to confirm some of the uses of nominal morphology. That said, none of the data here comes from the Bible translation.

This dissertation is far from being the last word on the grammar of the Bakairi language. It is a preliminary attempt to arrive at a description of the language. New ideas, reactions, and counterexamples are awaited to document more accurately this language that has so far eluded the attention of the majority of linguists.

The invaluable input of my supervisors and consultants has served to make up for many of my shortcomings. Much was discovered through my exchanges with them in the process of writing this grammatical description. My hope is that this combined effort serves as a resource to help advance future theoretical studies in fields related to Southern Carib languages, Amazonian languages, endangered languages, and ethnography. I also hope that this study will draw attention to this endangered language as to move individuals to contribute to its preservation by actively helping the people to continue to use their mother tongue.



## Chapter 2 Phonetics and Phonology

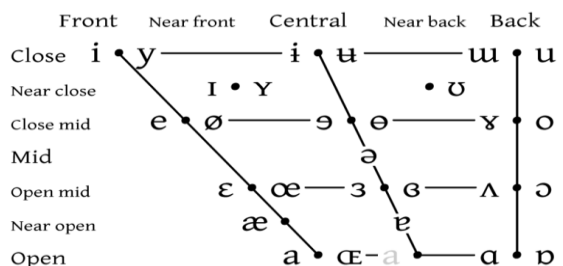
This chapter is dedicated to the phonetics and phonology of both Bakairi dialects. As such, it begins with an overview of the vocalic and consonantal phonemes, and subsequently, it discusses the sound system with attention to syllable structure, word stress, morphophonological processes, ideophones, and the incorporation of loanwords.

### 2.1 Vowels

The discussion of the Bakairi sounds utilizes the IPA sound charts (Tables 2.2 and 2.3) for vowels and consonants as a point of departure. The vowel descriptions refer to Table 2.1.<sup>10</sup>

TABLE 2.1: IPA VOWELS

#### VOWELS



Vowels at right & left of bullets are rounded & unrounded.

The Eastern Bakairi vowel system consists of seven oral and seven nasal vowel phonemes, as shown in Table 2.2.

TABLE 2.2: VOWEL CHART OF THE EASTERN DIALECT

	Front	Central	Back
<b>Close</b>	i ĩ	ɨ ĥ	u ũ
<b>Mid</b>	e ě	ə ẽ	o õ
<b>Open</b>		a ã	

<sup>10</sup>The IPA Chart, <http://www.langsci.ucl.ac.uk/ipa/ipachart.html>, is available under the Creative Commons Attribution-Sharealike 3.0 Unported License. Copyright © 2005 International Phonetic Association.

The Western Bakairi vowel system is identical save for the fact that it lacks the phonemes /i/ and /ĩ/ as shown in Table 2.3.

TABLE 2.3: VOWEL CHART OF THE WESTERN DIALECT

Vowels	Front	Central	Back
<b>Close</b>	i ĩ		u ũ
<b>Mid</b>	e ě	ə ẽ	o õ
<b>Open</b>		a ă	

Typically, the Eastern Bakairi vowels /i/ and /ĩ/ correspond as follow in the Western dialect:

- (a) /i/ → /i/ or /ə/  
 (b) /ĩ/ → /ĩ/ or /ẽ/.

All vowels of both dialects may occur in (1) word-initial position, (2) word-medial position, (3) word-final position, (4) unstressed syllables, (5) stressed syllables, as well as in (6) monosyllables. Although both dialects require vowels to be lengthened in monosyllables, vowel length is not contrastive in Bakairi. For a discussion of a possible vowel lengthening, see 2.5.8.

The following subsections illustrate phonemic contrasts in identical sound environments (CIE), in which the segmental change leads to a change in the meaning of the example words. Since some nouns, body parts in particular, are intrinsically possessed in Bakairi, a subset of the words of this lexical category does not appear as bare roots. For this reason, bare roots in the examples below are taken from compounds to reveal the contrasts we wish to establish. Finally, if CIE data are unavailable, two phones are contrasted in environments in which the phonemes under focus are not affected by surrounding sounds. Contrasts in non-identical environments (CNE) refer to contrasts in analogous environments because two phonetically similar segments occur in two separate words and have similar adjacent sounds.

### 2.1.1 Oral vowels

Below, /x/ : /y/ refers to a contrast between the ‘x’ phoneme and the ‘y’ phoneme. Phonological representations within slanted bars // are limited to the relevant part of the phonological environment of the example words under investigation.

- (2.1) [e] : [ə] : [u]  
 [ilerɪ] ①② /ile/ ‘his penis’  
 [ilə] ①② /ilə/ ‘it’

	[ilu] ①②	/ilu/ <sup>11</sup>	'his tongue'
(2.2)	[i] : [ī]		
	[ipi] ①	/ipi/	'his garden'
	[ip̄i] ①	/ip̄i/	'my garden'
	[ip̄ī] ①	/ip̄ī/	'his arrow, gun'
(2.3)	[a] : [e] : [i] : [ī] : [ə] : [ɔ] : [u]		
	[samerɔ] ②	/ame/	'throw'
	[emeni] ①	/eme/	'type of flute'
	[imeɔ] ①②	/ime/	'child'
	[ime] ①	/ime/	'my child'
	[əme] ①	/əme/	'your child'
	[ɔme] ①	/ome/	'witchcraft, charm'
	[ume] ①	/ume/	'season'
(2.4)	[a] : [ə]		
	[atə] ①	/atə/	'fishhook'
	[ətə] ①②	/ətə/	'home'
	[kura] ①	/kura/	'slow'
	[kurə] ①	/kurə/	'we, people'
(2.5)	[a] : [e] : [i] : [u] : [ī] : [ə]		
	[kutama] ①	/ama/	'bean <i>sp.</i> '
	[samu] ①	/amu/	'manioc flour'
	[pamə] ①	/amə/	'brother-in-law'
	[ame] ①	/ame/	'throw'
	[ami] ①	/ami/	'unique, sole'
	[amī] ①	/amī/	'termite <i>sp.</i> '
(2.6)	[a] : [e] : [i] : [u] : [ī] : [ə] : [ɔ]		
	[seqxɑ] ①	/eka/	'grill ( <i>n.</i> )'
	[pəki] ①	/əki/	'large wound'
	[majaku] ①	/aku/	'basket'
	[jewiəki] ①	/əki/	'rude'
	[ʃimukə] ①	/ukə/	'star'
	[kuɔ̄rəkɔ] ①	/oko/	'butterfly'

The combined vowel contrasts of CIE and CNE corroborate the hypothesis that the seven Eastern oral vowels and six Western oral vowels presented in Tables 2.2 and 2.3 are indeed vocalic phonemes.

<sup>11</sup> Even though the symbol /u/ represents the more frequent pronunciation of the phoneme, we decided to represent the corresponding phoneme as /u/ for reasons of system symmetry.

## 2.1.2 Nasal vowels

Below, nasal vowels are given in CIE and CNE environments.

(2.7)	[ã] : [ẽ]		CIE (word-initially)
	[ãrã] ①	/ãrã/	‘here it is’
	[ẽrã] ①	/ẽrã/	‘to, for’
	[ẽrẽ] ①	/ẽrẽ/	‘palm tree <i>sp.</i> ’
(2.8)	[ã] : [ẽ] : [ĩ] : [ũ] : [õ] : [õ̃]		CNE (word-finally)
	[ẽrã] ①	/ẽrã/	‘to, for’
	[ẽrẽ] ①	/ẽrẽ/	‘palm tree <i>sp.</i> ’
	[makãrĩ] ①	/ãrĩ/	‘parrot <i>sp.</i> ’
	[jĩzĩrũ] ①	/ĩrũ/	‘knee’
	[əpõrõ] ①	/õrõ/	‘swan’
	[õrõ] ①	/õrõ/	‘earth’
(2.9)	[ã] : [ẽ] : [ĩ] : [ĩ̃] : [õ]		CNE (word-finally)
	[õwã] ①	/õwã/	‘road, path’
	[jewẽ] ①	/euẽ/	‘smoke (v.), bless’
	[kirĩwĩ] ①	/ĩwĩ/	‘hummingbird’
	[polãwĩ] ①	/ãwĩ/	‘liana’
	[akõwõ] ①	/õwõ/	‘a long time ago’

Just as for oral vowels, the combined vowel contrasts in CIE and CNE settings above establish nasality as a contrastive feature for all the vowels of the Eastern and Western vowel systems.

Nasalization is also a suprasegmental morpheme present more notably in the formation of the imperfective aspect (discussed in 4.2.6).

## 2.1.3 Oral-nasal vowel contrast

In this subsection, an extensive list of morphologically simple words contrasts *oral* with *nasal* vowels.

(2.10)	[a] : [ã]		
	[iwata] ①	/ata/	‘clear (v.)’
	[iwātari] ①	/ãta/	‘ear’
	[adakõba] ①	/ada/	‘walk’
	[emake] ①	/ake/	‘get (v.)’
	[əejãke] ①	/ãke/	‘vomit (v.)’
	[age] ①	/age/	‘tell (v.)’
	[fũwõtibõ] ①	/ãti/	‘dismantle (v.)’
	[qxadiõni] ①	/adi/	‘fattening’

[ãdi] ①	/ãdi/	‘plant’
[matɔbi] ①	/ato/	‘apple quince’
[kâtɔê] ①	/ãto/	‘for me to take’
[qxadɔpa] ①	/ado/	‘ghost’
[eãɣðrð] ①	/ãgð/	‘the other’
[matue] ①	/atu/	‘imbirici’
[əwãku] ①	/ãku/	‘joke’
[awadu] ①	/adu/	‘beiju chips’
[ɔwãdu] ①	/ãdu/	‘weaved basket’
[padə] ①	/adə/	‘fish <i>sp.</i> ’
[jatigu] ①	/ati/	‘burn quickly (v.)’
[iweãpi] ①	/ãpi/	‘cross-cousin’ <sup>12</sup>
[iqadi] ①	/adi/	‘his fat’
(2.11) [e] : [ẽ]		
[eta] ①②	/eta/	‘box, hole, cage’
[edapi] ①	/eda/	‘food to eat with meat’
[jẽdaũkuuli] ②	/ẽda/	‘he is greeting’
[jeke] ①	/eke/	‘unload (v.)’
[papeɣe] ①	/ege/	‘with paper’
[pẽwẽdə] ①	/ẽuẽ/	‘hail’
[eti] ①	/eti/	‘his house, clothing’
[edi] ①	/edi/	‘non-possessed hammock’
[niwãedi] ①	/ẽdi/	‘type of medicinal plant’
[petə] ①	/eto/	‘firewood’
[ewedə] ①	/edo/	‘hedgehog’
[əẽdð] ①	/ẽdð/	‘meek’
[eturu] ①	/etu/	‘animal food’
[edumu] ①	/edu/	‘dust’
[etə] ①	/etə/	‘plant (v.)’
[kuẽtəĩ] ①	/ẽtə/	‘midnight’
[qxadredə] ①	/edə/	‘tayra’
[ẽdə] ①	/ẽdə/	‘hail storm’
[eyeki] ①	/eki/	‘he is lain’
[ĩwãeki] ①	/ẽki/	‘horn’
(2.12) [i] : [ĩ]		
[itagur] ①	/ita/	‘his ear’
[kəĩtaĩ] ①	/ĩta/	‘written in our language’
[qxadwida] ①	/ida/	‘macaw’
[ĩda] ①	/ĩda/	‘listen (v.)’
[əwanike] ①	/ike/	‘finish (v.)’
[təĩke] ①	/ĩke/	‘whistle (v.)’

<sup>12</sup> This word *iweãpi* refers to a female cross-cousin of a male Ego. See kinship in Appendix 1.



32 A Grammar of the Bakairi Language

	[aĩye] ①	/ige/	‘go out (v.)’
	[təməyəneĩye] ①	/ĩge/	‘in black’
	[iti] ①	/iti/	‘your house’
	[eidi] ①	/idi/	‘his place’
	[iqaĩdi] ①	/ĩdi/	‘thread’
	[itəẽ] ①	/ito/	‘later’
	[saĩtə] ①	/ĩto/	‘means of transportation’
	[idəkərərũ] ①	/ido/	‘wheel’
	[itubə] ①	/itu/	‘bark’
	[idunə] ①	/idu/	‘pair’
	[idənərə] <sup>13</sup> ①	/idə/	‘everybody’
	[aĩtia] ①	/ĩti/	‘eating’
(2.13)	[i] : [ĩ]		
	[itari] ①	/ita/	‘my mouth’
	[ipi] ①	/ipi/	‘my garden’
	[idi] ①	/idi/	‘my younger sister’
	[arikə] ①	/iko/	‘type of dance’
	[ədido] ①	/ido/	‘things’
	[mitu] ①	/itu/	‘curassow’
	[itəgi] ①	/itə/	‘go down (v.)’
	[miriti] ①	/iti/	‘bird <i>sp.</i> ’
	[widi] ①	/idi/	‘wife’
	[niwidi] ①	/ĩdi/	‘catch (v.)’
(2.14)	[o] : [õ]		
	[fikərətə] ①	/ota/	‘at noon’
	[odai] ①	/oda/	‘inside’
	[jõdari] ①	/õda/	‘nail’
	[petəge] ①	/oge/	‘with fire’
	[ohəye] ①	/õge/	‘lay eggs’
	[jəpiri] ①	/opi/	‘his lips’
	[otodai] ①	/oto/	‘inward’
	[mədə] ①	/odo/	‘worm’
	[nahõdə] ①	/õdo/	‘potato’
	[nõku] ①	/õku/	‘fish <i>sp. Brycon amazonicus</i> ’
	[jahõdu] ①	/õdu/	‘palm tree <i>attalea speciosa</i> ’
	[epayədə] ①	/odə/	‘pierce (v.)’
(2.15)	[u] : [ũ]		
	[kutama] ①	/uta/	‘string beans’
	[jũqxayə] ①	/ũka/	‘break (v.)’
	[noilũke] ①	/uke/	‘soaked’

<sup>13</sup> The word /iˈdənərə/ ‘everybody’ has an unusual third-to-last syllable stress in Bakairi.

[aʉtoũilo] ①	/uto/	‘there’
[aũto] ①	/ũto/	‘achiote’
[iramũdo] ②	/udo/	‘child’
[əwĩsaũdo] ①	/ũdo/	‘young woman’
[nũtu] ①	/utu/	‘he knew’
[kũdupi] ①	/udu/	‘gourd’
[jũdu] ①	/ũdu/	‘grandmother’
[aũtələ] ①	/utə/	‘there’
[maũkə] ①	/ũkə/	‘that one’
[ũdə] ①	/udə/	‘I went’
[nəsaũdə] ①	/ũdə/	‘he bathed’

As seen in the examples above, oral and nasal vowels are contrastive.

#### 2.1.4 Vowel sequences

Vowel sequences almost freely occur in word-internal position and across word boundaries (external sandhi). However, it appears that:

- (a) identical vowel sequences (i.e., [aa], [ee]) are lacking;
- (b) the sequences \*[əə] and \*[ɔə] are inexistent in the data, even in heteromorphemic sequences.

Most vowels can occur as a sequence of syllable nuclei (hiatus). As the dialects have either twelve or fourteen vowels, the number of possible vowel sequences is high. Additionally, as the number of CV+ and +VC affixes is also high, vocalic encounters in heteromorphemic environments are frequent. Some examples follow.

- (2.16) [ə.a]            u-də-aki            [u.də.'a.ki] ①  
 1S-go-IMM.PST  
 ‘I have just gone.’
- (2.17) [ɔ.ã]            si-iki-ho-ã            [ʃi.ki.hõ.'ã] ①  
 3O-sleep-NZR3-DAT  
 ‘to the bedroom’
- (2.18) [u.ẽ] / [ɔ.ĩ]    s-iutu-ẽ-ho-ĩ            [ʃu.tu.ẽ.hõ.'ĩ] ①  
 1-know-ATTR-CAUS-NZR4  
 ‘I am known’
- (2.19) [ɔ.ĩ]            s-ako-ĩbi<sup>14</sup>            [sa.kõ.'ĩ.bi] ①  
 1-pound-PTC  
 ‘pounded’

Heterosyllabic vowel sequences also occur when one of the vowels in a sequence is a high vowel. Below, L stands for low vowel, M for mid vowel, and H for high vowel.

<sup>14</sup> Note that *sakoibi* is an alternative pronunciation for *sakoibi*.

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(2.20)	LH	[a.ʊ]	[ˈqɣɑ.ʊ] ①	‘sky’
	LM	[a.ɔ]	[ˈwa.ɔ] ①	‘now’
	LM	[a.e]	[aˈqɣɑ.e.mɔ] ①	‘they’
	MH	[e.ʊ]	[ˈʃe.ʊ] ①	‘coati’
	MH	[ə.ʊ]	[pɪˈrə.ʊ] ①	‘arrow’
	MH	[ɔ.ʊ]	[ˈkɔ.ʊ] ①	‘little sister’
	ML	[e.a]	[e.a.ˈʏð.ʔ̃] ①	‘the other’
	HM	[i.ə]	[i.ˈə.hɔ] ①	‘syringe’
	HM	[i.ɔ]	[kɔ.nɔ.ˈpi.ɔ] ①	‘bird’

Note that the occurrence of two vowels of identical height (LL, MM, or HH) as a tautosyllabic vowel sequence has not been attested. MM and HH sequences are limited to heterosyllabic and/or morphologically complex environments.

When two contiguous vowels belong to different morphemes, the first being oral and the second nasal, the sequence is pronounced obligatorily as two syllables (hiatus). Stress is assigned to the last nasal syllable when in word-final position, which shows that nasal suffixes are inherently stressed.

(2.21)	[a.ʔ̃]	n-əz-itaɪ-Ø 3A-DETR-talk/speak-PST ‘he spoke’	[nə.ʒi.ta.ʔ̃] ①
(2.22)	[i.ʔ̃]	eui-ō germinate <sup>15</sup> -NZR2 ‘seeds’	[e.wi.ʔ̃] ①
(2.23)	[i.ɛ̃]	tə-(e)ti-ē 3R-house-BEN ‘to his house’	[tə.ti.ɛ̃] ①
(2.24)	[e.ʔ̃]	ime-ō small-PL ‘children’	[i.me.ʔ̃] ①

### 2.1.5 Diphthongs

All diphthongs involve a high vowel. They occur word-initially, word-medially, and word-finally.

(2.25)	i-ena-ri ②	[je]	word-initial position 1-nose-POSS ‘my nose’
(2.26)	[uɣw̃ɔdɔ] ①	[wɔ]	word-medial position ‘man’
(2.27)	[maj.maj] ①	[aj]	word-medial and final positions ‘tortoise’

<sup>15</sup> It is not yet clearly defined that /eui/ is a verbal stem.

- (2.28) s-anə-tai ① [aj] word-final position  
1A-buy-IMM.PST  
'I just bought it.'
- (2.29) s-e-tai ① [aj] word-final position  
1A-see-IMM.PST  
'I just saw someone.'

Bakairi diphthongs are either falling or rising. A falling diphthong has a glide as its second member (VG) as below.

- (2.30) [ãw̃] [ə.'dãw̃.lə] ① 'what, which'  
[ɔ̃] [tɔ̃.'lɛ̃] ① 'fish *sp.*'  
[ej] ['ej.di] ② 'his place'

Containing two moras, falling diphthongs are complex rhymes. A falling diphthong in the word-final syllable always carries the main word stress because the second to last mora attracts stress. Examples follow.

- (2.31) [ta.pa.bi.'lɛ̃] ① 'red'  
[tə.we.'hɛ̃] ① 'smooth'  
[tə.mə.'rɛ̃] ① 'heavy'  
[ə.'gəw] ① 'snake'  
[tɔ̃.'zɛ̃] ① 'edible manioc'  
[paj.'qɔxaj] ① 'in (liquid)'

Falling diphthongs appear in the final syllable of verbs.

- (2.32) s-ə-tai ①  
1A-eat.meat-IMM.PST  
'I just ate meat.'
- (2.33) s-amune-dai ①  
1A-dispose.of-IMM.PST  
'I just disposed of it.'
- (2.34) s-apa-dai ①  
1A-fill.up-IMM.PST  
'I just filled it up.'

In contrast, a rising diphthong is formed with a glide followed by a non-high vowel (GV). Some examples follow.

- (2.35) (a) /ia/ [ja.mũ.də] ① 'boy'  
(b) /ie/ [je.tə] ① 'curve'  
(c) /ua, ui/ [wa.bi.li.wi.gi] ① 'because, as'

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A word-final rising diphthong never attracts stress. This means that the high vowel, because it is realized as a glide in the syllable onset, is not moraic. Below are some examples of nouns with rising diphthongs in word-final position.

- (2.36) [‘i.wi] ‘mount’ ①  
 (2.37) [‘e.wi] ‘seed’ ①

Rising diphthongs appear in the final syllable of verbs.

- (2.38) n-ə-uð [‘nə.wð] ①  
 3-kill-REM.PST  
 ‘He killed it a long time ago.’  
 (2.39) n-iga-uð [ni.‘ga.wð] ①  
 3-accomplish-REM.PST  
 ‘He accomplished it a long time ago.’

Rising diphthongs occur across morpheme boundaries.

- (2.40) u-oda-ri [wo.‘da.ri] ①  
 1-nail-POSS  
 ‘my nail’  
 (2.41) i-ema-ri [je.‘ma.ri] ①  
 1-hand-POSS  
 ‘my hand’

Depending on the speech rate, CGV syllables consisting of [s] or [z] and the coronal glide [j] can be pronounced in different ways. For instance, *siurə* ‘of’ is pronounced as [hjurə] or [sjurə] in slow speech, but it is pronounced as [ʃurə] in fast speech. The following is a pair of examples of a similar variation between CGV and CV.

- (2.42) s-iə-gə [sjə.γə] ~ [ʃə.γə] ①  
 3O-kill/kick-IMP  
 ‘Kick it!’  
 (2.43) siogo [‘sjəγə] ~ [‘ʃəγə] ①  
 father  
 ‘Daddy’ or ‘my father’

In verbs, underlying C{i,u}V sequences lose the high vowel if C is a nasal consonant (N). In the following examples, the prevocalic high vowel is part of the underlying representation and is realized phonetically as a glide. In the examples and elsewhere,  $\tilde{V}$  stands for a floating nasal feature triggered by the Bakairi morphology (see 4.2.6).

- (2.44)  $kə-iə\tilde{V}-li$  [kə.ḷ̃.ḷ̃.li] ②  
 1A-kill-IPFV  
 ‘I am killing it.’
- (2.45)  $mə-iə\tilde{V}-li$  [mḷ̃.ḷ̃.li] ②  
 2-kill-IPFV  
 ‘You are killing it.’

The parentheses in the examples below include the underlying high vowel, which is elided. Here and elsewhere in this grammar, the pronoun ‘he’ in the interlinear free translation refers to ‘he,’ ‘she,’ or ‘it’ (an animal).

These examples illustrate the loss of an underlying high vowel due to the presence of an immediately preceding nasal consonant.

- (2.46)  $m-(i)ə-raki$  [mḷ̃.ra.ki] ②  
 2-kill-IMM.PST  
 ‘You killed it.’
- (2.47)  $n-(i)ə-raki$  [nḷ̃.ra.ki] ②  
 3-kill-IMM.PST  
 ‘He killed it.’

At this stage of the analysis, some generalizations can be made about vowel sequences involving high vowels: (1) sequences of two high vowels are pronounced as two syllables (e.g., *kuikuma* [ku.i.ku.mə] ‘snake sp.’); (2) intervocalic high vowels are always pronounced as glides (e.g., *iaduuḷ̃dili* [ja.duu.wḷ̃.di.li] ‘burning’); (3) word-initial {i,u}V sequences are always pronounced as rising diphthongs, as in /ia/ [ja.mḷ̃.də] ‘boy.’ Further fieldwork will clarify the relevant constraints that determine the syllabification of vowel sequences, one of which is a high vowel.

### 2.1.6 The distribution of vocalic allophones

Below, the major allophones of the Bakairi vowel phonemes are provided. Glides are not discussed here, as they are considered to be positional (non-syllabic) variants of high vowels.

/a/	[a:]	is realized in CV words;
	[ɑ]	is realized next to a velar consonant, as in [qɣɑrə] ‘interrogative marker’;
/ã/	[a]	is realized elsewhere.
	[ã:]	is realized in CV words;
	[ã]	is realized next to a velar consonant, as in [qɣãra] ‘fish’;
/e/	[ã]	is realized elsewhere.
	[e:]	is realized in CV words;
/ẽ/	[i] or [e]	(in free variation) is realized elsewhere.
	[ẽ:]	is realized in CV words;
	[ĩ] or [ẽ]	(in free variation) is realized elsewhere.

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/i/	[i:]	is realized in CV words;
	[i]	is realized elsewhere.
/ĩ/	[ĩ:]	is realized in CV words;
	[ĩ]	is realized elsewhere.
/i/	[i:]	is realized in CV words;
	[i]	is a free variant of [i] in unstressed syllables;
	[ĩ]	is realized elsewhere.
/ĩ/	[ĩ:]	is realized in CV words;
	[ĩ]	is a free variant of [ĩ] in unstressed syllables;
	[ĩ]	is realized elsewhere.
/u/	[u:]	is realized in CV words;
	[u] or [u]	(in free variation) is realized elsewhere.
/ũ/ <sup>16</sup>	[ũ:]	is realized in CV words;
	[ũ] or [ũ]	(in free variation) is realized elsewhere.
/o/ <sup>17</sup>	[ɔ:]	is realized in CV words;
	[o]	when preceded by /p/, as in [po] ‘lizard’;
	[ə]	is a variant of [ə] in unstressed syllables;
	[ɔ]	is realized elsewhere.
/õ/ <sup>18</sup>	[õ:]	is realized in CV words;
	[õ]	is realized when preceded by /p/ as in [põwa] ‘necklace’;
	[ə]	is a variant of [ə] in unstressed syllables;
	[õ]	is realized elsewhere.
/ə/	[ə:]	is realized in CV words;
	[ɔ]	is a variant of [ə] in unstressed syllables;
	[ə]	is realized elsewhere.
/ẽ/ <sup>19</sup>	[ẽ:]	is realized in CV words;
	[ẽ]	is a variant of [ẽ] in unstressed syllables;
	[ẽ]	is realized elsewhere.

It should be noted here that, in fast speech, /o/ and even /e/, /i/, and /u/ are typically neutralized as [ə] in unstressed syllables. Only in a slow and more careful speech do the informants distinguish the standard realization as noted above.

## 2.2 Consonants

In this section, the system of consonantal phonemes is proposed. The consonants of Bakairi are described using the IPA symbols as in Table 2.4.<sup>19</sup>

<sup>16</sup> Although the symbol /u:/ is more frequent, the symbol /u/ was used to make the inventory more symmetrical.

<sup>17</sup> Although the symbol /ɔ/ is more frequent, the symbol /o/ was used to make the inventory more symmetrical.

<sup>18</sup> Although the symbol /õ/ is more frequent, the symbol /õ/ was used to make the inventory more symmetrical.

<sup>19</sup> The IPA Chart, <http://www.langsci.ucl.ac.uk/ipa/ipachart.html>, is available under a Creative Commons Attribution-Sharealike 3.0 Unported License. Copyright © 2005 International Phonetic Association.

TABLE 2.4: IPA THE INTERNATIONAL PHONETIC ALPHABET (2005)

CONSONANTS (PULMONIC)

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Epi-glottal	Glottal
Nasal	m	ɱ	n		ɳ	ɲ	ɟ	ŋ	ɴ			
Plosive	p b	ɸ β	t d		ʈ ɖ	ɟ ɗ	c ɟ	k ɡ	q ɢ	ʕ ʔ		ʔ
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	ħ ʕ	h ɦ
Approximant		ʋ	ɹ		ɻ	j	ɥ	ɰ	ʁ			
Trill	ʙ		r						ʀ	ʀ		
Tap, Flap		ɸ	ɾ		ɽ							
Lateral fricative			ɬ ɮ		ɮ	ɬ	ɬ	ɬ				
Lateral approximant			l		ɭ	ʎ	ʎ	ʎ				
Lateral flap			ɺ		ɺ							

Where symbols appear in pairs, the one to the right represents a modally voiced consonant, except for murmured *ɦ*. Shaded areas denote articulations judged to be impossible. Light grey letters are unofficial extensions of the IPA.

The Bakairi consonant system consists of fourteen phonemes, as shown in Table 2.5. Although the total number of consonants is the same in the two dialects, there are differences in the realization of the fricatives /s, z, h/, and the glottal stop.

TABLE 2.5: CONSONANTS OF THE BAKAIRI

Consonants	Bilabial	Alveolar	Velar	Glottal
Nasals	m	n		
Stops	p b	t d	k ɡ	ʔ
Fricatives		s z		h
Lateral		l		
Flap		r		

2.2.1 Consonants: contrastive environments

Below, the phoneme status of the fourteen consonants is established. Where examples are lacking, the relevant contexts are not found in the corpus.

Consonantal contrasts: labials /p/ : /b/ : /m/

- (2.48) /p/ : /b/
- [ipa] ① ‘do not have’
  - [iperi] ① ‘my leg’
  - [ʃupilu] ① ‘red slime’
  - [jewipiẽ] ① ‘sharpened’
  - [udəpə] ① ‘I (am) not going’
  - [epwani] ① ‘paying party, payer’
- [ʃutuɓa] ① ‘I do not know’
  - [sahuɓə] ① ‘weeds’
  - [pāpabilu] ① ‘Red river’
  - [iməɓbəri] ① ‘little’
  - [təkubəye] ① ‘delicious’

- : /m/
- [mamə] ① ‘you took’



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[merə] ① ‘this’  
 [midili] ① ‘you are fighting’  
 [miaki] ① ‘you killed it’  
 [məkə] ① ‘that one’  
 [mɔʒi] ① ‘spider’  
 [muyutw] ① ‘owl’

[eamatɔʒɔru] ① ‘his cane’  
 [sameɣə] ① ‘throw it (IMP)’  
 [itamilw] ① ‘his (red) lipstick’  
 [imiri] ① ‘my son’  
 [iwaməkə] ① ‘my brother-in-law’  
 [iməli] ① ‘he is letting go’  
 [eremw] ① ‘chant’

**Consonantal contrasts: alveolars /t/ : /d/ : /s/ : /z/ : /l/ : /r/ : /n/**

(2.49) /t/ : /d/  
 [itari] ① ‘my mouth’                      [idakw] ① ‘his saliva’  
 [ətɪ] ① ‘party’                              [ədɪ] ① ‘what’  
 [miriti] ① ‘bird *sp.*’                      [widili] ① ‘I (am) bathing’  
 [ətə] ① ‘house’                              [mədə] ① ‘you ate’  
 [pwatə] ① ‘armadillo *sp.*’              [əɣwədə] ① ‘anaconda’  
 [aturu.a] ① ‘name of a tribe’            [huudu] ① ‘hair’

: /s/ : /z/  
 [təsaniyə.ɪ] ① ‘deep’                      [azayə] ① ‘two’  
 [iməsədə] ① ‘big’                          [izedi] ① ‘name’  
 [usɔ]<sup>20</sup> ① ‘my husband’                  -----  
 -----    [kuuzw] ① ‘weaved basket’

: /l/ : /r/  
 [ləʔ] ② ‘turn’                                  -----  
 [ləwəni] ① ‘still’                              -----  
  
 [iladibi] ① ‘dry’                              [nəpira] ① ‘cannot eat (meat)’  
 [ile] ① ‘penis’                                [jereri] ② ‘my liver’  
 [idəli] ① ‘he is going’                    [aripi] ① ‘old woman’  
 [-li] ① *v.* suffix                            [-ri] ① ‘possessive suffix’  
 [alə] ① ‘done/the end’                    [urə] ① ‘I’  
 [ə̃lɔkibə] ① ‘many’                          [=rə] ① intensifying clitic

<sup>20</sup> In Bakairi, word-initial and word-medial [sɔ] are infrequent phonological sequences. The syllable [sɔ] is limited to the semantic fields of ‘husband’ and ‘river.’ Similarly, [se] is related semantically to ‘mother’ and ‘tree.’

[ilɯ] ① ‘tongue’                      [jɔɾɯ] ① ‘your uncle’

: /n/  
 [nahɔ̃dɔ] ① ‘potato’  
 [netaj] ① ‘he saw’  
 [niɣɔ] ① ‘grandmother’  
 [niki] ① ‘he slept’  
 [nə.edə] ① ‘he came’  
 [nəkɯ] ① ‘his drink’  
 [nɯnə] ① ‘moon’

[jenari] ① ‘my nose’  
 [təwanɛ.ɪ] ① ‘worker, working’  
 [sɔpəni] ① ‘mass transportation’  
 [eni] ① ‘drink’  
 [eqxanə] ① ‘put’  
 [kənɔ] ① ‘younger brother’  
 [təkənɯɣe] ① ‘floppy’

**Consonantal contrasts: velars /k/ : /g/**

(2.50) /k/                      :                      /g/  
 [iqxayə] ① ‘sit (IMP)’                      [iyadi] ① ‘lard, fat’  
 [neke] ① ‘weaved’                      [iwayənɔ] ① ‘long’  
 [ikili] ① ‘I am sleeping’                      [ayipə] ① ‘he did not say’  
 [eyeki] ① ‘recline (v.)’                      [ʃiyihɔ] ① ‘grater’  
 [jekə] ① ‘do it (IMP)’                      [mazayə] ① ‘housefly’  
 [ɔrikə] ① ‘ritual dance’                      [eyɔ] ① ‘mortar’  
 [jakɯ.ə] ① ‘fish sp.’                      [piʃɯɣɯ] ① ‘bird sp.’

**Consonantal contrasts: glottals /h/ : /ʔ/**

The following examples contrast the glottals /h/ and /ʔ/ in Western Bakairi exclusively.

(2.51) /h/                      :                      /ʔ/  
 [ahayə] ② ‘two’                      [meʔa] ② ‘wolf fish sp.’  
 -----                      [iməʔedɔ] ② ‘large’  
 -----                      [inaʔi] ② ‘village’  
 [təhərə] ② ‘way over there’                      -----  
 [uħəhu] ② ‘chest’                      [eʔɔɾɯ] ② ‘charcoal’  
 [əihɯyili] ② ‘I am falling’                      [uʔɯɾɯ] ② ‘my foot’

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In Eastern Bakairi, /h/ is attested with greater frequency than /ʔ/, which occurs mainly in ideophones. For Western Bakairi, the situation is the opposite: /ʔ/ is more frequent than /h/ (see 2.5.8).

Most Eastern Bakairi /s/ and /z/ phonemes correspond to Western Bakairi /h/, /ʔ/ or zero.

(2.52)	Eastern Bakairi	Western Bakairi	gloss
	[ize] ①	[iʔe] ②	‘will be’
	[mazayə] ①	[mahayə] ~ [maʔayə] ②	‘housefly’
	[kozekə] ①	[koʔekə] ②	‘deer’
	[enahw] ①	[inaʔw] ②	‘closed’
	[siwahw] ①	[siwaʔv] ②	‘fenced’
	[azayə] ①	[ahayə] ②	‘two’
	[ese] ①	[eʔe] ②	‘watch over’
	[idəse] ①	[idəe] ②	‘will go’
	[meza] ①	[meʔa] ~ [meha] ②	‘wolf fish’

In sum, all consonants occur in a word-medial position. Only glides are allowed in the syllable coda. Furthermore, a number of CV combinations are not encountered in the corpus: \*[de], \*[bu], \*[zə], \*[he], \*[hi], \*[su], \*[ʔə], among others. Note that [te] is very rare and it is attested with only three words: *kuite* ‘macaw sp.’, *teruteru* ‘bird sp.’, and *metegu* ‘small gourd.’

### 2.2.2 The distribution of supra-laryngeal oral stops

In word-initial positions, only voiceless stops, sonorant consonants, and glides can be realized. No voiced realizations of stop consonants occur word-initially. Additionally, in word-internal positions, voiceless stops are limited to one occurrence. There is no restriction on the number of voiced stops in a word.

/p/	[p]	word-initially; up to one word-internal occurrence.
/b/	[p]	word-initially;
	[β]	at the left-edge of a nominal root, only if the root is preceded by a vowel-final prefix (V+ ___).
	[b]	word-internally.
/t/	[t]	word-initially; at most one word-internal occurrence.
/d/	[t]	word-initially;
	[d]	word-medially.
/k/	[k]	word-initially; up to one word-internal occurrence.
	[qx]	next to [a] as in [qxa];
/g/	[k]	word-initial position;
	[ɣ] or [g]	(in free variation) word-medially, between vowels, in derived and non-derived words as in [ʃɔɣə] ‘my father.’
/ʔ/	[ʔ]	in coda position, in ideophones only (both dialects); word-medially, only in the Western dialect.

Ideophones (see 2.6) and loanwords (see 2.7), possibly including the word /bakairi/, do not follow these restrictions. Exceptionally, a handful of Bakairi words, such as /tapekeĩ/ ‘white,’ contain two voiceless stops word-internally.

### 2.2.3 The distribution of fricatives

The set of fricatives consists of /s, z, h/. The phonemes /s/ and /z/ have different allophonic realizations, while the glottal fricative /h/ is restricted to word-medial environments.

/s/	[s]	word initially.
	[s]	at most one word-internal occurrence and only in CV syllables with the non-close vowels: /e/, /a/, /ə/ or /o/
	[ʃ]	when followed by /i/, /i/ or /u/
/z/	[s]	word initial position.
	[ʒ]	only if followed by /i/ (exclusive to the Eastern dialect) <sup>21</sup>
	[z]	word-medially
/h/	[h]	as onsets in suffixes ending in /u/ and /o/. However, /h/ forms no syllables with the front vowels /i e i/.

### 2.2.4 The distribution of nasal consonants

The set of nasal consonants consists of /m, n/. They combine with any vowel to form a CV syllable.

/m/	[m]	syllable-initially
/n/	[n]	syllable-initially

### 2.2.5 The distribution of liquids

The liquids /r, l/ occur syllable-initially, but rarely word-initially. The Western dialect makes use of /r/ in a few word-initial and word-medial positions, whereas the Eastern dialect employs it prominently in word-medial positions.

/r/	[r]	syllable-initially.
/l/	[l]	syllable-initially.

## 2.3 Syllable structure

The basic template of the Bakairi syllable is (C)V. The nucleus of a syllable can only be filled by a vowel, which is preceded by an optional onset consonant. Most words contain at least two syllables. The syllable nucleus of a monosyllabic word

<sup>21</sup> The phoneme /ʒ/ can only be followed by /e/ in loanwords, thus is it excluded from this generalization.

must contain a long vowel. Consonants may combine with a glide to form a complex syllable onset or rhyme: CGV or CVG. The following are attested syllable patterns:

V  
CV  
GV  
VG  
CGV  
CVG

Examples follow.

(2.53)	V.CVG.CV.V	[ə.daj.'tu.ɔ]	/ədaituo/	①	'for what'
	CV.CV.V.CV	[sa.mi.'a.ɣi]	/samiagi/	①	'I made a mistake'
	CV.V.CVG	[nə.e.'taj]	/nətai/	①	'he just came'
	V.CGV.CV	[u.'gɔ̃ð.dɔ]	/uguðdo/	①	'man'
	CV.CVG	[mi.'taj]	/mitai/	①	'you just bathed'
	CGV.CV	['kwā.bi]	/kuābi/	①	'a ritual dance with mask'
	CV.CV.V	[sa.'zi.ũ]	/saziu/	①	'(...), who is dirty'
	CV.V.V	[pi.'ə.u]	/piəu/	①	'dear' or 'boy'
	V.V.CV	[ə.'e.kə]	/əkə/	①	'come (IMP)'
	V.CV.V	[ə.'gə.u]	/əgəu/	①	'snake'
	CV.CV	['sɔ.dɔ]	/sodo/	①	'river'
	V.CV	['i.pi]	/ipi/	①	'his arrow' or 'gun'
	V.GV	['a.wa]	/aua/	①	'jaguar <i>sp.</i> '
	CV.V	['pu.a]	/pua/	①	'armadillo <i>sp.</i> '
	V.V	['i.a]	/ia/	①	'my older sister'
	CV	[pi:]	/pi/	①	'axe'

As there are no consonant clusters (CC) in Bakairi, glides are transcribed as high vowels in phonological transcriptions. In CGV formations, C may be one of the stops /p, t, k, g/ or a fricative from the set /s, h/. Stop-glide sequences are exemplified below:

(2.54)	[e.'pja.ɣɔ]	/epiago/	①	'spatula'
	[ə.se.da.ẽ.ɣi.'bi.ẽ]	/əsedaẽgibiẽ/	①	'going in different directions'
	[i.kju.'mə.ni]	/ikiüməni/	①	'mythological jaguar'
	['kja.i]	/kiaĩ/	①	'PST.COP'
	['kwð.wa]	/kuðua/	①	'onto us'
	['pja.ʒe]	/piaze/	①	'shaman'
	['pwa.tɔ] ~ ['kwa.tɔ]	/puato/ ~ /kuato/	①	'nine-banded armadillo'

CGV sequences, in which the onset is /s, h/, are variably realized as a CV in a process of glide deletion and fricative alternation. The same speaker alternatively uses CGV and CV.

- (2.55) [hja.la.o] ~ [ʃja.la.o] ~ [ʃa.la.o] /sialao/ ① 'heron'  
 [hje.u] ~ [ʃje.u] ~ [ʃe.u] /sieu/ ① 'coati'  
 [hju.ɣe.ze] ~ [ʃju.ɣe.ze] ~ [ʃu.ɣe.ze] /siugeze/ ① 'burn'  
 [hju.rə] ~ [ʃju.rə] ~ [ʃu.rə] /siura/ ① 'of'

## 2.4 Word stress and laryngealization

This section is dedicated to a discussion of stress and laryngealization.

### 2.4.1 Stress allocation and the mora

No words in Bakairi differentiate their meaning through the variation of stress. Indeed, stress is predictable in Bakairi. With very few exceptions, the main stress occurs on the second to last mora as illustrated below.

- (2.56) ['niki] /niki/ ① 'he slept'  
 [ni'kimɔ] /nikimo/ ① 'they slept'  
 ['nipi] /nipi/ ① 'he healed (of a wound)'  
 ['niti] /niti/ ① 'he dived'  
 ['pekɯ] /beku/ ① 'salt'  
 ['pepi] /bepi/ ① 'canoe'  
 ['parɯ] /baru/ ① 'water, river'  
 ['petɔ] /peto/ ① 'fire, bonfire, matchstick, firewood'  
 ['podɔ] /podo/ ① 'meat (from game); game (animal)'  
 ['tɔrɔ] /toro/ ① 'parrot'  
 ['tɔhu] /tohu/ ① 'squash, pumpkin, gourd'  
 ['ʃiʃi] /sisi/ ① 'sun'  
 ['eɣɔ] /ego/ ① 'pestle'  
 [e'gɔrɯ] /egoru/ ① 'his pestle'  
 [egɔ'ruɯɔ] /egorumo/ ① 'their pestle(s)'  
 ['taʔɔ] /daʔo/ ② 'knife'  
 ['natə] /natə/ ① 'he sharpened'  
 [na'təɯɔ] /natəmo/ ① 'they sharpened'

In monosyllabic words, the nucleus is realized as a long vowel. If we define a lengthened vowel as containing two moras, it may be stated that the minimal word in Bakairi is bimoraic.

- (2.57) [se:] /se/ ① 'tree'  
 [pi:] /pi/ ① 'gun'

Words with four or more syllables can exhibit secondary stress on the second syllable to the left of the main stressed syllable. In the examples below, the main stress is marked with the diacritic [ˈ], the secondary stress with the diacritic [ˌ].

- (2.58) [ida'ʔɔru] /idaʔoru/ ② 'his knife'  
 [natə'raɣi] /natəragi/ ② 'cut' (IMM.PST)  
 [natə'aɣi] /natəagi/ ① 'cut' (IMM.PST)  
 [qɣada'nədə] /kadanədə/ ① 'don't carry it' (IMP)

Rising diphthongs, as in CV.(C)GV##, fail to attract stress to the word-final syllable. Consequently, words ending in a rising diphthong do not constitute complex rhymes, as the glide [j] or [w] belongs to the syllable onset.

In contrast, falling diphthongs, as in CV.CVG##, are complex rhymes, counting as a bimoraic (or heavy) rhyme. When a falling diphthong is present in the last syllable of a word, it is stressed.

- (2.59) [ne.ɣa.tu.'daj] /negatudai/ ① 'he ran' (IMM.PST)  
 [nə.se.ɣu.bə.də.'daj] /nəsegubədə dai/ ① 'he left over' (IMM.PST)  
 [ʃ.lə.'taj] /siʃlətai/ ① 'I have put it off' (IMM.PST)  
 [wa.qɣa.re.'raj] /uakarerai/ ① 'toad'  
 [i.na.'qɣaj] /inakai/ ① 'bad'

In morphologically simple words, a nasal vowel derived from nasal spreading (see 2.5.4) is treated as light for the distribution of stress. Consequently, a word-final nasalized vowel does not act as a stress attractor.

- (2.60) [nʊnə] ~ [nũnə̃] ~ \*[nũ'nə̃] /nʊnə/ ① 'moon'  
 [qɣãra] ~ [qɣãrã̃] ~ \*[qɣã'rã̃] /kãra/ ① 'fish'  
 [i'zãra] ~ [i'zãrã̃] ~ \*[izã'rã̃] /izãra/ ① 'alligator'

In morphologically complex words, a phonological nasal vowel of a morpheme is stressed when in word-final position.

- (2.61) t-ita-ẽ-ba-ũ [ti.ta.ẽ.ba.'ũ] ②  
 3R-mouth-ATTR-NEG-NZR1  
 'a mute person'  
 (2.62) eui-õ [e.wi.'õ] ①  
 germinate-NZR2  
 'seeds'

## 2.4.2 Laryngealization

Laryngealization, or creaky voice, is a non-modal phonation type, in which the vocal folds are compressed tightly, vibrating irregularly, with little glottal airflow. Laryngealization is used in Bakairi when a speaker wants to intensify the meaning of a word, an utterance, or an ideophone (see 2.6). A subscript tilde (˘) specifies creaky vowels in the following examples.

- (2.63) [əwə] ② ‘not true’ : [əwə] ② ‘disgust/anger’  
 [kiri] ② ‘gross’ : [kiri] ② ‘gross, disgusting’  
 [kuunəhəwə] ② ‘mouse’ : [kuunə:ɾə] ② ‘disgusting mouse’  
 [tilainei] ② ‘one who feels disgust’ : [ilajinumi] ② ‘a disgusting person’

When associated with augmentative and diminutive constructions, creaky voice expresses emphasis or frustration.

- (2.64) i-ʔu-ru-dē                      uaũlo                      [iʔurudɛ:<sup>n</sup> waũlo<sup>n</sup>] ②  
 3-foot-POSS-AUG                      such/like  
 ‘They are such big feet.’
- (2.65) i-āgaʔu-Ø-tē                      uaũlo                      [ɲāyaʔutɛ:<sup>n</sup> waũlo<sup>n</sup>] ②  
 3-head-POSS-AUG                      such/like  
 ‘He has such a big head.’
- (2.66) Ø-iʔu-ru-dī                      uaũlo                      [iʔurudɪ<sup>n</sup> waũlo<sup>n</sup>] ②  
 3-foot-POSS-DIM                      such/like  
 ‘They are such tiny feet.’
- (2.67) i-āgaʔu-Ø-tī                      uaũlo                      [ɲāyaʔutɪ<sup>n</sup> waũlo<sup>n</sup>] ②  
 3-head-POSS-DIM                      such/like  
 ‘He has such a tiny head.’

The augmentative suffix /dɛ: - tɛ:/ is pronounced with a lengthened vowel or with a pause between the suffix and /uaũlo/. In the examples provided, the speaker adds a particularly large release of air through the nose, expressed as [ɔ<sup>n</sup>] above, to further emphasize the augmentative and diminutive meanings.

## 2.5 Phonetic, phonological, and morphophonological processes

This section focuses on the major vocalic and consonantal alternations that are predictable by rule.

### 2.5.1 Distribution of [± VOICE] feature in nonsonorant consonants

The [± VOICE] feature in nonsonorant consonants displays a complex distribution in Bakairi. In this subsection, unless otherwise indicated, the term ‘consonant’ refers to the class of nonsonorant consonants, which consists of the voice-contrasting pairs: /p-b/, /t-d/, /k-g/, and /s-z/. Three aspects related to voice alternation have been observed: word-initial devoicing, one word-internal voiceless consonant, and the distribution of voice in noun-incorporated verbs.

#### 2.5.1.1 Word-initial devoicing

**Generalization #1** The word-initial consonant is obligatorily realized as voiceless if formed with one of the nonsonorant consonants. Furthermore, monosyllabic words do not show the [± VOICE] contrast. The following pair contrasts



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a prefix-less noun (i.e., *taho*), in example (2.68a), with the same noun preceded by its bound person prefix in example (2.68b). In all examples provided in this section, root morphemes, as well as voice-alternating consonants, are in bold.

- (2.68) (a) **taho** ①  
          ‘knife’  
      (b) i-**daho**-ru ①  
          1-knife-POSS  
          ‘my knife’

Verbs that are realized with a  $\emptyset$ -prefix exhibit the same prohibition on initial voiced consonants, as below.

- (2.69) (a)  $\emptyset$ -**ke**-li ②  
          3S-speak-IPFV  
          ‘he says’  
      (b) u-**ge**-li ②  
          1S-speak-IPFV  
          ‘I say’

Wetzels (1997) states that in Bakairi ‘for consonant-initial roots, the voice value of the consonants is always predictable: when the root is not prefixed, i.e., when the root-initial consonant surfaces in word-initial position, it will be voiceless, whereas, in intervocalic position, it will always be voiced.’ Using underspecification for root-initial non-sonorants, Wetzels predicts the value for the root-initial voice feature with the redundancy rules below:

$\emptyset$  laryngeal  $\rightarrow$  [+ VOICE] / V\_\_V  
 $\emptyset$  laryngeal  $\rightarrow$  [- VOICE] / elsewhere

- (2.70) [pi]     /Pi/     ‘axe’  
      [po]     /Po/     ‘lizard’

In the example above, the uppercase /P/ represents a labial stop unspecified for [+ VOICE]. In all further examples, each consonant is represented with [ $\pm$  VOICE] value as realized.

Exceptions to generalization #1 are ideophones (see 2.6) and the name of the language /bakairi/, possibly a loanword (see 2.7).

### 2.5.1.2 One word-internal voiceless consonant per word

The second syllable of a disyllabic word may contain either a voiced or voiceless consonant, as in the following pair of examples: a minimal pair involving the [ $\pm$  VOICE] contrast in the onset of the second syllable of the root.

- (2.71) əti ① : ədi ①  
 ‘party’ ‘what’

**Generalization #2** Only a single non-initial [– VOICE] consonant may occur in polysyllabic words. Examples of this generalization are given below.

- (2.72) kid-eŋkəri-də-dili ①  
 1PL.INC-bend-VBZ2-IPFV  
 ‘We are bending it.’
- (2.73) kid-əŋpazigi-li ①  
 1PL.INC-knead-IPFV  
 ‘We are kneading it.’

This single word-internal voiceless consonant may occur as part of the root or in one of the affixes. Since both the presence and the position of a voiceless root consonant are unpredictable, we assume that the voiceless consonants are lexically specified in roots, whereas the [+ VOICE] value of the remaining consonants, including the affixes, is considered the default value.

There are a few exceptions to this generalization, including *tapekeĩ* ‘white,’ *əuatakuru* ‘your basket,’ *imatiuəto* ‘a tool for breaking something repeatedly,’ and *nepaziuətaiāgi* ‘he split it up again.’<sup>22</sup> In addition, one case of a free [± VOICE] alteration between *titagepa* and *titageba* ‘not having a mouth’ is observed in the data.

**Generalization #3** Affixes come in two classes. The majority of the affixes have [± VOICE] allomorphs, while a small non-alternating class of affixes always appears with the [+ VOICE] value. A list of the voice-alternating affixes, attested in the Eastern Bakairi dialect, follows. (Examples of words with voice-alternating affixes are given after generalization #5.)

- |     |                    |  |
|-----|--------------------|--|
| (a) | -aki, -agi         | ‘immediate past’                                       |
| (b) | -asi, -azi         | ‘locative’   |
| (c) | -dise, -dize       | ‘desiderative’   |
| (d) | -kə, -gə           | ‘imperative’   |
| (e) | -ke, -ge           | ‘verbalizer, reversative’                              |
| (f) | -pa, -ba           | ‘negation’   |
| (g) | -pɪgeduo, -bɪgeduo | ‘after’  |
| (h) | -pɪra, -bɪra       | ‘negation’   |
| (i) | -pɪri, -bɪri       | ‘past possession’                                      |
| (j) | -ripə, -ribə       | ‘participle’ (possibly parsable as /-ri-pə/, /-ri-bə/) |
| (k) | -se, -ze           | ‘purposive’  |
| (l) | -si, -zi           | ‘locative’   |
| (m) | -tai, -dai         | ‘immediate past’                                       |
| (n) | -taũ, -daũ         | ‘collective plural’                                    |
| (o) | -tē, -dē           | ‘augmentative’   |

<sup>22</sup> It is not yet possible to determine if the exceptions given occur because they are phonologically complex. Historically, they may be morphologically complex, but they are now ‘frozen’ in this shape.

(p)	-tibi, -dibi (-ibi)	‘participle’
(q)	-tõ, -dõ (-õ)	‘iterative’
(r)	-to, -ho, -do	‘nominalizer’
(s)	-tuo, -duo	‘when’
(t)	-tõri, -dõri	‘negative deverbal nominalizer’
(u)	əs-, əz-	‘detransitivizer’
(v)	ot-, oh-, od-	‘detransitivizer’

**Generalization #4** When a lexical root morpheme contains a [– VOICE] consonant, all affixes of the alternating class are obligatorily realized as [+ VOICE].

**Generalization #5** The [– VOICE] allomorph of a single affix is expected and the affix realizing the [– VOICE] allomorph is the one located adjacent to the root only if a lexical root morpheme does not contain a voiceless consonant. When a root is preceded by a non-initial alternating prefix (i.e., the word that has more than one prefix), the [– VOICE] allomorph of the non-initial prefix is selected. If the non-initial prefix contains a voiceless consonant, all the alternating suffixes realize the voiced variant.

Generalizations #4 and #5 are exemplified below. The verbal stem and the voice-alternating consonant are in bold.

- (a) The immediate past suffix *-aki, -agi* (see 4.2.5.1).
- (2.74) s-**iə**-aki ①  
 1S-shoot the target/kill-IMM.PST  
 ‘I killed.’
- (2.75) s-**atə**-agi ①  
 1S-cut-IMM.PST  
 ‘I cut.’
- (b) The locative suffix *-si, -zi* (see 3.1.5.2).
- (2.76) **oda**-si ①  
 inside-LOC2  
 ‘into the center’
- (2.77) **pa-ika**-zi ①  
 water/river-liquid-LOC2  
 ‘into the water’ or ‘into the river’
- (c) The desiderative suffix *-dise, -dize* (see 4.2.8.1).
- (2.78) k-**anə**-dise ①  
 1A-buy-DESI  
 ‘I want to buy it.’
- (2.79) k-**aŋpa**-dize ①  
 1A-carry-DESI  
 ‘I want to carry it.’
- (d) The imperative *-kə, -gə* (see 4.2.8.2).

- (2.80) **igono-kə** ①  
push-IMP  
'Push it!'
- (2.81) **akə-gə** ①  
break-IMP  
'Break it!'
- (e) The reversative suffix *-ke, -ge* (see 4.3.4).
- (2.82) **kə-iŋga-ke-Ø** ①  
1A-assemble-REV-PST  
'I am dismantling it.'
- (2.83) **s-ekazi-ge-Ø** ①  
1A-tie-REV-PST  
'I untied it.'
- (f) The negative suffix *-pa, -ba* (see 4.2.9).
- (2.84) **n-ige-pa** ①  
3S-die-NEG  
'He didn't die.'
- (2.85) **n-əku-ba** ①  
3O-climb-NEG  
'He didn't climb it.'
- (g) The postposition *-pigeduo, -bigeduo* 'after' (see 5.4.2.3).
- (2.86) **i-pigeduo** ①  
bathe-after  
'After bathing'
- (2.87) **təd-əs-enome-də-bigeduo** ①  
NPOS-DETR-knowledge-VBZ<sup>23</sup>-after  
'After teaching'
- (h) The negative suffix *-pira, -bira* (see 4.2.9).
- (2.88) **k-iga-pira** ①  
1A-invent-NEG  
'I don't invent it.'
- (2.89) **kə-(e)ta-də-bira** [kətadəbira] ①  
1A-cage-VBZ2-NEG  
'I don't gather it.'

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<sup>23</sup> In example (2.87) and elsewhere, as the first suffix to the right of the root is the verbalizer *-də* (which is part of a non-alternating class), subsequent suffixation is [+ VOICE]. The [- VOICE] prefix is licensed by the lack of a [- VOICE] feature inside either the root or the first suffix to its right.

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- (i) The past nominal possessor *-piri, -biri* (see 3.1.2).
- (2.90) **si-pi-ri** ume ①  
last-PST-POSS time  
'at the end of the last season'
- (2.91) **adai-to-bi-ri** ①  
experience-NZR3-PST-POSS  
'a previous experience'
- (j) The participle suffix *-ripə, -ribə* (see 3.2.6).
- (2.92) **s-ia-ripə** ②  
3O-kill-PTC  
'which was killed'
- (2.93) **Ø-eke-ribə** ②  
3A-weave-PTC  
'which was woven'
- (k) The purposive suffix *-se, -ze* (see 4.2.8.8).
- (2.94) **idəb-se** ①  
cook-PURP  
'in order to cook'
- (2.95) **eta-də-ze** ①  
cage-VBZ2-PURP  
'in order to gather'
- (l) The jussive suffix *-si, -zi* (see 4.2.8.6).
- (2.96) **s-e-si** ①  
1A-see-JUS  
'let me see'
- (2.97) **k-əku-zi** ①  
1A-climb-JUS  
'let me climb'
- (m) The immediate past suffix *-tai, -dai* (see 4.2.5.1).
- (2.98) **s-iga-tai** ①  
1A-invent-IMM.PST  
'I have just invented it.'
- (2.99) **s-eta-də-dai** ①  
1A-cage-VBZ2-IMM.PST  
'I have just gathered it.'
- (n) The collective plural suffix *-taũ, -daũ*, used only in imperatives (see 4.2.8.2).
- (2.100) **igono-taũ-gə** ①  
push-PL-IMP  
'Push it, all of you.'

- (2.101) **akə-daũ-gə** ①  
break-PL-IMP  
'Break it, all of you.'
- (o) The augmentative *-tẽ*, *-dẽ* (see 3.1.6).
- (2.102) **i-ãgahu-Ø-tẽ** ②  
3-head-POSS-AUG  
'his big head'
- (2.103) **Ø-enata-ri-dẽ** ②  
3-nose-POSS-AUG  
'his big nose'
- (p) The participle suffix *-tibi*, *-dibi* (see 3.2.6).
- (2.104) **i-dələ-tibi** ①  
3O-cook-PTC  
'which was cooked'
- (2.105) **Ø-eta-də-dibi** ①  
3O-cage-VBZ2-PTC  
'which was gathered'
- (q) The iterative suffix (Type I) *-tõ*, *-dõ* or (Type II) *-õ* (see 4.3.3).
- (2.106) **igono-tõ-daũ-gə** ①  
push-ITE-PL-IMP  
'Push it again, all of you.'
- (2.107) **akə-dõ-daũ-gə** ①  
break-ITE-PL-IMP  
'Break it again, all of you.'
- (r) The nominalizations with the suffix *-to*, *-do*, *-ho* (*-o*, *-ʔo* ②) (see 3.2.3).
- (2.108) **i-to** ①  
bathe-NZR3  
'bathing area'
- (2.109) **ətəua-do** ①  
clip-NZR3  
'clipper'
- (s) The postposition *-tuo*, *-duo* (see 5.4.2.3).
- (2.110) **ai-tuo** ①  
make-when  
'when making'
- (2.111) **itu-ge-duo** ①  
skin-REV-when  
'upon removing the skin'

The only systematic exception to generalization #5 is when a verbal stem is detransitivized by way of a voice-alternating reflexive prefix, in which case the [– VOICE] specification must be realized in the non-initial reflexive prefix adjacent to the root. As expected, when a prefix realizes the [– VOICE] allomorph, all other affixes utilize the voiced allomorph. Below are examples of two detransitivizers that alternate voice.

- (t) The detransitivizing prefix *əʂ-*, *əz-* (see 4.2.2).
- (2.112) n-**idə-tai** ①  
3A-settle.down-IMM.PST  
'He settled it down.'
- (2.113) n-**əʂ-idə-dai** ①  
3A-DETR-settle.down-IMM.PST  
'He settled down.'
- (2.114) n-**əz-ihu-gi-agi** ①  
3A-DETR-foot-wet(v.)-IMM.PST  
'He wet his feet.'

- (u) The detransitivizing prefix *ot-*, *od-* (see 4.2.2).
- (2.115) n-**ogomo-tai**<sup>24</sup> ①  
3A-shrink-IMM.PST  
'He shrank it.'
- (2.116) n-**ot-ogomo-dai** ①  
3A-DETR-shrink-IMM.PST  
'He became smaller.'
- (2.117) n-**od-opə-dai** ①  
3A-DETR-bring.back-IMM.PST  
'He returned it.'

The following group of affixes and postpositions belongs to a non-alternating class, which always appears with the [+ VOICE] value.

- |     |       |   |
|-----|-------|---|
| (a) | -dili | 'imperfective'  |
| (b) | -də   | 'past (Type I)'                                       |
| (c) | -də   | 'verbalizer'  |
| (d) | -də   | 'prohibitive'   |
| (e) | -də   | 'locative(3)'   |
| (f) | =dō   | 'ablative' (In special contexts, it is used as =dōro) |
| (g) | -ge   | 'instrumental as in the circumfix <i>t-N-ge</i> '     |
| (h) | ad-   | 'detransitivizer'                                     |
| (i) | əd-   | 'detransitivizer'                                     |
| (j) | kid-  | 'first-person plural inclusive'                       |

<sup>24</sup> As the past tense (see 4.2.5) and the imperfective (see 4.2.6) are formed with non-alternating suffixes, it is not possible to use them to predict the [± VOICE] feature to be utilized in the suffix.

The examples illustrate the use of these non-alternating [ $\pm$  VOICE] affixes.

- (2.118) **k-a** $\tilde{V}$ -**dili** ①  
1A-carry-IPFV  
'I am carrying it.'
- (2.119) **m-a-də** ①  
2A-carry-PST  
'You carried it.'
- (2.120) **idadə**=d(ə)- $\tilde{o}$  ①  
city=LOC3-NZR3  
'from the city'
- (2.121) **angu**-ge ①  
polenta-INSTR  
'with polenta'

When a lexical root does not contain a voiceless consonant and the prefix used with this root belongs to this non-alternating class, the first alternating suffix adjacent to the root is realized with the [- VOICE] allomorph, as predicted in generalization #5. An example is given to demonstrate this point.

- (2.122) **k-əd-əuĩdua-to** ①  
1A-DETR-feed-NZR3  
'my meal'

As previously mentioned, if the first suffix next to the root is of the non-alternating class, any further affixes will realize their [+ VOICE] allomorph.

- (2.123) **kid-e** $\tilde{V}$ **nome-də-dai** ①  
1PL.INC-knowledge-VBZ2-IMM.PST  
'We taught it.'

It follows from the five generalizations above that words without an intervocalic voiceless consonant can only surface when the root does not contain a voiceless consonant and all the affixes, if any, are of the non-alternating type.

Although the majority of the affixes containing a non-sonorant consonant in Bakairi have two allomorphs, we have so far established that some affixes containing nonsonorant consonants do not contrast [ $\pm$  VOICE]. These include the imperfective and past affixes, as in the examples below:

- (2.124) **kə-i** $\tilde{V}$ **dələ-dili** ②  
1A-simmer-IPFV  
'I am simmering it.'
- (2.125) **s-idələ-də** ②  
1A-simmer-PST  
'I simmered it.'



In Table 2.6, we demonstrate with the verb root *idələ* ‘simmer’ that every suffix of the alternating class behaves similarly with regard to selecting one or the other of the allomorphs.

TABLE 2.6: REALIZATION WITH A FIRST [-VOICE] SUFFIX ALLOMORPH

[+ VOICE] root	aspect-mood	gloss
s- <b>idələ-tai</b>	IMM.PST	‘I simmered it.’
<b>idələ-tibə</b>	PTC	‘that has been simmered’
<b>idələ-kə</b>	IMP	‘Simmer it.’
<b>idələ-taũ-gə</b>	PL-IMP	‘Simmer it, all of you.’
<b>idələ-tō-daũ-gə</b>	ITE-PL-IMP	‘Simmer it again, all of you.’
s- <b>idələ-pa</b>	NEG	‘I didn’t simmer it.’
<b>idələ-se</b>	PURP	‘in order to simmer it’

Likewise, a root with a [- VOICE] consonant causes all its alternating affixes to select the [+ VOICE] variant, as it is shown in Table 2.7 with the verb *eka* ‘sit.’

TABLE 2.7: REALIZATION WITH A [-VOICE] ROOT

[- VOICE] root	aspect-mood	gloss
s- <b>eka-dai</b>	IMM.PST	‘I sat.’
<b>eka-dibə</b>	PTC	‘that has been sat’
<b>eka-gə</b>	IMP	‘Sit down.’
<b>eka-daũ-gə</b>	PL-IMP	‘Sit down, all of you.’
<b>eka-dō-daũ-gə</b>	ITE-PL-IMP	‘Sit down again, all of you.’
s- <b>eka-ba</b>	NEG	‘I did not sit down.’
<b>eka-ze</b>	PURP	‘in order to sit’

### 2.5.1.3 The distribution of voice in a noun-incorporating verb

A verb with an incorporated noun makes use of inflection and affixation analogous to a single-rooted verb. Such nominal incorporation is restricted to body parts. When both the nominal and the verbal stems contain a lexical [- VOICE] consonant, only one of the roots maintains its voiceless consonant.

The distribution of voice in this type of compound is as follows:

The [- VOICE] of the first root, which refers to a body part, takes precedence over the remaining morphemes in the word.

- (2.126) k-əz-**ita-goge**-li [kəzitaɡo'geli] ①  
 1A-DETR-mouth-wash-IPFV  
 ‘I am washing my mouth.’

Example (2.126) shows that the first root takes precedence over any other voiceless consonants. The first root *ita* ‘mouth’ contains a lexical [- VOICE] consonant, thus all other allomorphs must be [+ VOICE]. Also in this example, other

syllables could potentially be realized as voiceless. The detransitivizer /əs-/, /əz-/ (see 4.2.2) has a voiceless allomorph. The root-initial consonant of the verb /koge/ ‘wash’ is voiced in the example. Since a voiceless consonant in a lexical root takes precedence over affixal voiceless consonants, the only surface voiceless consonant in this word is the one in *ita*.

In a sequence of two compounded roots, neither of which contains a root-internal voiceless consonant, the root-initial consonant of the second root is realized as voiceless. Two examples follow.

- (2.127) k-ad-**āga-koge**-li [qxadāgako'geli] ①  
 1A-DETR-head-wash-IPFV  
 ‘I wash my head.’
- (2.128) k-ad-**āga-silu-ge**-li [qxadāgaʃilu'geli] ①  
 1A-DETR-head-shave-VRB-IPFV  
 ‘I shave my head.’

When the first root of a compound does not contain a voiceless consonant, the initial consonant of the second root is realized as voiceless. Consequently, the voiced allomorph of the prefix is used.

- (2.129) əz-**ema-pilu-gə** ①  
 DETR-hand-stretch-IMP  
 ‘Stretch your hand!’
- (2.130) əz-**ema-kəzio-ze** ①  
 DETR-hand-lift-IPFV  
 ‘lift your hand’

### 2.5.2 Palatalization

In the Eastern dialect, a voiceless fricative onset consonant followed by a closed vowel becomes post-alveolar only before a front closed vowel.

$$\begin{aligned} [s] &\rightarrow [ʃ] / \_\_\_ / i i u / \\ [z] &\rightarrow [ʒ] / \_\_\_ / i / \end{aligned}$$

Examples follow.

- (2.131) n-əs-io-dai [nəʃiodaj] ①  
 3A-DETR-meet-IMM.PST  
 ‘He met it.’
- (2.132) ome si-iki-li [ʃikili] ①  
 time 1S-sleep-IPFV  
 ‘It is time for me to sleep.’

- (2.133) si-ui-ze [ʃuize]            u-də-li ①  
 3O-search.for-PURP        1S-go-IPFV  
 ‘I’m going to order to search for it.’
- (2.134) təz-iku [təʒiku] ①  
 NPOS-liquid  
 ‘urine’

### 2.5.3 Lenition (spirantization and affrication)

In both dialects, a type of consonant weakening or spirantization occurs. A root-initial voiced stop becomes continuant in an intervocalic position. The root-initial set /p-, t-, k-/ is not realized as /-b-, -d-, -g-/. When other morphemes are added to their left, these stops are consistently weakened to /-β-, -z-, -ɣ-/. There are counterexamples when the phonemes /-b-, -d-/ are not spirantized as /-β-, -z-/ root-internally (e.g., /pabai/ ‘my father,’ /patada/ ‘hawk sp.’).

p → b → β  
 t → d (→ z)  
 k → g → ɣ (see affrication of velar stops further below.)

The following examples demonstrate the lenition process for the labial stop. Since the rule is variable, it could be argued that lenition applies to an intermediate [b] at a morphological boundary:

- (2.135) i + pepi + ri        [iβepiri] ①  
 1-canoe-POSS  
 ‘my canoe’
- (2.136) u + posera + ri    [uβoserari] ①  
 1-bracelet-POSS  
 ‘my bracelet’
- (2.137) ə + pi + ri        [əβəri] ①  
 2-axe-POSS  
 ‘your axe’

When forming detransitivized verbs with the reflexive/reciprocal prefix /əd-/, verbs beginning with /e/ or /i/ show the allomorph /əz-/ instead: əd- → əz-. If followed by /i/, /əz-/ is pronounced [əʒ-] in the Eastern dialect. The following pairs illustrate this process. As previously mentioned, the symbol  $\tilde{V}$  indicates a suprasegment of nasality used in the formation of imperfective aspect of transitive verbs. Reflexive/reciprocal prefixes block the nasalization of the stem in the expression of the imperfective aspect (see 4.2.6).

- (2.138) (a)        bola        Ø-e $\tilde{V}$ nanə-dili    auəkə ①  
                  ball        3A-play-IPFV    AN.MED  
                  ‘He is playing ball.’

- (b) n-əz-enanə-dili      auəkə ①  
 3A-DETR-play-IPFV      AN.MED  
 ‘He is playing by himself.’
- (2.139) (a) *manga*      Ø-iŋkui-li      auəkə ①  
 mango.tree      3A-water-IPFV      AN.MED  
 ‘He is watering the mango tree.’
- (b) n-əz-ikui-li      auəkə ①  
 3A-DETR-water-IPFV      AN.MED  
 ‘He is urinating.’

A similar process is attested with the voiceless variant of the detransitivizing prefix: /ət/, which becomes /əs-/ before /e, i/. The following pairs illustrate the distribution of the detransitivizer əs-.

- (2.140) (a) eŋmage-li ①  
 discuss-IPFV  
 ‘discussing it’
- (b) əs-emage-li ①  
 DETR-discuss-IPFV  
 ‘gossiping’
- (2.141) (a) ieŋ-dili ①  
 climb-IPFV  
 ‘climbing’
- (b) əs-ie-dili ①  
 DETR-make-IPFV  
 ‘making it’

However, as the phoneme /g/ can only occur intervocalically, it is optionally pronounced as [ɣ]. Therefore, this realization of the phoneme /g/ can be seen as a case of allophony instead of lenition. Below are some Eastern Bakairi examples.

- (2.142) [ʼaɣə]      /agə/ ①      ‘with, against’  
 [ʼʃɔɣə]      /Siogo/ ①      ‘my father’  
 [ʼəʔɣahu]      /iəgahu/ ①      ‘head’  
 [iʔɣadi]      /igadi/ ①      ‘fat, lard’  
 [aʔzayə]      /azagə/ ①      ‘two’  
 [eaʔɣəðə]      /eagəðə/ ①      ‘the other’

Affrication of voiceless velar stops is another sound change that alters a consonant in Bakairi. In word-initial and intervocalic positions, a velar stop is often realized as a voiceless velar affricate /k/ → /kx/. When /k/ comes before /a/, they are realized further back as [qxa]. In intervocalic contexts, speakers alternatively produce pre-affrications, such as /k/ → /xk/. Examples of each are given below.

(2.143)	[ʔxãrã]	/kãra/	①	‘fish’
	[iʔxari]	/ikari/	①	‘his back’
	[ʔpexku]	/peku/	①	‘salt’
	[iwəʔxkuru]	/iuəkuru/	①	‘good’

#### 2.5.4 Nasal spreading

Bakairi has an optional rule of nasal assimilation. Regressive nasal spreading is initiated by a nasal vowel and mainly targets vowels and glides. Progressive nasal spreading is triggered by a nasal onset consonant or a nasal vowel and affects vowels, glides, and the rhotic [r].

The typology of harmony usually distinguishes three segment classes. For Bakairi, these classes are defined as follows:

- (a) transparent segments, i.e., glottal fricative [h];<sup>25</sup>
- (b) target segments, i.e., vowels, glides, and the rhotic [r]; and;
- (c) blockers, i.e., all remaining segments, including the lateral [l].

The following examples illustrate regressive nasal spreading (see also Meira 2005: 264).

(2.144)	[təhɔrẽĩ] ~ [təhõrẽĩ] ~ [təhõrẽĩ]	①	/tohorẽĩ/	‘strong’
	[tikihõẽĩ] ~ [tikihõẽĩ] ~ [tikihõẽĩ]	①	/tikihoẽĩ/	‘in order to sleep’
	[təwehẽĩ] ~ [təwẽhẽĩ] ~ [təwẽhẽĩ]	①	/təuehẽĩ/	‘smooth’
	[təmərẽĩ] ~ [təmõrẽĩ] ~ [təmõrẽĩ]	①	/təmərẽĩ/	‘heavy’

Postlexically, regressive spreading optionally affects the last syllable of the previous word in external sandhi. In example (2.144), /auəkə/ is realized as [awəkə̃], where the nasality originates from the first syllable of the verbal stem *iudu* ‘give’ in the following word.

(2.145)	pĩrəu	auəkə	Ø-iuṼdu-aki	①
	arrow	AN.MED	3S-give-IMM.PST	
	‘He gave an arrow(s) to him.’			

The same fact is observed below, in which the last syllable of /təpenari/ is realized as either [təpenarĩ] or [təpenari].

(2.146)	tə-(i)pena-ri	Ø-ieṼdakui-li	auəkə	①
	3R-leg-POSS	3S-scratch-IPFV	AN.MED	
	‘He is scratching his leg.’			

<sup>25</sup> A future study should investigate if in Bakairi [h] can be nasalized voicelessly.

Progressive spreading is common on syllables with nasal onset consonants, which optionally pass the nasal feature to the following nucleus or [r], regardless of whether the nucleus is stressed. This is shown in the examples below.

- (2.147) [ˈmərə] ~ [ˈm̃ərə] ~ [ˈm̃r̃ə] /mərə/ ① ‘that(distal)’  
 [ˈma.e] ~ [ˈm̃a.ẽ] /maẽ/ ① ‘tapir’  
 [iˈsemə] ~ [iˈsem̃ə] /ise-mo/ ① ‘their mothers’  
 [kuˈmũmə] ~ [kuˈmũm̃ə] /kumu-mo/ ① ‘our fathers’

Glides and [r] are also optional targets for progressive nasal spreading when nasality originates from a vowel.

- (2.148) [ˈkãra] ~ [ˈkãr̃ã] /kãra/ ① ‘fish’  
 [iˈzãra] ~ [iˈzãr̃ã] /izãra/ ① ‘alligator’  
 [sapeˈzẽru] ~ [sapeˈzẽr̃ũ] /sapezẽru/ ① ‘wind’  
 [kəẽˈdõrə] ~ [kəẽˈdõr̃õ] /koẽdõro/ ① ‘the good person’

### 2.5.5 Ablaut and epenthesis

The initial vowel of a verbal stem or of the possessed nominal undergoes a vowel change, i.e., ablaut, to indicate person inflection. This change typically applies to the initial vowels /e/ and /i/, as in the second person below, which are the most frequent root-initial vowels in Bakairi. Table 2.8, with data from Western Bakairi, exemplifies the effect of ablaut in nominal roots.

TABLE 2.8: ABLAUT PROCESS

/e-/ pattern	gloss	/i-/ pattern	gloss
/ema/ (bare root) ②	‘hand’	/ita/ (bare root) ②	‘mouth’
/iema-ri/	‘my hand’	/ita-ri/	‘my mouth’
/ima-ri/	‘your hand’	/əta-ri/	‘your mouth’
/ema-ri/	‘his hand’	/ita-ri/	‘his mouth’
/təma-ri/	‘the hand’	/tita-ri/	‘the mouth’
/kəma-ri-modo/	‘our hands’ (INC)	/kita-ri-modo/	‘our mouths’ (INC)
/ina ema-ri/	‘our hands’ (EXC)	/ina ita-ri/	‘our mouths’ (EXC)
/ima-ri-mo/	‘your hands’	/əta-ri-mo/	‘your mouths’
/ema-ri-mo/	‘their hands’	/ita-ri-mo/	‘their mouths’

In the nominal paradigms above, the root-initial /e-/ and /i-/ undergo changes when person inflection is added. For the second person forms, the root-initial /e-/ becomes /i-/. For 3R and first person plural inclusive, /e-/ becomes /ə-/ only if we assume that /ə/ is the ablaut transformation of the root-initial /e-/.<sup>26</sup>

Furthermore, if we assume that the body parts *ema* ‘hand’ and *ita* ‘mouth’ are

<sup>26</sup> However, if we assume that /ə/ is an underlying segment of /t-/ and /k-/, the prefixes /tə-/ and /kə-/ elide the root initial vowels /e-/ and /i-/.

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lexicalized as such (recall that these forms are employable in nominal compounding with body parts (see 3.1)), then the following vowel changes occur. Examples below are from Western Bakairi data.

(2.149)	/ema/	‘hand’		/ita/	‘mouth’
	1SG	/i-ema/		/ita/	
	2SG	/ima/	/e/ → /i/ 2SG	/əta/	/i/ → /ə/ 2SG
	3SG	/ema/		/ita/	
	3R	/təma/	/e/ → /ə/ 3R	/tita/	
	1PL.EXC	/ema/		/ita/	
	1PL.INC	/kəma/	/e/ → /ə/ 1PL.INC	/kita/	
	2PL	/ima/	/e/ → /i/ 2PL	/əta/	/i/ → /ə/ 2PL
	3PL	/ema/		/ita/	

As shown above, a consistent vowel change occurs in the second-person forms. Changes in vowel quality also happen when a prefix is added. If the first vowel of a root is the nasal vowel /ɛ̃/, then /i/-epenthesis for Western Bakairi or /i/-epenthesis for Eastern Bakairi is applied.

- (2.150) **t̃i-əkudo-Ø** ①  
 3R-measure-POSS  
 ‘his thermometer’

Consonant-initial roots and loanwords also apply /i/-epenthesis for Western Bakairi or /i/-epenthesis for Eastern Bakairi instead of ablaut.

- (2.151) **t̃i-pini-ri** ①  
 3R-cooked food-POSS  
 ‘his food’
- (2.152) **t̃i-uepi-ri** ① (</pepi/ ‘canoe’)  
 3R-canoe-POSS  
 ‘his canoe’
- (2.153) **t̃i-uape-ri** ②  
 3R-paper-POSS  
 ‘his document’
- (2.154) **t̃i-dinheiru-Ø** ②  
 3R-money-POSS  
 ‘his money’
- (2.155) **t̃i-garo-ri** ②  
 3R-car-POSS  
 ‘his car’
- (2.156) **t̃i-gatera-ri** ②  
 3R-license-POSS  
 ‘his drivers’ license’

In a verb paradigm, ablaut applies to the initial /e/ of the verbal stem. The following verbal paradigm belongs to the detransitivized verb *t-əd-ə-euəma-dili* ‘becoming sick’ from the stem *euəma* ‘become sick.’

(2.157)		/euəma/ ‘become sick’	
	1SG	i-euəma-dili ②	
	2SG	iuəma-dili ②	/e/ → /i/ 2SG
	3SG	euəma-dili ②	
	3R	təuəma-dili ②	/e/ → /ə/ 3R
	1PL.EXC	ina euəma-dili ②	
	1PL.INC	kəuəma-dili ~ kideuəma-dili ②	/e/ → /ə/ 1PL.INC
	2PL	iuəma-dili-mo ②	/e/ → /i/ 2PL
	3PL	euəma-dili-mo ②	

Ablaut does not affect verbal stems starting with /i/, as we illustrate with the detransitivized benefactive verb *t-əd-ə-itūā-dili* ‘becoming sad.’

(2.158)		/itūā/ ‘become sad’	
	1SG	itūā-dili ②	
	2SG	ə-itūā-dili ②	
	3SG	s-itūā-dili ②	
	3R	t-itūā-dili ②	
	1PL.EXC	ina s-itūā-dili ②	
	1PL.INC	k-itūā-dili ②	
	2PL	ə-itūā-dili-mo ②	
	3PL	s-itūā-dili-mo ②	

### 2.5.6 Vowel harmony

Bakairi morphology shows a limited use of vowel harmony (VH) between the initial vowel of a verb and its prefix. The detransitivizing prefix harmonizes with the initial vowel of the stem as seen in Table 2.9.

TABLE 2.9: VOWEL HARMONY: REFLEXIVE PREFIX

reflexive/reciprocal prefix	stems initial vowel	notes
/əd-/ → [əd-]	/i-/	no change
→ [əd-]	/ə-/	no change
→ [əz-], [əs-]	/e-/	(d/t → z/s / __ e)
→ [əʒ-], [əʃ-]	/i-/	(d/t → ʒ/s / __ i)
→ [əd-], [ət-]	/o-/	VH
→ [ad-]	/a-/	VH

The pairs of sentences below contrast a verb incorporated with its object in the first example (a) with the detransitivized verb in the second example (b). In the



detransitivized examples, the vowel of the prefix harmonizes with the initial vowel of the verbal stem.

- (2.159) (a) sisi i-āga-ə̃p̃i-ge-li ①  
 sun 3A-head-heat-VBZ2-IPFV  
 ‘The sun is burning his head.’
- (b) Ø-əd-ə̃p̃i-ge-li auəkə ①  
 3A-DETR-heat-VBZ2-IPFV AN.MED  
 ‘He is burning himself.’

The following pairs of examples show the vowel of the detransitivizer undergoing VH with initial /a, o/ of the verbal stem.

- (2.160) (a) eti i-ãgu-li auəkə ①  
 party 3A-start-IPFV AN.MED  
 ‘He is starting the party now.’
- (b) eti n-ad-āgu-li ①  
 party 3A-DETR-start-IPFV  
 ‘The party is getting started.’
- (2.161) (a) tə-(e)mano i-oẽ-dili auəkə ①  
 3R-object 3A-hide-IPFV AN.MED  
 ‘He is hiding the toy.’
- (b) n-ot-oẽ-dili auəkə ①  
 3A-DETR-hide-IPFV AN.MED  
 ‘He is hiding it.’
- (2.162) (a) tə-(e)mano i-õp̃ə-dili auəkə ①  
 3-object 3A-bring-IPFV AN.MED  
 ‘He is bringing back the toy.’
- (b) n-od-opə-dili auəkə ①  
 3A-DETR-return-IPFV AN.MED  
 ‘He is returning.’

Other VH effects can be seen in the formation of the possessum suffix in which /-ri/ harmonizes after stems that end in /o/ and /u/ becoming /-ru/, e.g., /i-daho-ru/ ‘my knife,’ and /u-hu-ru/ ‘my foot,’ in contrast with /i-ema-ri/ ‘my hand’ (see 3.2).

### 2.5.7 Vowel deletion

Deletion commonly affects the initial vowel in disyllabic function words in fast speech. In the example below, the initial vowel of the 2SG personal pronoun əmə ‘you’ is deleted in fast speech.

- (2.163) [idəʔe əmə urə aɣə] → [idəʔemə urə aɣə]  
 idə-ʔe əmə urə agə ②  
 go-FUT 2SG 1SG with  
 ‘You will go with me.’
- (2.164) t-ida-se əmə ① → [tidasemə]  
 3R-listen-ABTT 2SG  
 ‘Can you hear?’

For the third person medial animate demonstrative [a'wəkə], the deletion of the non-initial vowel yields ['awkə], as in the example, [tuhu iĩāmele a'wəkə] → [tuhu iĩāmele 'awkə] ① ‘He throws pebbles.’

### 2.5.8 /h/ deletion

A sequence of two identical back vowels separated by /h/ can be articulated as two different syllables or a single long vowel. Although *h*-deletion is attested in both dialects, it is especially common in Western Bakairi. The most common occurrence takes place when the nominalizing suffix *-ho* ① or *-o*, *-ʔo* ② (see 3.2.3) is present.

- (2.165) /siunoho/ ② [ʃu'nɔ:] ‘sieve’

Some nouns, verbs, adverbs, and pronouns match the above criteria and undergo /h/ deletion.

- |                   |            |                                  |
|-------------------|------------|----------------------------------|
| (2.166) /əguhu/ ② | [əgu:]     | ‘rattlesnake’                    |
| /kunohoro/ ②      | [kunu:rɔ]  | ‘mouse’                          |
| /poroho/ ②        | [pɔ'rɔ:]   | ‘fox’                            |
| /təhərə/ ②        | ['tə:rə]   | ‘there (distal)’                 |
| /tohoreĩ/ ②       | [tɔ:reĩ]   | ‘heavy’                          |
| /tohogala/ ①      | [tɔ:ɣala]  | ‘fish <i>sp.</i> ’               |
| /tohore/ ②        | ['tɔ:re]   | ‘lit (as in burning)’            |
| /tuhubileĩ/ ①     | [tu:bileĩ] | ‘fish <i>sp.</i> BP peraputanga’ |
| /uhuru/ ②         | [u:ru]     | ‘my foot’                        |
| /uhudu/ ②         | ['u:du]    | ‘feather’                        |

## 2.6 Ideophones: onomatopoeia and reduplications

Bakairi ideophones are expressed by one or more (often reduplicated) onomatopoeic words. Frequently used in daily conversation and in storytelling, onomatopoeic words are articulated in a manner unlike other words, i.e., by using creaky voice (see 2.4.2), by raising or lowering the voice, and by releasing a significant amount of air through the nose. Some concepts are only expressible with an ideophone. For instance, /kuitu/ ‘spit,’ /mi mi mi idili/ ‘beginning to rain.’

While a monosyllabic ideophonic expression is sometimes represented by otherwise non-existing CVC syllables, full and partial reduplications tend to respect the phonological rules of the language by (a) exhibiting a voiceless stop in word-initial position, (b) having only one occurrence of a voiceless stop in word-medial position, and (c) avoiding syllable codas.

As ideophones are neither possessed nouns nor verbs, they do not take person-marking prefixes or aspect-mood suffixes. There are many ideophones that co-occur with verbs, especially with the verb *ke* ‘say,’ to express a variety of meanings, ranging from ‘drizzling’ to various noises typical of some verbal actions such as ‘running.’

Some ideophones are listed below:

- (2.167) [hũ] ① (sound of someone or something falling on the ground)<sup>27</sup>  
 [mək] ① ‘quietly’ or ‘unexpectedly’ or ‘by surprise’  
 [mḍ] ① ‘absolutely all’  
 [miə] ① ‘in awe’ or ‘in admiration’  
 [tik] ① ‘Listen to me’ (before telling a story)  
 [fɯ] ① (sound of pouring or serving water)

Onomatopoeias often imitate sound representations or suggest the source of the sounds that they refer to, as below.

- (2.168) [bauk] ① (leaving, away from here: deixis)  
 [aʃihũ] ① (sound of a gun or a sneeze)  
 [bəh] ① ‘ridicule’ or ‘striking color’  
 [bərik] ① (sound of someone turning himself this or that way: deixis)<sup>28</sup>  
 [dē] ① (sound of someone or something falling)  
 [hũ] ① ‘truly, indeed’<sup>29</sup>  
 [huʔ] ② (a fast and sharp move, e.g., while killing a cockroach)  
 [iɯk] ① ‘great effort’ (sound made when stretching the arm with effort)  
 [iɯ] ① ‘a lot’ (with true intention)  
 [kui'tu] ① ‘spit, phlegm’ (followed by the verb *ke* ‘say’)  
 [lik] ① (unable to perform something)  
 [mək] ① (a very careful move while looking at various directions)  
 [məʔ] ② (a hand gesture, a movement: a tense marker)  
 [mḍ] ① (a firsthand experience, visual witness: a tense marker)  
 [mɪk] ① ‘around’ or ‘looking back’ (a turning movement)  
 [mɪrik] ① ‘turning around’ or ‘looking around’ (a circular movement,)

<sup>27</sup> This word [hũ] is pronounced with air being released through the mouth and nose.

<sup>28</sup> In the corpus, the onomatopoeia [bərik] is used in three sentences: [bərik iekə ʃariä] ‘turn yourself this way’ [bərik iekə wariä] ‘turn yourself that way’ and [bərik iekə warija] ‘turn yourself like that.’ It seems that [bərik] attaches to [ie] ‘do’ to form the verb ‘turn.’

<sup>29</sup> This word is pronounced with the lips sealed and with release of air through the nose.

[pʷ] ①	(sound indicating that something is small or almost irrelevant)
[pʷk] ①	(a sharp and brutal move)
[saqaj] ①	(sound of dunking solid food into liquid)
[sak] ①	(a very fast or painful sensation, such as of a knife cutting a finger)
[sək] ①	(sound of fear or horror, a cry to stop or to wait)
[tek] ①	(sound of liquid reaching the top of a bottle or container)
[tirik] ①	‘get out of the way’
[təh tuək] ①	(sound of tying hammock to two poles inside the house)
[təi] ①	‘whistle’
[tirik] ①	‘way over there’ (pointing, deixis)
[tu] ①	(sound of a rattle or hiss of a snake)
[tu] ~ [tuʔ] ②	‘right next to’ or ‘nearby’
[əbʷ] ①	(sound of breathing heavily, blowing excessive air through the mouth)
[ʃidik] ①	‘in a natural way’ or ‘calmly’
[ʃʷk]	‘hurry’
[ʃũ] ①	(a soft and confident movement without making much noise)

Reduplication is used mainly to express intensification. The average number of repetitions varies in accordance with the style of speech by a particular speaker.

(2.169) [gəiŋgəi] ①	(sound of someone stirring something)
[lu lu lu lu] ①	(sound of liquid going through the throat)
[luhʷ] ①	(sound of walking in the water)
[mi mi mi idili] ②	‘raining lightly’ (the initial sound of rain,)
[paĩ paĩ] ①	‘seesaw’ (metallic sound with a swinging motion)
[pəi pəi pəi pəi] ①	(sound of someone rocking hammock)
[pə pə] ①	(sound of chopping, cutting something with a knife)
[pʷɣʷ pʷɣʷ] ①	‘mess’ or ‘destruction’
[pʷk pʷk] ①	(sound of movement such as walking)
[piri piri] ①	(anointing, smearing, and a blessing gesture)
[se: se:] ①	‘splashing’ (sound of hand or feet hitting the water surface)
[tata] ①	(a calculated and fast move)
[tətə hũ] ①	(sound of hitting with an arrow, a shot or a quick movement)
[təhuʔ təhuʔ təhuʔ] ①	(sound of the tail of a fish hitting the surface of the water)
[tuək tuək tuək tuək] ①	(sound of liquid going down the throat)
[tuʃʷk tuʃʷk] ①	(sound of something floating)
[ʃʷ ʃʷ ʃʷ ʃʷ] ①	(pouring liquid into a container, reduplication from [ʃʷ])

[maĩ maĩ] ①	‘tortoise’
[seru seru] ①	‘dog’
[taə taə] ①	‘crow’ (bird and its sound ‘caw’)
[waiã waiã] ①	‘back and forth,’ ‘to-and-fro’
[wili wili] ①	1. bird <i>Southern Lapwing Vanellus chilensis</i> 2. chant in the mask festival
[ʃunəyʷ ʃunəyʷ] ①	‘telling stories for a long time’ or ‘chatting without hurry’ (from <i>siunə</i> storytelling)

Except for three lexemes (i.e., tortoise, dog, and a species of bird) that are used as animal names, onomatopoeias occur in sentence-initial position before the core constituents with possible pragmatic consequences.

In the example below, [sak] is pronounced with more intensity to convey the sense of speed or pain experienced in the action.

(2.170)	sak	Ø-ema-ri	n-atə-agi ①
	abruptly	3-hand-POSS	3A-cut-IMM.PST
	‘Ouch! He cut his hand.’		

In the next example, the reduplication seen at the beginning of the sentence expresses the way the beverage was drunk as well as the sound of liquid in the mouth.

(2.171)	lu lu lu lu	n-eni-Ø	keãra	mərə	toku ①
	(liquid in mouth)	3A-drink-PST	EMPH	INAN.DIST	beverage
	‘With pleasure, he drank that beverage.’				

The past nominal composite morphemes *-piri*, *-biri* ① or *-pəri*, *-bəri* ②, which are used to express that something or someone no longer exists or has been abandoned, allow reduplication of the initial syllable as *-pibiri*, *-bibiri* ① or *-pəbəri*, *-bəbəri* ②. This reduplication process accentuates the remoteness of the reported event. For instance, *uso isebiri* ① ‘late mother-in-law’ can be expressed as *uso isebibiri* ① for ‘the mother-in-law who has passed away a long time ago.’ Alternatively, *ətəbətə* ② from *ətəbətə* ② ‘abandoned house,’ indicates that the house has been abandoned for a very long time. Note that when *bəbətə* is added after *kopaeləgəē* ‘day’ as in *kopaeləgəē-bəbətə*, the word means ‘day-by-day,’ but not \*‘a very long time ago.’

The plural suffix *-mo* also allows reduplication to specify the reciprocity of the action. The plural of 2PL and 3PL are expressed with the plural suffix *-mo*. The reduplicated variant of the plural expresses a sense of reciprocity.

(2.172)	n-itueba-də-mo-mo ①
	3A-fight-PST-PL-RECP
	‘They fought one another.’
(2.173)	n-əz-enanə-də-mo-mo ①
	3A-DETR-play-PST-PL-RECP
	‘They played with one another.’

- (2.174) n-ad-apiogu-mo-mo) ①  
 3A-DETR-hit-PST-PL-RECP  
 ‘They hit one another.’

## 2.7 Loanwords

Bakairi speakers are in constant contact with BP and new BP vocabulary is actively being absorbed. Some loanwords, perhaps those that were assimilated a long time ago, are adapted to comply with Bakairi phonotactics, while others, possibly more current ones, have entered the language the way they are pronounced in BP. For example, the final lower-mid vowel in the function word *até* ‘until’ remains stressed and unchanged (i.e., [ɛ] instead of the expected [e]), as are the words for the days of the week: *domingo* ‘Sunday,’ *segunda-feira* ‘Monday,’ and so forth. These and other loanwords break three important phonological constraints of Bakairi: (a) they are voiced in word-initial position (e.g., *domingo*), (b) they possess more than one occurrence of a voiceless stop in word-medial position (e.g., *espírito* ‘spirit’), and (c) they may have consonants in coda position (e.g., *sexta-feira*).

The following phonotactic adjustments are observable in loanwords. Firstly, segments in the *coda position* in BP syllables are often deleted in Bakairi. Secondly, the addition of Bakairi affixes can change the voice of BP stops. For instance, [kax'te:ra], which is the local BP pronunciation of *carteira* ‘wallet,’ becomes [i-gate'ra-ri] ① ‘his wallet.’ Therefore, the velar fricative in the coda is deleted, and the initial consonant /k/ is voiced.

- (2.175) u-gatera-ri ②  
 1-wallet-POSS  
 ‘my wallet’

In another example, the BP word *papel* [pa'pɛʊ] ‘paper’ undergoes some adaptations: the coda is deleted, and the stress is reassigned, becoming prefinal ['pape]. When it is possessed, as in *tiuaperi* ‘his paper,’ the initial /p/ becomes /u/.

Nouns that are expected to be inherently possessed, such as ‘driver’s license’ and ‘car,’ are modified accordingly, receiving a person prefix and a possessum suffix. For instance, the word ‘carro’ in BP is articulated as [kahu] ‘car’ in the local dialect. In Western Bakairi, ‘car’ is often realized as inherently possessed [i-ga'rɔ-ru] ‘his car.’ Hence, the BP term [qɔahu] becomes [-garɔ] plus a possessum suffix. As *carro* seems to have entered Bakairi a long time ago, [-ɔ] becomes [-ɔ̃]. For current adaptations, it is more common to see BP [-ɔ] becoming [-u] in Bakairi.

Nevertheless, loanwords that possess two word-internal voiceless consonants do not always undergo voicing adaptations.

- (2.176) cinquenta [sɪ'kwɛ̃ta] ①  
 ‘fifty’

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In the following examples, the word-final BP [-ʊ] is modified to [-u], each word possesses two word-internal voiceless consonants as well as consonantal clusters.

(2.177) *ispiritu* ①  
‘spirit’

(2.178) *gregu e-alfabetu-ri* ①  
Greek 3-alphabet-POSS  
‘The Greek alphabet’

A few incorporated BP words are provided in Table 2.10.

TABLE 2.10: ADAPTATIONS OF LOANWORDS

BP	gloss	Bakairi	modifications
[sabo'neʃi]	‘body soap’	[sabo'neti]	adaptations of vowels and consonants
[qxa'oxu]	‘dog’	[qxa'orɔ]	adaptations of vowels and consonants
[pa'pai]	‘daddy’	[pa'bai]	change in voice of the second stop
['dosɪ]	‘sweets’	['dɔse]	vowel adaptation, while initial stop failed to devoice
['veʎɔ]	‘old man’	['vejɯ]	adaptations of vowels and consonant
[ẽ'ʃadə]	‘hoe’	[mi'ʃada]	inclusion of a nasal as syllable onset
[kãpɔ]	‘field’	[kãpu]	adaptation of the final vowel
[anɔ]	‘year’	[anu]	adaptation of the final vowel

## Chapter 3

### The Morphology of Nouns and Adverbs

This chapter begins with a discussion of the morphological structure of common nouns and their inflectional morphology. We then turn to the morphological processes by which nouns can be derived from nouns, verbs, or adverbs, followed by an overview of compound formation. Subsequently, we turn our attention to the remaining nominal classes: personal pronouns, demonstrative pronouns, interrogative pronouns, and numerals. For reasons that will be clarified below, we conclude this chapter with a discussion of adverbs.

#### 3.1 Common nouns: inflection

A word is considered a noun on the basis of morphological criteria (i.e., if it takes nominal morphology) and syntactic criteria (i.e., if it can act as a subject or an object of a verb and/or as a head of an argument). A single-root common noun can receive affixes, prefixes, and suffixes as in the example below, which contains the nominal root preceded by a person prefix and followed by a possessive suffix.

- (3.1)    *i-enata-ri* ②  
           1-nose-POSS  
           ‘my nose’

##### 3.1.1 Person inflection

In Bakairi, most nouns employ bound-person prefixes to indicate not only the presence and possession but also coreference or non-possession. The selection of the prefix is determined by the initial vowel of the nominal root, which usually starts *e-* or *i-*. Otherwise, nouns that begin with consonants are prefixed with the *i-* inflection.

Table 3.1 lists the main nominal person inflection prefixes for roots beginning with *e-*, *i-*, *o-*, and *a-*. The distinction between the prefixes *i-* and *i-* is lost or neutralized in Western Bakairi. The ablaut modifications seen here have been previously described (see 2.5.5). These prefixes are used to form most person inflections.



TABLE 3.1: PERSON INFLECTION PREFIXES

	<b>e-root</b>	<b>i-root</b>	<b>o-root</b>	<b>a-root</b>
1SG	ie-①, ie-②	u-	u-	i-①, i-②
2SG & 2PL	i-	ə-	∅-	i-∅-
3SG & 3PL	∅-	∅-	e-	e-
3R	tə-	tə-	t-	tə-
1PL.EXC	∅-	∅-	∅-	e-
1PL.INC	kə-	ki-①, ki-②	k-	k-

Table 3.2 illustrates the use of these person prefixes in the morphology of the possessum; the left root begins with *e-* and the right root begins with *i-*.

TABLE 3.2: INFLECTION OF NOUNS BEGINNING WITH /e/ AND /i/

	<i>ena</i> ②	‘nose’	<i>ipena</i> ②	‘leg’
1SG	ie-(e)na-ri	‘my nose’	u-(i)pena-ri	‘my leg’
2SG	i-(e)na-ri	‘your nose’	ə-(i)pena-ri	‘your leg’
3SG, 1PL.EXC	∅-ena-ri	‘his /our nose’	∅-ipena-ri	‘his /our leg’
3R	tə-(e)na-ri	‘his nose’	tə-(i)pena-ri	‘his legs’
1PL.INC	kə-(e)na-ri	‘our noses’	kə-(i)pena-ri	‘our legs’

Table 3.3 shows the inflection for *a-* and *o-*initial roots:

TABLE 3.3: INFLECTION OF NOUNS BEGINNING WITH /a/ AND /o/

	<i>atə</i> ①	‘fishhook’	<i>odu</i> ①	‘food (cooked meat)’
1SG	i-atə-ri	‘my fishhook’	u-odu	‘my food’
2SG	∅-atə-ri	‘your fishhook’	∅-odu	‘your food’
3SG, 1PL.EXC	e-atə-ri	‘his /our fishhook’	e-odu	‘his/our food’
3R	tə-(a)tə-ri	‘his fishhook’	t-odu	‘his food’
1PL.INC	k-atə-ri	‘our fishhooks’	kodu	‘our food’

Table 3.4 shows the paradigm of ‘canoe,’ and an irregular form for ‘mother.’

TABLE 3.4: INFLECTION OF NOUNS BEGINNING WITH /p/ AND /s/

	<i>pepi</i> ①	‘canoe’	<i>ise</i> ①	‘mother’
1SG	i-uepi-ri	‘my canoe’	seko	‘my mother’
2SG	ə-uepi-ri	‘your canoe’	ə-ze	‘your mother’
3SG	i-uepi-ri	‘his canoe’	i-se	‘his mother’
3R	tī-uepi-ri	‘his canoe’	tī-ze	‘his mother’
1PL.EXC	sina i-uepi-ri	‘our canoe’	sina seko	‘our mother’
1PL.INC	ki-uepi-ri	‘our canoe’	ki-ze	‘our mother’

A known characteristic of the Cariban languages is coreferentiality (3R) expressed through the person prefix *t(i)*-. Nouns, NPs, genitive constructions, subordination, anaphora, and cataphora all can express third-person coreferentiality. As an underlying binding phenomenon of the field of syntax, two or more sentence constituents (words or phrases) are coreferential when they refer to the same person or thing. In the example below, coindexed with *Paulo* is his impossibility of having a child.

- (3.2) Paulo pekodo uatai, ãgi t-ime-ð-ge-ba tə-i-ʔe ②  
 Paulo woman if who 3R-small-NZR2-INSTR-NEG 3R-COP2-ABTT  
 ‘If Paulo were a woman, he could not have small ones (children).’

The type of person prefix in Bakairi is the non-possessed person prefix *təd*-. The prefix *təd*- precedes a detransitivizer *-əd* (see 4.2.2) to express the non-possessed person inflection or ‘an unknown person.’ Two examples follow; the first one shows an unknown person performing an action, which is later contrasted to the nominalization of that verb in the second example.

- (3.3) təd-əs-enome-də-dili ①  
 NPOS-DETR-knowledge-VBZ2-IPFV  
 ‘Someone is studying. / People are studying. / There is studying going on.’
- (3.4) təd-əs-enome-də-do ①  
 NPOS-DETR-knowledge-VBZ2-NZR3  
 ‘...that is used to study’ (i.e., a book, it is used by someone to teach oneself.)

Here it is opportune to examine here the *t*-prefix. Although here and elsewhere that *t*- prefix is analyzed as a third-person reflexive/coreferential prefix, this prefix can also be used with the same nouns for other persons as the subject other than the third person. The distinction is more pragmatic in its semantics than morphological or syntactic. Meira (personal communication) observed that the *t-N-ge* is not merely a possessed noun with the third-person reflexive/coreferential prefix *t(i)*- followed by the instrumental *-ge*, since a possessed noun would also have a possessed suffix (see 3.1.5.7). In his data, *tī-daho-ge* ‘having a knife’ is different from *tī-daho-ru-ge* ‘having his own knife.’ Morphologically, the latter has the possessum suffix *-ru*. Syntactically, the latter can only occur with a third-person subject in a sentence (since *tī*- ‘3R’ is ‘coreferential with the subject’). However, the former expression *tī-daho-ge* can co-occur with any person as the subject. Semantically, *tī-daho-ru-ge* is a true instrumental ‘he did it with his own knife’ while *tī-daho-ge* is more of an implied possessive predicate ‘having a knife, beknifed.’ Therefore, as I analyze the data from a morphological point of view, the interlinear texts show the *t*- prefix as 3R, but the reader needs to be aware that textually and pragmatically further interpretations will emerge.

### 3.1.2 Past nominal with *-pi*, *-bi*① or *-pə*, *-bə*②

The suffix *-pi*, *-bi*① or *-pə*, *-bə*② attached to a noun indicates the past feature of that noun. Many meanings are attributed to a past nominal. These include that the referent of the noun is no longer valid, or it is old, former, deceased, detached, unknown, or abandoned. This suffix comes between the nominal root and the possessum suffix *-ri*① or *-ri*②, *-ru*, or  $\emptyset$  (see 3.1.3). Examples are given below.

- (3.5) ətə ②  
non.possessed.house  
'a house'
- (3.6) ətə-bə ②  
non.possessed.house-PST  
'an old/abandoned house'
- (3.7) ətə-bə-bə ②  
non.possessed.house-PST-PST  
'A very old/abandoned house.'

In the last example, reduplication of the suffix is used to emphasize its remoteness. As another example, consider the sentence *uso ise-bi-ri* 'my husband's deceased mother', which, when the reduplicated suffix is used *uso ise-bi-bi-ri*, means that the mother-in-law has passed away a long time ago.

The past nominal is also used when the status of the referent has changed. For example, when a role someone had previously is no longer applicable or relevant.

- (3.8) t-igə-e-ĩ-bə(-ri) ②  
3R-sing-ABTT-NZR1-PST(-POSS)  
'(his/her) former singer'
- (3.9) i-atu-ĩ-bə(-ri) ②  
3-split.log-NZR4-PST(-POSS)  
'a former logger'

This suffix is also utilized to form the word *photograph* as a photo indicates a fixed moment in the past. Similarly, it is used in the word *footprints* as footprints indicate that an animal walked through an area. As shown below, respectively.

- (3.10) k-əs-egu-do-bə-ri                      m-əs-egu-do-bə-ri ②  
1-DETR-measure-NZR3-PST-POSS    2-DETR-measure-NZR3-PST-POSS  
'My photo, your photo'
- (3.11) i-ʔu-ru-bə-ri ②  
3-foot-POSS-PST-POSS  
'footprints / detached feet'

When referring to people, past nominal constructions are used to express that an individual is deceased.

- (3.12) u-(i)so            i-se-bi-ri ①  
 1-husband            3-mother-PST-POSS  
 ‘the deceased mother of my husband’
- (3.13) i-(i)me-ri        i-damo-bi-ri ①  
 1-child-POSS        3-grandfather-PST-POSS  
 ‘the deceased grandfather of my child’
- (3.14) i-(i)me-ri        i-ĩũdo-bi-ri ①  
 1-child-POSS        3-grandmother-PST-POSS  
 ‘the deceased grandmother of my child’

In Western Bakairi, a quite different process is used to express this. As first- and third-person prefixes tend to be homophonous in Western Bakairi, the examples below could be interpreted as a third person as well.

- (3.15) (i)-ime-ri        i-damu            uõtai ②  
 1/3-child-POSS    1/3-grandfather    deceased  
 ‘the deceased grandfather of my son’
- (3.16) (i)-ime-ri        uõtai              i-damu ②  
 1/3-child-POSS    deceased            1/3-grandfather  
 ‘the grandfather of my deceased son’

The past nominal is also used in words describing dissected or removed body parts since they no longer belong to a body. They have become detached, and their possessor may be unknown. The following Western Bakairi example shows that past nominals are also used in that dialect.

- (3.17) tapirə    i-dəʔu-bə-ri ②  
 cow        3-belly-PST-POSS  
 ‘cow’s guts’

A variety of additional meanings are conveyed by this suffix, including (a) the *last child*, the baby of the family; (b) *the leftover* of food or the remains of something that was used or cooked previously; (c) something small such as *pebbles*, *specks of dust*, *minute objects* because they used to be part of something more substantial.

- (3.18) i-ema-ribə-bə-ri-ẽ                    eã        i-də-li ②  
 1-hand-PTC-PST-POSS-BEN            PTCL1    3S-go-IPFV  
 ‘He went to where I pointed.’

The semantic value of the following noun also changed once the past nominal was added: *emano* ‘object’ next to *-pi*, *-bi* ① or *-pə*, *-bə* ② means ‘captured’ or ‘victim.’

- (3.19) Ø-emano-bi-ri ①  
 3-object-PST-POSS  
 ‘he who was captured’

Compounds or NPs can employ the past nominal as well, in which case only the right element of the compound carries the suffix.

- (3.20) se i-āgaʔu-bə-ri ②  
 tree 3-head-PST-POSS  
 ‘tree stump’
- (3.21) s-agu-ʔo Ø-euanike-ĩ-bə-ri ②  
 3O-begin-NRZ4 3-finish-NZR4-PST-POSS  
 ‘the winner’

Typically, the interpretation of past NPs depends on the context, as in the following example, where it can refer to the person, the vehicle, or the place where the person arrived.

- (3.22) s-aĩ-to-bə-ri ②  
 3S-arrive-NZR3-PST-POSS  
 ‘arriving passenger/vehicle/place of arrival’

Similarly, the NP *unə egatu-ho-biri*, in the example below, means not only ‘a person who told stories, a storyteller’, but also ‘a place where stories were told, a story room’ and ‘a means by which stories were told.’

- (3.23) unə Ø-egatu-ho-bi-ri ①  
 story 3-tell-NZR3-PST-POSS  
 ‘a storyteller/room/the means of telling a story’

### 3.1.3 Possessive paradigm with *-ri*① or *-ri*② and *-ru* or *-ru*

Possession is marked by a suffix added to the nominal root on the possessum, not on the possessor. Allomorphs of the possessum suffix exhibit a degree of vowel harmony (see 2.5.6). Roots ending in the back vowel /-o, -u/ are formed with a back-vowel suffix. All other roots are formed with a non-back vowel suffix. These formations are demonstrated below.

Except for roots ending in /-o, -u/, the possessum suffix is realized as *-ri* ①, or *-ri* ②.

- (3.24) Ø-emela-ri ②  
 3-face-POSS  
 ‘his face’

- (3.25) i-pena-ri ②  
 3-leg-POSS  
 ‘his leg’
- (3.26) i-uosera-ri ②  
 3-bracelet-POSS  
 ‘his bracelet’

When the nominal root ends in a labial back vowel /o, u/, the possessum is realized as *-ru*.

- (3.27) i-go-ru ①  
 3-trachea-POSS  
 ‘his trachea’
- (3.28) i-garo-ru ①  
 3-car-POSS  
 ‘his car’
- (3.29) i-gutu-ru ①  
 3-rib-POSS  
 ‘his rib’
- (3.30) i-karadau-ru ①  
 3-lung-POSS  
 ‘his lung’

For some roots ending in /u/, the possessum is realized as either as *-ru*, or *-∅*.

- (3.31) i-lu-∅ ②  
 3-tongue-POSS  
 ‘his tongue’

A plural *-mo* only follows the suffix for emphasis when the possessor is not pluralized.

- (3.32) i-eri-ri-mo ②  
 3-tooth-POSS-PL  
 ‘his teeth’

Some high-frequency nouns mark possession via suppletion since their non-possessed stems differ from their possessed ones. Two pairs of examples demonstrate this point:

- (3.33) ətə ①  
 unpossessed.house  
 ‘house’

- (3.34) eti ①  
possessed.house  
'house'
- (3.35) edi ①  
unpossessed.hammock  
'hammock'
- (3.36) edə ①  
possessed.hammock  
'hammock'

Typically, high-frequency nouns do not take the suffix *-ri*① or *-ri*② or *-ru*; instead, they take a *-Ø* possessive suffix, as in *ieti-Ø* 'my house,' and *iedə-Ø* 'my hammock,' *iso* 'her husband' and *ise* 'his mother.' See Appendix 1 for kinship terms and Appendix 2 for body parts.

### 3.1.4 Plural *-(do)modo*

Pluralization of nouns is achieved in accordance with the following two observations:

**Observation #1.** The plural suffix *-mo* is added to a 2<sup>nd</sup> or 3<sup>rd</sup> plural possessum. An example follows.

- (3.37) i-uaməkə            e-atə-ri-mo ①  
3-brother.in.law 3-fishhook-POSS-PL  
'the brother-in-law's fishhooks'

**Observation #2.** The suffix *-do*, *-modo*, *-domodo*, *-ð* is added to non-possessed nouns, for instance, when the possessor is part of the animate class.

- The suffix *-do*, *-domodo* is added to animate nouns that do not end in *-do*.
- The suffix *-modo* is added to animate nouns that do end in the syllable *-do*. (Observe that *-modo* is also added to all words of the inanimate class.)
- The suffix *-ð* is added to a handful of lexemes, such as *imeð* 'children.' No words outside this very small group of nouns are attested taking the plural *-ð*, which indicates that the *-ð* allomorph of the suffix is now non-productive.

Non-possessed animate nouns take the plural suffix *-do* before the plural suffix *-modo* creating *-domodo*, an animate collective plural:

- (3.38) əsigo-domodo ①  
guest-PL  
'guests'
- (3.39) təuəgunēi-domodo ①  
bird-PL  
'birds'
- (3.40) aturua-domodo ①  
Aturua-PL  
'the inhabitants of Aturua village'

The pleonastic reinforcement of the plural suffix in the above examples is optional for these words, which are also attested with *-do*. In fact, most non-possessed words exclusively occur with the *-do* variant of the plural suffix.

- (3.41) iriua-do ①  
 rooster-PL  
 ‘roosters’

When a noun already ends in the syllable *-do*, only the plural suffix *-modo* is added. Nouns that end in *-do* can be interpreted as singular or plural. For instance, *pekodo* means ‘woman’ and ‘women’ but the addition of *-modo* as in *pekodo-modo* can only mean ‘women.’ Other examples follow.

- (3.42) modo-modo ①  
 earthworm-PL  
 ‘earthworms’  
 (3.43) sodo-modo ①  
 relative/owner-PL  
 ‘relatives’ or ‘owners’

The plural suffix is used primarily to emphasize the plurality of the noun, and, in practice, many speakers do not use plural markers systematically. When data are analyzed in isolation, apart from the discourse and pragmatic context, NPs can have multiple interpretations, as seen in the following pair of examples:

- (3.44) əgurodo            Ø-eti ②  
 boy                    3-house  
 ‘boy’s home’ or ‘boys’ home’ or ‘boy’s homes’ or ‘boys’ homes’  
 (3.45) əgurodo-modo    Ø-eti ②  
 boy-PL                3-house  
 ‘boys’ home’ or ‘boys’ homes’

Non-possessed inanimate nouns and nominalizations always form plurals with *-modo*. Some examples follow.

- (3.46) siunari-modo ①  
 story-PL  
 ‘stories’  
 (3.47) pəni-modo ①  
 food-PL  
 ‘food items’  
 (3.48) s-atə-uə-do-modo ①  
 3O-cut-CPLT-NZR3-PL  
 ‘cutting tools’



Below are examples of nouns pluralized with *-ō*.

- (3.49) atae-ō ①  
 friend-PL  
 ‘friends’
- (3.50) ime-ō ①  
 child-PL  
 ‘children’
- (3.51) agaiti-ō ①  
 elder-PL  
 ‘elders’

### 3.1.5 Locatives

The expression of the locative case is relatively complex in Bakairi (see also Derbyshire (1999: 54)). Locative suffixes distinguish between stagnant (‘in, on’) and movement (‘into’), and their opposite sense is obtained by adding a negative suffix.

#### 3.1.5.1 Locative(1) stagnant *-i*① or *-ə*②

When the referent of the root is a liquid, the locative(1) attaches to the morpheme *-ika* ‘water,’ which is obligatorily left-attached to the root as the following example illustrates.

- (3.52) kārā paru-ika-ə ②  
 fish water-liquid-LOC1  
 ‘The fish is in the water.’

Similarly, when the locus represents an enclosed area, the locative(1) is obligatorily preceded by the morpheme *odai*① or *odaə*② ‘inside.’

- (3.53) idu-oda-ə paikə ②  
 forest-inside-LOC1 anteater  
 ‘The anteater is inside the forest.’

Other instances of the use of this locative follow.

- (3.54) i-apa-ə ②  
 3-next-LOC1  
 ‘It is next to it.’
- (3.55) ōuā-epia-ə ②  
 road-side-LOC1  
 ‘It is beside the road.’

- (3.56) se-ia-ə ②  
tree-under-LOC1  
'It is under a tree.'
- (3.57) setagoa-ə ②  
corner-LOC1  
'It is in the corner.'

### 3.1.5.2 Locative(2) dynamic *-si/-zi* ① or *-i* ②

The locative(2) indicates a dynamic locative, a movement toward a destination. Therefore, the suffix marks the goal of the action.

- (3.58) *açúcar* *café*-ika-i n-ie-tai ①  
sugar coffee-liquid-LOC1 3A-make-IMM.PST  
'He put sugar in the coffee.'
- (3.59) idu-oda-i i-egauð-tai ①  
forest-inside-LOC1 1A-enter-IMM.PST  
'I just went into the forest.'

In the eastern dialect, the locative(2) suffix *-si/-zi* can be combined optionally with *-ika* and *oda-i* to reinforce the notion of movement.

- (3.60) pa-ika-zi n-ame-mo ①  
water-liquid-LOC2 3-dive-PL  
'They dived into the water.'
- (3.61) tapirə i-huge-li ěrã tə-(i)tagu-e-ĩ-oda-si ①  
bull 3S-fall-IPFV PTCL1 3R-box-ATTR-NZR1-inside-LOC2  
'The bull fell into the ditch.'
- (3.62) pa-ika-zi n-ame-mo ①  
water-liquid-LOC2 3-dive-PL  
'They dived into water.'
- (3.63) tapirə i-huge-li ěrã tə-(i)tagu-e-ĩ-oda-si ①  
bull 3S-fall-IPFV PTCL1 3R-box-ATTR-NZR1-inside-LOC2  
'The bull fell into the ditch.'

To express the meaning 'not inside, out of,' the negative suffix *-pa/-ba* attaches directly to the *-ika* or *-oda* morphemes.

- (3.64) paru-ika-ba n-egae-ragi məkə ②  
water-liquid-NEG 3-leave-IMM.PST AN.DIST  
'He came out of yonder water.'
- (3.65) idu-oda-pa n-əe-tai məkə ②  
forest-inside-NEG 3A-come-IMM.PST AN.DIST  
'He just came out of the forest.'

- (3.66) i-oda-i-pa ①  
 1-inside-LOC1-NEG  
 ‘It is not in my heart.’

### 3.1.5.3 Locative suffix(3) -də

The locative(3) suffix *-də* ‘in, on’ is used primarily with words that refer to open fields, toponyms, and specific locations.

- (3.67) seruseru            *campo-də* ①  
 dog                    field-LOC3  
 ‘The dog is on the field.’
- (3.68) sina                    əs-enome-də-do-də ①  
 1PL.EXC                DETR-knowledge-VZR2-NZR3-LOC3  
 ‘at our school’
- (3.69) kurə-do                tərə      əti-də ①  
 person-PL                DIST      party-LOC3  
 ‘There are people at the party.’
- (3.70) *capítulo*                tokalə-də,                azagə-də ①  
 chapter                    one-LOC3                two-LOC3  
 ‘in chapters one and two’
- (3.71) idu-də ①  
 forest-LOC3  
 ‘in the forest.’

It is also observed in a colloquialism, seen in the following example, to signify ‘something I want to have’ or ‘something that I am interested in.’

- (3.72) i-enu-da ①  
 1-eye-LOC3  
 ‘in my eye’

Attaching the negative suffix to it forms the ablative or the point of departure.

- (3.73) *campo-də-ba*      k-əe-tai ①  
 field-LOC3-NEG 1A-come-IMM.PST  
 ‘I just came from the field.’

A reduction of *-də* with the nominalizer *-d̃* (see 3.2.2) also forms an ablative as *=d̃d̃*. In other words, the ablative *d̃d̃* is a reduction of a locative (LOC3) with a nominalizer (NZR3).

- (3.74) paru=d(ə)-d̃ ②  
 water-LOC3-NZR3  
 ‘from the river’

- (3.75)  $idadə=d(ə)-\delta$  ②  
 city-LOC3-NZR3  
 ‘from the city’
- (3.76)  $Brasil=d(ə)-\delta$  ②  
 Brazil-LOC3-NZR3  
 ‘from Brazil’

Pragmatically, the three examples above are interpreted as ‘the one who is from the river,’ ‘the one who is from the city,’ and ‘the Brazilian one.’ Therefore, the reduction forming  $=d\delta$  should be analyzed as a noun formed from the locative.

#### 3.1.5.4 Locative(4) $-uəgə$ ‘above, on top’

The locative(4) suffix  $-uəgə$  is used to express the sense that an object is above or on top of something or a place. When a person prefix is added to this locative, it becomes an independent word (a point which will be clarified below). The following example demonstrates the use of  $-uəgə$  ‘on’ after a noun.

- (3.77)  $\delta u\delta-uəgə$              $tə-(e)mano$  ②  
 soil-LOC4            3R-object  
 ‘The object is on the floor.’
- (3.78)  $kau-uəgə$  ①  
 sky-LOC4  
 ‘in the sky.’

The locative  $-uəgə$  is also used for being on top of a moving animal or object.

- (3.79)  $bicicleta-uəgə$  ①  
 bicycle-LOC4  
 ‘on a bicycle.’

The expression ‘go on foot’ is formed in the same way.

- (3.80)  $u-də-li$              $u-(i)ʔu-ru-uəgə$  ②  
 1S-go-IPFV            1-foot-POSS-LOC4  
 ‘I am going on foot.’

The locative  $-uəgə$  can be inflected for person. As such, it expresses the sense of ‘about someone, something.’ As a postposition,  $-uəgə$  be inflected for person.

- (3.81)  $i-uəgə$      $\emptyset-ke-li$              $urə$  ②  
 3-LOC4    3-say-IPFV            1SG  
 ‘I am talking about him.’

When added to a deverbal nominalization such as *eme-dili* ‘morning,’ *-uəgə* means ‘during, while.’ Unless a copula-less formation is the source of the deverbal nominalization, it could be argued that *-uəgə* acts as a deverbal nominalizer here. An example follows.

- (3.82) *ime-dili-uəgə* ②  
 rise-IPFV-LOC4  
 ‘(It’s) during the morning.’

Negating a word with this suffix produces a meaning akin to ‘off of.’

- (3.83) *ōuō-uəgə-pa tǝiēi s-auə-tai* ①  
 soil-LOC4-NEG manioc 1A-catch-IMM.PST  
 ‘I plucked the manioc off of the soil.’

When a noun is formed with the suffix *-ō*, *-no*, *-Ũrō* (see 3.2.2), it means ‘the one who is located.’ For example, the word *uogōrō* (probably *uəgə+-Ũrō* → *uogo* through assimilation) means ‘one that is on top of ...’ As a new nominal formation, it takes plural, past nominal, and other nominal affixes.

- (3.84) *kawaru uogo-Ũrō-modo* ①  
 horse LOC4-NZR2-PL  
 ‘those ones who are on top of the horse(s)’  
 (3.85) *kau uogo-Ũrō-pi-ri* ①  
 sky LOC4-NZR2-PST-POSS  
 ‘the one that was in the sky’

### 3.1.5.5 Allative *-ōua*

The allative *-ōua* ‘onto’ indicates a movement towards a surface.

- (3.86) *ōuō-ōua n-iʔuge-ragi manga* ②  
 soil-ALL3S-fall-IMM.PST mango.fruit/tree  
 ‘The mango fruit just fell onto the ground.’  
 (3.87) *ōuō-ōua=iā n-iʔuge-ragi manga* ②  
 soil-ALL-DAT 3S-fall-IMM.PST mango.fruit/tree  
 ‘The mango fruit just fell onto the ground near me.’  
 (3.88) *se-ōua* ①  
 tree-ALL  
 ‘onto the tree’  
 (3.89) *se i-uata-ri-ōua* ①  
 tree 3-branch-POSS-ALL  
 ‘onto the tree’s branch.’

The allative can be inflected for person as in the example below.

- (3.90) ku-ḍua ①  
 1PL.INC-ALL  
 ‘on top of us’ or ‘onto us’

### 3.1.5.6 Comitative *agə* and *-ge*

A comitative is used primarily to indicate with whom someone is performing an action. It is formed in accordance with one of three strategies:

1. With the postposition *-agə* being preceded by an inflected bound personal pronoun; and in fast speech after nouns as *-gə*.
2. With the independent word *agə* coming after common nouns, names, person pronouns, and in careful speech.
3. With the instrumental suffix *-ge*, commonly attached to loanwords. This point is described below in the following section.

The first strategy is exemplified below.

- (3.91) ḁgi ina-gə əsiḁ-ī ②  
 who 1PL.EXC-COM stay-NZR4  
 ‘Who is going to stay with us?’
- (3.92) podo t-iə-se auəkə paĩḁ-gə ①  
 meat 3R-eat-ABTT AN.MED manioc.flour-COM  
 ‘He eats meat with manioc flour.’
- (3.93) ie u-a-to auəkə  
 like/want 1S-COP1-NZR3 AN.MED  
 arakuma ipə-gə ②  
 hen souari.nut-COM  
 ‘I like eating hen with souari nuts.’
- (3.94) m-ədə-diʔe əmə i-agə ②  
 2S-go-DESI 2SG 3-COM  
 ‘Would you like to go with him?’
- (3.95) idə-ʔe əmə u-agə ②  
 go-FUT 2SG 1SG-COM  
 ‘You will go with me.’

The second approach is exemplified below. As an independent word, the comitative has been glossed here as *with*.

- (3.96) ina idə-ʔe məkare-mo agə ②  
 1PL.EXC go-FUT AN.DIST-PL with  
 ‘We will go with them.’
- (3.97) podo t-iə-se auəkə peku agə ①  
 meat 3R-eat-ABTT AN.MED salt with  
 ‘He eats meat with salt.’

- (3.98) kopə-be            s-ape-ũ            agə ①  
 rain-EXIST        3O-blow-NZR2    with  
 ‘There is rain with wind.’

When *agə* combines with the nominalizing suffix *-ō*, *-no*, *-ĩrō* (see 3.2.2), a word with the semantic value of ‘a person who is with’ is created. Note that in the following example and elsewhere *āgi* is used for the animate beings, meaning ‘who’ or ‘what animal.’

- (3.99) āgi        əmə        agə-ō ②  
 who        2SG        with-NZR3  
 ‘Who is your companion?’
- (3.100) podo        agə-ō ①  
 meat        with-NZR3  
 ‘the one who is with the meat’

### 3.1.5.7 Instrumental *t-N-ge*

Attaching to a noun, the co-occurrence of the *t-* prefix (see 3.1.1) and the suffix *-ge* means ‘having or possessing N’ as well as ‘with N.’ Nouns, not loanwords, that begin with a vowel take the prefix *t-*. Nouns that begin with a voiceless stop (p, t, k) take a  $\emptyset$ -morpheme. For loanwords, this rule is applied inconsistently.

The following examples show the basic formation of a noun or nominalization beginning with a vowel.

- (3.101) t-unə-ge-ĩ ①  
 3R-story-INSTR-NZR4  
 ‘storyteller’
- (3.102) t-iā-ge-ĩ ②  
 3R-smell-INSTR-NZR4  
 ‘who/which has a smell’
- (3.103) t-auə-ge-ĩ ②  
 3R-wing-INSTR-NZR4  
 ‘who/which has wings’

The following examples illustrate the use of a noun beginning with a voiceless stop.

- (3.104)  $\emptyset$ -peto-ge        kulə ①  
 3R-fire-INSTR        only  
 ‘Only with fire.’
- (3.105)  $\emptyset$ -pāsie-ge ②  
 3R-belt-INSTR  
 ‘with a seatbelt’

- (3.106) Ø-taho-ge ②  
 3R-knife-INSTR  
 ‘with a knife’

When used with loanwords, the formation is inconsistent. In many cases, the prefix is not used.

- (3.107) podo m-ə-də angu-ge ②  
 meat 2A-eat.meat-PST polenta-INSTR  
 ‘You ate meat with angu.’
- (3.108) *caneta*-ge ①  
 pen-INSTR  
 ‘with a pen’
- (3.109) pəririlē-li auəkə pano-ge ②  
 clean-IPFV AN.MED cloth-INSTR  
 ‘He is cleaning with a cloth.’

The following examples illustrate the negative formation of loanwords. The second example is a borrowing from *carteira* ‘wallet, license.’

- (3.110) *dinheiro*-ge-ba ②  
 money-INSTR-NEG  
 ‘without money’
- (3.111) ti-*gātera*-ge-ba ②  
 3R-license-INSTR-NEG  
 ‘without a driver’s license.’

The instrumental(1) as N-*ge* is also used to signify ‘through,’ as seen below.

- (3.112) ətə ənaʔu-ge ②  
 house door-INSTR  
 ‘through a house door’

### 3.1.5.8 Perlative -*oe*

The perlative, which expresses that something or someone moved ‘through,’ ‘across,’ or ‘along’ is formed with the suffix -*oe*. The perlative is used almost exclusively with nouns that involve transportation.

- (3.113) pepi-*oe* ②  
 canoe-PER  
 ‘by canoe’
- (3.114) *karo*-*oe* ②  
 car-PER  
 ‘by car’



- (3.115) ðuã-oe ②  
road-PER  
'through the road'

### 3.1.5.9 Benefactive -ẽ

The benefactive suffix *-ẽ* expresses that an activity is performed for the benefit of the individual to which this suffix is attached. The beneficiary of *give*, the addressee of *tell*, the person to whom something is *shown*, and the one to whom something is brought are formed with the benefactive *-ẽ* attached to a personal pronoun.

- (3.116) ədidɔ e-gə-ne urə-ẽ ②  
things look-IMP-POL 1SG-BEN  
'Do take care of the things for me!'
- (3.117) s-iudu-ze əmə-ẽ ①  
1S-give-FUT 2SG-BEN  
'I will give something to you.'
- (3.118) ʔgi-ẽ? kārā kurə-ẽ s-e-tai ①  
who-BEN fish 1PL.EXC-BEN 1A-bring-IMM.PST  
'To which one of us? I brought the fish for us.'
- (3.119) u-(i)so siurə-ẽ ①  
1-husband of-BEN  
'This belongs to my husband.'

In addition to this usage, when the suffix attaches to a nominalized verb the benefactive is used to denote the purpose of an object, as seen below.

- (3.120) *caneco* n-(i)udu(-ma) makə məkə kopalegə  
mug 3S-give(-FOC) AN.DIST yesterday  
paru kə-eni-ʔo-ẽ ②  
water 1-drink-NZR3-BEN  
'Yesterday, he gave me a mug for drinking water.'
- (3.121) *chapéu* m-(i)udu-ma kopalegə kə-ĩe-to-ẽ ②  
hat 2S-give-FOC yesterday 1A-wear-NZR3-BEN  
'Yesterday, you gave me a hat to wear.'
- (3.122) *dinheiro* s-iudu-ma ə-ĩã kopalegə  
money 1S-give-FOC 2-DAT yesterday  
tokalə *chapéu* m-anə-to-ẽ ②  
one hat 2-buy-NZR3-BEN  
'Yesterday, I gave you some money for buying a hat.'

The benefactive may also express a purposive meaning.

- (3.123) *sirə*                      *m-əwĩdua-to-ẽ* ①  
 IN.PROX                      2A-eat-NZR3-BEN  
 ‘This is for you to eat.’
- (3.124) *sirə*                      *mə-ẽ-to-ẽ* ①  
 IN.PROX                      2A-see-NZR3-BEN  
 ‘This is for you to see.’
- (3.125) *ẽ-to-ẽ-ma-bəilə*                      *tərə*                      *nelərə* ①  
 see-NZR3-BEN-FOC-also                      DIST                      only  
 ‘There is also one for you to see over there.’

### 3.1.5.10 Dative *-ã* / *-Vrã*

The dative has two forms: *-ã* and *-Vrã*. The former allomorph is used with speech-act participants (i.e., first and second persons) and the latter with non-speech-act participants (i.e., a third person).

The first allomorph *-ã* co-occurs with verbs such as ‘go,’ ‘travel away,’ ‘visit,’ as well as in causative formations (see 4.2.3 and 4.2.4).

- (3.126) *ãgi-ã?*                      *tako-ã*                      *kãrã*                      *s-a-tai* ①  
 who-DAT                      grandfather-DAT                      fish                      1A-take-IMM.PST  
 ‘To whom? I took the fish to my grandfather.’
- (3.127) *age-ho-ã*                      *sina*                      *n-ətə-Ø* ①  
 talk-CAUS-DAT                      1PL.EXC                      3S-go-PST  
 ‘We went towards the sounds of barking.’
- (3.128) *sodo-ã*                      *sina*                      *i-də-li* ①  
 body/main-DAT                      1PL.EXC                      3S-go-IPFV  
 ‘We are going to the river (figuratively).’
- (3.129) *campo-ã*                      *u-də-ʔe*                      *urə*                      *bola*                      *s-iə-e* ②  
 field-DAT                      1S-go-FUT                      1SG                      ball                      3O-kick-PURP  
 ‘I will go to the field to kick ball.’

The following examples show the dative suffix *-ã* attaching to person pronouns.

- (3.130) *n-(i)udu-raki*                      *əmə-ã* ②  
 3S-give-IMM.PST                      2SG-DAT  
 ‘He gave something to you.’
- (3.131) *podo*                      *i-ʔu-ribə*                      *s-iudu-raki*                      *e-ĩã*                      *iĩ-to-ẽ* ②  
 meat                      3-grill-PTC                      1A-give-IMM.PST                      3-DAT eat-NZR3-ATTR  
 ‘I gave grilled meat for him to eat.’
- (3.132) *s-ene-ʔo-ragi*                      *e-ĩã-mo* ②  
 1A-see-CAUS-IMM.PST                      3-DAT-PL  
 ‘I showed (myself) to them.’

The dative is used to indicate the experiencer of a feeling through a personal pronoun as (a) a possessor of the feeling, (b) an experiencer of the attributive, and (c) a recipient of the attributive. The examples below identify these adaptations.

- (3.133) urə igəuənu ②  
1SG coldness  
'My cold.'
- (3.134) t-igəuən-e urə ②  
3R-cold-ATTR 1SG  
'I am cold.'
- (3.135) i-ĩã t-igəuən-e ②  
1-DAT 3R-cold-ATTR  
'It is cold to me.'

The second allomorph of the dative is *-Vĩrã* 'to.' It is commonly used with non-speech-act participants. It indicates a recipient or a place to which someone or something is moving. Below is an example of the dative *-Vĩrã* next to a place referring to a non-speech-act participant.

- (3.136) kado Ø-eti=Vĩrã pĩlə keãkə i-də-li-mo əi-se ①  
bakururu 3-house=DAT after PTCL2 3S-go-IPFV-PL dance-PURP  
'After that, they went into the bakururu house in order to dance.'

When the dative is used in constructions where the causative (see 4.2.3 and 4.2.4) is attached to the verb, *-Vĩrã* marks the causee.

- (3.137) pazikə udodo-Vĩrã əz-enu-esa-ge-ho-li ①  
anteater jaguar-DAT DETR-eye-scratch-REV-CAUS-IPFV  
'The anteater got its own eyes scratched by the jaguar.' i.e., 'The anteater caused the jaguar to scratch the anteater's eye.'

### 3.1.6 Other nominal inflections

Other nominal inflections are augmentative, diminutive, and entitative.

#### 3.1.6.1 Augmentative *-tẽ* / *-dẽ*

The augmentative suffix is *-tẽ* / *-dẽ*. It is phonologically conditioned and added to the right edge of the noun. It is often followed by *uaũlo* 'like.' Some examples follow.<sup>30</sup>

<sup>30</sup> Meira (personal communication) posits that /uaũlo/ is an irregular nominalized form of the non-nominalized /uars/ 'like' due to nasalization and /-ro/ or /-lo/ at the end. In Bakairi, /uaũlo/ is used after onomatopoeia meaning 'like.'

- (3.138) i-ãgaʔu-Ø-tẽ            uaũlo ②  
 3-head-POSS-AUG            like  
 ‘like his big head’
- (3.139) Ø-enata-ri-dẽ            uaũlo ②  
 3-nose-POSS-AUG            like  
 ‘like his big nose’

### 3.1.6.2 Diminutive *-tĩ*

Diminutive constructions are formed with the suffix *-tĩ* after the noun. The suffix is added at the right edge of nouns, which are typically followed by *uaũlo* ‘like.’

- (3.140) i-ʔu-ru-tĩ                uaũlo ②  
 3-foot-POSS-DIM            like  
 ‘his tiny feet’

### 3.1.6.3 Entitative *-mi*

The entitative *-mi* suffix expresses ‘one that is characterized by the feature X.’ The suffix *-mi* attaches to a noun ending in /-u/, the root from which adverbialized forms are derived (see 3.7). The following are examples of the entitative *-mi*.

- (3.141) sinu-mi ②  
 lethargy-ENT  
 ‘a lazy person or animal’
- (3.142) eanu-mi ②  
 fear-ENT  
 ‘a scared person or animal’
- (3.143) igigu-mi ②  
 life-ENT  
 ‘a person or animal full of life’
- (3.144) saikuru-mi ②  
 sweetness-ENT  
 ‘a sweet person or animal’
- (3.145) ilainu-mi ②  
 disgust-ENT  
 ‘a disgusting person or animal’
- (3.146) ipədu-mi ②  
 embarrassment-ENT  
 ‘an embarrassed person or animal’

### 3.2 Nominal derivation

Nominal derivations are possible across classes as well as within the nominal class. Deadverbials, deverbals, and past deverbal nominalizations are analyzed, respectively.

#### 3.2.1 De-adverbial nominalizer(1) *-ĩ, -ũ*

The suffixation *-ĩ* to an adverb or an adverbial formation creates a deadverbial nominalization, meaning ‘one which is’ or ‘one who is.’ (In the first example below, although the segment *-gə* is tentatively analyzed as *-agə* ‘with,’ Meira suggests it may be part of an older verb */gə/* incorporating *ema* ‘hand’.)

- (3.147) tə-ema-(a)gə-ze-ĩ ①  
3R-hand-COM?-ATTR-NZR1  
‘thief’
- (3.148) ti-ãga-pil-e-ĩ ①  
3R-head-red-ATTR-NZR1  
‘one who has red hair’
- (3.149) āzi t-apadur-e-ĩ ①  
corn 3R-yellow-ATTR-NZR1  
‘yellow corn’
- (3.150) sauari t-apiegur-e-ĩ ②  
leaf 3R-thin-ATTR-NZR1  
‘thin leaf’
- (3.151) satubi t-iki-ze-ĩ ②  
bark 3R-sleep/soothing-ATTR-NZR1  
‘smooth bark’

Deadverbial nominalizations are negated with the negative existential particle *ke-ba*.

- (3.152) t-apabil-e-ĩ ke-ba ①  
3R-red-ATTR-NZR1 PT-NEG  
‘It is not red.’

The following pair contrasts the negation of the instrumental case with its negated nominalization.

- (3.153) tə-(e)sani-ge-ba ①  
3R-depth-INSTR-NEG  
‘not deep’
- (3.154) tə-(e)sani-ge-ĩ ke-ba ①  
3R-deep-INSTR-NZR1 PT-NEG  
‘that is not deep’

The following pair contrasts the negation of the adverbial with its negated nominalization.

- (3.155) ti-eku-do-ẽ-pa  
 3R-measure-NZR3-ATTR-NEG  
 ‘unmeasurable(-ly)’
- (3.156) ti-eku-do-ẽ-ĩ                      ke-ba ①  
 3R-measure-NZR3-ATTR-NZR1      PT-NEG  
 ‘that has no measurement’

In some cases, instead of *-ĩ*, the entitative nominalization with the allomorph *-ũ* of primitive nouns may be used to impart a sense of ‘a person who is N.’

- (3.157) ǎga-si-ũ                      əmə ①  
 head-LOC2-NZR1 2SG  
 ‘You are a stubborn person.’

Deadverbial nominalizations with the allomorph *-ũ* are negated internally between the attributive suffix and the nominalizer.

- (3.158) t-ita-ẽ-ba-ũ ②  
 3R-mouth-ATTR-NEG-NZR1  
 ‘mute person’
- (3.159) tǎ-(e)nu-ẽ-ba-ũ ②  
 3R-eye-ATTR-NEG-NZR1  
 ‘blind person’
- (3.160) t-(s)in-e-pa-ũ ②  
 3R-lethargy-ATTR-NEG-NZR1  
 ‘active person’
- (3.161) tǎ-(e)uǎ-ne-ba-ũ ②  
 3R-sickness-ATTR-NEG-NZR1  
 ‘healthy person’

### 3.2.2 De-adverbial /-postposition nominalizer(2) *-ǎ*, *-no*, *-Vrǎ*

De-adverbial nominalizations with the suffix *-ǎ*, *-no*, *-Vrǎ* create a noun that possesses the quality of the adverb or numeral.

The allomorphs *-ǎ*, *-no* are used to create nouns from nouns or nouns from adverbs, as in the following examples.

- (3.162) idu-no ①  
 forest-NZR2  
 ‘partner’,<sup>31</sup>
- (3.163) tokale-ō ②  
 one-NZR2  
 ‘single person’

The following examples show that postpositions can be nominalized.

- (3.164) idu oda-no ②  
 woods inside-NZR2  
 ‘a forest-dweller’
- (3.165) ika-no ②  
 liquid-NZR2  
 ‘gourd’

The addition of the nominalizing allomorph  $-Vr\ddot{o}$  to adverbs or postpositions creates ‘one who is ADV.’ In this process, one or more vowels of the adverb or postposition become /o/ through vowel harmony (see 2.5.6). These transformations are shown in the examples below:

- (3.166) iuage- $\check{V}r\ddot{o}$  ① /iuogōrō/  
 far-NZR2  
 ‘one who is far’
- (3.167) koēda- $\check{V}r\ddot{o}$  ① /koēdōrō/  
 fine-NZR2  
 ‘one who is fine’
- (3.168) də- $\check{V}r\ddot{o}$  ① /dōrō/  
 LOC3-NZR2  
 ‘one who is inside’
- (3.169) uəgə- $\check{V}r\ddot{o}$  ① /uogōrō/  
 LOC4-NZR2  
 ‘one who is on the top’
- (3.170) k-agə- $\check{V}r\ddot{o}$  ① /kagōrō/  
 1PL-COM-NZR2  
 ‘our companion’
- (3.171) ə-ninə- $\check{V}r\ddot{o}$  ① /əninōrō/  
 2-against-NZR2  
 ‘one who is beside you’

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<sup>31</sup> This word *idumo* was more commonly used to mean ‘a forest hunting companion.’ It is now used for ‘a member of a group, a partner.’

Nominalizations such as the ones above can take person prefixes, plural markers, past nominal markers, and other affixes.

### 3.2.3 Deverbal entity nominalizer(3) (I) *-to*, *-do* and (II) *-ho*① or *-o*, *-ʔo*②

A deverbal entity nominalization forms a noun describing something that is a place, a time, or an object used for doing the action described in the verbal stem. Apart from stative verbs, there are two types of verbs in Bakairi (Type I and II). Knowing this distinction of the verbs is important to understand the distribution of the different allomorphs:

- (a) Type I verbs and the stative copulative verb *-a-* are nominalized with one of the allomorphs *-to* / *-do*.
- (b) Type II verbs are nominalized with the suffix *-ho*① or *-o* / *-ʔo*②.

The distribution of the different allomorphs within each verb type respects strict phonological conditions, i.e., the same [ $\pm$  VOICE] quality of the immediate-past suffix (see Chapter 2, Phonology). Highlights in the examples below illustrate this point. The following are some Type I deverbal nominalizations.

- (3.172) u-i-**tai** ①  
1S-bathe-IMM.PST  
'I took a bath'
- (3.173) i-**to** ①  
bathe-NZR3  
'bathroom'
- (3.174) s-eka-**dai** ①  
1S-sit-IMM.PST  
'I sat'
- (3.175) eka-**do** ①  
sit-NZR3  
'seat'
- (3.176) s-eka-nə-**dai** ①  
1A-store-TRVR-IMM.PST  
'I stored something.'
- (3.177) eka-nə-**do** ①  
store-TRVR-NZR3  
'cabinet'

Deverbal entity nominalizations take person prefixation, possessed suffixation, past possession suffixation, and plural markers.

The stative copulative *-a-* (see 4.1.1) is nominalized with *-to* meaning 'one that is X, one for being X.' The copula complement is more commonly used together with a desiderative adverbial meaning 'a noun or a nominalization that is of someone's liking.'



TABLE 3.5: NOUN + LIKING + NOMINALIZED COPULATIVE VERB

	<i>n.</i> + <i>ize</i> <sup>①</sup> + person affix + COP + NZR3	Gloss
1SG	<i>n.</i> + DESI + u-a-to	‘ <i>n.</i> is of my liking’
2SG	<i>n.</i> + DESI + m-a-to	‘ <i>n.</i> is of your liking’
3SG	<i>n.</i> + DESI + Ø-a-to	‘ <i>n.</i> is of his liking’
1PL	<i>n.</i> + DESI + Ø-a-to + <i>sina</i>	‘ <i>n.</i> is of our(EXC) liking’
1PL	<i>n.</i> + DESI + kid-a-to + <i>kurə</i>	‘ <i>n.</i> is of our(INC) liking’
2PL	<i>n.</i> + DESI + m-a-to-mo	‘ <i>n.</i> is of your liking’
3PL	<i>n.</i> + DESI + Ø-a-to-mo	‘ <i>n.</i> is of their liking’

Unlike what is found in common nouns, the plural *-mo* is added before the past nominal suffix.

TABLE 3.6: NOUN + LIKING + PAST NOMINALIZED COPULATIVE VERB

	<i>n.</i> + <i>ize</i> <sup>①</sup> + person affix + COP + NZR + PL + PST + POSS	Gloss
1SG	<i>n.</i> + DESI + u-a-to-bi-ri	‘ <i>n.</i> was of my liking’
2SG	<i>n.</i> + DESI + m-a-to-bi-ri	‘ <i>n.</i> was of your liking’
3SG	<i>n.</i> + DESI + Ø-a-to-bi-ri	‘ <i>n.</i> was of his liking’
1PL	<i>n.</i> + DESI + Ø-a-to-bi-ri + <i>sina</i>	‘ <i>n.</i> was of our(EXC) liking’
1PL	<i>n.</i> + DESI + kid-a-to-bi-ri + <i>kurə</i>	‘ <i>n.</i> was of our(INC) liking’
2PL	<i>n.</i> + DESI + m-a-to- <b>mo</b> -bi-ri	‘ <i>n.</i> was of your liking’
3PL	<i>n.</i> + DESI + Ø-a-to- <b>mo</b> -bi-ri	‘ <i>n.</i> was of their liking’

Type II verbs form nominalizations with the suffix *-ho*<sup>①</sup> or *-o*, *-ɔo*<sup>②</sup> serving as instrument nominalizations.

- (3.178) egase-ho ①  
 come.out-NZR3  
 ‘exit’
- (3.179) eni-ho ①  
 drink-NZR3  
 ‘cup’
- (3.180) pai-ʔo ② (from the verb: *iuaili* ② ‘scratch’)  
 scratch-NZR3  
 ‘bleeder’
- (3.181) iə-ʔo ②  
 bite-NZR3  
 ‘syringe’

This suffix is also used as a location nominalizer, as evident in the formation of the words which express the cardinal directions ‘east’ and ‘west.’

- (3.182) sisi      Ø-egase-ho ①  
 sun          3-rise-NZR3  
 ‘east’
- (3.183) sisi      i-huge-ho ①  
 sun          3-fall-NZR3  
 ‘west’

Interestingly, the other cardinal points are *sodoã* ‘to the river,’ i.e., ‘north’ and *igəwɪnu əeto* ‘from where the cold comes,’ i.e., ‘south.’ As a rule, landmarks are used for these cardinal points, and each village has different north-south landmarks.

### 3.2.4 Deverbal entity nominalizer(4) -ĩ, -ni

The deverbal entity nominalizing suffix *-ĩ, -ni* has an agentive function. The nominalizing suffix is added after the verbal stem or after a verbalizing suffix. The following are examples of this nominalizer occurring directly after the stem.

- (3.184) ai-ni ①  
 dance-NZR4  
 ‘dancer’
- (3.185) epauə-ni ②  
 pay-NZR4  
 ‘payer’

The following are examples of the nominalizer coming after a verbalizer.

- (3.186) enome-də-ni ②  
 knowledge-VBZ2-NZR4  
 ‘teacher’

- (3.187) əs-enome-də-ni ②  
 DETR-knowledge-VBZ2-NZR4  
 ‘student’

Nominalizations of transitive verbs are formed with a detransitivizer *əd-* (see 4.2.2), whereas intransitive verbs take the third-person subject prefix *s-*.

- (3.188) əz-enanə-ni ②  
 DETR-play-NZR4  
 ‘player’  
 (3.189) s-ai-ni ②  
 3S-arrive-NZR4  
 ‘arriver’

Agentivized words accept person-marking prefixes and other affixation. In the example below, the vowel of the verb shifted from /i/ to /u/ while adding the suffix.

- (3.190) kə-(e)gaku-ni ①  
 1PL.INC-run-NZR4  
 ‘one who runs after us’

The plural is formed with *-modo*.

- (3.191) əs-ibəmi-ni-modo ①  
 DETR-faint-NZR4-PL  
 ‘fainters’

The form of the agentive may alternate when co-occurring with the plural. For example, in the following plural formation of *siutuĩ* ‘expert,’ *-ĩ* becomes *-ni*.

- (3.192) s-iutu-ĩ ①  
 3O-know-NZR4  
 ‘expert’  
 (3.193) s-iutu-ni-modo ①  
 3O-know-NZR4-PL  
 ‘experts’

An example of a negated agentivized verb follows.

- (3.194) n-epagu-də-ĩ-ba ①  
 3-rest-VBZ2-NZR4-NEG  
 ‘restless person’

### 3.2.5 Negative deverbal nominalizer(5) *-tãri, -dãri*①

A negativizing deverbal nominalization creates nouns with the meaning ‘one who/that does not do.’ This suffix is likely a composite of the prohibitive morpheme *-dã* (see 4.2.8.4), which is later nasalized (*-ã*), and the possessive suffix *-ri* (see 3.1.3).<sup>32</sup> All verbs take one of the two allomorphs *-tãri, -dãri*① depending on a strict phonological condition, i.e., the same [ $\pm$  VOICE] quality of the immediate-past suffix. Consider the minimal pairs below.

- (3.195) *n-od-opã-dai* ①  
3A-DETR-return-IMM.PST  
‘he returned’
- (3.196) *od-opã-dãri* ①  
DETR-return-NZR5  
‘person who is gone’
- (3.197) *n-oh-oguĩ-agi* ①  
3A-DETR-marry-IMM.PST  
‘he got married’
- (3.198) *oh-oguĩ-dãri* ①  
DETR-marry-NZR5  
‘unmarried person’
- (3.199) *n-æe-tai* ①  
3A-come.back-IMM.PST  
‘he came back’
- (3.200) *æ-tãri* ①  
come.back-NZR5  
‘absent person’
- (3.201) *i-dã-aki* ①  
3S-go-IMM.PST  
‘He went’
- (3.202) *i-dã-tãri* ①  
3S-go-NZR5  
‘staying person’

### 3.2.6 Participles

A Bakairi participle, a word derived from a verb that is used as an adjective, is a nominalized verb, formed according to the valency of the verb: (a) Transitive verbs (Type I) take the participle suffix *-tibi, -dibi*① or *-tibã, -dibã*②; and (b) Intransitive verbs (Type II) take the participle suffix *-ipi, -ibi*① or *-ripã, -ribã*②.

Below are examples of Type I and Type II participles, respectively.

<sup>32</sup> The word *tãnuẽri* ‘one who does not have eyes’ may be related to this formation. The suggested segmentation of this word *tãnuẽri* is 3R *t-/*, enu- ‘eye’ + ATTR *-ẽ* + an unattested suffix *-ãri* ‘not having.’

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- (3.203) Ø-eta-də-dibə ②  
 3A-cage-VBZ2-PTC  
 ‘one who was incarcerated’
- (3.204) Ø-eta-ge-ribə ②  
 3-cage-VZR1-PTC  
 ‘one who was released’

In a sentence, the participle places the focus on the object.

- (3.205) ətə kə-iṽtə-dibə ②  
 house 1A-build-PTC  
 ‘The house was built by me.’

Similar examples are given below.

- (3.206) arakuma kə-iṽʔu-ribə ②  
 hen 1A-roast-PTC  
 ‘The hen was roasted by me.’
- (3.207) udodo kə-iəṽ-ripə ②  
 jaguar 1A-kill-PTC  
 ‘The jaguar was killed by me.’
- (3.208) iuelo sirə s-aĩge-ho, sina i-anə-tibi ①  
 new IN.PROX 3O-strain-NZR3 1PL.EXC 3-buy-PTC  
 ‘This is the new strainer, which we bought.’

By itself, a participle does not discriminate animacy.

- (3.209) Ø-etamu-ge-ribə ②  
 3-cover-REV-PTC  
 ‘one who/which was uncovered’

Next to a noun, the participle is a past nominalization (see 5.1.4).

- (3.210) tohu s-aeta-dibi ①  
 pumpkin 3O-plant-PTC  
 ‘planted pumpkin’

A participle can be attached to an adverbializer *-ē* (see 3.7) forming a subordinate clause.

- (3.211) a-ie-tibi-ē sina i-eiṽle-dili auəkə ①  
 3O-make-PTC-ATTR 1PL.EXC 3S-laugh-IPFV AN.MED  
 ‘After making it, she laughed with us.’

A compound noun can be identified as a sequence of two common noun roots preceded by a person prefix and a possessive suffix.

(3.212) i-enu-(e)pi-ri ②  
1-eye-top-POSS  
'my eyelid'

(3.213) i-enu-(e)ta-ri ②  
1-eye-box-POSS  
'my eyeglasses'

The left root of a compound noun is limited to body parts. In its formative process, one of the roots loses a syllable. In some compounds, the last syllable of the first root is lost, whereas, in others, the first syllable of the second root is lost. In the two examples above, segmental reduction (i.e., the parenthetic syllable) occurs in the second root. In the following examples, the first root is morphologically reduced.

(3.214) i-emi(li)-hudu-Ø ①  
1-face-hair-POSS  
'my mustache'

(3.215) i-ãga(hu)-hudu-Ø ①  
3-head-hair-POSS  
'his head hair'

Many compound nouns are formed without syllable reduction.

(3.216) Ø-enu-anali-ri ②  
3-eye-core-POSS  
'the eye pupil'

(3.217) Ø-enu-kimunu-Ø ②  
3-eye-cover-POSS  
'the eyebrow'

(3.218) Ø-enu-pilu-Ø ②  
3-eye-redness-POSS  
'the red eyes'

### 3.3 Personal pronouns

In a Bakairi speech act, 'first person' and 'second person' are expressed with dedicated pronouns. The singular and plural third-persons are expressed through a set of demonstratives, which are described in section 3.3. Two plural first-person pronouns refer to the exclusion or inclusion of the addressee, in other words, an exclusive *we* and an inclusive *we*. Although semantically plural, these plural first-person pronouns do not take a plural suffix. Only the plural second- and third-person pronouns take the plural suffix *-mo*. In the examples below, only variations in pronunciation are marked.

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- (3.219) urə ‘I’  
 əmə ‘you’  
 sina ① or ina ② ‘we-EXC’  
 kurə ‘we-INC’  
 əmae-mo ① or əmare-mo ② ‘you-PL’

Examples in sentences are provided below.

- (3.220) t-utue-lə urə ②  
 3R-know-EMPH 1SG  
 ‘I know someone/something.’  
 (3.221) ie əmə? ②  
 like/want 2SG  
 ‘Would you like some?’  
 (3.222) toē-ze-pa kehoē<sup>33</sup> sina i-eiV̄le-dili ①  
 few-ATTR-NEG INTS 1PL.EXC 3S-laugh-IPFV  
 ‘We laughed very much.’

Table 3.7 is based on Derbyshire’s model for the Cariban languages (1999: 54). The right column lists the attested demonstrative adverbs; items with ① or ② are found exclusively in each dialect; all remaining data are observable in both dialects.

TABLE 3.7: PRONOUNS AND DEMONSTRATIVE ADVERBS

Free Personal pronoun	SG	PL	Demonstrative adverbs
1	urə	---	tarə, siarə, siariã, taulələ, tarəpaũ
1+2 EXC	sina① ina②	---	---
1(+2)+3 INC	kurə	---	---
2	əmə	əmaemo① əmaremo②	---
3R – anaphoric			
3AN	inəra	akaemo① akaremo②	
3INAN	ilə	iləmo	
3DEICTIC PROXIMATE			autələ, autərəĩgə
3AN	merə	merəmodo, mesaremo ②	
3INAN	sirə	sirəmodo	
3DEICTIC MEDIAL			atərə, auətərə, uəriĩã, uəriã

<sup>33</sup> Today, *kehoē* is a non-segmentable intensifier meaning ‘very much.’ Historically, it may have consisted of *ke* ‘say’ or a proto-copula *\*ke* – which is still used in *keba* ‘there isn’t,’ in *keākə*, a generic past particle (see 4.2.7.3) – plus the suffix *-ho* ‘causative’ (see 4.2.4) or ‘circumstance nominalizer’ (see 3.2.3) plus *-ē* ‘essive/similative denominalizing marker,’ i.e., literally, ‘as something to say.’

3AN	auəkə	asaemo ① asaremo ②, auəkəmodo ① auəkəremo ②
3INAN	auərə	auərəmodo
3DEICTIC DISTAL		tərə, tərələ, mələ, mərarə, təhərə, tərīkə
3AN	məkə, maūkə	məkəremo ②
3INAN	mərə	mərəmodo

### 3.4 Demonstrative pronouns

Deictic demonstratives are established in order of decreasing proximity from the speakers. *Proximal* refers to being near the speech-act participants, *medial* relates to being away from the speech-act participants but still within sight, and *distal* refers to a distance that is no longer within sight. Although a priori deictic demonstratives relate to their spatial distances, they are also used as existential copulas as seen in the examples here and elsewhere. In Bakairi, demonstratives can occur independently or co-occur with a noun. Their plural is formed with the suffix *-mo* or *-modo*.

Animate and inanimate nouns use different demonstratives as seen in the following pair.

- (3.223) seruseru            mərə ①  
           dog                    AN.PROX  
           ‘This (is a) dog.’
- (3.224) əmugə sirə ①  
           pan                    IN.PROX  
           ‘This (is a) pan.’

Demonstratives for the animate class refer to ‘he,’ ‘she,’ or ‘an animal,’ including detached parts of an animal and meat. The animate distals exhibit a variant (*maūkə*), which is not attested in the inanimate demonstratives.

TABLE 3.8: ANIMATE DEMONSTRATIVES

3SG AN	3PL ANIM	Deictic Referencing
mərə	mərə-modo ①    mesare-mo ②	proximal
auəkə	auəkə-modo ①    auəkəre-mo ②	medial
məkə	məkə-modo ①    məkəre-mo ②	distal
maūkə	asae-mo ①    asare-mo ②	distal
inəra	akae-mo ①    akare-mo ②	anaphora

Below are some examples of animate demonstratives next to a noun, such sequences of a demonstrative and a noun can be the subject of a predicate noun or a phrase.



- (3.225) merə                      uguōdo ①  
 AN.PROX                      man  
 ‘This/Here (is a) man.’
- (3.226) auəkə                      uguōdo ①  
 AN.MED                      man  
 ‘That / There (is a) man.’
- (3.227) məkə                      uguōdo ①  
 AN.DIST                      man  
 ‘That / Yonder (is a) man.’

The *inanimate* demonstrative class consists of three spatial distances referring to the third person ‘it’ and ‘they.’ Their plural is formed with the suffix *-modo*.

TABLE 3.9: INANIMATE DEMONSTRATIVES

3SG INAN	3PL INAN	Deictic Referencing
sirə	sirə-modo	proximal
auərə	auərə-modo	medial
mərə	mərə-modo	distal

Examples are provided below.

- (3.228) i-emanə-lə              sirə ②  
 1-object-EMPH    IN.PROX  
 ‘This object is mine.’
- (3.229) auərə-modo              ke-ba    rolə              emə-ke-ri-mo ②  
 IN.MED-PL              PT-NEG but              hand-REV-POSS-PL  
 ‘They took things but not these.’
- (3.230) peĩ              naka              i-tibi-e-ĩ                      mərə-modo ②  
 fruit              bad              COP-PTC-ATTR-NZR1              IN.DIST-PL  
 ‘Those pieces of fruit are rotten.’

### 3.5 Interrogative pronouns

With the exception of /əgi/ ‘who,’ interrogative pronouns appear to be historically derived from /ədi/ ‘what.’ For instance, /ədi + uaũlo/ forms /ədaũlo/; /ədi + -ã/ forms /ədiã/; /ədi + -ra/ forms /ədira/; /ədi + aituo/ forms /ədaituo/.

TABLE 3.10: INTERROGATIVE PRONOUNS

Bakairi	Free Translation
əgi <sup>34</sup> ②	‘what, who’ (for animate entities, also meat or ghosts)
ədi / ədaũlo ②	‘what’ (for inanimate entities, such as tree, rain, or rice)
ədikə ②	‘where’
ədiã ②	‘where to’
ədara ① ədura ②	‘how many’
ədaituo ②	‘why’

Interrogative words are not inflected into the plural, do not receive possessive morphology, and cannot be negated. Often in sentence-initial position, interrogatives can be combined with a noun.

- (3.231) ədara                      pão-be=ka                      əmae-mo? ①  
 how.many                      bread-EXIST=QST                      2PL-PL  
 ‘How many loaves of bread do you have?’
- (3.232) ədara=ka                      hora                      a-uili? ①  
 how.many=QST                      time                      COP-IPFV  
 ‘What time is it?’

In questions, the interrogative clitic =ka is optional.

- (3.233) ədura                      əmə                      anu-pe? ②  
 how.many                      2SG                      year-EXIST  
 ‘How old are you?’
- (3.234) ədaũlo                      iuenu? ②  
 what                      color  
 ‘What color is it?’

Interrogative pronouns are also attested in declarative sentences:

- (3.235) ədaũlo                      eã                      eti                      s-ãĩ-to ②  
 how                      PTCL2                      clothing                      3S-arrive-NZR3  
 ‘**Whatever way** he was clad upon his arrival.’
- (3.236) ədi                      pe-ba-ro                      uaũlo-ma,  
 what                      have-NEG-INTS                      if-FOC
- café                      kule-lə                      a-iĩe-kili-mo ②  
 coffee                      RSTR-EMPH                      3O-make-IPFV-PL  
 ‘If we do not have **anything** (to offer), we make only coffee.’

<sup>34</sup> The interrogative word *əgi* is used for all animate beings. For the Bakairi, animals and humans alike engage in conversations and quite often identical terminology for humans is used for animals, such as offspring/children, male-female/husband-wife indicating that animals and humans share common traits.

### 3.6 Numerals

While the numerals from one to five, ten, and twenty are Bakairi words, the remaining numerals are loanwords. Numerals belong to a binary class system. There are two base numerals: *tokalə* ‘one’ and *azagə*① or *ahagə*② ‘two.’ A combination of these terms leads to a few more numerals, such as 2+1, 2+2, and 2+2+1. The table below shows the Bakairi numerals.

TABLE 3.11: CARDINAL NUMERALS

Western Bakairi	Eastern Bakairi	Free Translation
<i>tokalə</i>	<i>tokalə</i>	‘one’
<i>ahagə</i>	<i>azagə</i>	‘two’
<i>ahagə tokalə</i>	<i>azagə tokalə</i>	‘three’
<i>ahagə ahagə</i>	<i>azagə azagə</i>	‘four’
<i>ahagə ahagə tokalə</i>	<i>azagə azagə tokalə</i>	‘five’
<i>seis</i>	<i>seis</i>	‘six’
<i>sete</i>	<i>sete</i>	‘seven’
<i>oito</i>	<i>oito</i>	‘eight’
<i>nove</i>	<i>nove</i>	‘nine’
<i>ahagə iemari</i>	<i>azagə iemari</i>	‘ten’
<i>ahagə iemari, ahagə uʔuru azagə iemari, azagə uhuru</i>		‘twenty’

The numeral ten is expressed as *azagə iemari* ‘my hands’ and the numeral twenty is expressed as *ahagə iemari, azagə uhuru* ‘my hands, my feet.’

(3.237) *azagə i-ema-ri* ①  
two 1-hand-POSS  
‘ten’

(3.238) *azagə i-ema-ri azagə u-(i)hu-ru* ①  
two 1-hand-POSS two 1-foot-POSS  
‘twenty’

For any numeral between or higher than the ones represented in Table 3.11, the expression *merə merə* ‘this and this’ or *mərə merə* ‘that and this’ represents an indefinite quantity of the inanimate class. The expression *məkə merə* means ‘that and this’ but it is used for two types of entities of the animate class, as in ‘this and that type of.’ Therefore, these three expressions no longer refer to spatial deixis.

(3.239) *ahagə məkə merə kaida* ②  
two AN.DIST AN.PROX macaw  
‘There are two types of macaws.’

Emphatic particles can be added to a numeral to intensify or otherwise change the meaning: *-lə* (firsthand) and *=mə* (non-visual) are the most common (see 5.6).

- (3.240) tokalə kulə tarə Ø-a-uəli tokalə-lə ②  
 one only here 3S-COP1-IPFV one-EMPH  
 ‘There is a small one here. It’s just one.’

Syntactically, numerals precede nouns.

- (3.241) tələ urə ahagə-tokalə pōwā iuelo-modo ②  
 there.is 1SG two-one necklace new-PL  
 ‘I have three new necklaces.’

A numeral can be distanced from its modifying noun due to the obligatory object-before-verb positioning (see 5.1).

- (3.242) u-uosera-ri s-anə-də tokalə ②  
 1-bracelet-POSS 1A-buy-PST one  
 ‘I bought myself one bracelet.’  
 (3.243) tokalə kulə s-aīge-ho ①  
 one only 3O-strain-NZR3  
 ‘There is only one coffee strainer.’

The attachment of the suffix *-ō*, *-no*, *-Ũrō* (see 3.2.2) to a numeral changes it into a common noun meaning ‘something or someone that is limited to that number.’ While a numeral does not take affixation, a derived common noun does (see 3.1). Table 3.12 shows that numeral derivation is limited to native Bakairi words.

TABLE 3.12: NOMINALIZED NUMERALS

Western Bakairi	Eastern Bakairi	Free Translation
tokale-ō	tokale-ō	‘who is one’
ahage-ō	azage-ō	‘who are two’
ahagə tokale-ō	azagə tokale-ō	‘who are three’
ahagə ahage-ō	azagə azage-ō	‘who are four’

Below are some examples.

- (3.244) Paulo, João azag(e)-Ũrō-pi-ri ①  
 Paulo João two-NZR2-PST-POSS  
 ‘Paulo and João were twins.’  
 (3.245) urə i-(i)me-ri tokale-ō ②  
 1SG 3-child-POSS one-NZR2  
 ‘It is my only child.’

### 3.7 Adverbs and Adverbial Morphology

The term ‘adverb’ has been chosen here as this word class modifies nouns and verbs in Bakairi. Therefore, ‘adverb’ not ‘adjective’ is used throughout this text. What the reader might understand as an ‘adjective’ is accomplished by many forms of nominalizations in Bakairi (see 3.2).

Adverbs have two basic morphological distinctions:

- (a) most are formed with a circumfix, namely, denominal attributive adverbializer *t-N-e/ẽ* or *t-N-se/ze*, and
- (b) very few adverbs lack any affixation.

The denominal attributive adverbialization process is illustrated below with the circumfix *t-N-e/-ẽ*. Examples of the circumfix follow. Note that the realization of the prefix is conditioned by the initial vowel of the root.

- (3.246) *tə-(e)bi-ri-ẽ* ①  
3R-payment-POSS-ATTR  
‘payable’
- (3.247) *tə-(e)zidi-ẽ* ①  
3R-territory-ATTR  
‘territorial’
- (3.248) *ti-eku-do-ẽ* ①  
3R-measure-NZR3-ATTR  
‘measurable’

A negative suffix *-pa*, *-ba* (see 2.5.1, for the distribution of the voice feature) expresses antonyms. Pairs of antonyms follow.

- (3.249) *tə-(e)ti-ẽ* ①  
3R-cloth-ATTR  
‘clad’
- (3.250) *tə-(e)ti-ẽ-ba* ①  
3R-cloth-ATTR-NEG  
‘naked’
- (3.251) *t-a-se* ①  
3R-inside-ATTR  
‘full’
- (3.252) *t-a-se-ba* ①  
3R-inside-ATTR-NEG  
‘empty’
- (3.253) *toʔõ-e* ②  
strong-ATTR  
‘strong’
- (3.254) *toʔõ-e-ba* ②  
strong-ATTR-NEG  
‘not strong’

- (3.255) koēda ①  
good  
'good'
- (3.256) koēda-pa ①  
good-NEG  
'unwell'

Adverbs can be intensified as in the examples below:

- (3.257) t-an-e-begō ②  
3R-acid-ATTR-INTS  
'a bit acidic'
- (3.258) tu-(i)dū(r)-begō ②  
3R-bitter-INTS  
'a little bitter'

Adverbs that lack affixation, i.e., lexical adverbs can also be intensified in the same manner.

- (3.259) māʔedo-begō ②  
big-INTS  
'a little big'
- (3.260) toʔo-begō ②  
strong-INTS  
'a little strong'

Syntactically, adverbs precede verbs, i.e., modifiers precede heads.

- (3.261) uarə iuerə tod-oh-oguĩ-ho-ē a-iŨe-dili-mo ①  
and today NPOS-DETR-marry-CAUS-ATTR 3O-make-IPFV-PL  
'And today they are getting married.'

Adverbs modify nouns.

- (3.262) toē-ze-pa kopə i-huge-li ①  
little-ATTR-NEG rain 3S-fall-IPFV  
'It is raining a lot.'
- (3.263) toē-ze-pa doce sina n-eĩ-Ø ①  
little-ATTR-NEG sweet stuff 1PL.EXC 3S-suck-PST  
'We ate a lot of candy.'
- (3.264) toē-pa igəuənu ②  
little(-ATTR)-NEG coldness  
'It is very cold.'



- (3.274) əwīdua-ni-pi-ri-ē (...) ①  
eat-NZR4-PST-POSS-ATTR  
'As they have eaten, (clause)'
- (3.275) s-əgu-ho-ē (...) ①  
3O-begin-NZR3-ATTR  
'As its beginning, (clause)'

Finally, demonstratives are adverbialized with the attributive adverbializing suffix *-e/ē*.

- (3.276) auərə-pi-ri-ē (...) ①  
IN.MED-PST-POSS-ATTR  
'As that is over, (clause)'
- (3.277) sirə-pi-ri-ē (...) ①  
IN.PROX-PST-POSS-ATTR  
'As this is done, (clause)'

There are four semantic types of adverbs in Bakairi: (1) colors, (2) physical properties, (3) human propensities, and (4) dimensions. Only Western Bakairi data are indicated with ②; otherwise, the data below are from Eastern Bakairi.

#### COLORS

- (3.278) t-əpabil-e 'red'  
t-əpadur-e 'yellow'  
t-əpek-e 'white'  
t-iziur-e 'purple, violet'  
t-əʔog-e ② 'colorful, colored'  
t-ukobil-e 'brown'  
t-uku-e 'green, blue'  
t-upiur-e 'orange, auburn'  
t-utugi-ne 'dark olive skin color'  
tə-(e)am-e 'dark'  
tə-(e)məgi-ne 'black'  
t-iazin-e 'light, bright'

#### PHYSICAL PROPERTIES

- (3.279) t-ədīg-e 'fat'  
t-igəuən-e 'cold'  
t-iuək-e 'dirty'  
t-iuəkur-e 'handsome, beautiful'  
t-okonu-ge 'soft, flaccid, mushy'  
t-əʔo-e ② 'strong'  
t-agara-ne 'tight'  
t-un-e 'bloody'  
t-ūwāʔ-e ② 'hard'  
tə-(e)dəpi-ge 'hot'



tə-(e)uən-e 'sick'

HUMAN PROPENSITIES

- (3.280) t-ieil-e 'smiling'  
 t-itiĩ-e ② 'sad'  
 t-iuãʔ-e ② 'quiet, serious'  
 t-iuən-e 'missing, lacking',<sup>35</sup>  
 t-ið-ge-e 'having a smell'  
 t-omar-e 'happy'  
 tə-(e)regir-e 'he is worried, uneasy'

DIMENSIONS

- (3.281) t-agol-e 'floppy, loose'  
 t-apari-ge 'having a wide canopy'  
 t-idəpə-ne 'round, circular'  
 t-imibakul-e 'short (in length)',<sup>36</sup>  
 t-umol-e 'wide, large, loose'  
 tə-(e)sani-ge 'deep, having depth'  
 tə-(e)kəri-ne 'bent'

<sup>35</sup> The nominalization /iuənu/ means 'missing, being homesick, lacking' as in the following example: /paru iuənu/② '(I am) missing water → (I am) thirst(y)'. As a verb, it is used as in the following example: /əmə kəũuənədili/② 'I am missing you → I miss you.'

<sup>36</sup> The nominalization /t-imi-ba-kul-e-i/ literally means 'the one that is **not** long in length.'

## Chapter 4

### Inflectional and Derivational Morphology of Verbs

In this chapter, we will address the morphology of verbs in Bakairi. We begin with inflectional morphology and end with derivational morphology. Note that in the discussion of tense inflection, we will show that Bakairi has an alternative way to express past or future through the use of morphologically independent particles.

Three groups of Bakairi verbs present distinct morphology: copulative verbs, underived transitive verbs, and underived intransitive verbs. The copulative class is very small and not very common. The class of underived transitive verbs is labeled as Type I. Type II refers to underived, intransitive verbs.

In Bakairi, tense and aspect overlap, so a suffix marking aspect/tense comes after the stem of an underived verb. Therefore, the basic template of an underived verb is person prefix + verbal stem + aspect + mood.

#### 4.1 Copulative verbs

There are two copulative verbs in Bakairi: a stative copulative *-a-* ‘be,’ and a change of state copulative *-i-* ‘become.’

For these two copulative verbs, the person inflection prefixes are:

- u- for 1SG,
- m- for 2SG and PL,
- ∅- for 3SG and PL, 1PL. EXC,
- kid- for 1PL. INC.

##### 4.1.1 Stative copulative(1) verb *-a-*

The stative copula *-a-* requires an inflectional person prefix, which is similar to nominal possessive prefixes (see 3.1), and the imperfective suffix *-uili*① or *-uəli*②. In interlinear glosses, this copula is labeled COP1. The examples below characterize the paradigm of this copula in the imperfective aspect. As the tense should be expressed externally via particles (see 4.2.7). The plural suffix *-mo* described in parenthesis below is used only for 2PL and 3PL.

- (4.1) u-a-uili ①  
1SG-COP1-IPFV  
‘I am being’
- (4.2) m-a-uili(-mo) ①  
2-COP1-IPFV(-PL)  
‘you are being’

- (4.3) Ø-a-uili(-mo) ①  
 3/1PL.EXC-COP1-IPFV(-PL)  
 ‘he is / we are / they are being’
- (4.4) kid-a-uili ①  
 1PL.INC-COP1-IPFV  
 ‘we are being’

In Bakairi, copula omission or zero copula represents a state thought of as permanent, the stative copulative *-a-* indicates a temporary state but not a change of state.

#### 4.1.2 Change-of-state copulative(2) verb *-i-*

The change-of-state copulative verb *-i-*, glossed as COP2, indicates the sense of ‘become.’ It takes a person prefix (identical to the ones used with the stative copulative, see 4.1.1) and its suffix is *-dili*① or *-dili*② (identical to the imperfective Type I suffix, see 4.2.5).

The examples below establish the paradigm of this copula in the imperfective aspect. The plural suffix *-mo*, described below in parenthesis, is used only for 2PL and 3PL.

- (4.5) u-i-dili ①  
 1SG-COP2-IPFV  
 ‘I am becoming’
- (4.6) m-i-dili(-mo) ①  
 2-COP2-IPFV(-PL)  
 ‘you are becoming’
- (4.7) Ø-i-dili(-mo) ①  
 3/1PL.EXC-COP2-IPFV(-PL)  
 ‘he is / we are / they are becoming’
- (4.8) kid-i-dili ①  
 1PL.INC-COP2-IPFV  
 ‘we are becoming’

The past or future tenses of this copula are expressed via suffixes (see 4.2.5).

## 4.2 Verbal inflection in independent verbs

Verbal inflection<sup>37</sup> in Bakairi covers person distinctions, valency changes, aspect-mood distinctions, tense particles,<sup>38</sup> negation, and number.

### 4.2.1 Person inflection

The shape of the person inflection prefixes is partly dependent on the presence of tense or aspect markers, on phonological conditioning, and on whether the prefix refers to an agent or to an object. These three factors play an important role in the selection of which prefix is chosen for the verbal stem: aspect markers (different for past and imperfective morphological categories), the initial vowel of the stem (most underived verbal stems begin with either /-i/ or /-e/ and a few derived stems begin with /-a/, /-ə/, or /-o/), and valency (whether the agent or the object is indicated in the person prefix).

The examples below demonstrate a change of a person prefix according to aspect-mood for the same verbal stem *eka* ‘sit.’ For the formation of the imperfective, see 4.2.6 and the description of the generic past, see 4.2.5.2. Note that this stem *eka* means ‘sit’ as well as ‘ask for.’ They differ mainly in the imperative where *ekagə* means ‘please ask for it’ and *ikagə* means ‘please sit down.’

- (4.9) kə-eŃka-dili ②  
1SG-sit-IPFV  
‘I am sitting.’
- (4.10) s-eka-də ②  
1SG-sit-PST  
‘I sat.’

Below are two examples of a person prefix changing according to the initial vowel of Type II verbal stem as there are phonological variations.

- (4.11) Ø-iŃke-li ②  
3SG-shave-IPFV  
‘He is shaving’
- (4.12) ĩ-eŃnaʔu-li ②  
3SG-sit-IPFV  
‘He is closing’

Exclusively in first and second persons of Type I verbs, the person prefix indicates A-orientation or O-orientation.

<sup>37</sup> Some of the material here first appeared in Imasato and Faria (2014).

<sup>38</sup> Tense particles (see 4.2.7) are not technically part of verbal morphology.

- (4.13) kə-eṽʔe-dili ②  
 1A-stare-IPFV  
 ‘I am staring’
- (4.14) ie-(e)ʔe-dili ②  
 1O-stare-IPFV  
 ‘I am being stared’

All verbs show two sets of person prefixes: one for the past aspects and another for the imperfective morphology. Phonological variations are limited to the third person and the first person plural prefixes. Only person inflection prefixes for underived verbal stems are given below. These prefixes are used by both Type I and Type II indicating the agent or subject.

Note that verbal stems begin with either the vowel /e-/ and /i-/. When stems begin with the consonant /s-/, this consonant is dropped, and the person prefix set for /e-/ is used. For example, *sameli* ② ‘throw out’ → *mameli* ② ‘you are throwing out.’ Only one verb begins with a different vowel /a-/ *aiedili* ② ‘make’ or ‘build’ establishing an irregular formation, because *a-* remains unchanged and the person prefix set for stems beginning with /i-/ is inserted between *a-* and *-iedili*. For example, *aiedili* ‘make’ *aməiṽedili* ‘you are making.’

	Stems with /e-/	Stems with /i-/
1SG	kə-	kə-
2	mə-	mə-
3, 1PL. EXC	ĩ-	Ø-
1PL. INC	kid-	kid-

Below are the person prefixes for the past tense aspects.

	Stems with /e-/	Stems with /i-/
1SG	s-	s- (pronounced [ʃi])
2	m-	m-
3, 1PL. EXC	n-	n-
1PL. INC	ki-	kin-

Additionally, the person prefixes can indicate the object of a Type I verb through an O-orientation perspective.

	Stems with /e-/	Stems with /i-/
1O	ie-	u-
2O	i-	ə-

4.2.2 Detransitivizer -əd

Formed through prefixes, detransitivization shows that the action of the verb is directed back on the agent. Apart from this canonical use, past bodily functions are formed through detransitivization expressing dispossession as bodily functions were once part of the individual, e.g., ejaculated, urinated, defecated, spat. Finally, detransitivization is required in a few verbs, e.g., ‘walk oneself’ or ‘learn’ which is the reflexive of ‘teach.’

The set of prefixes used with phonological environments is given below. The plural suffix *-mo* is added only to 2PL or 3PL. The reciprocal and mutual sense of the 2PL and 3PL is devised with the reduplication of the plural suffix as *-mo-mo*.

TABLE 4.1: ALLOMORPHY OF THE DETRANSITIVIZER

PREFIXES-	STEMS BEGINNING WITH
ad- ① ②	a-
əd- ① ②	ə-
od-/ot-/oh- ① ②	o-
əz-/əs- ①, əʔ-/ə- ②	e-
əz-/əs- ①, əʔ-/ə- ②	i-
əz-/əs- ①, əʔ-/ə- ②	i-

A canonical example follows.

- (4.15) k-ad-atə-agi ①  
 1A-DETR-cut-IMM.PST  
 ‘I just cut myself.’

The past action of what is considered intrinsically possessed, e.g., past bodily functions, is formed through detransitivization. The prefix *təd-* (possibly formed with the coreferential *t-* and the detransitivizer *-əd*) is required only for the past. A pair of examples of a bodily function is given below. While the imperfective verb in the first example cannot be detransitivized, the verb in the second example must take the prefix *təd-*. It could be argued that this prefix is a generic formation for bodily functions, a euphemism.

- (4.16) kə-(e)ki-li ②  
 1A-defecate-IPFV  
 ‘I am defecating.’
- (4.17) təd-ə(e)ki-Ø                      urə ②  
 NPOS-defecate-PST                      1SG  
 ‘I defecated.’

One use of detransitivization is the idea of being ‘self-initiated, or doing it out of one’s own will.’ In the example below, the verb *akobə* ‘take someone for a walk’ is detransitivized as ‘go for a walk,’ possibly as a deponent verb.

- (4.18) *k-ad-akobə-dili* ②  
 1A-DETR-take.someone.for.a.walk-IPFV  
 ‘I am going for a walk.’

The following pair shows the formation of a new semantic sense through detransitivization.

- (4.19) *geografia*            *i-enome-də-dili*                            *əmə* ②  
 geography                1O-knowledge-VBZ2-IPFV                            2SG  
 ‘You are teaching me geography.’
- (4.20) *geografia*            *k-əs-enome-də-dili* ②  
 geography                1A-DETR-knowledge-VBZ2-IPFV  
 ‘I am studying geography.’

Below is an example of reciprocity formed with detransitivization and reduplication.

- (4.21) *n-əz-enənə-də-mo-mo* ①  
 3A-DETR-play-PST-PL-RECP  
 ‘They played with one another.’

#### 4.2.3 Causative transitivizer (I) *-nə*

Causative transitivization is a valency-increasing operation that indicates that the subject causes someone or something to do or be something or it causes a change in the state of a non-volitional event. The causative suffix *-nə* often comes after the verbal stem (or occasionally after the nominal root) and before an aspect-mood suffix. As such, all causative transitivizers become Type I.

The following pair shows this process.

- (4.22) *i-au-dili* ①  
 1S-stand.up-IPFV  
 ‘I stand up.’
- (4.23) *s-au-nə-dili*                            *urə* ①  
 3O-stand.up-TRVR-IPFV    1SG  
 ‘I am helping him stand up.’

Recall that, here and throughout,  $\tilde{V}$  represents a nasal segment that occurs when a verb in the imperfective aspect is inflected with an A-oriented person prefix (see 4.2.1). The nasal feature attached to the stem-initial vowel sequence spreads to target segments until it is blocked (see 2.5.4).

The next pair exemplifies the use of the causative transitivizer as a deadjectival verbalizer.

- (4.24) t-apek-e-ī ①  
 3R-white-ATTR-NZR1  
 ‘one that is white’
- (4.25) m-aŵpek-e-nə-dili ①  
 2A-white-ATTR-TRVR-IPFV  
 ‘You are whitening it.’

Below are examples in sentences.

- (4.26) mamāe iso akāuð i-enama-nə-dili ①  
 mother husband PTCL4 1O-raise-TRVR-IPFV  
 ‘My mother’s husband raised me a long time ago.’
- (4.27) ōnibus s-eparagu-nə-dai urə ②  
 bus 1A-stop-TRVR-IMM.PST 1SG  
 ‘I stopped the bus.’

Causativization often leads to derivations with new and unpredictable semantic meanings. Below, the derived meanings from ‘sitting’ are ‘saving money,’ ‘making a deposit’ and ‘putting it away,’ which are metaphorical fruitions of the meaning of the underived verb.

- (4.28) eka-dili ②  
 sit-IPFV  
 ‘sitting’
- (4.29) eka-nə-dili ②  
 sit-TRVR-IPFV  
 ‘saving money’

#### 4.2.4 Causative intransitivizer (II) -ho① or -o, -ʔo②

Causative intransitivization is a valency-decreasing operation that removes an agent of the active voice and causes the object to become the subject of the newly-shaped intransitive verb. The causative intransitivizer is formed by placing the suffix -ho, -hō① or -o, -ō, -ʔo, -ʔō② (see 3.2.3) between the verbal stem and the aspect-mood affixation. In this process, all causative intransitivizers become Type II.

The following pair shows this process.

- (4.30) i-əiŵtə-dili ②  
 3A-build-IPFV  
 ‘He is building it.’



- (4.31) əitə-o-li ②  
 build-CAUS-IPFV  
 ‘It is being built.’

The causee of the causative is relocated to where a transitive object would be: right before the verb. The causee is identifiable by the dative suffix *-ã* (see 3.1.5.10) meaning ‘by.’

- (4.32) ətə Paulo-ã Ø-əitə-o-li ②  
 house Paulo-DAT 3A-build-CAUS-IPFV  
 ‘A house is being built by Paulo.’

An additional example is given with a causee in a causative formation. Meira (personal communication) notes that the dative might be expected to co-occur with the detransitivizer prefix *-əd* ‘to cause to V self’ = ‘to be V-ed’ (*cf.* the French construction with ‘*se faire V*’ = ‘to make oneself V’ = ‘to be V-ed’). This co-occurrence creates a passive sense.

- (4.33) udodo Paulo-ã n-əd-i-o-raki ②  
 jaguar Paulo-DAT 3A-DETR-kill-CAUS-IMM.PST  
 ‘The jaguar was just killed by Paulo.’

#### 4.2.5 Tense

Bakairi does not mark present tense in the verb. There are three distinct morphological formations or three different tenses that refer to the past: immediate past, generic past, and remote past. The immediate and remote pasts refer to specific contexts, i.e., the immediate past refers to a past that occurred within the past day, whereas the remote past refers to a past that occurred or is believed to have occurred a long time ago. The generic past refers to any previous time, overlapping the immediate and remote pasts. There are also morphological modifications to a verb to designate the future.

##### 4.2.5.1 Immediate past (I) *-tai, -dai* and (II) *-aki, -agi*① or *-raki, -ragi*②

When indicating actions that occurred recently, Type I verbs take one of the immediate past allomorphs *-tai, -dai*, as shown below.

- (4.34) s-etə-dai ②  
 1S-sow-IMM.PST  
 ‘I just sowed it.’

And Type II verbs take one of the allomorphs *-aki, -agi*① or *-raki, -ragi*②.

- (4.35) s-ēi-raki ②  
 1S-eat-IMM.PST  
 ‘I just ate.’

#### 4.2.5.2 Generic past (I) -*də*, (II) - $\emptyset$

The generic past tense covers any past action that has happened as well as those that are believed to have happened.

Type I verbs take the suffix -*də* whereas Type II verbs take the suffix - $\emptyset$ . Below is a Type I verb.

- (4.36) s-etə-də ②  
 1S-sow-PST  
 ‘I sowed it.’

The following is an example of a Type II formation.

- (4.37) s-ēi- $\emptyset$  ②  
 1S-eat-PST  
 ‘I ate.’

#### 4.2.5.3 Remote past (I) -*mǎ*, (II) -*uǎ*

The remote past indicates circumstances that are believed to have happened in a distant past. A Type I verb takes the suffix -*ǎmǎ*.

- (4.38) s-etə-*ǎmǎ* ②  
 1S-sow-REM.PST  
 ‘I sowed it a long time ago.’

A Type II verb takes the suffix -*uǎ* in the remote past.

- (4.39) s-ēi-*uǎ* ②  
 1S-eat-REM.PST  
 ‘I ate a long time ago.’

#### 4.2.5.4 Future -*se*, -*ze* ① or -*e*, -*ʔe* ②

The future tense refers to an action that has not taken place yet but is expected to happen. A morphological future is obtained with the addition of the suffixation -*se*, -*ze* ① or -*e*, -*ʔe* ②. The future tense of a given verb or the change-of-state copula ② is not inflected for person leading to a simple morphology: verbal stem + suffix. A free personal pronoun indicates the subject or agent of the verb, or it is understood pragmatically.

The following are some examples of the future tense in sentence examples.

- (4.40) siarə eka-e əmə? ②  
 here sit-FUT 2SG  
 ‘Will you sit here?’
- (4.41) siki-ze auəkə iuiələ-lə ①  
 sleep-FUT AN.MED soon-EMPH  
 ‘He is going to sleep soon.’
- (4.42) idə-ʔe əmə urə agə ②  
 go-FUT 2SG 1SG COM  
 ‘You will go with me.’

#### 4.2.6 Aspect: Imperfective (I) -dili① or -dili② and (II) -li① or -li②

Being the most common verbal affix in Bakairi, the imperfective ending refers to an incomplete ongoing action in the indicative mood. It expresses an event or a state with respect to its internal structure, instead of expressing it as a simple whole.

- (a) A Type I imperfective stem takes the suffix *-dili*① or *-dili*②  
 (b) A Type II imperfective stem takes the suffix *-li*① or *-li*②.

In principle, all underived Type I verbs are transitive verbs, and all underived Type II verbs are intransitive. However, morphologically-complex verbs exhibit a less predictable valency, i.e., reduction and augmentation of syllables seem to affect the shape of the imperfective suffix.

The following examples show underived Type I formations.

- (4.43) kə-iaṼtə-dili [kəʃjātədili] ②  
 1A-set.up-IPFV  
 ‘I am setting it up.’
- (4.44) kə-iṼdələ-dili [kəʃdələdili] ②  
 1A-simmer-IPFV  
 ‘I am simmering it.’

Several Type I verbs have allomorphs with *-kili*①, *-kili*②. They are *aiēkili* ‘cook in a pot,’ *ēkili* ‘see,’ *idakili* ‘listen,’ *iuākili* ‘believe,’ and *ītakili* ‘fear.’ The following are examples of underived Type II formations.

- (4.45) i-auṼku-li [jāūkuli] ①  
 3A-catch-IPFV  
 ‘He is catching someone.’
- (4.46) i-eṼti-li [jētīli] ①  
 3A-take-IPFV  
 ‘He is taking it.’

Below are some derived imperfective verb stems which become Type II. Note that detransitivised verbs, intransitive verbs, and quotative verbs are not nasalized in the imperfective.

- (4.47) mǝ-enetǝ-ge-li [mǝenetǝyeli] ②  
 2S-decrease-VZR1-IPFV  
 ‘You are decreasing.’
- (4.48) kǝ-enukibǝ-ge-li [kǝenukibǝyeli] ②  
 1S-fan-VZR1-IPFV  
 ‘I am fanning.’
- (4.49) u-ge-li [uyeli] ②  
 1S-say-IPFV  
 ‘I am saying.’

#### 4.2.7 Tense particles

Four tense particles express notions of tense in an imperfective or copula-less sentence. The first two refer to a recent past, the third one refers to a generic past, and the fourth, the remote past. These tense particles or function words cannot be inflected. They often come in a medial or final position for imperfective and copula-less clauses.

##### 4.2.7.1 Immediate past particle *ērǎ*① or *eǎ*②

The immediate past particle *ērǎ*① or *eǎ*② expresses the immediate occurrence of ‘just’ or ‘right now.’

- (4.50) u-(i)ʔu-ru-uǝgǝ-lǝ eǎ k-ǝe-uǝli ②  
 1-foot-POSS-LOC4-EMPH PTCL1 1A-come-IPFV  
 ‘I just came on foot.’
- (4.51) ǝdi-ǎ eǎ i-dǝ-li? ②  
 where-DAT PTCL1 3S-go-IPFV  
 ‘Where was he just going?’

It is used to denote a sense of a past copula.

- (4.52) nigo Ø-eti-dǝ eǎ urǝ ②  
 grandmother 3-house-LOC3 PTCL1 1SG  
 ‘I was in my grandmother’s house.’

In the following example, the subject and verb are known pragmatically.

- (4.53) si-unǝ-ri eǎ urǝ agǝ ②  
 3-story-POSS PTCL1 1SG with  
 ‘He was telling me his story.’

The immediate past particle comes next to the core constituents as well as peripheral constituents, as given below.

- (4.54) setagoa-zi ērã Ø-egatu-dili t-odu-Ø agə ①  
 corner-LOC2 PTCL1 3A-run-IPFV 3R-body-POSS with  
 ‘It was running towards the corner with the body (of a mouse).’

In Bakairi, a sentence containing an interrogative pronoun nominalizes its verb. The particle *ērã* ① or *eã* ② imparts the past meaning of that nominalization.

- (4.55) ãgi age-ĩ eã? ②  
 who speak-NZR4 PTCL1  
 ‘Who was speaking?’
- (4.56) ədaũlo eã eti s-aĩ-to? ②  
 how PTCL1 clothing 3S-arrive-NZR3  
 ‘How was he clad upon his arrival?’

#### 4.2.7.2 Recent past particle *keãkə* ① or *kiãkə* ②

The recent past particle *keãkə* ① or *kiãkə* ② is used for occurrences within the past day or two.

- (4.57) kopaeləgə keãkə sina tagĩre uataə  
 yesterday PTCL2 1PL.EXC hunt when  
 i-də-li eme-dili-uəgə, əwĩduani-pi-ri-ẽ ①  
 3S-go-IPFV rise-IPFV-LOC4, food-PST-POSS-ATTR  
 ‘Early yesterday morning, we went hunting after eating (breakfast).’
- (4.58) tələ keãkə Ø-əi-dili-mo ①  
 3DEICTIC.DISTAL PTCL2 3S-dance-IPFV-PL  
 ‘They were dancing there.’
- (4.59) ige-li agə kiãkə tə-(e)uənu-ge ②  
 die-IPFV COM PTCL2 3R-ache-INSTR  
 ‘(I) almost died having caught that disease.’

#### 4.2.7.3 Generic past particle *ani* ① or *kinani* ②

The generic past tense particle *ani* ① or *kinani* ② is used by a speaker who has experienced firsthand the events. Two examples are given below.

- (4.60) u-də-li ani i-me-ri agə paru-ã ①  
 1S-go-IPFV PTCL3 1-child-POSS COM river-DAT  
 ‘Some time ago, I went to the river with my son.’
- (4.61) u-aduĩ Ø-eti Ø-əd-(ad)u-ge-li  
 1-nephew 3-house 3A-DETR-burn-VBZ2-IPFV

ani      əti      ume ①  
 PTCL3 party season  
 ‘My nephew’s house got burned down during the festive season.’

#### 4.2.7.4 Non-visual past tense particle *akəuə*

The past-tense particle *akəuə* is used for hearsay events or non-visual circumstances that are believed to have happened in the past (e.g., mythological or Biblical stories). Some examples are given below.

- (4.62) s-agu-ho-ē=mi                      akəuə    kurə-ē                      əgido ①  
 3O-begin-NZR3-ATTR=NVSL      PTCL4    people-ATTR      animals  
 ‘In the beginning, a long time ago, the animals were just like people.’
- (4.63) udodo əe-uili=mi                      akəuə ①  
 jaguar come-IPFV=NVSL                      PTCL4  
 ‘A long time ago, the jaguar came.’
- (4.64) təz-itai-ze                      lelə=mi                      akəuə-akəuə ①  
 NPOS-speak-ABTT                      really=NVSL                      PTCL4- PTCL4  
 ‘A long, long time ago, they could speak.’

#### 4.2.8 Mood

Mood is the use of verbal inflections that allow speakers to express their attitude toward what they are saying (e.g., a statement of a fact, a desire, or a command). This section on the Bakairi mood investigates desiderative, imperative, venitive, prohibitive, cohortative, jussive, abilitative, and purposive morphological formations. Modal suffixes are not mutually exclusive. Aspect suffixes primarily come next to underived verbal stems, followed by one or two mood suffixes. But note that verbal derivation adds a suffix between the stem and the aspect suffix (see 4.3), and the same can be said about inflected verbs with causative suffixes (see 4.2.3 and 4.2.4). Venitives, prohibitives, and cohortatives are expected in word-final positions.

##### 4.2.8.1 Desiderative *-dise*, *-dize* ① or *-die*, *-di?e* ②

All verbs can take the suffix *-dise*, *-dize* ① or *-die*, *-di?e* ②, which indicates the speaker’s desire to fulfill the act expressed in the verb:

- (4.65) kə-ē-di?e ②  
 1A-see-DESI  
 ‘I would like to see it.’
- (4.66) t-iki-di?e                      auəkə                      iramudo ②  
 3R-sleep-DESI    AN.MED                      child  
 ‘That child wants to sleep.’

The negative is formed with the suffix *-ba*.

- (4.67) i-(i)huge-dize-ba ①  
 1S-fall-DESI-NEG  
 ‘I don’t want to fall.’

In desiderative constructions, the past is formed with a particle preceding the verb.

- (4.68) iamime-ō      ləgələ    keākə    ti-ē-dise-ba      məkə ①  
 child-PL          neither   PTCL2   3R-see-DESI-NEG      AN.DIST  
 ‘The children didn’t like to see him either.’

#### 4.2.8.2 Imperative -kə, -gə

The imperative is employed for commands or requests. The imperative suffix -kə, -gə placed immediately after the underived verbal stem indicates that it is the imperative directed towards a single person.

- (4.69) au-kə ①  
 stand.up-IMP  
 ‘Stand up!’
- (4.70) e-gə ①  
 look-IMP  
 ‘Look!’

To direct an order to a collective or more than one person, the affix -taũ, -daũ is added immediately after the underived verbal stem, followed by -gə. This collective suffix differs from a cohortative since in the cohortative the speaker is included (see 4.2.8.5).

- (4.71) ai-taũ-gə ①  
 make-COLL-IMP  
 ‘Make it, all of you!’
- (4.72) s-əke-daũ-gə ①  
 3O-drag-COLL-IMP  
 ‘Drag it, all of you!’

The following are examples of the imperative of the change-of-state copula -i- ‘become’ in copula constructions.

- (4.73) ti-(i)pi-ze      i-kə ①  
 3R-farm-ABTT    COP-IMP  
 ‘Do the weeding.’
- (4.74) t-əs-eane-ze-ba      i-kə ①  
 3R-DETR-fear-ATTR-NEG COP-IMP  
 ‘Be(come) fearless.’

- (4.75) ə-(e)di-hu-ge-ze            i-kə ①  
 2-jaw-hair-REV-PURP        COP-IMP  
 ‘Do shave off your beard.’

As the imperative of the change-of-state copula *-i-* cannot combine with a negative suffix, negation is expressed by negating the preceding word.

- (4.76) itu-ge-ze-ba                    i-kə ①  
 skin-REV-PURP-NEG            COP-IMP  
 ‘Do not remove the skin.’
- (4.77) tad-əẽ-ke-ze-ba                i-kə ①  
 NPOS-loud-speak-ATTR-NEG    COP-IMP  
 ‘Do not shout!’

#### 4.2.8.3 Venitive *-rə*

A venitive with *-rə* indicates that the person to whom the request is made should ‘come and do something.’ It is formed with a compound of *-gə* ‘imperative’ and the venitive suffix *-rə* ‘to here.’

- (4.78) ai-tõ-daũ-gə-rə ①  
 make-ITE-PL-IMP-VEN  
 ‘Come all of you and make it again!’
- (4.79) e-dõ-daũ-gə-rə<sup>39</sup> ①  
 look-ITE-PL-IMP-VEN  
 ‘Come all of you and look at it again!’
- (4.80) s-atə-dõ-daũ-gə-rə ①  
 3O-cut-ITE-PL-IMP-VEN  
 ‘Come all of you and cut it one more time.’

#### 4.2.8.4 Prohibitive *-də*

The prohibitive suffix *-də*, having no voiceless variant, expresses that a verbal action should not be performed. Combining affixes with the prohibitive distinguishes formations: prohibitive for one, for all, with iteration, with a venitive quality, and a copular prohibitive with the verb *ikə* ‘do.’ Here are some examples of them.

First, an example of a prohibitive directed toward an individual.

- (4.81) au-də ①  
 stand.up-PRHB  
 ‘Do not stand up.’

<sup>39</sup> *edõdaiũgərə* ‘come, you all, and look at it again’ is also pronounced as *etõdaiũgərə* by some informants.



Next is a collective prohibitive.

- (4.82) au-taũ-də ①  
 stand.up-COLL-PRHB  
 ‘Do not stand up, you all.’

An iterative, collective prohibitive is provided below.

- (4.83) au-tō-daũ-də ①  
 stand.up-ITE-COLL-IMP  
 ‘Do not stand up again, you all.’

A transitive object can be inflected at the beginning of the prohibitive verb as it normally would in the affirmative. This type of prefixation is seen in the following examples.

- (4.84) ki-eili-də ①  
 1PL.O-laugh-PRHB  
 ‘Do not laugh at us!’
- (4.85) kəd-iə-də ①  
 1SG.O-bite-PRHB  
 ‘Do not eat me!’

#### 4.2.8.5 Cohortative (I) *-ne* or (II) *-Ũre*

Cohortatives signal mutual encouragement for the speaker and the addressee(s). The Bakairi cohortatives (‘let us do’) are formed with the suffix *-ne* for Type I verbs, and the suffix *-Ũre* for Type II. Some examples of the suffix *-ne* follow. Although the free translations may seem misleading as they use intransitive verbs, they are grammatical transitive in Bakairi.

- (4.86) ki-egatu-ne ①  
 1PL-run-HORT  
 ‘Let us run.’
- (4.87) ka-ika-ne ①  
 1PL-sit-HORT  
 ‘Let us sit.’

Some examples of *-Ũre* follow.

- (4.88) ki-eni-Ũre ①  
 1PL-drink-HORT  
 ‘Let us drink.’

- (4.89) kiz-ipi-Ṽre ①  
 1PL-till-HORT  
 ‘Let us plow.’

The cohortative (alternatively this refers to a homophonous and independent particle) can soften a negative imperative, with a role comparable to ‘please.’

- (4.90) t-æ-to-ẽ-ba-ne                      i-kə                      siarə ②  
 3R-come-NZR3-BEN-NEG-HORT    COP-IMP                      here  
 ‘Do not come here anymore.’
- (4.91) t-ətə-õ-ã-ba-ne                      i-kə                      mərərə ②  
 3R-go-ITE-DAT-NEG-HORT            COP-IMP                      DIST  
 ‘Do not go there anymore.’

#### 4.2.8.6 Jussive *-si*, *-zi*① or *-i*, *-ʔi*②

Jussive or permissive forms, such as letting someone do something, consist of an inflected verb followed by the jussive suffix *-si*, *-zi*① or *-i*, *-ʔi*②. Note that the verbal jussive is homophonous with the nominal locative (see 3.1.5.1). Examples are given below.

- (4.92) u-də-ʔi ②  
 1S-go-JUS  
 ‘Let me go.’
- (4.93) s-iutu-e                      u-də-ʔi                      uao                      mərərə ②  
 3O-find.out-PURP                      1S-go-JUS                      POL.PTC                      DIST  
 ‘Now, let me go way over there in order to find it out.’
- (4.94) u-i-ʔi ②  
 1S-bathe-JUS  
 ‘Let me bathe.’
- (4.95) s-emə-ʔi ②  
 3O-put.on-JUS  
 ‘Let me put it on.’

#### 4.2.8.7 Abilitative *t-V-se*, *t-V-ze*① or *t-V-e*, *t-V-ʔe*②

An abilitative verb expresses a potential action or the ability to fulfill an action. The abilitative mood is formed with the circumfix *t-V-se*, *t-V-ze*① or *t-V-e*, *t-V-ʔe*②. The allomorphic variation between *t-*, *ti-*, *ti-*, and *tə-* seen in the examples in this section have been previously described (see 2.5.5). Verbs prefixed with the abilitative circumfix cannot contain a person prefix. Instead, an unbound pronoun is used.

The following example of the abilitative is formed with the allomorph *t-V-se*①.

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- (4.96) t-igə-se            urə ①  
 3R-sing-ABTT    1SG  
 ‘I can sing.’

Below are examples of the allomorph *t-V-ze* ① or *t-V-ʔe* ②.

- (4.97) ti-goke-ze            urə ①  
 3R-wash-ABTT    1SG  
 ‘I can clean it.’
- (4.98) t-ohō-ge-ze            auəkə ①  
 3R-lay-INSTR-ABTT    AN.MED  
 ‘It can lay eggs.’
- (4.99) tə-(e)ga-ʔe            məkə            kauaru ②  
 3R-run-ABTT    AN.DIST            horse  
 ‘That horse can run.’

Below is an example of a question and an answer using an abilitative verb.

- (4.100) *leidi*    tə-(e)ni-ʔe            əməʔ    ēʔē    tə-(e)ni-ʔe ②  
 milk    3R-drink-ABTT    2SG    yes,    3R-drink-ABTT  
 ‘Can you drink milk? Yes, I can.’

The negation of the abilitative is obtained with a nominalization of the verb and a subsequent adverbialization, which is then followed by a verb with negative inflection. This is exemplified in the pair below. The first example shows the negated verb, whereas the second example shows nominalization and subsequent adverbialization of that verb.

- (4.101) n-ad-akobə-bəra ②  
 3A-DETR-take.someone.for.a.walk-NEG  
 ‘He does not walk.’
- (4.102) t-ad-akobə-do-ē            n-udu-ba ②  
 3R-DETR-take.someone.for.a.walk-NZR3-ATTR    3A-know-NEG  
 ‘He cannot walk.’

#### 4.2.8.8 Purposive with *V-se/-ze* ① or *V-e/-ʔe* ②

The purposive mood represents a purpose of a motion verb, which appears next to a motion verb, such as ‘go in order to do, come in order to do;’ and it is formed with the suffix *V-se/-ze* ① or *V-e/-ʔe* ②.

Below are two examples of purposive constructions.

- (4.103) etə-ze                      u-də-li ①  
 cast-PURP                      1S-go-IPFV  
 ‘I go in order to plant it.’
- (4.104) eni-ze                      u-də-li ①  
 drink-PURP                      1S-go-IPFV  
 ‘I go in order to drink.’

Additional inflectional and derivational affixes can be added between the verbal stem and the purposive suffix.

- (4.105) s-auə-tō-ze                      u-də-li ①  
 3O-hold-ITE-PURP                      1S-go-IPFV  
 ‘I go in order to hold it again.’
- (4.106) s-au-nə-tō-ze                      u-də-li ①  
 3O-stand.up-TRVR-ITE-PURP                      1S-go-IPFV  
 ‘I go in order to raise it again.’
- (4.107) od-opə-dō-ze                      u-də-li ①  
 DETR-return-ITE-PURP                      1S-go-IPFV  
 ‘I go in order to return it again.’

A verb inflected with the purposive suffix *-se*, *-ze* may co-occur with a motion verb as seen in the examples below. Note that the motion verb *əe* ‘come’ takes transitive person inflection as well as Type I suffixation.

- (4.108) pīrəu    e-se                      k-əe-uili ①  
 arrow    fetch-PURP                      1A-come-IPFV  
 ‘I have come in order to fetch arrows.’
- (4.109) əs-euani-ze                      k-əe-uili ①  
 DETR-work-PURP                      1A-come-IPFV  
 ‘I have come in order to work.’
- (4.110) paru                      eni-ze                      k-əe-uili ①  
 water/river                      drink-PURP                      1A-come-IPFV  
 ‘I have come in order to drink water.’

#### 4.2.9 Negative (I) *-pīra*, *-bīra*① or *-pəra*, *-bəra*② and (II) *-pa*, *-ba*

Bakairi uses two different suffixes to express negation:<sup>40</sup> Type I verbs are negated with the suffix *-pīra*, *-bīra*① or *-pəra*, *-bəra*②, while Type II verbs are negated with the suffix *-pa*, *-ba*.

The following examples demonstrate the negation of Type I verbs.

<sup>40</sup> A more comprehensive study of expressions of negation in Bakairi is found in Faria (2016).

- (4.111) n-ad-akobə-bəra ②  
 3A-DETR-take.O.for.a.walk-NEG  
 ‘He does not walk.’
- (4.112) n-iga-pəra ②  
 3A-create-NEG  
 ‘He didn’t create anything.’

The following pair demonstrates the negation of Type II verbs.

- (4.113) n-iueni-ba ②  
 3S-paint-NEG  
 ‘He didn’t paint.’
- (4.114) n-iə-pa ②  
 3S-kill-NEG  
 ‘He didn’t kill.’

When negation is associated with a venitive sense such as in the verbs meaning ‘come, arrive, return, and approach here,’ the vowel in the last syllable of the negative suffix changes from *-ra* to *-ri*① or *-rə*②, as in:

- (a) {-bira/-pira ①} → {-biri/-piri ①}
- (b) {-bəra/-pəra ②} → {-bərə/-pərə ②}

The following examples associate negation in the verb with a venitive movement. Although *əe* ‘come’ and *aĩ* ‘arrive’ are intrinsically *intransitive* verbs (Type II), they take *transitive* negative suffixes (Type I). These examples demonstrate this point.

- (4.115) n-əe-pərə Ø-a-uəli ②  
 3S-come-NEG 3S-COP1-IPFV  
 ‘He is not going to come.’
- (4.116) n-aĩ-pərə ②  
 3S-arrive-NEG  
 ‘He did not arrive.’

Negation can be intensified with the frustrative particle *uəne*.

- (4.117) k-əd-ukagə-bira uəne a-ze ①  
 1A-DETR-break-NEG FRUST COP-PURP  
 ‘It was not my intention to break anything.’

The following example makes use of negation.

- (4.118) əmə      kə-ē-pəra      urə-ro      uataə,      əuədiiāli  
 2SG      1A-see-NEG      1SG-INTS      if      delivery  
 i-ʔe      ĩ-gəʔe-dibə      kə-(i)uṼdu-li ②  
 2-wife      3A-call-PTC      1S-give-IPFV  
 ‘If it is improbable that I’ll see you, I will give the delivery to your wife.’

#### 4.2.10 Plural *-mo*

The verbal suffix *-mo* can be added at the right edge of a verb to represent plurality. This suffix is only used with the 2PL and 3PL.

- (4.119) mə-eṼditə-dili-mo ②  
 2PL.A-host-IPFV-PL  
 ‘you are hosting’  
 (4.120) n-enomi-dai-mo ②  
 3PL.A-circle-IMM.PST-PL  
 ‘they circled’

In imperatives (see 4.2.8.2), a collective plural is formed with *-taiĩ*, *-daiĩ*.

### 4.3 Verbal derivation

This section dedicates two subcategories to verbal derivation or verbalization of nouns to Type I and Type II verbs. Three additional subcategories describe derivational affixes, which change the meaning of the base but leave the category unchanged. They are iterative, reversative, and completive.

#### 4.3.1 Denominal intransitive verbalizer (II) *-ke*, *-ge*

The suffix *-ke*, *-ge* has two morphological functions: (a) a derivational one by turning nouns into intransitive verbs, i.e., it is a denominal verbalizer, described below; and (b) also a derivational one that does not change the part of speech, but changes the meaning by expressing the contrary sense of a given verb (see 4.3.4). It seems to have a consistent semantics: the derived verb subtracts the original noun from it.

Three pairs of examples below demonstrate denominal derivations.

- (4.121) euni ②  
 smoke(*n.*)  
 ‘smoke’  
 (4.122) Ø-eunu-ke-li ②  
 3A-smoke(*n.*)-VZR1-IPFV  
 ‘He is creating smoke.’

- (4.123) ekərinu ②  
curl (*n.*)  
'a curl'
- (4.124) Ø-eŨkərinu-ge-li ②  
3A-bent-VZR1-IPFV  
'He is straightening it.'
- (4.125) sari ②  
leaf (*n.*)  
'a leaf'
- (4.126) Ø-sari-ke-li ②  
3A-leaf-VZR1-IPFV  
'He is removing the leaves.'

#### 4.3.2 Denominal transitive verbalizer (I) -də

Nouns can also be verbalized with the suffix *-də*. The suffix applies to one lexical category (i.e., nouns) changing them into another category (i.e., verbs). It seems to have a consistent semantics: the derived verb adds or provides the original noun to it.

- (4.127) n-epara-də-dili ①  
3-stick-VBZ2-IPFV  
'He is sticking it vertically'
- (4.128) n-eta-də-dili ①  
3-cage-VBZ2-IPFV  
'He is locking it.'
- (4.129) *pape-ge* i-eŨti-də-dili-ro ①  
paper-INSTR 3A-clothing-VBZ2-IPFV-INTS  
'He sure is going to cover it with paper.'

#### 4.3.3 Iterative (I) -tō, -dō and (II) -ō

Iteration, or frequentative, expresses frequent repetition or intention of action. It is formed with a suffix next to the verbal stem. The iterative suffix for Type I verbs is *-tō*, *-dō* and for Type II is *-ō*. The Type I pair below demonstrates how it is formed.

- (4.130) s-aūlə-tai ②  
1A-grill-IMM.PST  
'I grilled it.'
- (4.131) s-aūlə-tō-dai ②  
1A-grill-ITE-IMM.PST  
'I grilled it again.'

With the incorporation of the iterative suffix, a Type II verb becomes Type I as it is observed in the pair below.

- (4.132) kə-iṼpi-li ①  
 1A-farm-IPFV  
 ‘I am farming.’
- (4.133) kə-iṼpi-ḏ-dili ①  
 1A-farm-ITE-IPFV  
 ‘I am farming again and again.’

The iterative suffix can co-occur with the imperative suffix (see 4.2.8.2).

- (4.134) au-tḏ-daũ-gə ①  
 stand.up-ITE-PL-IMP  
 ‘Stand up again, all of you!’

It can also co-occur in purpose-of-motion constructions (see 4.2.8.8).

- (4.135) s-auə-tḏ-ze                      u-də-li ①  
 3O-hold-ITE-PURP                      1S-go-IPFV  
 ‘I am going in order to hold it again.’

#### 4.3.4 Reversative (II) *-ke, -ge*

The attachment of the reversative suffix *-ke, -ge* to a verb leads to its semantic antonym (e.g., open → close, put on → take off). Any verb derived with the reversative suffix becomes Type II. Note that the reversative suffix is homophonous with the denominal verbalizer (see 4.3.1).

The following examples demonstrate this basic formation and the change in meaning.

- (4.136) kə-ioṼli-li ②  
 1A-inflate-IPFV  
 ‘I am inflating’
- (4.137) kə-ioṼli-ke-li ②  
 1A-inflate-REV-IPFV  
 ‘I am deflating’

The examples below show how a Type I becomes Type II after the annexation of the suffix.

- (4.138) mə-eṼtə-dili ②  
 2A-cast-IPFV  
 ‘You are casting.’
- (4.139) mə-eṼtə-ge-li ②  
 2A-cast-REV-IPFV  
 ‘You are harvesting.’



### 4.3.5 Completive *-uə*

The completive suffix *-uə* is added to verbs to signify the completeness or fullness of action. In some contexts, it is translated as ‘well’ and in others as ‘all.’

Some verbs require syllable reduction in order to accommodate the completive suffix. In the following contrastive pair, the syllable /gə/ is deleted from the stem, while the completive *-uə* is added before the aspect-mood suffix. After affixation, all verbs with the completive affix become Type I.

(4.140) k-uṽkagə<sup>41</sup>-dili ②

1A-break-IPFV

‘I am breaking it’

(4.141) k-uṽka-uə-dili ②

1A-break-CPLT-IPFV

‘I am breaking it all’

The attachment of the completive transforms a Type II into a Type I verb, as in the example of *iudu* ‘give.’

(4.142) kə-(i)uṽdu-li ①

1A-give-IPFV

‘I am giving it.’

(4.143) kə-(i)uṽdu-uə-dili ①

1A-give-CPLT-IPFV

‘I am giving it all.’

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<sup>41</sup> One might posit that the syllable /gə/ is an affix indicating singularity, but there is no other occurrence in the corpus.

## Chapter 5 Syntax

Bakairi syntax is, for the most part, similar to the syntax of other Carib languages. The main transitive clause has a fairly rigid OV sequence. Adverbial and postpositional phrases are placed peripherally more flexibly. Paratactic constructions are a common feature of Carib languages. The juxtaposition of clauses is the most attested pattern, in which nominalizations, adverbializations, and postpositions replace subordinate clause constructions (Derbyshire 1999: 54-60).

This chapter is divided into the following sections: clausal constituents and constituent order, morphosyntactic alignments, clause-level syntax, sentence types, and sentence elements.

### 5.1 Clausal constituents and constituent order

Word order and linearization of major clausal constituents are discussed here as constituent order. The idea of a basic Bakairi word order refers to the alignment of the clausal constituents ‘in stylistically neutral, independent, indicative clauses with full noun phrase participants, where the subject is definite, agentive, and human, the object is a definite semantic patient, and the verb represents an action, not a state or an event’ (Siewierska 1999: 412). With this in mind, 171 clauses were collected to establish a basic constituent order in Bakairi.

There are four main variations of the clausal constituents: OVA, AOV, VS, and SV. Four observations can be said about them: (a) the OV order is always expected, i.e., the overt transitive object comes before the verb; (b) occurring in discourse-medial position and referring back to the previous clause(s), AOV or SV is an unmarked sequence unless when it is used for emphasis, contrast, or textual continuity;<sup>42</sup> (c) a constraint can be established that pronouns used as S or A must come after verbs and no more than one constituent precedes the main predication (V or OV); and (d) copulative verbs are expected in a clause-final position.

The following chart shows the result of the syntactic analysis of these 171 clauses. Note that constituents are treated here in terms of Dixon’s primitives: A, S, O, and V, where A stands for a transitive agent, S for an intransitive subject, O for the direct object, and V for the verb.<sup>43</sup>

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<sup>42</sup> Some of the material described in this section first appeared in Faria (2014).

<sup>43</sup> To keep the text homogeneous and simple, formulations—such as A, P, S, and V by Comrie (1981: 81-96) or Creissels’ constituents S-O-V-X, where X stands for the oblique argument (2005: 1-15)—are not used in this grammar.

Table 5.1 Constituent Order in Transitive, Intransitive, and Copulative Clauses

Transitive (58)	Total	Remarks
OV	29	A is only inflected
AOV	13	A is a noun or NP
AOV	0	A is a pronoun
OVA	2	A is a noun or NP
OVA	14	A is a pronoun
Intransitive (90)		
V	15	S is only inflected
SV	35	S is a noun or NP
SV	0	S is a pronoun
VS	26	S is a noun or NP
VS	14	S is a pronoun
Copulative (23)		
Clause-final	23	

This section will look into intransitive, transitive, and stative clauses, followed by a deverbal adjective, existential, and ‘purpose-of-motion’ clauses. The last subsection will view the reduction and omission of constituents.

### 5.1.1 Intransitive clauses

Intransitive clauses are typically formed with both constituents overtly expressed. The subject can be formed with a noun, noun phrase, or a pronoun, which can come before or after the intransitive verb. This is statistically observed in the data, and both alignments (VS and SV) can represent unmarked sequences.

- (5.1)    *tə-(e)ga-ʔe*    *məkə*            *kauaru* ②  
           3R-run-ABTT    AN.DIST            horse  
           ‘That horse can run.’

Subject fronting of a noun or a noun phrase in intransitive clauses is expected when used for emphasis, correction, or focus. Otherwise, an SV sequence can be equally expressed as a VS sequence without alteration to its meaning.

- (5.2)    *siogo*    *s-iki-li* ②  
           father    3S-sleep-IPFV  
           ‘My father is sleeping.’

If the subject is a demonstrative or a personal pronoun, the stylistic default order is VS.

- (5.3) siarə eka-e əmə ②  
 here sit-FUT 2SG  
 ‘You are going to sit here.’

Plausibly, the order with a detransitivized verb (see 4.2.2) is identical to that of an intransitive clause (see 5.1.1). The example below illustrates such a formation.

- (5.4) Ø-əd-əpi-ge-li auəkə ①  
 3A-DETR-heat-VBZ2-IPFV AN.MED  
 ‘He is getting burned.’

The exclusive first-person plural pronoun *sina*① or *ina*② ‘we’ is expected next to its verb in a prefixed position.<sup>44</sup> Therefore, *sina*① or *ina*② is an exception of the obligatory ordering as VS for pronouns.

In sum, the constituent order of intransitive clauses with noun phrases and pronouns is:

VS	(when S is an NP or a pronoun, except <i>sina</i> ① or <i>ina</i> ②)
SV	(when S is an NP or the pronoun <i>sina</i> ① or <i>ina</i> ②)

Finally, when subject fronting with a pronoun or demonstrative is necessary for emphasis, correction, or focus, the subject is often accompanied by a focus element (see 5.6) expressing that the discourse context is special. In the example below, the emphatic *-lə* comes next to the personal pronoun, because the consultant rectifies an incorrect assertion.

- (5.5) urə-lə ināri Ø-aui-pira ①  
 1SG-EMPH always 3O-hunt-NEG  
 ‘It is I who does not hunt anymore.’

### 5.1.2 Transitive clauses

An overt object must precede the transitive verb as in the sequence: OV. Two transitive orders are attested: OVA and AOV. When the agent is expressed through a demonstrative or personal pronoun, the agent often follows the verb: OVA. Occasionally, it precedes the object for emphasis, contrast, or textual continuity. When the agent is expressed through a noun or a noun phrase, OVA and AOV are possible sequences. Finally, the overt occurrence of all constituents of the OVA or AOV sequence is more common in discourse-initial contexts.

The OVA order is demonstrated below.

<sup>44</sup> Meira (personal communication) mentions that this phenomenon is also seen in Apalaí, another Cariban language. In Apalaí, the exclusive first person plural pronoun /ina/ together with the third person inflection /n-/ becomes a preverbal prefix /inan-/, never occurring after the verb.

- (5.6) bola i-a<sup>ĩ</sup>me-li-mo məkə-remo ②  
 ball 3S-play-IPFV-PL AN.DIST-PL  
 ‘They are playing ball.’
- (5.7) podo m-ə-də əmə ②  
 meat 2A-eat.meat-PST 2SG  
 ‘You ate meat.’

The AOV order is demonstrated below.

- (5.8) ərigə pĩdu n-ə-də ②  
 hawk chick 3A-eat.meat-PST  
 ‘The hawk ate the chick.’

If the object is a body part (highlighted in the examples below), that noun must be incorporated into the verb, and verbal prefixes will be added before the incorporated noun.

- (5.9) k-əz-**ita**-goge-li, əz-**ita**-goge-ĩ-bi-ri-ẽ  
 1A-DETR-mouth-wash-IPFV DETR-mouth-wash-NZR4-PST-POSS-ATTR
- ẽra aroc=agə a-i<sup>ĩ</sup>e-dili ①  
 PTCL1 rice=COM 3O-make-IPFV  
 ‘I washed my mouth. Once the mouth was washed, I soon cooked the rice.’
- (5.10) *sabonete*-ge k-**ãga**-koge-Ø uarə ①  
 body.soap-INSTR 1A-head-wash-PST and  
 ‘And I washed my head with soap.’

### 5.1.3 Stative clauses

A stative clause in Bakairi consists of a verb or an adverb expressing a non-dynamic action. The stative verbs in Bakairi are (a) verbs of perception and sensation (*ẽ* ‘see,’ *ida* ‘hear,’ *ekeĩ* ‘feel’), (b) stance verbs (*unə* ‘stand,’ *eka* ‘sit’), and (c) mental attitude (*utu* ‘know/understand,’ *iuĩ* ‘believe’). Notions of relations as in ‘resemble’ and ‘look like’ do not establish stative clauses in Bakairi because they are expressed through the similitive particle *ara* ~ *arə* ‘like’ or through the attributive circumfix *t-N-e/ẽ*, *t-N-se/-ze* (see 3.7).

The example below of a stative clause observes the OVA sequence.

- (5.11) nunə s-e-də urə ②  
 moon 1A-see-PST 1SG  
 ‘I saw the moon.’

When a non-core (or peripheral) argument is present, it is attested at the edges of the main constituents.

- (5.12) saguʔoẽ kinane *bicicleta* n-utu-ba kurə-domodo ②  
 past remote bicycle 3O-know-NEG person-PL  
 ‘A long time in the past, we Indigenous did not know about bicycles.’

Also in contrast to dynamic verbs, verbs that express a preference, such as *ie* ‘like/want,’ employ the same sentence structure as the abovementioned stative verbs. Therefore, they are included here. The constituent order of preference verbs is the same as expressed above, the object must come before the verb, and a pronoun indicating the subject is placed after the verb.

- (5.13) məkə əgurodo ie urə ②  
 AN.DIST man like/want 1SG  
 ‘I like that man.’

If a copulative verb is used to impart an imperfective aspect, the copulative verb must come at the end of the clause: O+V+COP.

- (5.14) toẽ-pa məkə ie u-a-uəli ②  
 little(-ATTR)-NEG AN.DIST like/want 1S-COP1-IPFV  
 ‘That is the person of much liking to me.’

When nominalized, the copula remains at the end of the clause.

- (5.15) pənu ie-pa. urə pəni ie u-a-to ②  
 pepper like/want-NEG 1SG food like/want 1S-COP1-NZR3  
 ‘I don’t want pepper. Food is what I want.’

When an interrogative pronoun is used as an agent (*əgi*), the order remains AOV. As stative verbs make use of a split inflection mechanism, the object (not the subject) is inflected before the verb *ize*① or *ie*② ‘like,’ which also respects a person hierarchy describe further below (see 5.2).

- (5.16) əgi k-ie-pa. əgi kurə ie-pa ②  
 who 1PL.INC-like/want-NEG who 1PL.INC like-NEG  
 ‘Nobody likes us. Nobody likes us.’

Unlike its behavior next to motion verbs (see 4.1.1 and 5.1.2), *sina*① or *ina*② comes after the verb *ize*① or *ie*② ‘like.’

- (5.17) pai-ho ize-pa-mo sina ①  
 scratch-NZR3 like/want-NEG-PL 1PL.EXC  
 ‘We do not want the scratcher.’

#### 5.1.4 Deverbal adjective clauses

Deverbal adjective clauses come after the noun to which they refer. For a state thought of as permanent, the clause is formed through copula omission or zero copula.

- (5.18) peto i-atu-ribə ②  
 log 3-split-PTC  
 ‘It is a split log.’

In a similar sense, the deverbal adjective clause can come next to adjectives. A sequence of two demonstratives after the noun phrase expresses the sense ‘an indefinite object.’

- (5.19) parare i-adu-ipi maūkə merə ①  
 seriema 3-burn-PTC AN.DIST AN.PROX  
 ‘A seriema is brown.’

A deverbal adjective clause with multiple components organizes itself as possessor – partitive – deverbal, as in the example below.

- (5.20) pīrəu mitu siuhudu-ge s-auətərə-dībi ①  
 arrow curassow feather-INSTR 3O-remove-PTC  
 ‘It is an arrow with the removed feathers of a curassow.’

#### 5.1.5 Existential clauses

Existential clauses express the presence of something. They are realized through (a) a phonologically conditioned positive suffix *-pe, -be* ‘have;’ (b) a deictic demonstrative; or (c) a copula-less clause. The constituent order of an existential clause is OVA, when the agent is a free personal pronoun or demonstrative. With a more distinct or rigid linearization, the existential element is sentence-initial.

- (5.21) *pergunta*-be urə ②  
 question-EXIST 1SG  
 ‘I have a question.’
- (5.22) poroʔo-be kiã arakuma etari-odaə ②  
 fox-EXIST perhaps hen box-inside-LOC1  
 ‘There must be a fox in the henhouse.’

Even without an overt possessor, an existential element remains sentence-initial.

- (5.23) eunu-pe iuerə ②  
 smoke-EXIST today  
 ‘There is smoke today.’

The independent word *peba* establishes the negation of this clause type.

- (5.24) ətə i-goke-ho pe-ba keākə urə ①  
 clothing 3-wash-NZR3 have-NEG PTCL2 1SG  
 ‘I didn’t have any laundry detergent.’

In a copula-less clause, the existential sense is obtained with a demonstrative.

- (5.25) tələ eunu iuerə ②  
 3DEICTIC.DISTAL smoke today  
 ‘There is smoke today.’

#### 5.1.6 ‘Purpose-of-motion’ clauses

A ‘purpose-of-motion’ clausal construction, also known as purposive construction, is a string of two verbs in which the main predicate is a motion verb, and the other expresses the purpose of the motion. The most prominent motion verb is *tədətəli*① or *tədətəli*② ‘go,’ though other verbs indicate motion as well. The ‘purpose-of-motion’ verb is inflected with a purposive suffix (see 4.2.8.8). The ‘purpose-of-motion’ verb always precedes the main predicate, and a past particle is required to express the past tense overtly.

- (5.26) karoui=mi akəuə t-ago-Ũrō-agə  
 karowi=NVSL PTCL4 3R-COM-NZR2-COM  
 āga-silu-ge-ze i-də-li-mo ①  
 head-shave-REV-PURP 3S-go-IPFV-PL  
 ‘Karowi (i.e., *Kurupira*) and his companion went in order to have their heads shaved.’
- (5.27) kāra aue-ze i-də-li-mo keākə ①  
 fish catch-PURP 3S-go-IPFV-PL PTCL2  
 ‘They went in order to catch fish.’

#### 5.1.7 Valency reduction and omission of constituents

From one or two objects and peripheral arguments, verb valency controls the number of arguments that a clause possesses. In Bakairi, valency reduction occurs markedly in discourse-medial environments where some nonverbal constituents can be omitted. The subject is only referred to by pronouns or indirect references in discourse-medial contexts. As a result, the subject or agent, and the direct object can be omitted through valency reduction processes.



The following discourse-medial sentences omit the object argument.

- (5.28) *bicicleta* imeĩ-bi-ri      Ø-iuṼdu-li      i-ua-ri-ẽ  
 bicycle small-PST-POSS 3S-give-IPFV 3-older.sister-POSS-BEN  
 əz-enanə-do-ẽ ①  
 DETR-play-NZR3-BEN  
 ‘He gave his older sister a small bicycle in order to play with it.’
- (5.29) i-ĩã      Ø-iudu-ripə-mo      sirə      i-eti  
 1-DAT 3S-give-PTC-PL INAN.PROX 1-shirt  
 kə-aiṼe-pəra      rolə      urə ②  
 1A-use-NEG but 1SG  
 ‘This is the shirt which they gave me, but I never used it.’

Below, two contexts initiate omissions more prominently: omission in answers and omission of the inanimate direct object.

Omission in Answers: Ellipsis is observed in Bakairi when the answer of a *wh*-question omits not only nominal but also verbal segments that have no direct relation to the *wh*-question.

- (5.30) ədikə      a=ka      auəkə      korie?      auəkə-lə ①  
 where COP=QST AN.MED wildcat AN.MED-EMP  
 ‘Where is the wildcat? That one (meaning, there).’
- (5.31) ədikə      ə-daho-ru?      tarə=mi      ure      i-aə ①  
 where 2-knife-POSS here=NVSL bench 3-under  
 ‘Where is the knife? Here, under the bench.’

Omission of the Inanimate Direct Object: An inanimate direct object pronoun is often omitted.

- (5.32) t-iuəkur-e-ĩ      ke-ba-ma      kiākə      mərə  
 3R-beauty-ATTR-NZR1 PT-NEG-FOC PTCL2 INAN.DIST  
 ətə,      aituo      s-ame-ro      kopalegə-ro ②  
 clothing, therefore 1A<sup>45</sup>-throw-INTS yesterday-INTS  
 ‘That shirt was not beautiful, so I threw it out yesterday.’

## 5.2 Morphosyntactic alignment

Ergativity is present in many but not all Carib languages (Derbyshire, 1999: 60). Without case markings in the main constituents and relying solely on its constituent order patterns, Bakairi fails to be an ergative language. Nonetheless, the

<sup>45</sup> Meira (personal communication) points out that some person-marking prefixes on transitive verbs might co-index both A and O participants. If the prefix *s-* marks 1A3O, the object is also referenced, no omission occurs in the example.

inflection of a transitive verb being either A-oriented or O-oriented is likely a historical trait of its ergativity.

This section describes the nature of the transitive constituents and how it influences morphosyntactic alignment.

Since a transitive object immediately precedes its verb (OV), the constituent order plays a significant role in understanding who performs the verb action. A person hierarchy is a guiding factor in the choice of an agent or object person inflection of transitive or verbs. The verbal inflection respects the following hierarchy: first person > second person > third person. The syntactic expression of this hierarchy is illustrated with examples below.

A first person agent outranks all other syntactic persons. As a result, the first person agent prefix is expressed on the verb.

- (5.33) Agent (I) > Patient (you) (1A>2O)  
 əmə kə-enagaē-dili ②  
 2SG 1A-observe-IPFV  
 ‘I am observing you.’

- (5.34) Agent (I) > Patient (him) (1A>3O)  
 auəkə si-uagi-ə-tai ②  
 AN.MED 1A-wake.up-IMM.PST  
 ‘I’ve just woken him up.’

- (5.35) Agent (I) > Patient (it.animate) (1A>3O)  
 əgəu s-iə-raki ②  
 snake 1A-kill-IMM.PST  
 ‘I killed the snake.’

- (5.36) Agent (I) > Object (it.inanimate) (1A>3O)  
 auərə k-aŋpəmi-dili ②  
 INAN.MED 1A-twist-IPFV  
 ‘I am going to twist that one.’

A first person object or patient outweighs all other syntactic persons.

- (5.37) Patient (me) > Agent (you) (2A>1O)  
 i-enome-də-də əmə ②  
 1O-knowledge-VBZ2-PST 2SG  
 ‘You taught me.’

- (5.38) Patient (me) > Agent (he) (3A>1O)  
 i-ə-də auəkə ②  
 1O-hit-PST AN.MED  
 ‘He hit me.’

- (5.39) Patient (me) > Causer (it.inanimate) (3A>1O)  
 u-(u)rusi-də ilə ②  
 1O-drag-PST IN  
 ‘It (here, a river rapid) dragged me.’

A second person agent outweighs a third person object.

- (5.40) Agent (you) > Patient (him) (2A>3O)  
 auəkə ə-ĩc-ʔe ②  
 AN.MED 2A-take.care.of-FUT  
 ‘You will take care of him.’

- (5.41) Agent (you) > Object (it.inanimate) (2A>3O)  
 sirə m-aṽpəmi-dili ②  
 INAN.PROX 2A-twist-IPFV  
 ‘You are twisting this.’

Similarly, a second person object outweighs a third person agent.

- (5.42) Patient (you) > Agent (he) (3A>2O)  
 ə-ə-də auəkə ②  
 2O-hit-PST AN.MED  
 ‘He hit you.’

- (5.43) Patient (you) > Causer (it.inanimate) (3A>2O)  
 peto ə-(a)du-ge-li ②  
 fire 2O-burn-VBZ1-IPFV  
 ‘The fire is burning you.’

Finally, an animate third person outweighs an inanimate one.

- (5.44) Agent (he) > Object (it.inanimate) (3A>3O)  
 tuhu i-aṽme-li auəkə ①  
 pebble 3A-throw-IPFV AN.MED  
 ‘He is throwing pebbles.’

### 5.3 Clause-level syntax: noun phrases

A noun phrase (NP) is a phrase that has a noun or pronoun as its head and performs the same grammatical function as a single noun, which plays a particular role within the syntactic structure of a sentence. This section describes simple noun phrases, complex noun phrases, nominal quantifications, and possession.

### 5.3.1 Simple NPs

A sequence of a demonstrative and a noun, a personal pronoun and a noun, or a proper noun and a noun can establish a simple noun phrase. Only its head takes particles, postpositions, or affixes.

- (5.45) kurə məkə əgurodo ②  
 people AN.DIST man  
 ‘That man is indigenous.’

A demonstrative by itself can be pluralized with *modo* forming a noun phrase.

- (5.46) kurə məkə-modo ②  
 people AN.DIST-PL  
 ‘Those people are indigenous.’

The plural marker may not precede the head of the noun phrase.

- (5.47) kurə məkə əgurodo-modo ②  
 people AN.DIST man-PL  
 ‘Those men are indigenous.’

Only the head noun takes particles, postpositions, or suffixes, such as past nominal, and negative markers. The following pair shows this constraint.

- (5.48) auərə-pe ②  
 3.INAN.medial-EXIST  
 ‘There is.’
- (5.49) auərə paru-pe ②  
 3.INAN.medial water-EXIST  
 ‘There is water.’

A personal pronoun or a proper noun before a noun functions as the modifier of that noun. In Western Bakairi, first and third person bound pronouns are homophonous as shown below.

- (5.50) urə i-me-ri tə-(e)ui-ē ②  
 1SG 1-child-POSS 3R-hunger-ATTR  
 ‘My child seems hungry.’
- (5.51) Paulo i-me-ri tə-(e)ui-ē ②  
 Paulo 3-child-POSS 3R-hunger-ATTR  
 ‘Paulo’s child seems hungry.’

For pets, livestock, or food items, a hyperonym meaning ‘pet,’ ‘livestock’ or ‘food item’ must occur between the modifier and the noun. In the example below, the first person modifier is inflected in the hyperonym.

- (5.52) i-egi    *kauaru*    n-ige-Ø ②  
 1-pet    horse    3S-die-PST  
 ‘My horse died.’

### 5.3.2 Complex NPs

Bakairi features a mixture of head-initial and head-final structures leading to complex noun phrases. Pronouns, demonstratives, numerals, and other nouns are positioned to the left of the head noun. Nominalizations, participles, and adverbs are positioned to the right. Head nouns are highlighted in the examples in this section.

- (5.53) urə    i-me-ri    **əgurodo**    tokale-ō ②  
 1SG    3-child-POSS    man    one-NZR2  
 ‘My male child is only one.’
- (5.54) tələ    urə    ahagə    tokalə    **pōuā**    iuelo-modo ②  
 3DEICTIC.DISTAL 1SG    two    one    necklace    new-PL  
 ‘I have three new necklaces.’

A sequence of a noun followed by a nominalization forms a complex noun phrase. Three examples are given below.

- (5.55) **sauari**    t-apiegur-e-ī ①  
 leaf    3R-thin-ATTR-NZR1  
 ‘a thin leaf’
- (5.56) **tohu**    s-aeta-dibi ①  
 pumpkin    3O-plant-PTC  
 ‘a planted pumpkin’
- (5.57) sauə-ri-uəgə    azagə    **edi**    s-alokua-ni ①  
 wing-POSS-LOC4    two    wire    3O-rise-NZR4  
 ‘On its wings, there are two lifting wires.’

As nominal quantification applies to noun phrases in general, it is described below.

### 5.3.3 Nominal quantification

Most quantifications are obtained through two quantifiers: *tožzəpa* ① or *tožpa* ② and *idənərə*. Numerals are also a type of quantification (see 3.6).

The quantifier *tož-ze-pa* ① or *tož-pa* ② ‘not few, not a little’ can be translated as ‘much, many, a lot, and very,’ and it is formed with the adverb *tož-ze* ‘little, few,’

followed by the negative suffix *-pa*. In Western Bakairi, the attributive morpheme *-ze* is elided. Here and elsewhere, the elided segment is parsed in the interlinear text in parentheses.

- (5.58) toẽ-pa                    tərə      ətə-də                    mahagə ②  
 few(-ATTR)-NEG DIST    home-LOC3                    mosquito/house.fly  
 ‘There are many mosquitoes/house flies at that home over there.’
- (5.59) toẽ-ze-pa                    kehoẽ    sina                    i-eiṼle-dili  
 few-ATTR-NEG    INTS    1PL.EXC                    3A-laugh-IPFV  
 məkə                    uguõdo ①  
 AN.DIST                    man  
 ‘We laughed very much at that man.’

The quantifier *idənərə* ‘all, everybody or everything’ differs from the verbal completive suffix *-uə* (see 4.3.5), because the suffix is limited to the verbal quantification, while *idənərə* expresses the totality of an argument. This point is illustrated below.

- (5.60) idənərə i-(i)ze-ri                    s-iõke-agi ①  
 all    1-farm-POSS                    1-weed-IMM.PST  
 ‘I have weeded everything on the farm.’
- (5.61) n-egate-ragi                    idənərə    keʔoẽ    urə-ã ①  
 3-tell-IMM.PST    all    PTCL    1SG-DAT  
 ‘He has told me everything.’
- (5.62) əe-taũ-gə                    idənərə! ①  
 come-PL-IMP    all  
 ‘Come, everybody!’

When it is deemed necessary to clarify that *idənərə* refers to humans, the term can be used in combination with *kurədo* ‘people.’

- (5.63) idənərə kurə-do                    i-eṼni-li ①  
 all    person-PL                    3S-drink-IPFV  
 ‘Everybody drank.’

### 5.3.4 Possession

The possessive relationship between two words, whereby one word modifies the other, is expressed through (a) possessive morphology on the possessed noun or possessum (see 3.1), and (b) possessive relation between two words. In Bakairi, there are a number of ways to express possessive relations.

The basic structure of a possessive phrase consists of a possessor followed by a possessum. In Bakairi, the possessum (i.e., possessed noun) is marked with possessive morphology. The following example illustrates this type of formation.

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- (5.64) āgaʔu i-euənu ②  
 head 1-pain  
 ‘I have a headache.’

Although the construction illustrated above is seen as a complex noun phrase, it is possible to analyze it as an apposition. Consider, for instance, *ieuənu* ① ‘I am hurting, I am sick, my pain, my illness.’ When *euənu* occurs by itself, without being preceded by a body part, it means ‘be hurting, be sick, one’s pain, one’s illness.’<sup>46</sup>

If a sequence of a denominal adverb and a possessed noun form a predicate sentence (not a possessive noun phrase), the possessed noun is inflected.

- (5.65) tə-(e)uən-e i-ema-ri ②  
 3R-pain-ATTR 1-hand-POSS  
 ‘My hand is painful.’

Possession can also be expressed analytically. An analytical possession consists of the use of a free personal subject pronoun (having the syntactic role of possessive pronoun) followed by the possessum (i.e., possessed noun). The four pairs of examples exemplify this type of possession.

- (5.66) i-enome-ri ②  
 1-knowledge-POSS  
 ‘It is my intelligence.’
- (5.67) urə enome-ri ②  
 1SG knowledge-POSS  
 ‘It is my intelligence.’
- (5.68) i-enu-də ②  
 1-eye-LOC3  
 ‘It is in my eye’ which is used to mean ‘I want it.’
- (5.69) urə enu-də ②  
 1SG eye-LOC3  
 ‘It is in my eye’ a colloquialism used to mean ‘I want it.’
- (5.70) i-ego-ru ②  
 1-pestle-POSS  
 ‘It is my pestle.’
- (5.71) urə ego-ru ②  
 1SG pestle-POSS  
 ‘It is my pestle.’
- (5.72) i-(e)nu-eta-ri ②  
 2-eye-cage-POSS  
 ‘It is your pair of glasses.’

<sup>46</sup> Other examples of disorders are *idəʔu euənu* ‘bellyache,’ *ereri euənu* ‘liver ache’ or ‘stomachache’ or ‘heartburn,’ *ieri euənu* ‘toothache,’ and *iwātari euənu* ‘earache.’

- (5.73) əmə enu-eta-ri ②  
 2SG eye-cage-POSS  
 ‘It is your pair of glasses.’

An apposition of two person pronouns cannot be interpreted as a possession construction. Pronouns are not possessable; therefore, the sequence of personal pronouns represents coordination meaning ‘you and I,’ not ‘you are mine.’

- (5.74) urə əmə  
 1SG 2SG  
 ‘You and I’

A hyperonymous possession is a distinct way of expressing possession of pets, domesticated livestock, and food. The hyperonymous expression, for instance, *egi* ‘pet,’ is inflected with a possessor morpheme. The pet or food remains an uninflected noun even though it is the possessum. Commonly possessed or domesticated animals are parrots, dogs, chickens, horses, and cattle.

The inflected hyperonymous expressions for pets are, in Western Bakairi, *iegi* ‘my pet,’ *igi* ‘your pet,’ *egi* ‘his pet,’ and, in Eastern Bakairi, *iegi* ‘my pet,’ *igi* ‘your pet,’ *egi* ‘his pet.’ Two examples of pets are given below.

- (5.75) i-egi arakuma ②  
 1-pet hen  
 ‘It is my hen.’
- (5.76) i-egi seruseru ①  
 1-pet dog  
 ‘It is my dog.’

Examples of food (meat and fruit alike) are given below.<sup>47</sup>

- (5.77) i-eīli orozi ①  
 1-fruit.food cashew  
 ‘It’s my food cashew’
- (5.78) u-odu aukuma ①  
 1-meat.food chicken  
 ‘It’s my food chicken.’

An inanimate possession can be expressed by the use of the hyperonymous noun *emano* ‘a possessed thing’ followed by the uninflected noun or noun phrase.

- (5.79) kəma-no-lə-ma sirə təkə, pəresia uarə ①  
 1PL.INC+in.hand-NZR2-EMPH-FOC INAN.PROX bow arrow and  
 ‘The bow and the arrow are ours.’

<sup>47</sup> The examples in this paragraph are provided by Meira.



Possessive expression with *siurə*: by making use of the possessive marker *siurə* ‘of,’ it is possible to clarify who the possessor is. Eastern speakers pronounce this postposition as [sjurə ~ hjurə], whereas Western speakers prefer [jurə]. The second example below indicates that this is possession construction.

- (5.80) əmə      sirə? ②  
2SG      INAN.PROX  
‘Is this yours?’
- (5.81) əmə      iurə      sirə? ②  
2SG      of      INAN.PROX  
‘Is this yours?’

The word *siurə* ‘of’ is also used to establish a genitive relation between two inanimate nouns with the meaning ‘made of.’ This does not refer to ownership, but to a part-whole possession.

- (5.82) toʔu                  iurə      pogu ②  
pumpkin                  of      porridge  
‘Porridge of pumpkin.’

This genitive word *siurə* is often attested in the data as part of the sequence possessor-*siurə*-possessum. Between two animate entities, *siurə* acquires the meaning of ‘belongs to.’ The examples below illustrate this meaning.

- (5.83) urə      iurə      əmə ②  
1SG      of      2SG  
‘You belong to me.’

In possession with *siurə*, not the two nouns but the genitive marker is accompanied by any adverbial modifications, for instance, by sentence particles (see 5.6).

- (5.84) əmə      iurə-lə                  urə ②  
2SG      of-EMPH                  1SG  
‘I really belong to you.’

#### 5.4 Clause-level syntax: coordination and subordination

When a sentence contains two or more clauses, these clauses can establish a relation of coordination and subordination. Coordinated sentences contain two or more independent clauses joined with a coordinating conjunction. A subordinated construction combines an independent clause and one or more dependent clauses. In this section, we will come to the conclusion that such a shape of subordination is not formally expressed in Bakairi.

### 5.4.1 Coordinate clauses

In coordinate clauses, coordinating morphemes are used to join two or more items (such as words, clauses, or sentences) of equal syntactic importance (Givón 2001: 327ff). The Bakairi clauses (verbal, stative, deverbal adjective, existential, and purpose-of-motion) can be coordinated as (a) clauses lacking negative morphemes; (b) clauses containing negative morphemes; (c) non-verbal coordination; (d) contrasting clauses; and (e) opposing clauses. These five types of coordination are explained below.

#### 5.4.1.1 Coordinating clauses with *-pilə*① or *-pərilə*②

The agreement of two clauses, which cannot contain any negative morpheme, is formed with a variant of the coordinating conjunction *-pilə*① or *-pərilə*②. This conjunction is attested in various sequences as follows:

(sentence initial)	<i>aləpilə</i> ① or <i>aləpərilə</i> / <i>aləpərilə</i> ② + (clause+clause)
(sentence initial)	adverb <sup>48</sup> + <i>-pilə</i> ① or <i>-pərilə</i> / <i>-bərilə</i> ② + (clause+clause)
(elsewhere)	(clause+clause) + <i>ləpilə</i> ① or <i>ləpərilə</i> ②

Given the high number of variants of *-pilə*① or *-pərilə*② ‘also,’ we posit that the conjunction consists of multiple morphological elements, such as *-a-* ‘copula,’ or the prefix *a-* ‘it,’ *ləpəri* ‘too,’ and *-lə* ‘emphatic particle.’ The reasons for the contractions of some of these segments have yet to be established.

In Bakairi, many antonyms are expressed with the negative suffix *-pa*, *-ba* ‘not.’ When *-pa*, *-ba* ‘not’ occurs in any constituent of the coordinated clauses, it is ungrammatical to use one of the variants of the coordination conjunction *-pilə*① or *-pərilə*② ‘also.’ Therefore, the conjunction *-pilə*① or *-pərilə*② is formally used to express the coordination of two or more morphologically positive clause types as given in the example below.

(5.85)	Daniel, Maria	eogūru	i-ē-dili,		
	Daniel, Maria	crying	3A-see-IPFV		
	eagōrō-modo	eogūru	i-ē-dili	ləpilə	uarə ①
	other-PL	crying	3A-see-IPFV	also	and
				‘Daniel saw Maria crying and (he) saw also the others crying.’	

A coordination that implies a choice as in ‘either A or B is true’ is realized with *-pilə*① or *-pərilə*② ‘also’ as in the following example.

<sup>48</sup> The adverb *alə* is used as a sequential time marker.

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- (5.86) tokalə ədi-lə a-ie $\tilde{V}$ -dise,  
 one what-EMPH 3O-make-DESI  
 eagōrō ədi-lə a-ie $\tilde{V}$ -dise ləpələ ①  
 other what-EMPH 3O-make-DESI also  
 ‘Someone *and/or* another person would like to make it.’

5.4.1.2 Coordinating clauses with *ləgələ*

When two clauses each containing a negative morpheme are coordinated, the second negated verb is followed by *ləgələ* ‘either.’ All examples of *ləgələ* in the corpus follow the final coordinand.

- (5.87) ədi pe-ba t-ūr-e-pa ləgələ uarə ①  
 what have-NEG 3R-meat-ATTR-NEG either and  
 ‘There was nothing, not even meat.’  
 (5.88) toē-ze-pa ləgələ doce ①  
 few-ATTR-NEG either sweet.stuff  
 ‘There is also a lot of pastry.’  
 (5.89) s-aui-pa, s-az-ie-ba ləgələ ①  
 1-hunt-NEG 1-DETR-make-NEG either  
 ‘I didn’t hunt or cook.’

If *nem* ‘also not,’ a borrowing from BP, is used with two negated clauses, the first verb is followed by *ləgələ* and the second by *nem*.

- (5.90) k-aui-pira, ləgələ k-az-ie-bira nem ①  
 1A-hunt-NEG either 1-DETR-make-NEG also.not  
 ‘I don’t hunt nor cook.’

The use of the loanword *nem* can lead to the absence of *ləgələ*.

- (5.91) Tereza leidi n-anə-pira i-se nem s-aikuru ①  
 Tereza milk 3A-buy-NEG COP-FUT also.not 3O-sweetness  
 ‘Tereza will not be buying milk nor sugar.’

5.4.1.3 Coordinating clauses with *uarə*

The coordinating conjunction *uarə* is used as simple conjunction of two nouns, adverbs, personal pronouns, and clauses. When this conjunction coordinates two or more clauses (all of which must be symmetric alignment either positive or negative), their subject is identical. The conjunction *uarə* ‘and’ is located at the end of the sentence.

- (5.92) pekodo uguōdo uarə ①  
 woman man and  
 ‘woman and man.’
- (5.93) t-une məkə i-āgahu-də, i-hohu-də uarə ①  
 3R-blood AN.DIST 3-head-LOC3 3-chest-LOC3 and  
 ‘Its blood is on its head and on its chest.’ (about a bull which fell into a ditch)

Some examples indicate that *uarə* is equally used in disjunctions indicating that the distinction between conjunctions and disjunctions may not be relevant in Bakairi.

- (5.94) pabai ie Ø-a-to ke-ba *quiabo*  
 my father like 3S-COP1-NZR3 PT-NEG okra  
*pimentão* uarə ②  
 bell.pepper and  
 ‘Okra and/or bell pepper is not of my father’s liking.’

The following example illustrates two motion-of-purpose clauses with *uarə*.

- (5.95) u-də-aki āwi ene-se, ad-atə-ho-bi-ri  
 1S-go-IMM.PST remedy bring-PURP DETR-cut-CAUS-PST-POSS  
 akəzi-ze uarə ①  
 stitch-PURP and  
 ‘I went there in order to bring a remedy and stitch up what was wounded.’

The coordination of two negative clauses also makes use of *uarə*.

- (5.96) ohoguī-ribə ke-ba məkə pekodo  
 marry-PTC PT-NEG AN.DIST woman  
 taūlo ke-ba uarə ②  
 from.here PT-NEG and  
 ‘That woman is not married, nor is she from here.’

The following example illustrates a symmetric alignment in verbs before *uarə*.

- (5.97) kogonekə i-se karaiua-ē  
 afternoon COP-FUT foreigner-ATTR  
 ti-uailu-ge-mo i-se uarə ①  
 3R-party-INSTR-PL COP-FUT and  
 ‘In the next afternoon, having a party as foreigners do.’

The coordination of syntactic arguments formed with the instrumental *t-N-ge* ‘possessing a noun’ follows the same pattern, the second or last item is followed by *uarə*.

- (5.98) *ti-dinheiro-ge*                      *məkə*    Marcos   *ti-garo-ge*  
 3R-money-INSTR                      AN.DIST Marcos   3R-car-INSTR
- t-ana-ge*                      *uarə* ②  
 3R-land-INSTR    and  
 ‘Marcos has money, a car, and a plot of land.’

The following example shows coordination with two past deverbal nominalizations.

- (5.99) *mə-u-ŵtu-ba*                      *a-u-ge-ho-bi-ri*  
 2-know-NEG                      3O-1A-say-CAUS-PST-POSS
- i-enome-ho-bi-ri*    *uarə* ①  
 1-knowledge-CAUS-PST-POSS                      and  
 ‘You did not know what I said or what I taught.’

#### 5.4.1.4 Coordinating contrastive clauses with *olə* ① or *rolə* ②

When two contrasting clauses are coordinated, *olə* ① or *rolə* ② ‘but’ is used to show an unexpected result in contrast to the expectation if:

- (a) a verb containing a negative suffix *-pira*, *-bira* ①, *-pəra*, *-bəra* ②, *-pa*, *-ba* or a frustrative element is present as in the example below.

- (5.100) *tə-(e)mano-lə*    *uəne*     $\emptyset$ -*euane-li*,                      *s-iutu-ĩ-ã*                      ***rolə*** ②  
 3R-object-EMPH    FRUST    3-work-IPFV                      3O-know-NZR4-DAT but  
 ‘This object is for work, but by those who know it.’

- (b) it is a sequence of two contrasting VPs as in the example below.

- (5.101) *i-(e)ti*    *s-emagaene-õ*    *epera-no*                      *s-anə-ʔe*    ***rolə***    *urə* ②  
 2-clothes    3O-steal-NZR2    replace-NZR2                      1-buy-FUT but    1SG  
 ‘They stole your clothes from me, but I will buy a replacement.’

Contrasting coordination may occur even when the disparity is no longer evident.

- (5.102) *n-ətə-ragi*                      *tə-(e)ma-ge*                      ***rolə***                      *eã*                      *i-də-li* ②  
 3S-go-IMM.PST    3R-hand-INSTR    but                      PTCL1    3S-go-IPFV  
 ‘He’s gone, but he went with it in his hand.’

### 5.4.1.5 Coordinating clauses with the frustrative *uəne*

When one of two clauses shows an expectation that has a frustrating result, it is formed with the frustrative conjunction *uəne*. This conjunction, which at times means ‘although,’ is placed after the verb expressing the frustrated expectation.

- (5.103) u-də-pa            i-ʔe            urə,  
 1S-go-NEG            COP-FUT            1SG  
 u-də-diʔe            uəne    urə ②  
 1S-go-DESI            FRUST 1SG  
 ‘Although I’m not going to go, I really want to.’

A frustrative clause can co-occur with a contrastive clause as in the examples below.

- (5.104) u-də-diʔe            uəne    urə,  
 1S-go-DESI            FRUST 1SG  
 u-də-pa            i-ʔe            urə    rolə ②  
 1S-go-NEG            COP-FUT            1SG    but  
 ‘I’m not going to go, but I really want to.’
- (5.105) udodo,    kə-ē-pəra            uəne    a-ʔe,  
 jaguar 1A-see-NEG            FRUST COP-ABTT  
 bizeru    n-iə-raki            rolə ②  
 steer 3S-kill-IMM.PST but  
 ‘I couldn’t see it, but a jaguar killed a steer.’

### 5.4.2 Subordinate clauses

Four types of subordinate or dependent clauses are usually differentiated: (a) relative clauses, (b) adverbial clauses, (c) verb-complement clauses, and (d) non-complement clauses. Unlike the main clause, a subordinate clause makes use of subordinators, which are invariable grammatical particles (Givón 2001: 100).

The Bakairi way of expressing dependent clauses is by way of a deverbal participial or nominalized forms, placed paratactically or appositively within the sentence. Although functionally these constructions establish dependence relations between them and other sentence constituents, formally they are not subordinate clauses. We will, nevertheless, investigate these functional constructions that are equivalent to subordinate clauses in other languages.

Relative pronouns and subordinate conjunctions do not exist as a separate class in Bakairi. Instead, a number of morphemes are used to indicate a dependence relation between sentence constituents. The morphemes, i.e., suffixes which at times can become independent words, are placed after a nominalized verb. Below is a shortlist

of these morphemes or words sorted out by their different meanings and relations in the sentences: time, cause/effect, comparison/contrast, and possibility/conditional.

<b>Time</b>	<b>Cause/Effect</b>
-bigeduo <sup>49</sup> ‘after’	-bərēlə ‘since’
iləp̄irič̄ <sup>50</sup> ‘that <u>done</u> ’ (sentence initial)	-č̄ ‘because’
-tuo/-duo ‘when, whenever’	
ate (< BP até) ‘until’	<b>Possibility/Conditional</b>
irainə ‘before’	uataə <sup>51</sup> ‘if’
<b>Comparison/Contrast</b>	ipa-ro ‘if not’
ara ‘as if, like’	
ara ‘while, like’	

The following subsections explore five types of clausal dependency: relativization, time adverbials, concurrent adverbial expressions, result adverbial expressions, and cause-reason clauses.

#### 5.4.2.1 Relativization

In Bakairi, the participle is used to obtain the effect of a relative clause in other languages. The deverbal participle is placed next to a noun phrase in a paratactic relationship, usually with an intonational break. A deverbal participle nominalization is commonly used as a deverbal adjective as part of a noun phrase (see 5.1.4). This process is demonstrated through the examples below.

The first example refers to a simple transitive clause (see 5.1.2).

- (5.106) i-eti                      k-aŋkəzi-li ①  
 1-clothing                      1-sew-IPFV  
 ‘I sewed my fabric.’

The second example illustrates a deverbal adjective as part of the noun phrase. As such, the deverbal adjective, being the participle of a transitive verb, is inflected with a third person object prefix *s-* (see 5.1.4).

- (5.107) eti                      s-ātə-ibi ①  
 clothing 3O-cut-PTC  
 ‘It is a cut fabric.’

In the examples below, the participle is used as part of a sentence containing a verbal predicate. In this case, the participle, which we consider as a relative clause, is

<sup>49</sup> Note that *-duo* ‘when’ co-occurs in forming the word *-pigateduo*, *-bigeduo* ‘after.’

<sup>50</sup> The word *iləp̄irič̄* ① consists of *ilə* ‘that,’ the morpheme *-p̄iri* ① ‘done, former, past’ and the attributive *-č̄*.

<sup>51</sup> Alternatively, *uataə* ‘if’ is pronounced as [watai] ① or [wataj] ②.

inflected with a person prefix indicating the transitive agent.

- (5.108) i-eti                      k-ātə-ibi                      k-aŋkəzi-li ①  
 1-clothing                      1A-cut-PTC                      1-sew-IPFV  
 ‘I sewed my clothing, which I had already cut.’
- (5.109) iuelo    sirə                      s-aĩge-ho                      sina                      i-anə-tibi ①  
 new    INAN.PROX                      3O-strain-NZR3    1PL.EXC                      3A-buy-PTC  
 ‘This is the new strainer, which we have bought.’

Another means used to obtain the effect of a relative clause is by way of the nominalization of verbs and adverbs. The nominalizing suffix works as a semantic/functional equivalent to subordination, because affixes (prefixes and suffixes) of a nominalization encode referencing other elements of the clause. For instance, the third person coreferential prefix *t(ə)*- establishes an adjectival relation with the noun phrase resulting in ‘which is.’ A nominalization with the coreferential affix (in square brackets in the example) is non-restrictive and can be removed without change in meaning.

- (5.110) [t-iuəkur-e-ĩ]                      mərə                      nadi                      sauāku ②  
 [3R-beauty-ATTR-NZR1]    INAN.DIST                      houseplant                      flower  
 ‘That is a houseplant flower [, which is beautiful].’

Nominalizing suffixes encode different inherent meanings, which are often interpreted as relative clauses. For instance, *-to*, *-do*, *-ho* (*-o*, *-ɔo*) is used as ‘an object that..., a place that..., where...’ e.g., *paru osiodo* ‘where the rivers meet,’ from the verb *osio* ‘meet, unite.’ More suffixes of this type are provided as follows:

- (a) {-pa-ũ/-ba-ũ} ‘who/which does not...’ (a composite with the negative suffix *-pa*, *-ba*) (see 3.2.1).  
 (b) {-ð, -no} ‘that is/has..., who does...’ (see 3.2.2).  
 (c) {-do} ‘where ...’ (see 3.2.3).  
 (d) {-ĩ} ‘who has...’ (see 3.2.1 and 3.2.4).

The following examples demonstrate how they are used as relative clauses. The head noun is followed by the adverbial nominalization in boldface, containing one of the relativizing suffixes. (As previously mentioned, such nominalizations can alternatively be analyzed as appositions: ‘a winged one’, ‘a non-mouthed one,’ and ‘the salty one.’)

- (5.111) tərə    tələ                      emano    **t-auə-ge-ĩ-modo** ①  
 DIST    3DEICTIC.DISTAL                      object    3R-wing-INSTR-NZR4-PL  
 ‘There is over there an object, **which has wings.**’
- (5.112) əgurodo **t-ita-ē-ba-ũ**                      kə-ē-dili                      akəuũ ②  
 man    3R-mouth-ATTR-NEG-NZR2                      1A-see-IPFV                      PTCL4  
 ‘A long time ago, I saw a man **who was dumb.**’



- (5.113) podo      **peku-be-ō**      s-ə-də ②  
 meat      salt-EXIST-NZR2 1A-eat-PST  
 ‘I ate meat, **which was salty.**’

Another type of relativization designates relations of places by adding the deverbal nominalizer morpheme *-piri/-biri*① ‘where it happens.’ When *-to/-do/-ho*① is added between the stem and the nominalizer as in *-tobiri/-dobiri*① (see 3.2.3), the clause is used to establish a causative relation between the verbs, e.g., ‘where it is made to happen’ (see 4.2.4). Finally, reduplication of the nominalizer, as in *-pibiri/-bibiri*, is used to express a past notion of the relation of place, e.g., ‘where it happened’ (see 3.1.2).

#### 5.4.2.2 Time adverbials

Sentences may contain several events occurring at different times, in which one event expresses the temporal reference with respect to which the main event of the sentence must be interpreted. Bakairi often uses functionally equivalent adverbial expressions (in square brackets in the example).

- (5.114) iuerə      eme-dili-uəgə      əs-egu-do-bi-ri,  
 [today rise-IPFV-LOC4 DETR-measure-NZR3-PST-POSS]  
 sina              n-ə-tai ①  
 1PL.EXC              3A-eat-IMM.PST  
 ‘We ate [while the pictures were taken today in the morning].’

In the previous example, the locative postposition *uəgə* ‘on’ is used with the meaning ‘during, while’ following the deverbal nominalization *emedili* ‘morning.’ This temporal use of the locative expression is quite frequent cross-linguistically.

Similarly, the adverbializing postposition *-tuo, -duo* ‘when, while’ expresses a simultaneous action when it is added to a verb.

- (5.115) ipəge-duo,              n-ad-akobə-də ①  
 pull-while              3A-DETR-take.O.for.a.walk-PST  
 ‘While pulling, he walked.’
- (5.116) ke-duo              n-ad-akobə-də ①  
 speak-while              3A-DETR-take.O.for.a.walk-PST  
 ‘While speaking, he walked.’

When *-tuo, -duo* is added to a verb, the verb takes person inflection but not a suffix indicating aspect or mood.

- (5.117) u-ge-duo,              s-ad-akobə-də ②  
 1S-speak-while      1A-DETR-take.O.for.a.walk-PST  
 ‘As I spoke, I walked.’

- (5.118) *i-(i)ki-duo,*            *n-əs-euani-Ø* ①  
 1S-sleep-while    3A-DETR-work-PST  
 ‘While I slept, he worked.’

Adverbial phrases (an expression operating adverbially) may both precede or follow the sentence predicate. The adverbial phrases below are formed with *-tuo*.

- (5.119) *n-otoẽ-də*            *i-e-tuo* ①  
 3A-hide-PST        1O-see-when  
 ‘He hid when he saw me.’
- (5.120) *i-e-tuo*                *n-otoẽ-də* ①  
 1O-see-when        3A-hide-PST  
 ‘When he saw me, he hid.’

Another type of temporal relation between parts of a sentence is established with *-barẽ* ‘since,’ which is used together with an adverb of time, and it is an inceptive mark of the adverbial clause.

- (5.121) *pialə-õ-bərẽ-lə,*            *k-əs-euani-li* ①  
 early-NZR2-since-EMPH    1A-DETR-work-IPFV  
 ‘I have been working since early.’
- (5.122) *pealə*    *Ø-uage-raki*                    *iuerə-bərẽ-lə*            *ĩ-ẽũĩdi* ②  
 early    1-wake.up.IMM.PST            today-since-EMPH    1-hunger/sickness  
 ‘Because I woke up early today, I am hungry/sick.’

We must conclude that the Bakairi temporal relations are expressed by way of adverbial phrases, not formally different from other APs, PPs, or even simple adverbs.

### 5.4.2.3 Concurrent adverbial expressions

Bakairi has adverbial markers that express concurrent temporal relations, i.e., one clause co-occurring simultaneously with another: *iraina* ‘before,’ and *-pigeduo*, *-bigeduo* ‘after’ and *-duo* ‘when’ (see 5.4.2.4). In a sentence, these clauses occur before or after the core constituents often where an adverb is expected. The highlighted clauses in the second and third examples below fill the same position used by the highlighted adverb in the first example.

- (5.123) *pogu*                    *s-eni-agi*                    ***pealə*** ①  
 porridge                    1S-drink<sup>52</sup>-IMM.PST            early  
 ‘I had porridge early.’

<sup>52</sup> Note that the intransitive *eni* ‘drink’ increases valency to mean ‘to drink something’ when preceded by an object even though it is still inflected as an intransitive verb.

- (5.124) pogu                    s-eni-agi                    **si-uage-pigeduo** ①  
 porridge                1S-drink-IMM.PST        1-wake.up-after  
 ‘I had porridge after I woke up.’
- (5.125) pogu                    s-eni-agi                    **si-uage-duo** ①  
 porridge                1S-drink-IMM.PST        1-wake.up-when  
 ‘I had porridge when I woke up.’

The adverbial marker *-pigeduo*, *-bigeduo*① or *-pigeduo*, *-bigeduo*② ‘after’ is preceded by a verbal stem without aspect-mood suffixation.

- (5.126) iguã-pigeduo,    podo    s-ə-də ①  
 darken-after        meat    1A-eat-PST  
 ‘After it got dark, I ate meat.’
- (5.127) i-pigeduo,        podo    s-ə-də ①  
 bathe-after         meat    1A-eat-PST  
 ‘After bathing, I ate meat.’
- (5.128) i-uaduĩ            ohoguĩ-bigeduo, pogu    s-eni-Ø ①  
 1-nephew            marry-after        porridge 1S-drink-PST  
 ‘After my nephew’s wedding, I had porridge.’
- (5.129) təd-əs-enome-də-bigeduo,    paru            s-eni-Ø ①  
 NPOS-DETR-knowledge-VBZ2-after water/river    1S-drink-PST  
 ‘After teaching, I drank water.’

Although the adverbial *-bigeduo*, *-pigeduo*① or *-bigeduo*, *-pigeduo*② ‘after’ is usually attached to verbs, we find it occurring next to a non-verbal word *kopalegə* ‘yesterday/tomorrow’ forming *kopalegəbigeduo* ‘the day after tomorrow.’

- (5.130) kopalegə-bigeduo ①  
 day.which.is.not.today-after  
 ‘the day after tomorrow’

The rarity of the adverbial marker co-occurring with non-verbs seems to indicate that this is an exception rather than an expansion of the use of this adverbial marker.

#### 5.4.2.4 Result adverbial expressions

Consequence or result adverbial expressions are formed with *aituo* ‘thus.’ This word is probably morphologically composed of *a-* ‘it’ + *i-* ‘be’ + *-tuo* ‘when / after’ = ‘after it being’ or ‘consequently.’ If so, *aituo* is not a syntactic subordinator, but an adverbial marker. In the following example, *aituo* marks the result or consequence of the action expressed in the main clause.

- (5.131) *sabonete-ge*      *k-ãga-koge-Ø*      *o(-do)-koge-ibi-ẽ*      *keãkə*  
 soap-INSTR      1A-head-wash-PST      body-wash-PTC-ATTR      PTCL2
- aituo məkə*      *əguə=Ũrã*      *k-əd-ə-ho-li*      *keãkə* ①  
 thus AN.DIST      wasp=DAT      1A-DETR-bite-CAUS-IPFV      PTCL2
- ‘I washed my head with a fragrant soap, so I was bitten by a wasp over there.’

#### 5.4.2.5 Cause-reason clauses

A question that requests reason with *ədaituoka* ‘why’ is followed by an adverbial expression conveying cause or reason. The cause-reason clause is introduced by the subordinating conjunction *ədaituo* ‘because.’ A cause-reason clause formation can stand alone or be accompanied by the main clause. The order of the adverbial clause and the main clause is interchangeable. As previously mentioned, =*ka* is an optional interrogative clitic (see 3.5).

- (5.132) *ədaituo=ka*      *auərə*      *Ø-a-uili?*      *ədaituo*  
 why=QST      3-INAN-medial      3S-COP1-IPFV      because (of)
- sirə*      *Ø-iuəni-li*      *sirə*      *kata*      *uəgə* ①  
 INAN.PROX      3S-paint-IPFV      INAN.PROX      letter      about
- ‘Why is that? Because of this, he wrote this letter.’

### 5.5 Sentence types

The sentence types in Bakairi are divided as declarative, copulative, interrogative, imperative, comparative, and quotative.

#### 5.5.1 Declarative

Declarative sentences state facts or arguments, and they range from (in)transitive clauses to ‘purpose-of-motion’ clauses. Existential clauses are typically declarative sentences as they make a statement using copula constructions or existential verbs, but the most common declarative sentence in Bakairi is the discourse-initial sentence when all constituents are present as an introductory statement (see 5.1).

#### 5.5.2 Copulative

In Bakairi, copular sentences are devised with two arguments (a copular subject CS and a copular complement CC) joined by an underlying copula verb. Copula-less, also known as copula-free or zero-copula sentences, are feasible in affirmative and interrogative sentences.

The following is an example of a copula-less sentence.

- (5.133) iuage-no            urə ②  
 far-NZR2            1SG  
 ‘I’m from afar.’
- (5.134) t-iuəkur-e-ĩ            əmə ②  
 3R-beauty-ATTR-NZR1    2SG  
 ‘You are beautiful.’

Below is an example of a copular sentence.

- (5.135) tokalə   kulə   tarə   Ø-a-uəli   tokalə-lə ②  
 one    only   here   3S-COP1-IPFV   one-EMPH  
 ‘There is a small one here. (It’s) just one.’

Negative copular sentences require the presence of a negative existential word *keba*, which co-occurs with nouns, pronouns, adverbs, and copulative verbs. As such, *keba* appears between one of these constituents and the plural marker.

- (5.136) karaiua            ke-ba-modo            Ø-a-uili-mo ①  
 foreigner            PT-NEG-PL            3S-COP1-IPFV-PL  
 ‘They are non-foreigners, i.e., natives.’

A past copulative sentence with a noun phrase is formed with the addition of one of the following tense particles *ērā* ① or *eā* ② or *keākə* ① or *kiākə* ② *keākə*, *ani*, *akāuā* (see 4.2.7).

- (5.137) nigo            Ø-eti-də            eā            urə ②  
 grandmother    3-house-LOC3    PTCL1    1SG  
 ‘I was just at my grandmother’s house.’
- (5.138) i-pa    sisi,    eamu,  
 do-NEG sun    darkness
- eamu            lelə-lə            kopaeləgə            keākə ①  
 darkness            really-EMPH            yesterday            PTCL2  
 ‘The sun didn’t (come out); it was dark, really dark yesterday.’

A future copulative sentence is expressed with a future copula *ise* ①, *iʔe* ②.

- (5.139) əmə    iurə    i-ʔe            sirə ②  
 2SG    of    COP-FUT            INAN.PROX  
 ‘This will become yours.’
- (5.140) koēdə    i-ʔe            tərə            m-a-uəli ②  
 good    COP-FUT            DIST            2S-COP1-IPFV  
 ‘You will be better over there.’

The previous example refers to a situation in which a child does not know why he has to stay at the health center when he is sick. By utilizing the copula *auili*<sup>①</sup> or *auəli*<sup>②</sup>, the parent builds a stronger argument connecting the *staying over* and *getting better*. The progression from being sick to getting better is made clear by the combination of two copulas: *iʔe* ‘future-tense particle of the copulative -i-’ and *mauəli* ‘imperfective copula -a-.’

Copular sentences can also express a sense of (im)possibility.

- (5.141) əmə ke-ba-ro uatai ədurə  
 2SG PT-NEG-INTS if how  
 kurā tə-i-ʔe urə ②  
 because 3R-COP2-ABTT 1SG  
 ‘If it weren’t for you, I don’t know what I could have become.’

Copulative sentences in the imperfective aspect are quite robust.

- (5.142) toē-pa məkə ie u-a-uəli ②  
 little(-ATTR)-NEG AN.DIST like/want 1S-COP1-IPFV  
 ‘It is him that I like very much.’
- (5.143) tokalə-lə i-ʔe u-a-uəli ②  
 one-EMPH COP-FUT 1S-COP1-IPFV  
 ‘I will be one.’
- (5.144) akuru mərə sinumi-ē m-a-uəli uarə ②  
 MIR INAN.DIST laziness-ATTR 2S-COP1-IPFV thus  
 ‘In fact, you’re being lazy about that.’
- (5.145) kogonekə məkə siunu-pe Ø-a-uəli ②  
 afternoon AN.DIST bug.sp-EXIST 3S-COP1-IPFV  
 ‘In the afternoon, there are insects over there.’
- (5.146) idə-uə-taū-gə pialə Ø-a-uəli ume-lə ②  
 go-CPLT-PL-IMP early 3S-COP1-IPFV time-EMPH  
 ‘Go all of you while the time is still early.’

### 5.5.3 Interrogative

Interrogative sentences make use of interrogative pronouns and the interrogative clitic =*ka*, which is used for closed and open-ended questions alike. The interrogative clitic =*ka* is described in other Cariban languages. In Arara do Pará,<sup>53</sup> it is used exclusively for yes-no questions (S. D. Souza 2010: 98). Examples of questions with the interrogative clitic are provided presently.

The interrogative clitic is attested next to an interrogative pronoun.

<sup>53</sup> Arara do Pará is a Cariban language spoken in Southern Amazonia with some linguistic similarities to Bakairi.

- (5.147) ǝgi=ka                      ǝmə? ①  
 who=QST                      2SG  
 ‘Who are you?’

The interrogative clitic is attested next to a desiderative adverbial.

- (5.148) urǝ            ize=ka                      ǝmə? ①  
 1SG            like=QST                      2SG  
 ‘Do you like/want me?’

The interrogative clitic can occur next to an existential verb.

- (5.149) ǝdi            pe-ba=ka                      ǝmə            autǝrǝ? ②  
 what            have-NEG=QST                      2SG            there(PROX)  
 ‘Don’t you have anything there?’

The interrogative clitic can be used after an adverb plus copula.

- (5.150) iuage    a=ka? ①  
 far            COP=QST  
 ‘Is it far?’

The interrogative clitic can occur next to an augmentative particle.

- (5.151) ǝda            kuru=ka                      i-se                      kǝ-iǝ-li? ①  
 how            INTS=QST                      COP-FUT                      1-kill-IPFV  
 ‘How will I be killing it for real?’

The interrogative clitic is attested next to copulative verbs regardless of the inanimate or animate nature of the referent.

- (5.152) ǝdi            a=ka                      auǝrǝ? ①  
 what            COP=QST                      INAN.MED  
 ‘What is that?’ (for inanimate concepts)

- (5.153) ǝgi            a=ka                      merǝ? ①  
 who            COP=QST                      AN.PROX  
 ‘Who is this?’ (for people and animals)

Nevertheless, the interrogative pronoun *ǝdikǝ*① or *ǝdika*② does not co-occur with the interrogative clitic =ka. Instead, an optional copulative verb is added to supplement the interrogative sense.

- (5.154) ədikə (a=ka)      ə-uai-ho-ru?      tarə=mi      ure      ia-ə ①  
 where (COP=QST) 2-grate-NZR3-POSS here=NVSL seat under-LOC1  
 ‘Where is your grater?’ ‘It’s somewhere here under the seat.’ (But I cannot see it.)
- (5.155) ədikə      a=ka      tə-(e)tagu<sup>54</sup>-e-ĩ      i-ta-ri? ②  
 where COP=QST 3R-box-ATTR-NZR1 3-mouth-POSS  
 ‘Where is the entrance of the hole?’

In the western dialect, the =ka② can combine with the venitive suffix *-rə* to form the sequence *karə*.

- (5.156) əgi      iurə=ka-rə      sirə? ②  
 who of=QST-hitherto INAN.PROX  
 ‘Whose is this?’
- (5.157) ədaũlo      karə      i-(e)ti? ②  
 what QST 2-house  
 ‘Which of these is your house?’
- (5.158) ədikə      inə      karə      s-ape-ũ? ②  
 where (side?) QST-hitherto 3O-blow-NZR2  
 ‘Where is the wind coming?’

Yes/no questions do not require the interrogative clitic =ka. In this situation, the listener knows that this is a question because of a change in the intonation at the end of the question.

- (5.159) autələ      məkə?      ʔěʔě ①  
 here(PROX) AN.DIST yes  
 ‘Is the distant person here now? Yes.’

The following example refers to an object that was expected to be collected at the moment.

- (5.160) autələ      mərə?      ʔōʔō ①  
 here(PROX) INAN.DIST no  
 ‘Is that distant object here now? No.’

The interrogative pronoun of a question containing a tense particle (see 4.2.7) need not contain an interrogative clitic.

<sup>54</sup> The semantic notion of ‘box, hole’ has two similar phonetic realizations, *tətagunēĩ* and *tətagēĩ*. Both are nominalizations from the adverbs *tətagē* and *tətagunē*, which are formed with the circumfixes *t-ADV-ge* and *t-ADV-ne*. The first word is, therefore, derived from a stem *eta*, meaning ‘hole’ (e.g., *se etari* ‘tree hole’), also ‘container.’ In *tətagunē*, the basis is a word *etagu*, perhaps derived from *eta* ‘hole’ with a suffix *-gu*, and apparently synonymous with *eta* ‘hole’ (Meira, personal communication). This point needs further investigation.



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- (5.161) ədurə eã nelə-lə? ②  
 how PTCL1 only-EMPH  
 ‘How was it really?’
- (5.162) ʔgi age-ĩ eã? ②  
 who speak-NZR4 PTCL1  
 ‘Who was the speaker?’

Interrogative constructions involving an interrogative pronoun and a verb are quite rare in Bakairi. Typically, an interrogative sentence is a nominal construction or a nominalized verb next to a copula. This point is illustrated with two examples.

- (5.163) ʔgi i-ʔe əe-ni? ②  
 who COP-FUT come-NZR4?  
 ‘Who is coming?’ (literally ‘who will become the coming person/people?’)
- (5.164) ədaũlo eã s-aĩ-to siarə? ②  
 what PTCL1 3S-arrive-NZR3 here  
 ‘How did he get here?’ *or* ‘what was the vehicle?’)

The final example contains an interrogative pronoun followed by a nominalized verb without the use of a copula. The verbal stem *eta* ‘box’ signifies ‘where it is holed’ after nominalization.

- (5.165) ədikə tə-(e)ta-ge-ĩ i-ta-ri? ②  
 where 3R-box-INSTR-NZR4 3-mouth-POSS  
 ‘Where is the house’s exit?’

#### 5.5.4 Imperative

Imperative sentences are typically formed with an optional vocative together with a verb (see Appendix 1). The verb can take affixes, typical for the imperatives, followed by the imperative suffix *-kə*, *-gə*.<sup>55</sup> Some examples of imperative sentences follow.<sup>56</sup>

- (5.166) iga-uʔ-taũ-gə, ika-daũ-gə uarə.  
 enter-CPLT-PL-IMP sit-PL-IMP and  
 aukuma i-ũrũ. s-ə-taũ-gə-ne. ①  
 hen 3-meat 3O-bite-PL-IMP-POL  
 ‘Come in and sit down, all of you. This is cooked chicken. Eat, all of you.’

<sup>55</sup> Affixes can be added to an imperative verb (see 4.2.8.2) to impart further meaning, such as totality, repetitiveness, and venitive. Additionally, demonstratives (see 3.4) are used in imperative sentences to impart clarity.

<sup>56</sup> See 4.2.8.4 for the morphology of the prohibitive.

- (5.167) *æ-taũ-gə*      *siarə* ①  
 come-PL-IMP      here  
 ‘Come here, all of you.’

### 5.5.5 Comparative

In Bakairi, comparative sentences express comparisons between nouns, nominalizations, property concepts (i.e., semantic adjectives), and adverbs in a very similar manner. This section will describe comparative sentences of equality, superiority, and superlatives.

**Comparison of equality:** When two noun phrases of equal characteristics are being compared, the first of the two noun phrases is followed by *arə* ‘like.’ The second is followed by *uarə* ‘and.’ Hence, the comparison of equality template is:

first NP + *arə*, second NP + *uarə*

Below is an example of a comparison of equality.

- (5.168) *Antônio caneta-modo-pe arə Paulo caneta-modo-pe uarə* ②  
 Antônio pen-PL-EXIST like Paulo pen-PL-EXIST too  
 ‘Antônio has as many pens as Paulo does.’

The omission of the second *caneta-modo-pe* does not affect the meaning.

- (5.169) *Antônio caneta-modo-pe arə Paulo uarə* ②  
 Antônio pen-PL-EXIST like Paulo too  
 ‘Antônio has as many pens as Paulo.’

**Comparison of superiority:** When expressing superiority of one noun phrase over another, the superior one is always expressed first. It is then followed by the inferior noun phrase, which is necessarily followed by *takaze* ① or *takae* ② ‘more than.’ This marker is formed with the circumfix *t-V-ze/-e* ‘abilitative,’ and the stem *aka* ‘surpass.’ Therefore, a comparison of superiority follows the template:

superior argument, inferior argument + *takaze* ① or *takae* ②

Below is an example.

- (5.170) *Brasília-də Cuiabá-də t-aka-e kurə agi Ø-a-uəli* ②  
 Brasília-LOC3 Cuiabá-LOC3 3R-surpass-ABTT people many 3S-COP1-IPFV  
 ‘Brasília surpasses Cuiabá with respect to how many people it has.’

An alternative order is also viable. However, the superior noun phrase must come first and the inferior one is still followed by *takaze*① or *takae*② ‘more than.’

- (5.171) *Brasília*-də kurə agi Ø-a-uəli *Cuiabá*-də t-aka-e ②  
 Brasília-LOC3 people many 3S-COP1-IPFV Cuiabá-LOC3 3R-surpass-ABTT  
 ‘Brasília surpasses Cuiabá with respect to how many people it has.’

The modifier *agi* ‘many’ can come before or after *takaze*① or *takae*② to express degrees of comparison. The following examples demonstrate comparisons of superiority. The first example shows a comparison without any modifier. The second and third examples are formed with adverbial modifiers in boldface.

- (5.172) João Antônio t-aka-e i-oʔoũ ②  
 João Antônio 3R-surpass-ABTT 3-strength  
 ‘João is stronger than Antônio.’
- (5.173) João Antônio t-aka-e **nelə-lə** i-oʔoũ ②  
 João Antônio 3R-surpass-ABTT only-EMPH 3-strength  
 ‘João is much stronger than Antônio.’
- (5.174) João Antônio **ago-pa** t-aka-e i-oʔoũ-ge ②  
 João Antônio much-NEG 3R-surpass-ABTT 3-strength-INSTR  
 ‘João is a bit stronger than Antônio.’

In comparisons, the noun ending in *-ũ* or *-u* is obligatorily inflected with a person prefix designating the superior argument. In the examples below, this agreement is represented in boldface.

- (5.175) **urə** Jonas t-aka-e **u-oʔoũ** ②  
 1SG Jonas 3R-surpass-ABTT 1-strength  
 ‘I am stronger than Jonas.’
- (5.176) **Jonas** urə t-aka-e **i-oʔoũ** ②  
 Jonas 1SG 3R-surpass-ABTT 3-strength  
 ‘Jonas is stronger than I am.’
- (5.177) **əmə** urə t-aka-e **ə-omaru** ②  
 2SG 1SG 3R-surpass-ABTT 2-happiness  
 ‘You are happier than I am.’
- (5.178) **urə** əmə t-aka-e **u-omaru** ②  
 1SG 2SG 3R-surpass-ABTT 1-happiness  
 ‘I am happier than you are.’

A **superlative comparison** is morphologically identical to a comparison of superiority. Additionally, it is formed with the inferior argument as *idənərə* ‘of all’ coming before *takaze*① or *takae*②.

- (5.179) João idənərə t-aka-e toʔõ-e ①  
 João everybody 3R-surpass-ABTT strong-ATTR  
 ‘João is stronger than everybody.’

Hence, a basic template for the superlative comparison is:

superior argument, inferior argument, (+ modifier) + *takaze* ① or *takae* ② + adverb

The following are two examples of superlatives, one of an animate word class with *idənərə* ‘all’ and the other of an inanimate word class without *idənərə*.

- (5.180) Paulo idənərə t-aka-ze tak-uaũlo ①  
 Paulo everybody 3R-surpass-ABTT tall-like  
 ‘Paulo is taller than everybody.’
- (5.181) ie-garo-ri-modo=Vrã t-aka-ze imøsedo-ẽ ①  
 1-car-POSS-PL=DAT 3R-surpass-ABTT big-ATTR  
 ‘My car is the biggest.’

### 5.5.6 Quotative

The Bakairi language does not have indirect quotations, only direct quotations next to a clause containing a verb such as ‘say,’ ‘ask’ or ‘answer.’ Direct quotations come in two variants.<sup>57</sup> The first compulsory variant uses a quotative verb after its quotation (“...” said he), in other words, the quoted material comes first, where the transitive object is expected. This sentence-final quotative clause ends with a deictic demonstrative indicating not only the speaker of the quotation but also his spatial location. In the second variant, the quotation is preceded and followed by two quotative verbs. The preceding quotative clause marks the beginning of the quotation, whereas the following marks its end. The preceding quotative verb clarifies who the source of the quotation is with a proper noun, a subject fronting (SV) mechanism. An example of the first variant is given below.

- (5.182) “pepi sirə,” Ø-ke-li auəkə ②  
 canoe INAN.PROX 3-say-IPFV AN.MED  
 “‘This is a canoe,’ says he.”

For the second variant, the preceding quotative verb must contain a transitivity *a-* prefix, as in *augeli*, *amigeli*, *ageli* ... ① ‘I say, you say, he says ...’ The person inflection comes between the *a-* prefix and the stem. This morphology is seen only with this verb and with the verb *aie* ‘make.’ An example of the second variant is given below.

<sup>57</sup> A study of the reported speech in Bakairi is found in Faria (2015).

- (5.183) Paulo a-Ø-ge-li, “podo m-ə-də,” Ø-ke-li auəkə ②  
 Paulo a-3-say-IPFV meat 2A-eat-PST 3-say-IPFV AN.MED  
 ‘Paulo says, “You ate meat,” says he.’

There is a special usage for a first person reporter. As this quotation often expresses thoughts, a first person quotation is a type of thinking or a form of speaking to oneself. For the first person quotation, the quotative verb represents various kinds of mental activities in which no actual talking is involved.<sup>58</sup> Some semantic equivalents become part of this lexical domain: knowledge, perception, and reflection. Such notions can be called inner speech.

- (5.184) ‘manga õua k-əku-zi-ha,’ u-ge-li ①  
 mango-tree onto 1A-climb-JUS-INTS 1S-say/think-IPFV  
 ‘I thought “I can climb higher onto the mango tree.”’
- (5.185) ‘sina i-də-li,’ u-ge-uə-dili ①  
 1PL.EXC 3S-go-IPFV 1S-say/think-CPLT-IPFV  
 ‘I thought “we are going together.”’

In the following sentence, a mother tells her child that they should return to their village in the company of a man who is leaving soon. This is an example of the cohortative use of the quotative verb.

- (5.186) a-u-ge-li ěrã i-me-ri-Ũrã, “inoro i-agə,”  
 a-1A-say-IPFV PTCL2 1-child-POSS-DAT let us go 3-COM  
 Ø-ke-li urə ②  
 3-say-IPFV 1SG  
 ‘I pleaded with my child, “Let’s go with him,” pleaded I.’

The verb *keli*① or *keli*② is used to quote questions and answers.

- (5.187) “ədikə ə-ukono?” Ø-ke-li ①  
 where 2-younger.brother 3-say-IPFV  
 ‘“Where is your younger brother?” asks she.’
- (5.188) “atərələ auəkə,” Ø-ke-li ①  
 3DEICTIC.MED AN.MED 3-say-IPFV  
 ‘“He is over there,” answers he.’

In the following example, the quotative verb refers to an inner speech. A man, who observes from a distance that a house is catching fire, wonders what is happening. The following exemplifies the analytical use.

<sup>58</sup> Thoughts can be also expressed with the nominal base *-nana-* ‘thought, opinion, an inner feeling.’ The nominal base takes person inflection and suffixes as in *ienanazi* ‘in my opinion.’

- (5.189) “*ədi=ka*            *auərə?*  
 what=QST            3-INAN-medial  
*peto*    *tì-əpi-ge*            *n-iāki-Ø*            *asaemo?”*            *u-ge-li* ①  
 firewood 3R-heat-INSTR 3S-forget-PST 3PL            1S-say-IPFV  
 “‘What is that? Did they forget the firewood burning?’ wondered I.’

In the sentence below, a boy retells the story of when he disobeyed his mother and decided to climb a mango tree. As he is not an apt climber yet, he falls off the tree and breaks his arm. Below is an excerpt from that narrative with a quotation in the contemplative use.

- (5.190) “*manga*            *ōua*            *k-əku-zi-ha,*”            *u-ge-li* ②  
 mango.tree            ALL            1A-climb-JUS-INTS            1S-say-IPFV  
 “‘I can climb higher onto the mango tree,’ thought I.’

### 5.5.7 Mirative

Personal pronouns, demonstratives, and interrogatives can come next to a mirative word. Mirativity refers to the marking of a proposition as representing information that is new to the speaker. Expressing emphasis or surprise with the behavior of others, a mirative construction is expressed with the word *akuru* next to a pronoun.

- (5.191) *akuru*    *mərə*            *sinumi-ē*            *m-a-uəli*            *uarə* ②  
 MIR    INAN.DIST            lazy-ATTR            2S-COP1-IPFV            and  
 ‘And you are *so* lazy.’
- (5.192) *əgi*            *akuru*    *n-ətə-ba*            *mərərə* ②  
 who    MIR            3S-go-NEG            DIST  
 ‘*Nobody* goes there.’
- (5.193) *akuru*    *əmə=ē* ②  
 MIR            2SG-INTS  
 ‘Man! *You*...!’

## 5.6 Sentence-level elements

Sentence-level elements are segments—from morphemes, clitics, particles to words—that must be associated with part or the whole sentence to impart meaning. Sentence-level elements that encode grammatical categories, such as bound morphemes, postpositions, and the like, have already been described in Chapter 3. Tense particles and other sentence-level elements have been described in Chapter 4. This final section of the grammar will describe three very productive sentence-level elements: a firsthand emphatic particle, a non-firsthand clitic, and a focus/topic particle.



- (f) after postpositions            *i-eti-də-lə* ‘in my house’ (within sight).  
    *uəgə-lə* ‘on’ (as in I came on foot).

### 5.6.2 Sentence-level non-firsthand =*mi*① or =*mə*②

The clitic =*mi*① or =*mə*② is used as a non-firsthand evidential. It not only indicates the type of evidence but also validates the statement, reassuring its veracity (even if, rhetorically), as a truth marker. It is often attested in past non-visual descriptions.

- (5.200) *u-də-li=mə*                      *ke-ba keāka* ②  
 1S-go-IPFV=NVSL                      PT-NEG PTCL2  
 ‘I was not going to go.’
- (5.201) *kāra=mə*                      *ke-ba keāka* ②  
 fish=NVSL                      PT-NEG PTCL2  
 ‘It was not a fish.’
- (5.202) *auərə*                      *kule=mə*                      *ke-ba keāka* ②  
 INAN.MED                      RSTR=NVSL                      PT-NEG PTCL2  
 ‘It was not only that.’

It can be used in a current situation when the object is not visible, as in the example below.

- (5.203) *ədikə (a=kə)*                      *ə-uai-ho-ru?*                      *tarə=mi ure ia-ə* ①  
 where (COP=QST) 2-grate-NZR3-POSS                      here=NVSL seat under-LOC1  
 ‘Where is your grater? It’s somewhere here under the seat (but I cannot see it).’

The sequence *mi ani* points out the truth of what has occurred in a more remote past: =*mi* ‘non-visual’ and *ani* ‘remoteness in time.’ In storytelling, the sequence *mi ani*① is employed extensively since anecdotes have or may have happened a long time ago; they are supposed to be real.

- (5.204) *ilə-pi-ri-ē*                      *mi ani*  
 it-PST-POSS-ATTR                      NVSL PTCL23  
*pazikə udodo=Ũra*                      *age-li(...)* ①  
 anteater jaguar=DAT                      speak-IPFV  
 ‘After that, a long time ago, the anteater told the jaguar(...).’



The verb ...*kehōli*① or ...*keʔōli*② ‘it is said that...’<sup>59</sup> often comes next to *mi ani*.

### 5.6.3 Sentence-level focus/topic *-ma*

The particle *-ma* is used next to different parts of speech to indicate the focus as well as the topic of the statement. Therefore, the focus/topic particle can co-occur with any other marker.

- (5.205) təd-əeka-do-lə-ma                      sirə ①  
 NPOS-sit-NZR3-EMPH-NVSL              INAN.PROX  
 ‘This is a thing to sit on.’
- (5.206) kə-(e)mano-lə-ma              sirə                      təkə              pəresia              uarə ①  
 1PL-object-EMPH-NVSL              INAN.PROX              bow              arrow              and  
 ‘These bow and arrow belong to us.’

This particle is often used to indicate which part of the speech, highlighted in the examples below, is marked for focus.

- (5.207) ədi              kə-ba-ma                      əmə ②  
 what              PT-NEG-FOC              2SG  
 ‘You are absolutely **nothing**.’
- (5.208) s-əgu-ʔo-ē-ma                      kinane              koēdə ②  
 3O-begin-NZR3-ATTR-FOC              PTCL3              good  
 ‘It **used to be** good.’

<sup>59</sup> The verb ...*kehōli*① or ...*keʔōli*② ‘it is said that...’ is a defective formation because it never takes first or second person inflections.

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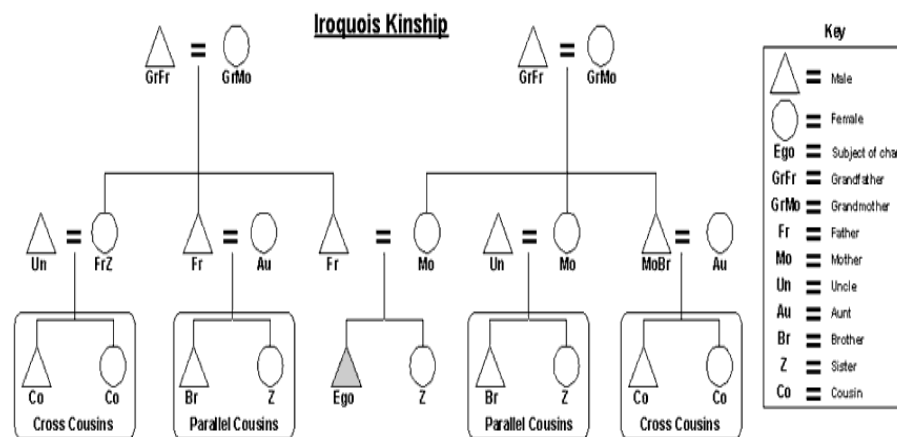
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## Appendices

### 1. Bakairi Kinship

TABLE 1: IROQUOIS KINSHIP CHART<sup>60</sup>



Using the Iroquois kinship system, Bakairi kinship is divided as classificatory and descriptive lexemes. *Classificatory* lexemes are those that refer to only one person, such as the terms ‘husband’ and ‘wife.’ *Descriptive* lexemes refer to a class or a group of individuals, such as ‘parents’ (referring either to the father or his brother or the mother or her sister). Descriptive lexemes can take the plural *-domodo*, whereas classificatory ones cannot.

The guiding parameter in this system relates to the eligibility for marriage. Cross-cousins being potential spouses are referred to with the same term ‘cousin,’ (i.e., a potential spouse). In contrast, parallel cousins are genetically too close to Ego to be suitable spouses or sexual partners. They are called ‘brother’ and ‘sister.’ Additionally, the Bakairi people distinguish ‘same-sex’ (parallel family members) from ‘cross-sex’ siblings. In other words, a male Ego’s brother is named differently from a female Ego’s brother (i.e., the word ‘brother’ for a man is different from the word ‘brother’ for a woman), a ‘younger brother’ of the Ego is different from an ‘older brother’ in terminology. Thus, the gender of Ego and the age-rank position in the family are relevant factors in kinship.

<sup>60</sup> Table 1 was obtained from [http://familypedia.wikia.com/wiki/Iroquois\\_kinship](http://familypedia.wikia.com/wiki/Iroquois_kinship). The chart is under the category of public domain files.

The father's brothers and the mother's sisters are considered identical blood relatives, so they are collectively called 'father' and 'mother,' respectively. The brother of the mother and the sister of the father, however, are called 'uncle' and 'aunt,' as they are Ego's potential in-laws.

Below is the kinship paradigm. The fourth column of data is used for the 3SG, followed by 3R referring to a coreferential noun. The rightmost column demonstrates the vocabulary inflected with the 1PL.INC prefix *k-*. The second and third person can take plural suffixes.

TABLE 2: BASIC KINSHIP PARADIGMS

	VOC	my	your	his	3R	our
grandfather	tako	idamu	ədamu	idamu	tɪdamu	kidamu
grandmother	nigo	ɪɲudu	əɲudu	ɲudu	tɪɲudu	kɪɲudu
father, paternal (parallel) uncle	siogo	ɪwĩ	əwĩ	ɪwĩ	tɪwe	kɪwĩ
mother, maternal (parallel) aunt	seko	ize, seko	əze	ise	tize	kize
(cross) uncle	kugu iupi-iso usɔɲuĩ ime-ɪdamu <sup>61</sup>	kugu	əoru	ioru	—	—
(cross) aunt	iupi kug-iwidi iwidi-ise ime-ɪɲudu <sup>62</sup>	iupi	—	—	—	—
cross- uncle's wife	kug-iwidi	kug-iwidi	—	—	—	—
cross-aunt's husband	iupi-iso	iupi-iso	—	—	—	—
older brother	paigo, iwaigo-ru (♂ speaker), wiwi (♀ speaker)	iwaigo-ru	əwaigo-ru	iwaigo- ru	tɪwaigo- ru	kiwaigo -ru
younger brother	kono (♂ speaker) iukono (♀ speaker)	kono	əu-kono	iu-kono	tɪu-kono	kiu- kono

<sup>61</sup> These four vocatives designate different titles via chronological stages of life. The first is *my uncle—potential father-in-law*, the second is *my aunt's husband*, the third *my husband's father* and the fourth is *my children's grandfather*.

<sup>62</sup> These four vocatives designate different titles via chronological stages of life. The first is *my aunt—potential mother-in-law*, the second is *my uncle's wife*, the third is *my wife's mother*, and the fourth is *my children's grandmother*.

older sister	ia (♀ speaker) iwari (♂ speaker)	iwa-ri	əwa-ri	iwa-ri	tiwa-ri	kiwa-ri
younger sister	kou (♀ speaker) idi/iwidi (♂ speaker)	idi	ədi	idi	tidi	kidi
child (son, daughter, parallel nephew and niece)	mē	imeri	əmuru, əweri	imeri	timeri	kimeri
daughter (& parallel niece <sup>63</sup> )	esiri	iesiri	esiri	esiri	təsiri	kəsiri
grandchild	iweri	iweri	əweri	iweri	tiweri	kiweri

### 1.1 The grandparents' generation

Ego may not use given names when addressing the generation of grandparents. The use of the title *tako* 'grandfather,' and *nigo* 'grandmother' is required throughout the speech. The collectivized nouns *tako-domodo* and *nigo-domodo* represent 'my grandfather and his brothers' and 'my grandmother and her sisters,' respectively.

### 1.2 The parents and their siblings

Ego may not use given names when addressing the parent generation. The terminology is relatively simple, with two large groups: the parallel relatives (which include the parents and siblings of the same sex) and their cross-relatives (blood relatives of the opposite sex, such as the mother's brother, and the spouses of this generation).

*tiupi* 'cross-aunt' is the same term used for 'mother-in-law.' Another term that can also be used to describe the relation to one's *usoise* 'mother-in-law' (literally, 'mother of my husband').

The uninflected term *kugu* 'my uncle' also refers to 'father-in-law.' Just like the previous entry, greater affection can be implied by using 'uncle' to refer to a 'father-in-law,' and in fact any 'cross-uncle' is a potential 'father-in-law.' The less affectionate term is *iwidiūi* 'father of my wife.'

To address *ise* the 'wife' of a blood relative, a descriptive term is used. For instance, *uso ise* 'my husband's mother.' Similarly, to address the husband of a blood relative, one uses the descriptive form adding the root *iso* 'husband' to any classificatory name, as in *uso iso* 'my husband's father.'

### 1.3 Ego, siblings and, peers

The terminology for the siblings and peers of Ego is the most complex in the kinship system because it is directly associated with the process of marriage, land property, and political status.

<sup>63</sup> For male Ego, his brother's daughter. For female Ego, her sister's daughter.



The terminology varies according to the gender of Ego. *paigo* is an older brother of a male Ego and the reduplicated syllable *uiui* (sometimes shortened to [wi:]) is the older brother of a female Ego. There is also variation in the lexicon depending on whether Ego is a cross or a parallel relative of the peers. Parallel relatives tend to be regarded as siblings, whereas cross relatives are potential spouses; hence, they are described differently. The *age* of the other in relation to Ego is expressed with a different lexical term (older male cousin, younger male cousin...).

Once, for instance, a male Ego is married, his wife<sup>64</sup> and her family are renamed accordingly. Prefixes are added to the lexemes, clarifying this intricate connection.<sup>65</sup> Many times long compounds indicate this complex familial connection. The compound, ‘my brother-in-law’s wife’ (meaning either ‘my husband’s brother’s wife’ or ‘my wife’s brother’s wife’) can only be translated into Bakairi if the exact relation is expressed in full: ‘my husband’s brother’s wife’ or ‘my wife’s brother’s wife.’ It is imperative to express the exact relationship with the Ego in the Bakairi culture.

#### 1.4 The children

When addressing the younger generation, it is not necessary to use kin terms; the addresser may use given names and personal pronouns, as well as any of the terms representing the kin relationship. In using kin terms, affixes are required to express possession (my child). The language shows specialization in lexemes expressing parallel and cross nephews and nieces, the vocative is *uadu*<sup>66</sup> for ‘cross nephew,’ *iuadu* ‘my cross nephew.’ For ‘cross niece,’ the vocative is *uase*, *iuase* is ‘my cross niece.’

#### 1.5 The grandchildren

The terminology is simple for the tier of the grandchildren. *iueri* means ‘my grandchild,’ *aueri* ‘your grandchild,’ *iueri* ‘his grandchild,’ *tiueri* is the coreferential ‘the grandchild,’ and the compound root *iue* is ‘the grandchild of.’ It is more common, however, to address grandchildren by nicknames, a common practice in the Bakairi culture.

#### 1.6 How to address someone in the Bakairi communities

##### 1.6.1 As an insider

The category of the *insider* contains direct members of the family, cross and parallel kinfolk. Family members use vocative forms to address each other accordingly; these vocatives express endogamous levels of the social unit. Insiders may also use proper names to address each other, though it is less common to do so.

##### 1.6.2 As an outlier

An *outlier*, a characteristic relating to someone who does not have direct

<sup>64</sup> The Bakairi word for ‘wife’ can indeed be pronounced in many ways, either to express affection or as a simple play with words: *iuidi*, *iuedi*, *iuedi*, *iuidi*, plus other combinations.

<sup>65</sup> For the husband of a blood relative, the descriptive form is used by adding the root *iso* to any classificatory kinship term.

<sup>66</sup> Though less common, *uadu* is also possible to be referred to as *tikao*.

ancestral relation with another person, is divided into two groups. Group 1 consists of a Bakairi individual who does not belong to the family and does not have relatives in that family. Marriage with an outlier of this group 1 is considered the first level of exogamy. Some non-Bakairi indigenous people who live among the Bakairi and may be married to someone in the community also belong to this group. Group 2 consists of indigenous and non-indigenous people who are not Bakairi and do *not* reside in the Bakairi settlements.

Outliers (groups 1 and 2) must address the Bakairi people by: (a) their given names, under which they were registered in a notary office, or (b) by a different Christian name received in Catholic or Protestant communities or (c) by nicknames. To call each other, these outliers make use of more formal or different proper names than those who are from ‘inside’ the family.

### *1.6.3 Seeing the world through the eyes of the youngest in the household*

As in many languages, Bakairi families call their members by various *kin terms*—descriptive titles (such as a singular term for ‘husband’) and classificatory titles (such as the same term for ‘father’ or the ‘father’s brother’). Different words are used at different stages of life. To illustrate a few, a woman calls her boyfriend ‘cousin,’ then ‘lover’; she switches to ‘my husband’ after getting married before having a child. Once the first child is born, she calls her husband ‘daddy,’ and once her child has a child of its own, she calls her husband ‘grandpa.’ This anthroponomical graduation applies to most family members. Her cross-uncle is called ‘uncle,’ then ‘father-of-her-husband,’ then ‘grandfather-of-her-child.’ Many descriptive and classificatory *anthroponyms* are compounds. This manner of addressing family members is a way of seeing the world through the eyes of the youngest member of the family.

Children are expected to call their mother ‘mother’ throughout their lives. Their mothers, on the other hand, call a son ‘son’ only while he is single and without children, and does not have any nephews or nieces via siblings. If the son becomes an uncle, his mother addresses him as ‘uncle.’ Descriptive and classificatory titles change as new family functions are assumed by the family members.

## 2. Body Parts

Table 3 contains a list of body parts, and some related vocabulary at its end. Nominal bare roots and third-person inflection are listed. The list begins from the top of the head moving downward. In compounds, morphological boundaries are marked with a hyphen. Further morphological modifications, such as person prefixation, follow the rules set in Chapter 3.

TABLE 3: BODY PARTS, BARE ROOTS AND THIRD-PERSON INFLECTION

Bare root	3SG	gloss
āga-si ①	ĩ-āga-si-ri	‘brain’
hudu ①	siu-hudu-Ø	‘hair’
āga-hudu	ĩ-āga-hudu-Ø	‘head hair’
āga ①	ĩ-āga-Ø	‘head’
āga-hu ①	ĩ-āga-hu-Ø	‘(emotional) heart’
odo ①	e-odo-Ø	‘body’
emela ①	e-emela-ri	‘face’
emidi ①	e-emidi-ri	‘forehead’
edi-hudu ①	e-edi-hudu-Ø	‘beard’
edi ①	e-edi-ri	‘jaw’
enu ①	e-enu-ri	‘eye’
enu-gorolu	e-enu-gorolu-Ø	‘tear’
enu-pi ①	e-enu-pi-ri	‘eyelash’
enu-hudu ①	e-enu-hudu-Ø	‘eyelash’
enu-pialogu ①	e-enu-pialogu-Ø	‘eyelid’
enu-anali ①	e-enu-anali-ri	‘eye pupil’
enu-kimunu ①	e-enu-kimunu-Ø	‘eyebrow’
inata ①	e-(i)nata-ri	‘nose, nostril’
iuapa ①	i-(i)uapa-ri	‘cheek’
ita ①	i-(i)ta-ri	‘mouth’
opi ①	i-ōpi-ri	‘lip’
ie ①	i-(i)e-ri	‘tooth’
ilu ①	i-(i)lu-Ø	‘tongue’
idaku ①	i-(i)daku-Ø	‘saliva’
erehu ①	i-erehu-Ø	‘gum’
iuāta ①	i-(i)uāta-ri	‘outer ear’
itagu ①	i-(i)tagu-Ø	‘inner ear’
uimi ①	i-uimi-ri	‘neck’
igo ①	i-(i)go-ru	‘throat, trachea’
igutu ①	i-(i)gutu-ru	‘rib’
ikana ①	i-(i)kana-ri	‘ribcage’
ihohu ①	i-(i)hohu-Ø	‘chest’
ekaradau ①	e-(e)karadau-ru	‘lung’
ibi ①	i-(i)bi-ri	‘bone’
enutādo ①	ə-enutādo-ri	‘joint’

itubi ①	i-(i)tubi-ri	'skin'
ĩua ①	ĩ-(ĩ)ua-ri	'breast'
euə ①	e-(e)uə-ri	'arm'
sauə ①	s-(s)uə-ri	'forearm'
iataba ①	i-(i)ataba-ri	'armpit'
iataba-uəigu ①	i-(i)ataba-uəigu-Ø	'armpit hair'
isobilu ①	i-(i)sobilu-Ø	'elbow'
ema ①	e-(e)ma-ri	'hand'
ema-kua ①	e-(e)ma-kua-ri	'palm'
ema euili ①	e-(e)ma-ri euili	'finger'
ema-koa ①	e-(e)ma-koa-ri	'wrist'
enutə-do ①	ie-(e)nutə-do	'knuckle'
hoda ①	ĩ-ōda-ri	'nail'
siue ①	i-siue-ri	'stomach'
iunu ①	i-(i)unu-Ø	'blood'
enedi ①	e-nedi-ri	'vein'
ere ①	e-(e)re-ri	'liver'
epamugu ①	e-(e)pamugu-Ø	'kidney'
ere-nuku ①	e-(e)re-nuku-ru	'pancreas'
iuiku eta ①	iuiku e-(e)ta-ri	'bladder'
idəhu ①	i-(i)dəhu-Ø	'belly'
ekoromi ①	e-(e)koromi-ri	'intestines'
iuəċka ①	i-(i)uəċka-ri	'navel'
ika ①	i-(i)ka-ri	'back'
amu ①	i-ami-Ø	'buttocks'
ehibi ①	e-(e)hibi-ri	'anus'
ile ①	i-(i)le-ri	'penis'
emu ①	e-(e)mu-Ø	'testicle'
eli ①	i-(c)li-ri	'vagina'
ime eta ①	i-(i)me-ri e-(e)ta-ri	'uterus'
iuma ①	i-(i)uma-ri	'genitalia'
iuma-hudu ①	i-(i)uma-hudu-Ø	'pubic hair'
epadi ①	e-(e)padi-ri	'hip, waist'
iuedi ①	i-(i)uedi-ri	'thigh'
ezeũ ①	e-(e)zeũ-ru	'knee'
ipena ①	i-(i)pena-ri	'leg'
ipena-uəigu ①	i-(i)pena-uəigu-Ø	'leg hair'
ihu ①	i-(i)hu-ru	'foot'
esiuido ①	i-esiuido-ru	'foot sole'
euə(-pə)nu ①	e-(e)uənu-Ø	'pain'
ie euənu ①	i-(i)e euənu-Ø	'toothache'
idəhu euənu ①	i-(i)dəhu-euənu-Ø	'stomachache'

### 3. Interlinear Text

The following text *ãzi itabiêli unəri sirə* is an oral report of a Bakairi ritual called ‘the baptism of the corn.’ The text was recorded in the late 1960s. The recording was transcribed by native teachers, who utilized a simple five-vowel system, instead of the required fourteen-vowel system of the Eastern dialect. The local people in the village helped with the translation, however, they failed to mention the name of the narrator.<sup>67</sup> In 1972, the same text *ãzi itabiêli unəri sirə* resurfaced in a graded primer for children. It was copied just as it was first printed without any improvements on the orthography. The Portuguese translation was slightly amended eliminating a handful of errors. Fernando Caiuaa’s name, an active teacher in his community who wanted to document various aspects of the daily lives of the Bakairi, was included after the text but it is not clear what his role was in relation to this text (1972: 1-4). This second text was later used in another primer without any adaptations. In 2012, five speakers were consulted in order to adapt the text to a fourteen-vowel system according to the Eastern dialect. In the process, they noticed that a few of the words are no longer in use but they refrained from making changes to the word choices of the text. The text is transcribed phonologically below.

The ‘*baptism of the corn*,’ a type of thanksgiving festival, occurs annually in the second fortnight of January, right before the harvest of the corn. The event takes place overnight, perhaps because at this time of the year the humidity and heat are quite unbearable for a daytime festivity. Many provisions must be made for the festival (selection of a chief, invitation of singers, musicians, and dancers, cooking of meals, and a communal hunt before the festival) with roles that are split between men and women. As the storyteller is a man, he focuses on the role of men in the festival, making a short mention of how women partake.

In preparation for the festival, men go on a hunt to gather as much game as they can. There are three different groups that are led by three chiefs and assistants. These groups may spend a day and a night (viz. Friday) in the forest. When they return, they go to their gardens to gather corn, which is later used in the festival. Some villagers paint their bodies with dyes collected from the forest.

At the outset, the festival takes place in the central hut. There are different dances, songs, and musical presentations throughout the night. As the corn is roasted, the kernel must be removed from the cob with their teeth. Then the participants head to the front of the chief’s house. A handful of the corn kernel is thrown by each member at the house of the chief of the festival. Then more corn is removed and thrown at the cardinal points. The festival ends in the morning as the sun is rising. Meals are exchanged and some food is eaten. Village members are supposed to express gratitude to the cooks as the event reaches an end.

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<sup>67</sup> In 1991, a copy of this early work was obtained in the archives of the former Summer Institute of Linguistics which was located in Brasília.

TEXT: āzi itabiēli unəri sirə

āzi i-ta-biē-li unə-ri sirə  
 corn 3-mouth-leave-IPFV story-POSS INAN.PROX  
 ‘This is the story of the corn ritual!’

tələ tokalə uguōdo auərə até  
 3DEICTIC.DISTAL one man INAN.MED until  
 ‘There is a man who, until it happens, is the chief of the

āzi i-ta-biē-li  
 corn 3-mouth-leave-IPFV  
 corn ritual.’

i-pimə-ri məkə-lə idənərə kurə-domodo=Ũrā  
 3-chief-POSS AN.DIST-EMPH all person-PL=DAT  
 ‘He, who speaks to all of us,’

age-ĩ idənərə kurə-domodo ohō-do-ē  
 speak-NZR4 all person-PL pack-NZR3-BEN  
 ‘for everybody to pack.’

ədi-lə ti-pini-ri-mo a-iŨe-to-mo-ē  
 thing-EMPH 3R-cooked.food-POSS-PL 3O-make-NZR3-PL-BEN  
 ‘To prepare many things to eat:

auadu *farinha* uarə  
 beiju flour and  
 beiju chips and flour.’

uasi t-iəŨ-kili-mo ilə idənərə t-ohō-bigeduo pilə  
 group.hunt 3R-eat-IPFV-PL it.REF all 3R-pack-when after  
 ‘For a communal hunt. After everybody is set (all packed),’

Ø-egase-li-mo azagə.tokalə i-pimə-ri agə məkə  
 3-leave-IPFV-PL three 3-chief-POSS with AN.DIST  
 ‘they leave in three groups, each with a leader’

agə aləpilə e-āgo-Ũrō agə uarə Ø-egase-li-mo uasi  
 with also 3-COM-NZR2 with and 3-leave-IPFV-PL group.hunt  
 ‘He and his hunting partner(s) leave to go on a communal hunt.’

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i-də-li-mo ilə-pi-ri-ẽ odora-lə iuage idə-ipi-ẽ  
 3S-go-IPFV-PL it-PST-POSS-ATTR enough-EMPH far go-PTC-ATTR  
 ‘doing that, they have gone far enough’

azi iuakuru ti-ẽ-tuo-mo p̄lə  
 wildlife good 3R-see-when-PL after  
 ‘once they have found good (game) wildlife’

Ø-əsida-dili-mo tə-(e)ti-mo Ø-iV̄ta-dili-mo-ro  
 3S-settle-IPFV-PL 3R-house -PL 3A-plant-IPFV-PL-INTS  
 ‘they settle down by setting up a hut.’

ilema p̄lə tərə Ø-ẽ-dai-lə podo i-uəV̄-li-mo  
 then after DIST 3A-see-IMM.PST-EMPH game 3S-hunt-IPFV-PL  
 ‘after that, there they hunt what they found’

até Ø-ohoĩ-ba-dili-mo  
 until 3S-strong-NEG-IPFV-PL  
 ‘until they cannot carry anymore’

ilema p̄lə idənərə t-ohoĩ-ba-bigeduo-mo mərə  
 then after all 3R-strong-NEG-when-PL INAN.DIST  
 ‘afterwards, when everybody can no longer carry anything else’

t-atunə-ge-ho-mo-bi-ri odasi ituo Ø-odopə-dili-mo  
 3R-set.up-REV-CAUS-PL-PST-POSS into and so 3A-return.home-IPFV-PL  
 ‘they lift camp and’

idənərə kehoẽ tə-(e)ti-mo=V̄rã=ro  
 all INTS 3R-house/clothing/party-PL=DAT-INTS  
 ‘everybody returns home’

ilə idənərə kehoẽ t-ãĩ-pigeduo-mo p̄lə  
 it.REF all INTS 3R-arrive-when-PL after  
 ‘after getting home’

kopaeləgə-ĩ p̄lə sábado oda-i  
 other.day-on after Saturday inside-LOC1  
 ‘the following day, which is a Saturday’

p̄lə idənərə kehoẽ apaizazi i-də-li-mo  
 after all INTS place 3S-go-IPFV-PL  
 ‘and then, everybody goes to their garden’

ãzi ese t-amui-ze-i=ro uarə  
 corn fetch 3R-throw-ABTT-just-INTS and  
 ‘and may throw the corn to fetch it later.’

ilə-pi-ri-ẽ pɪlə kogonekə ədiẽ-pa iguã-tibi-ẽ ituo  
 it-PST-POSS-ATTR after afternoon something-NEG late-PTC-ATTR and so  
 ‘After that is done, and so, when it has become late in the evening’

kado-ẽ Ø-ai-dili-mo até domingo eme-dili  
 Bakururu.festival-ATTR 3S-dance-IPFV-PL until Sunday rise-IPFV  
 ‘they dance the bakururu until Sunday is dawning.’

ilə-pi-ri-ẽ pɪlə eme-tibi-ẽ atai  
 it-PST-POSS-ATTR after dawn-PTC-ATTR this way  
 ‘After that is done like this, when it has dawned,’

idənərə kehoẽ kurə-domodo ədaũlo  
 all INTS person-PL anything  
 ‘the people gather together’

məkə até ãzi i-ta-biẽ-li i-pimə-ri  
 AN.DIST until corn 3-mouth-leave-IPFV 3-chief-POSS  
 ‘close to the chief of the corn ritual,’

eti-ã=ro  
 house/clothing/party-DAT-INTS  
 ‘(throwing chewed corn) at his house.’

ilə-pi-ri-ẽ pɪlə idənərə tə-(e)taũ-pigeduo-mo idənərə  
 it-PST-POSS-ATTR after all 3R-greet-when-PL all  
 ‘After that is done, everybody greets one another’

mərə pɪni-modo-pe-õ t-idu-no  
 INAN.DIST cooked.food-PL-EXIST-NZR2 3R-forest-NZR2  
 ‘looking for a partner (or a pair/ another) who has a lot of cooked food’

i-ui-ẽ-li-mo mərə pɪni-modo epa-ni-ro uarə  
 3-search-IPFV-PL INAN.DIST cooked.food-PL exchange-NZR4-INTS and  
 ‘in order to exchange lots of food.’

ilema pɪlə idənərə auərə-modo euanike-bigeduo  
 then after all INAN.MED-PL finish.when  
 ‘Once everyone has finished them,’



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məkə                      pini-modo  
AN.DIST                      cooked.food-PL  
'with the meals'

Ø-odo idu-no-modo      mərə                      āzi                      azihu-ibi  
3-owner forest-NZR2-PL    INAN.DIST                      corn                      roast-PTC  
'the owner's partners hand out the roasted corn'

Ø-ie-ĩpa-dili-mo                      idənərə      kehoẽ      kurə-domodo=ĩrã-ro  
3A-exchange-IPFV-PL                      all                      INTS                      person-PL=DAT-INTS  
'to everybody.'

ilema idənərə                      kehoẽ      mərə                      āzi                      Ø-epa-dili  
after all                      INTS                      INAN.DIST                      corn                      3A-exchange-IPFV  
'when everybody has finished exchanging the corn,'

euanike-bigeduo, s-agu-ho-ẽ                      kuru      sisi                      egase-ho=ininə  
finish-when                      3O-begin-NZR3-ATTR                      INTS                      sun                      rise-NZR3=against  
'first towards where the sun is risen, the east'

tad-apaıda-dili                      tasera                      ezipia-aze  
NPOS-align-IPFV                      central.house                      place-onto  
'everybody makes a line (looking) toward the place of the central house'

idənərə      kehoẽ      pekodo-modo      uguõdo-modo      uarə  
all                      INTS                      woman-PL                      man-PL                      and  
'Everybody, women and men'

ilema      pılə      tu-(i)go-ru-mo      Ø-i-ĩ-dili-mo-ro                      ilə  
then      after                      3R-flute-POSS-PL                      3S-COP2-IPFV-PL-INTS                      it.REF  
'After that, they may play their flute.'

(i)goru      i-deĩ-pi-ri-ẽ                      pılə      idənərə      kehoẽ      mərə  
flute                      3-blow-PST-POSS-ATTR                      after                      all                      INTS                      INAN.DIST  
'Right after playing the flute, everybody gets'

āzi                      azihu-ibi      ədi-ẽ-pa                      sagũ-pi-ri-ẽ                      tə-(e)ma-asi  
corn                      roast-PTC                      what-ATTR-NEG                      grind-PST-POSS-ATTR                      3R-hand-inside  
'some roasted corn in their hand.'

Ø-i-ĩe-dili-mo                      ilema      pılə  
3A-make-IPFV-PL                      then                      after  
'After they do that,

i-amui- $\tilde{V}$ -li-ro                      azeki-ba                      keho $\tilde{e}$ -ro                      uarə  
 3-throw-IPFV-PL-INTS              different-NEG              INTS-INTS                      and  
 they may throw equally (equal amounts of corn).’

s-agu-ho- $\tilde{e}$                       kuru                      s-amui-li                      sisi                      egase-ho= $\text{inin}\tilde{e}$   
 3O-begin-NZR3-ATTR              INTS                      3O-throw-IPFV              sun                      rise-NZR3= $\text{against}$   
 ‘Actually throwing first in the direction of the rising sun, the east’

ilə-pi-ri- $\tilde{e}$                       p̄ilə                      paru                      ilə-pi-ri- $\tilde{e}$                       p̄ilə                      sisi  
 it-PST-POSS-ATTR                      after                      river                      it-PST-POSS-ATTR                      after                      sun  
 ‘after that is done to the headwaters (the north), after that is done, in the direction’

eguā-to= $\text{inin}\tilde{e}$ -ro  
 lie.down-NZR3= $\text{against}$ -INTS  
 ‘of the setting sun (the west)’

si-pi-ri- $\tilde{e}$                       p̄ilə                      əuāṛī                      əe-to= $\text{inin}\tilde{e}$ -ro                      uarə.  
 last-PST-POSS-ATTR                      then                      cold/storm                      come-NZR3= $\text{against}$ -INTS                      and  
 ‘and, at last, towards the direction where cold fronts come (the south).’

ilə                      āzi                      s-amui-li                      euanike-bigeduo                      p̄ilə  
 it.REF                      corn                      3O-throw-IPFV                      finish-when                      after  
 ‘Once it is finished throwing the corn,’

idənərə keho $\tilde{e}$  mərə                      p̄ini-modo  
 all                      INTS                      INAN.DIST                      cooked.food-PL  
 ‘everybody hands out their dishes’

Ø-odo idu-no-modo  
 3-owner forest-NZR2-PL  
 ‘to each other and their partners’

mərə                      p̄ini-modo                      i-e $\tilde{V}$ pa-dili-mo-ro                      uarə  
 INAN.DIST                      cooked.food-PL                      3A-exchange-IPFV-PL-INTS                      and  
 ‘exchanging cooked dishes.’

akaemo mərə                      p̄ini                      modo                      epa-də-ī-modo  
 3PL                      INAN.DIST                      cooked.food                      PL                      exchange-PST-NZR4-PL  
 ‘Those who have exchanged dishes’

azi-ge                      t-atua-ge-mo                      aləp̄ilə                      ilə-pi-ri- $\tilde{e}$                       idənərə  
 wildlife-INSTR                      3R-split-REV-PL                      also                      it-PST-POSS-ATTR                      all  
 ‘also exchange (meat) dishes. After that is done, everybody’

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mərə                      təd-əwīdua-pigeduo                      pīlə      idənərə  
 INAN.DIST              NPOS-meal-when                      after      all  
 ‘has eaten all their meals,’

akaemo mərə                      pīni                      Ø-odo-modo  
 3PL      INAN.DIST              cooked.food                      3-owner-PL  
 ‘they, the helpers of the owners’

idu-no-modo      mərə                      pīni                      ti-eŨpa-dibi-mo  
 forest-NZR2-PL      INAN.DIST              cooked.food                      3R-exchanging-PTC-PL  
 ‘of the food that was exchanged’

Ø-ieŨpa-uə-dili-mo                      uarə ədido ime-ō-ge-lə                      peto-ge  
 3A-exchanging-CPLT-IPFV-PL                      and things small-PL-INSTR-EMPH      fire-INSTR  
 ‘over and over, pay (thank) with small things such as matches’

pərəu-ge-lə                      uarə      Ø-əs-ebauə-dili-mo  
 arrow-INSTR-EMPH                      and      3A-DETR-pay-IPFV-PL  
 ‘and arrows.’

ilə-modo-bigeduo-ma      Ø-adaĩ-li                      lelə-ro                      uarə  
 it.REF-PL-when-FOC      3-finish-IPFV                      really-INTS                      and  
 ‘And when it is finished, it is over.’