Stefan Dienst
A Grammar of Kulina

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Abbreviations, symbols and conventions

Abbreviations

A   subject of transitive verb
ADJU   adjunct
ADMON   admonitive
ADV   adverbial
AM   associative modifier
APPL   applicative
ASS   associative
AUX   auxiliary
AVRS   aversive
CAUS   causative
CC   copula complement
CL   clause
CMPL   complement
COLL   collective
CONC   concurrence
CONTR   contrastive
COP   copula
CoS   change of state
CS   copula subject
DECL   declarative
DEIC   deictic (noun)
DEM   demonstrative
DIR   directional
DISP   dispossessive
DL   dual
DST   distal
ECOM   even comitative
EPENTH   epenthetic segment
EXCH   in exchange for
EXCL   exclamative
f   feminine
FUT   future
HPAST   hodiernal past tense
IFUT   immediate future
IMP   imperative
INF   infinitive
INSTR   instrument(al)

INT	interrogative
INTENS	intensifier
IO	indirect object
ITE	iterative
lit	literal(ly)
LOC	locative-allative-ablative
m	masculine
NAR	narrative
NCL	noun class
NEG	negation
NFC	narrow focus
NFIN	non-finite
NFRST	non-firsthand evidential
NFTC	non-future temporal-causal
NFUT	near future
NMLZ	nominalizer
NP	noun phrase
NSG	non-singular
O	direct object
PAST	prehodiernal past tense
PL	plural
Port	Portuguese
POSS	possessor
PRED	predicate
PRX	proximate
PTCP	participle
PURP	purpose, purposive
Q	question
RCP	reciprocal
REDUP	reduplication
REL	verbal relative clause suffix
REM	remote
RPAST	recent past tense
S	subject of intransitive verb
SG	singular
sp	species
TAM	tense, aspect, mood, modality, evidentiality
TC	temporal-causal
TOP	topic
UCOM	uneven comitative
VCC	verbless clause complement
VCS	verbless clause subject

Symbols

ø	Morpheme deletes immediately preceding auxiliary *na-*.
(ø)	Morpheme deletes immediately preceding auxiliary *na-* only if the auxiliary has a prefix.
↑	Morpheme raises immediately preceding /a/ to /e/ or /i/.
á, é, í, ó	Stressed vowels. Stress is only indicated on morpheme-final diphthongs and in Portuguese loans with unassimilated stress. In all other cases the last vowel of a phonological word is stressed.
=	Following morpheme is a clitic.

Conventions

Between the original form of an example and the glosses, an underlying form is given if it is different from the surface form and relevant for the example. In this case, only the underlying form is segmented into morphemes, but the surface form is also aligned with the glosses.

The stem of inflecting verbs is followed by a hyphen.

Reduplication is glossed with its function if it is clearly identifiable. Otherwise, it is glossed REDUP.

Summary

This work is a comprehensive description of the grammar of Kulina, a language of the Arawan family of south-western Amazonia. It is a revised version of my PhD thesis, submitted at La Trobe University in January 2006. Kulina is spoken by around 5,500 people in Brazil and around 400 in Peru. The grammatical analysis is mainly based on data collected on the Purus river in the Brazilian state of Acre during five field trips between 2002 and 2007.

Kulina is predominantly head-marking. It has a complex verbal morphology which is largely agglutinating with some instances of fusion. The language has two noun classes and two genders. The gender agreement of transitive verbs with their arguments is in part governed by intricate grammatical rules and in part pragmatically driven.

The book consists of 15 chapters and two texts. The introductory chapter presents the geographical setting and linguistic affiliation of the language as well as an overview of grammatical features of Kulina and earlier studies on the language and its speakers. Chapter 2 on phonetics and phonology is followed by five chapters on the word classes of Kulina. Chapter 8 deals with the various possessive constructions and chapter 9 with the syntax of noun phrases. The following four chapters describe the syntax of main and subordinate clauses. Chapter 14 is on word formation processes and the final chapter discusses a number of issues concerning the lexicon: colour terms, generic nouns for plants and animals, vocatives for pets, idioms, and the origin of loan words.

1 Introduction

1.1 Population and geographic location

The Kulina are an indigenous people of south-western Amazonia. Their self-denomination is *Madiha* (with wordfinal stress), which is also the word for 'people' in general. Kulina populations are found in both Brazil and Peru.

According to data published on the website of the Brazilian Ministry of Health, the number of Kulina in Brazil is around 5,500. They live in the states of Acre and Amazonas. In Acre, Kulina villages are found in the areas of the Purus river and the Envira river. In Amazonas state, the Kulina live in the areas of the Juruá, Tarauacá and Jutaí rivers.

According to Peruvian census data, there were seven Kulina villages in Peru in 2007 with 321 inhabitants over the age of six. The villages are located on the Purus river in the department of Ucayali.

The population of a village is usually not much larger than one hundred (and can be much smaller). Exceptions to this are two Kulina villages with resident Evangelical missionaries, San Bernardo in Peru and Piau in the Brazilian state of Amazonas, which have accrued larger populations.

The traditional subsistence economy is based on slash-and-burn agriculture, hunting and fishing. The main crops are sweet manioc and bananas. Metal tools are now used in agriculture, shotguns for hunting and nets and hooks for fishing, so that the Kulina have become dependent upon those goods provided by the non-indigenous societies.

Most Kulina villages in Brazil are located in indigenous territories. Those territories have been set apart for the exclusive use of the indigenous population, but in many places illegal intrusions of loggers and fishermen are commonplace. Kulina villages are found in the following indigenous territories.

Table 1. Indigenous territories in Brazil with Kulina populations

Indigenous territory	River	State
Alto Rio Purus	Purus	Acre
Cacau do Tarauacá	Tarauacá	Amazonas
Jaminawa/Envira	Envira	Acre
Kulina do Igarapé do Pau	Envira	Acre
Kulina do Médio Juruá	Juruá	Amazonas
Kulina do Rio Envira	Envira	Acre
Kumaru do Lago Ualá	Juruá	Amazonas

The largest Kulina populations are found in the territories Alto Rio Purus and Kulina do Médio Juruá. There is also a Kulina village, Batedor, on the Jutaí river, for which an indigenous territory has not yet been created.

Map 1 shows the states of Acre and Amazonas as well as my main fieldwork location, the village of Santa Júlia in the indigenous territory Alto Rio Purus.

Map 1. The village of Santa Júlia in the state of Acre, Brazil

1.2 The name *Kulina*

Besides the Kulina whose language is studied here, there are remnants of an unrelated people known by the same name on the Curuçá river in the indigenous territory Vale do Javari in the state of Amazonas. Those Kulina speak a Panoan language and are often called "Kulina (Pano)" to distinguish them from the Kulina discussed here, who are in turn called "Kulina (Madihá)", after their self-denomination, or "Kulina (Arawá)", after the family their language belongs to.

The name *Curina* is found as early as the seventeenth century, referring to an indigenous people living on the Amazon river in Peru (Figueroa, Acuña et al. [1660–1684] 1986: 73), but it is almost certain that those people were neither Kulina (Arawá) nor Kulina (Pano). Those Peruvian Curina may very well have been the ones who were

originally known by that name. The name may then have travelled with the Western explorers, who started to use it for new, unrelated groups they encountered on their journeys.

In 1820, German naturalist Johann Baptist von Spix met members of an indigenous people known as *Culinos* in São Paulo de Olivença on the Solimões river. A Culino wordlist he collected was published in Martius (1867: 242–244). Though the wordlist clearly shows that von Spix's Culino was a Panoan language, Fleck (2007) demonstrates that it belonged to a different branch of the Panoan family than today's Kulina (Pano) of the Curuçá river.

Since the identity of groups named *Curina*, *Culina*, *Culino*, etc. in most early sources is unclear, it is not possible to say when the Kulina (Arawá) were first contacted by Europeans or Neobrazilians. The first account of *Culinos* who can clearly be identified as Kulina (Arawá) is from the British explorer William Chandless, who travelled up the Juruá river in 1867 (Chandless 1869: 300, 304). See Fleck (2007) for a more detailed discussion of the history of the name *Kulina*.

1.3 The Alto Rio Purus

The indigenous territory Alto Rio Purus (Upper Purus River), where most of the research for this work was carried out, is located in the municipalities of Manuel Urbano and Santa Rosa do Purus in the state of Acre in Brazil. The territory is inhabited by Kulina and Kashinawa with each group numbering somewhat over 1,000 people. A small group of Jaminawa also used to live in the territory. Like the Kashinawa, they speak a language of the Panoan family. Due to continuous conflicts with the Kashinawa, they moved away some time before 2002, when the research for this study began.

With the exception of the Kulina village Maloca, which is located on the Chandless river, a tributary of the Purus, all the villages of the indigenous territory lie on the banks of the Purus river, which is the only way of access to them. There are footpaths between neighbouring villages, but paths that led out of the area, e.g. to the Envira river, are no longer used. As of 2006, there were seven Kulina villages in the north of the territory[1] (downriver) and nine in the south[2] (upriver, close to the Peruvian border), separated by twelve Kashinawa villages.

Many of the older Kulina men and a few older women know Portuguese well enough to talk about issues which are relevant for everyday life in the jungle. Younger

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1 The names of the villages are Apuí, Santa Júlia, Embuaçu, Santo Amaro, Boca do Chandless, Maloca and Ipiranga.

2 These villages are Canamari, Nazaré, Vista Alegre, Carolina, Maronaua, Sobral, Paxiúba and Cumaru, which all lie next to each other and Tocandeira, which lies in between the Kashinawa villages. It is separated from the other villages listed here by four Kashinawa villages and from the Kulina villages downriver, listed in the previous footnote, by eight Kashinawa villages.

people generally have a more limited command of Portuguese. In the 1980s, Catholic and Lutheran missionaries living in the villages introduced the Kulina orthography devised in Peru (section 1.9) to the Alto Purus territory. They taught many people how to read and write Kulina, but they didn't teach them how to write Portuguese. Most of those who learnt how to read and write years ago never make use of this skill and are in fact functionally illiterate.

The Lutheran mission has since terminated its activities among the Kulina on the Purus while the Catholic mission has changed its mode of operation. The missionaries now live in the town of Manuel Urbano from where they visit the villages several times a year, staying only a short while in each village.

Most villages now have a school and even those without a school building have a local teacher, paid by the state government, who was trained in courses for indigenous teachers in Rio Branco, the capital of Acre, but the form and frequency of classes in most villages are not sufficient to ensure the literacy of the younger generation. The teachers are also meant to teach Portuguese, but the results here are even poorer.

1.4 The Kulina language and the Arawan language family

Kulina belongs to the Arawan language family. All other known languages of the family are or were spoken in Amazonas state in Brazil. Figure 1 shows the family tree. Kulina is most closely related to Western Jamamadi and then to Deni. These varieties form the Madihá dialect continuum. (The self-denomination *Madiha* is shared by the Kulina and the Deni.)
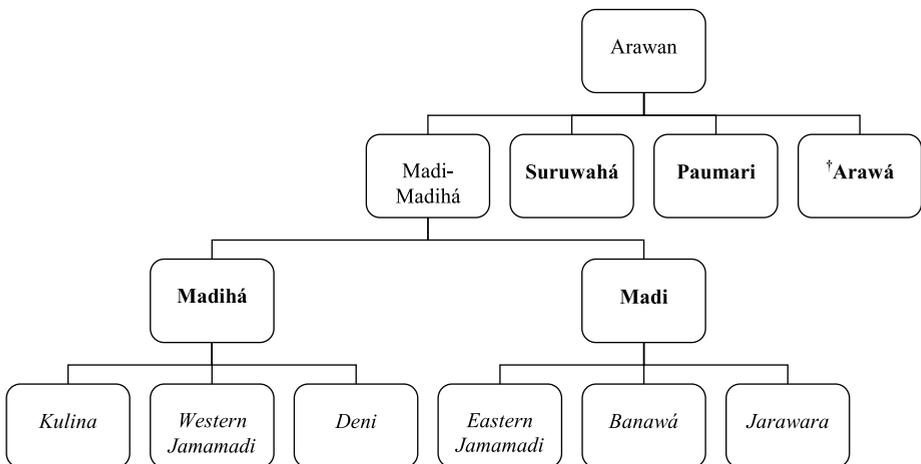
Figure 1. The Arawan family

Kulina and Deni are the two ends of this continuum. Western Jamamadi dialects are spoken by several indigenous groups along the Purus river and its tributaries. The Madihá varieties are all mutually intelligible, though with some difficulty between Kulina and Deni.

As a continuum of mutually intelligible dialects, Madihá could be called a language, with Kulina as one of its dialects. In this study, however, the word *language* will be used in its sociolinguistic sense, i.e. referring to the shared means of communication of a speech community. In this sense, the Kulina, Deni and Western Jamamadi, who consider themselves to be distinct ethnic groups, speak different languages, for which they now also use different spellings. Kulina will therefore be referred to as a language and the term *dialect* will be used for the different varieties of Kulina.

As the family tree shows, Madi is the next closest relative of Kulina. The Madi-Madihá subgroup was first proposed in Dienst (2005b, 2008c). Madi is made up of the Eastern Jamamadi, Banawá, and Jarawara dialects (Dixon 2004a: 8). Madi and Madihá are mutually unintelligible.

The speakers of Arawá, the language after which the family was named, fell victim to the measles in 1877. The few survivors of the epidemic were reportedly killed by the Kulina (Rivet and Tastevin 1938a: 72–73). The Arawá language is only known from a wordlist with 52 items collected by William Chandless in 1867 and published in Chandless (1869). The speakers of Suruwahá were only contacted in 1980 and are all monolingual in their language, while Paumari is seriously endangered. Dixon (1999) gives an overview of the languages of the family. Dixon (2006) is a bibliography of early sources (until 1950).

1.5 Features of the language

1.5.1 Phonology

There are four vowel phonemes, /a/, /e/, /i/ and /o/. The vowel [ɨ], which is found in many Amazonian languages (Dixon and Aikhenvald 1999: 8), is an emphatic variant of /a/ in Kulina. The language has 16 consonants, with a three-way voicing distinction (voiced, voiceless unaspirated and voiceless aspirated) for obstruents.

Syllables usually have a (C)V-structure. There are only a few instances of CVV-syllables with a diphthong. A large proportion of these are recent loans from Portuguese, a language rich in diphthongs. There are no contrastive suprasegmental features (though neighbouring identical vowels can be pronounced as one long vowel [V:], resulting in distinctive vowel length in the surface form. In careful pronunciation, however, neighbouring vowels are separated by a glottal stop [VʔV] [section 2.1.2].) Stress is always word-final.

The quality of the vowel(s) of a morpheme can be influenced by neighbouring morphemes of the same word due to two phonological processes: ablaut and assimilation.

1.5.2 Word classes

Kulina has two open word classes:
1. Nouns (chapter 3)
2. Verbs

The latter fall into two major categories,
2a. Dynamic verbs (chapter 4)
2b. Stative verbs (chapter 5)

These two subclasses, though given semantic labels, are distinguished by morphological and syntactic criteria. The justification of the names *dynamic* and *stative* is discussed at the beginning of chapter 4. The only native basic numbers, 'one' and 'two', fall in the subclass of dynamic verbs.

There are two closed word classes whose members have a lexical meaning:
3. Adjectives (chapter 6)
4. Adverbs (section 7.5)

Words of the following closed classes have a grammatical function:
5. Pronouns (section 7.1)
6. Postpositions (section 7.2)
7. Deictic nouns and demonstratives (section 7.3)
8. Interrogatives (section 7.4)
9. Quantifiers (section 7.6)
10. Information structure markers and similar elements (section 7.7)
11. Clause linkers (section 7.8)

There are inflecting and non-inflecting postpositions. Inflecting postpositions are grammaticalised possessed nouns which retain part of their nominal morphology.

One class of words occurs outside syntactic structures:
12. Interjections (section 7.9)

Finally, there is an important grammatical marker which does not fall into any word class:
13. Associative particle (section 7.10)

1.5.3 Gender, noun class and possession

Kulina has a gender and a noun class system (section 3.5). Both systems are binary, masculine vs. feminine for gender and marked vs. unmarked for noun class. Members of the marked noun class require the use of an agreement prefix on the verb. A transitive verb agrees in gender either with its subject or its direct object. A complex set of rules determines which argument governs gender agreement in each clause.

There are three types of possession: alienable, inalienable and kinship. Some kinship nouns require the use of kinship possession while others require alienable possession. Inalienably possessed nouns agree in gender with their possessor.

1.5.4 Morphology

Dynamic verbs are either inflecting or non-inflecting. Non-inflecting verbs are followed by an auxiliary, which takes the inflectional affixes. The verbal morphology is very rich, with affixes occurring in three prefix slots and eleven suffix slots. Some verbs have suppletive singular, dual and plural stems, which indicate the number of S in the case of intransitive verbs and the number of O in the case of transitive verbs, following a global pattern described by Durie (1986).

The language is mainly agglutinating, but with somewhat more fusion than its close relative Deni.

Kulina:	*ti-*	+	*ino*	>	*tino*	'your tooth'
	2		tooth	>	2.tooth	

Deni:	*ti-*	+	*inu*	>	*ti-v-inu*	'your tooth'
	2		tooth		2-EPENTH-tooth	

1.5.5 Syntax

The basic constituent order is SV, AOV, but the actual order is determined by pragmatic as well as syntactic rules. Arguments in S, A or O function are unmarked, but cross-referenced on the verb in the categories person (S/A), number (S/A and O), gender (S/A or O) and noun class (S/A or O). The function of oblique arguments and adjuncts is marked by postpositions.

Dynamic verbs can be intransitive, transitive, S=A-ambitransitive or S=O-ambitransitive. Stative verbs, however, are always intransitive. Some stative verbs take a second and even a third argument, but the non-subject arguments are always marked

as oblique and unlike in the case of transitive dynamic verbs, gender agreement is always with the subject.

There are two types of noun phrase-modifying clauses. Relative clauses (section 12.1), which require the modified noun to be an argument of the subordinate clause, play a relatively minor role. Associative clauses (section 12.2), in which the modified noun need not be a participant, are a much more important clause type. Other types of subordinate clauses are complement clauses (section 12.3.1), embedded purpose clauses (section 12.3.2) and various kinds of adverbial clauses (chapter 13).

1.6 Dialect variation

The Kulina villages are scattered over a large area, but dialect variation is not very significant, indicating a relatively recent split of the groups living on different rivers. Since rivers are the main traffic routes, there is constant contact between villages connected by one and dialects can be defined by rivers.

1.6.1 Purus and Envira

As described above, the Kulina villages in the indigenous territory Alto Rio Purus form two clusters separated by Kashinawa villages. The dialect described in this work is the one spoken in the Kulina villages downriver from the Kashinawa, which could be called "lower Alto Purus dialect" but will usually be referred to here as the dialect of Santa Júlia, after the village where I undertook fieldwork. Travelling upriver from the Alto Purus territory, one reaches Peru and the Peruvian Kulina villages. The Peruvian Kulina dialect is among the best-described and it differs very little from the lower Alto Purus dialect. The upper Alto Purus dialect, spoken in Brazil upriver from the Kashinawa, is located between the Peruvian and lower Alto Purus dialects mentioned before and shares some features with one and some with the other. Together, the dialects of the Brazilian Alto Purus and of Peru will be referred to as Purus-Kulina or the Purus dialect. Table 2 shows a few differences between the dialects.

Table 2. Differences between the Kulina dialects of the lower Alto Purus and Peru

	lower Alto Purus (dialect of Santa Júlia)	Peru
'industrial beads'	sowiko	siiti
'banana'	bare	bari
non-singular prefix on auxiliary na-	ke-	ki-
non-singular affixes on auxiliary ha-	ke-...-ra	ke-...-na
purpose and cause marker	hini	hine

The dialect spoken on the Envira river is also very similar to the lower Alto Purus dialect.

1.6.2 Juruá

The dialect of the middle Juruá river is more divergent. A phonetic difference is that the phonemes /z/, /s/ and /sh/ are mostly pronounced as affricates [dz], [ts] and [tsʰ] on the Purus, while on the Juruá, they are more commonly pronounced as fricatives [z], [s] and [sʰ] (Tiss 2004: 24–25). Phonologically, the dialects differ in that the Purus dialect has lost /w/ in many cases (section 2.6.4.2). This consonant loss is most salient in the highly frequent masculine form of the declarative suffix (section 4.2.2.2), which is -*wi* on the Juruá and -*i* on the Purus.

The table below shows some lexical differences between the Purus and middle Juruá dialects, which are often due to borrowing in either dialect. (Loan words are discussed in section 15.5. See also section 3.2.3 for differences in the kinship terminology.)

Table 3. Lexical differences between the Purus and Juruá dialects

	Purus	**Middle Juruá**
'axe'	*zami*#	*bari*
'bad'	*tabakhora*	*waidira*
'cut with scissors'	*beri*	*khado*
'giant anteater'	*hozawa*	*banipe*
'mirror'	*warowa****	*shonoba*
'pet vocative for toucan'	*khira*	*opa*º
'pineapple'	*nana**	*shami*

Loan from an unidentified Panoan language. * Loan from Nheengatu (Língua Geral Amazônica).
º Loan from Kanamari (Katukinan).

In some cases, including the ones given in table 4, there are idiosyncratic differences between the phonological forms of a word or grammatical morpheme in the two dialects.

While the gender system (section 3.5.1) as such is stable in all known dialects of Kulina, gender is marked in certain cases in the Juruá dialect where this is no longer the case on the Purus. This includes the verbal subordination suffixes -*za, -zama* and -*raa* (section 13.3; Tiss 2004: 312), the clause linkers *naza* and *naraa* (section 7.8; Tiss 2004: 339) and the cause marker *hini* (section 7.2.2.1; Tiss 2004: 85).

Table 4. Idiosyncratic phonological differences between Kulina dialects

	Purus	**Middle Juruá**
'manatee'	*sopaina*	*sopena*
'That's enough!'	*apaha*	*papaha*
1. 'opossum'; 2. 'write'	*zodo*	*dozo*
topic marker, feminine	*pi*	*pe*

The Kulina living on the lower Juruá river moved downriver from the middle Juruá during the 20th century. Nothing has been published on their dialect, but it can be assumed not to differ significantly from the middle Juruá dialect.

1.6.3 Jutaí

There is one Kulina village, Batedor, on the Jutaí river. I met a speaker from Batedor in the town of Jutaí in 2006. His dialect was very close to that of the middle Juruá.

1.7 Previous work on the Kulina language and its speakers

1.7.1 General grammatical descriptions

There are four general works on Kulina grammar, all of which resulted from Christian missionary work. In her *Culina grammar outline* from 1963, Arlene Agnew, a missionary of the Summer Institute of Linguistics (SIL), presents an analysis of the syntax of the Peruvian Kulina dialect within the theoretical framework of tagmemics.

The short *Gramática da Língua Kulina, Dialeto do Igarapé do Anjo* published in 1986 was co-authored by Brazilian linguist Ruth Monserrat and Abel O. Silva (Kanaú), who worked with the Kulina of the Envira river from 1978 to 1983 as a volunteer of the Catholic Conselho Indigenista Missionário (CIMI). It is mainly a description of the surface forms of Kulina morphology along the lines of Portuguese grammar, one of the consequences of which is that stative verbs and adjectives are lumped together as one word class "adjectives".

Patsy Adams's *Madija grammar sketch*, dated 11 December 1987, is an unfinished manuscript. Adams worked in Peru as an SIL missionary for several decades. Her sketch does not include phonology, but information on almost all grammatical morphemes in the dialect described as well as the most important morphophonological processes. The order of verbal suffixes given is not completely accurate. Adams's "antipassive construction" is not tenable (see section 3.5.1.2).

Frank Tiss, author of the *Gramática da Língua Madiha (Kulina)* published in 2004, worked as a Lutheran missionary in Eirunepé on the Juruá river. His grammar is

the most comprehensive work on Kulina preceding the present study. In some cases, Tiss does not follow Adams while I do. He does not recognise a separate word class of adjectives, considering the words in question to be possessed nouns. He regards the verbal third person prefix *i-*, which occurs only on transitive verbs, to mark a third person object, although *i-* also occurs when the object is first person singular and the subject is third person non-singular. This shows that *i-* is in fact a third person subject marker, as correctly assumed by Adams. In some other cases, future research will have to show if different analyses we offer are due to dialectal variation, given that the dialect described by Tiss is more different from the one of the present work than those in Agnew (1963), Monserrat and Silva (1986), and Adams (1987). Table 5 shows the works mentioned in this section, together with the dialects they describe.

Table 5. Grammatical works on different varieties of Kulina

river	country	dialect	subdialect	general grammatical work
Purus	Peru	Purus dialect	Peruvian subdialect	Agnew (1963), Adams (1987)
	Brazil		lower Alto Purus subdialect	present work
Envira	Brazil	Envira dialect	–	Monserrat and Silva (1986)
Juruá	Brazil	Juruá dialect	–	Tiss (2004)

1.7.2 Specific grammatical and phonological topics

There is a small number of works on Kulina phonology or specific aspects of the grammar. Adams Spell and Gordon de Powlison (1976) deals with the phonology of Peruvian Kulina. Adams and Marlett (1987) is a paper on gender agreement. The title of Adams Liclan and Marlett (1990) is "Madija noun morphology", but it includes a phonological analysis which is substantially different from the one presented in Adams Spell and Gordon de Powlison (1976). A major point of Adams Liclan and Marlett's paper is to demonstrate that [w] is not a phoneme when it occurs in the position [owV]. In section 2.5, I discuss why this is not convincing. Adams Liclan and Marlett (1991) and Wright (1991) are analyses of an aspect of Kulina syntax in the framework of relational grammar. The claims of the former paper are analysed and refuted in section 3.5.1.2 and in Dienst (2008b). Wright (1988) is an M.A. thesis on Kulina predicates, published in a condensed form as Wright (1995). Wright's works are based on the sound data of the SIL missionaries, but also on their to a large extent erroneous syntactic analysis. Adams Liclan and Marlett (1994) is a very short paper on vowels. Dienst (2009) discusses stative verbs.

1.7.3 Dictionaries and wordlists

Besides their work on Kulina grammar, Monserrat and Silva compiled a small dictionary (Silva and Monserrat 1984), which includes several hundred Kulina names. Rivet and Tastevin (1938a, 1938b, 1939, 1940) contain data from several Kulina wordlists collected by Tastevin, some of them from non-indigenous people who had some knowledge of the language. Carvalho (1931) contains a wordlist collected by the author.

1.7.4 Historical linguistics and language contact

Dixon (1999) is an overview of the language family with a reconstruction of the phonology of the proto-language. Proto-Arawan phonology is discussed more comprehensively in Dixon (2004b), which includes about 460 cognate sets with reconstructed proto-forms. Dienst (2005a) demonstrates that the phoneme /s/ reconstructed by Dixon is in fact an innovation of Madihá. Dienst (2008c) shows that Madihá and Madi are more closely related to each other than to the other languages of the family. Dixon (1995) deals with possessed nouns in Jarawara and other Arawan languages and reconstructs possessed nouns for Proto-Arawan. Dienst (2008a) discusses the influence of Portuguese on Kulina.

The history of the name *Kulina*, which has been used for various unrelated indigenous groups, is discussed in Fleck (2007).

1.7.5 Pan-Amazonian forms

Kulina features as the representative of the Arawan family in Payne (1990). This paper presents five "widespread grammatical forms" found in Amazonian languages. Kulina forms are given in three cases:

1. negative *mara*
2. causative *a-*
3. transitivizer *ka-* (this form is not given as specifically Kulina, but generally Arawan)

While Payne presents the "negative" form *mara* as an instance of the widespread negative syllable *ma*, the present work analyses *ma ra-* as consisting of two morphemes, only the second one of which, *ra-*, has a negative meaning (section 10.4.3). According to this analysis, the form does not belong in Payne's list.

The surface form *a-*, given as a "causative" by Payne, is only an allomorph of the applicative prefix *ka-*, which he gives separately as a "transitivizer" (section 2.6.5).

The paper also discusses the interesting morphological similarities between possession markers in Arawan, Arawakan, Cariban and Candoshi.

1.7.6 Texts

Rivet and Tastevin (1940), already mentioned in section 1.7.3, contains a glossed Kulina story and the lyrics of several songs without glosses or translations.

Instituto Lingüístico de Verano (1999a) is a collection of texts about aspects of the traditional culture and Instituto Lingüístico de Verano (1999b) contains fictional stories. Both works were compiled for use by native speakers. All the texts have a Spanish translation.

1.7.7 Anthropological literature

Verneau (1921) contains a few pages (267–272) on the Kulina of the Juruá region. The paper is based on unpublished reports by Tastevin.

SIL missionary Patsy Adams, who worked in Peru, published a number of papers on Kulina culture (1963, 1964, 1976, Adams and Townsend 1975).

Rüf (1972) describes the ceremonial hunt of the Kulina after fieldwork in the village Zapote in Peru.

Donald Pollock did fieldwork in the Kulina village Maronaua on the Brazilian Purus and has written on shamanism, illness and death (1985a, 1988, 1992, 1993b, 1994, 1996, 2004) as well as a variety of other topics (1985b, 1985c, 1993a, 1998, 2002, 2003).

Claire Lorrain's Ph.D. thesis (1994), based on fieldwork in the Juruá area, explores the significance of gender roles in various aspects of Kulina culture. A more recent publication is Lorrain (2000). Nakamaki (1997) deals with how the Kulina perceive their environment. Gordon (2006) is a master's thesis which contains a review of the literature on the Kulina and other Arawan-speaking peoples and an analysis of the Kulina kinship system.

Dienst and Fleck (2009) discusses pet keeping and the use of pet vocatives among the Kulina and other indigenous groups in south-western Amazonia. Haverroth, Negreiros and Barros (2010) is an ethnobiological and ethnoecological study on the Kulina on the Envira River. Frenopoulo Gorfain (2012) studies the relationship between the Kulina on the Brazilian Purus and the public health workers who attend them.

1.8 Materials for the present study

1.8.1 Kulina

For the present study, I recorded about 16 hours of spoken texts from more than thirty speakers of both sexes during eight months of fieldwork in 2002/2003, four

months in 2004 and six weeks in 2005. Many of the texts are traditional stories, often with several versions of a story told by different people. Others are accounts of past events (e.g. the killing of a jaguar that entered the village and a hunt during which a dog was eaten by a caiman) and plans for the future (e.g. going to town to apply for a pension[3]). Some texts describe the production of artefacts and substances, such as red paint from the fruit of the annato tree and black paint from the fruit of the genipap tree. Several recordings deal with various kinds of animals and their behaviour.

I also recorded and transcribed some traditional songs. Each line of a song is usually repeated several times and the next line, again repeated several times, may only vary a little, so that long recordings produce only little text. Moreover, my consultants couldn't always explain the contents of a song so that I focused on spoken texts and the analysis of songs played only a minor role in my work.

At the time of recording, the speakers lived in various villages in the indigenous territory Alto Purus in Brazil, although some were originally from Peru or had lived in Peru for some time. One speaker who recorded several long stories was originally from the Envira river. Almost all of the texts were transcribed, in many cases with the help of the monolingual speakers who recorded them. As a separate step, the transcribed texts were elucidated and translated into Portuguese with the help of speakers who had some command of that language.

A considerable amount of data was elicited through questions, pictures and videos. Further data come from my daily interaction with the inhabitants of the village Santa Júlia, my fieldwork location.

During a short visit to the town of Eirunepé on the Juruá river in 2004, I carried out a few hours of elicitation with three speakers who lived in the town and were bilingual in the middle Juruá dialect of Kulina and Portuguese.

During two field trips to other indigenous peoples of the area in 2006 and 2006/2007, I had the opportunity to collect some additional material on both the Purus and the middle Juruá dialects.

Many insights came from the existing works on Kulina. Adams (1987) in particular proved extremely helpful in the early stages of my work. Tiss (2004) only became available to me after I had completed a first draft of the present work. Some questions remain open here although they have been answered by earlier authors because I could neither confirm nor disconfirm their analysis from my own data.

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3 Like all rural workers in Brazil, the inhabitants of indigenous villages who work in family agriculture are entitled to an old age pension without ever having contributed to the social security system.

1.8.2 Other languages

In the present work, some use has been made of materials I collected on other languages. During my fieldwork on Kulina from 2002 to 2005, I spent a few hours each eliciting data from speakers of three languages, Deni (Arawan) in the towns of Lábrea and Tapauá in the Brazilian state of Amazonas, Kanamari (Katukinan) in the village Flecheira in the indigenous territory Kanamari do Rio Juruá, also in Amazonas, and Kashinawa (Panoan), mostly from visitors in my house in Santa Júlia.

From 2006 to 2007, I did extensive fieldwork on Kanamari in Flecheira and some fieldwork on Western Jamamadi (Arawan) in the village Capana in the indigenous territory Igarapé Capana on the Purus.

1.9 Spelling

The missionaries of the Summer Institute of Linguistics[4] (SIL) working in Peru since 1954 devised an orthography for Kulina which is based on the orthography of Spanish. They consider the glottal stop (section 2.2.4) to be a phoneme and spell it <h>. Patsy Adams, one of the first SIL missionaries to work among the Kulina, revised her original analysis and does not treat the glottal stop as a phoneme in her later publications. But the missionaries currently working among the Kulina report that this change in Adams's analysis only occurred when she no longer worked with the Kulina and that their own work was unaffected by Adams's new views, so that they continue to write the glottal stop (Jim Boyer, personal communication).

Catholic missionaries introduced the SIL spelling with <h> for the glottal stop in the Brazilian state of Acre. But as the glottal stop is in free variation with zero, works using this spelling differ in where they use <h> and where they don't. In Monserrat and Silva (1986) it is used much more widely than in Adams (1987), although Monserrat and Silva state that <h> usually doesn't correspond to any sound in the dialect they describe (p. 9). The current SIL missionaries write the glottal stop in a predictable manner in certain phonological environments, which demonstrates that it is not phonemic, though they are unaware of this implication. The table below compares the spelling used here to that of SIL Peru.

The New Tribes Mission working on the Juruá in Brazil uses a somewhat different spelling than SIL. Unlike SIL, this organisation does not give outsiders easy access to its work. According to Frank Tiss (personal communication), the Kulina on the Juruá know both the SIL spelling and the New Tribes spelling.

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4 In Peru the organisation uses the Spanish name Instituto Lingüístico de Verano (ILV).

Table 6. Kulina spelling systems

IPA	present work	SIL Peru
a	a	a
ɛ	e	e
i	i	i
o ~ u	o	o
b	b	b
p	p	p
pʰ	**ph**	**pp**
ḓ	d	d
ṱ	t	t
ṱʰ	**th**	**tt**
dz	**z**	**ds**
ts	s	s
tsʰ	**sh**	**ss**
k	k	**c / qu**[5]
kʰ	**kh**	**cc / qqu**[6]
h	**h**	**j**
m	m	m
n	n	n
ɾ	r	r
β ~ w̞	**w**	**hu**
ʔ	*not written*	**h**

For his own grammar (Tiss 2004), Tiss devised a new spelling as did I for this study. By coincidence, our spellings are identical except for the following details.

1. I put an accent on the first element of morpheme-final diphthongs.

present work:	Tiss 2004:	
ahói	*ahoi*	'rice'
papéo	*papeo*	'paper, book'

2. I write an epenthetic /w/ when a morpheme ending in /o/ occurs before another morpheme which begins with a vowel.

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5 <c> is used before <a> and <o>, <qu> is used before <e> and <i>
6 <cc> is used before <a> and <o>, <qqu> is used before <e> and <i>

present work:	Tiss 2004	
o-w-ebeno	*o-ebeno*	'my tongue'
1SG-EPENTH-tongue	1SG-tongue	

3. Tiss analyses the personal pronouns *owa* 'I' and *powa* 'he' as consisting of a prefix *o-* or *po-* and a stem *-a*, with an epenthetic /w/. Since he doesn't spell epenthetic /w/, he writes the pronouns *oa* and *poa*. I consider the two words in question to be mono-morphemic, but even if I analysed them as dimorphemic, I would still spell them *owa* and *powa* (see preceding point).

2 Phonetics and phonology

2.1 Vowels

2.1.1 Inventory and realisations

Kulina has four vowel phonemes, /a, e, i, o/.

    /a/ is usually pronounced as an unrounded low central vowel [a]. It is occasionally pronounced as an unrounded high central vowel [ɨ], particularly in words that are emphasised.

Maithakhazama	[maitʰaˌkʰadzaˈma]	'formerly' (not emphasised)
maithakhazama	[maitʰaˌkʰɨdzaˈma]	'a very long time ago' (emphasised)

/e/ is an unrounded mid-low front vowel [ɛ].

    /i/ is an unrounded front vowel, mostly pronounced [i] with a high tongue position. But it can also be pronounced as a somewhat lower, almost mid-high vowel [e̞].

    /o/ is a back vowel whose pronunciation varies between mid-high [o̞] and high [u̞]. Although it is not pronounced with lip rounding, it sounds like a rounded back vowel, not like unrounded [ɣ] or [ɯ]. This is presumably due to the fact that the position of the tongue has more influence on the quality of a back vowel than the position of the lips.

    Vowels are often nasalised after /h/ (a phenomenon known as rhinoglottophilia [Matisoff 1975]), especially in word-final position. There is no phonemic contrast between nasalised and non-nasalised vowels. According to Aikhenvald (1996: 511), word-final nasalisation was mentioned as an areal feature of South American languages in Rodrigues (1983), which was published as Rodrigues (1984).

apaha	[apahã]	'That's enough!'

2.1.2 Long vowels

Phonetically, Kulina has semi-long and long vowels, e.g.

[makaˑri ~ makaːri]	'squirrel'

In all of these cases, however, the semi-long or long vowel is in free alternation with two short vowels, pronounced as neatly distinct syllable nuclei. And as is always the case between adjacent vowels within a morpheme, a glottal stop (section 2.2.4) can be inserted between them, so that the possible pronunciations of the example above are

[makaˑɾi ~ makaːɾi ~ makaaɾi ~ makaʔaɾi]   'squirrel'

As the alternative pronunciation with a glottal stop shows, phonetically semi-long or long vowels can only be interpreted as sequences of two identical (short) vowel phonemes.

makaari   /makaari/   'squirrel'

In many cases, such a sequence of two identical vowels resulted from the loss of an intervocalic /w/ in the Purus dialect (section 2.6.4.2), e.g. *makaari* 'squirrel' is *makawari* in the Juruá dialect, which has preserved the phoneme /w/.

Long vowels are thus merely a phonetic surface phenomenon. Length is not a contrastive feature of vowels in the phonological system of Kulina.

2.1.3 Diphthongs

Kulina has the falling diphthongs [ai̯], [ɛi̯], [oi̯], [au̯], [ɛu̯] and [iu̯]. They are analysed in two different ways here, depending on whether they occur in morpheme-final position or not. The reasons for the different analyses are given below.

2.1.3.1 Non-morpheme-final diphthongs

Morpheme-internally, only three diphthongs are found, [ai̯], [au̯] and [oi̯]. They are considered here to be sequences of two vowels, /a.i/, /a.o/ and /o.i/, belonging to separate phonological syllables.

Phonetic diphthong [ai̯]

[ai̯] is by far the most common phonetic diphthong. In some cases it resulted from the loss of intervocalic /w/ in the Purus dialect (section 2.6.4.2).

taikhoro   'black-fronted nunbird', *tawikhoro* in the Juruá dialect
zaida   'peach-palm', *zawida* in the Juruá dialect

A large proportion of the words containing [ai̯] are loans. Here, [ai̯] is found particularly frequently before affricates, even if the word does not have a diphthong in the language of origin.

haizo   'radio', from Portuguese *rádio*
kapaizo   'papaya', see section 2.10.2.1 for discussion
raraiza   'orange', from Portuguese *laranja*

sopaina   'manatee', *sopena* in the Juruá dialect, see section 15.5.5 for discussion of origin

There is only a small number of words with the diphthong [ai̯] for which there is no evidence that they are loans or that the diphthong is the result of a recent phonological change. They include the following examples.

baishi   'vocative for pet tortoises'
daiphiri   'a tree species'
maitha   'yesterday'
maiza-   'to (tell a) lie'

In some cases where /w/ has recently been lost between /a/ and /i/ in the Purus dialect, the speakers continue to pronounce the two vowels as distinct syllable nuclei, e.g. in *zairii* (< *zawiriwi*) 'spotted' and *karairi* (< *karawiri*) 'a catfish species, Port. *mandim*'. But there are no minimal pairs differing only in having a disyllabic /a.i/ versus a monosyllabic /ai/. It is probably the phonetic surrounding, especially the quality of the following consonant, which is more conducive to the pronunciation of /ai/ as a diphthong in some cases than in others. Cases of the non-morpheme-final diphthong [ai̯] can therefore be analysed as sequences of the phonemes /a/ and /i/.

Evidence for the hypothesis that the elements of these phonetic diphthongs belong to different syllables comes from the word *mamaizade* 'liar', which is derived from the verb *maiza-* 'to lie'. Agent nouns of this type are formed by reduplicating the first syllable of a verb and adding the suffix *-de* (section 14.1.3). As Tiss (2004: 30) notes, in the case of *mamaizade* it is only /ma/, not /mai/ which is reduplicated, indicating that the vowel /i/ of *maiza-* constitutes a separate syllable.

Phonetic diphthong [au̯]
The diphthong [au̯] is attested in the male name *Naoza* and in the Portuguese loans *baosa* 'raft, river ferry' (from *balsa*) and *baozi* 'bucket' (from *balde*). In all of these cases, the diphthong is followed by an affricate. The only other attested words with the sequence /ao/ are proper names, e.g. the male name *Maori*, in which /a/ and /o/ are pronounced as separate syllable nuclei. It seems that an immediately following affricate is conducive to the pronunciation of /ao/ as a diphthong, but this pronunciation is not obligatory; *Naoza* has also been heard as [na.o̞.ˈdza]). It therefore appears appropriate to represent [au̯] as a vowel sequence /a.o/.

Phonetic diphthong [oi̯]
The diphthong [oi̯] is attested in the following three words.

biskoita   'biscuit', from Portuguese *biscoito*

koiza   a traditional alcoholic beverage and the festivity during which it is con-
            sumed; probably a loan from an unrelated indigenous language, cf. Yine
            (Arawakan) *koya* (Nies 1986: 133) and Kanamari (Katukinan) *koyah*, which
            are names for the same kind of beverage
koize   'spoon', from Portuguese *colher*

In line with the analysis of the two other non-morpheme-final diphthongs, these
words are interpreted here as containing the vowel sequence /o.i/. They are of par-
ticular interest for the phonological analysis of /o/ and /w/ for reasons discussed in
section 2.5.

2.1.3.2 Morpheme-final diphthongs

Six diphthongs are attested in morpheme-final position, [ai̯], [ɛi̯], [oi̯], [au̯], [ɛu̯] and
[iu̯]. Morpheme-final diphthongs are analysed as a single vowel nucleus and are rep-
resented by two vowel letters with an acute accent on the first: ái, éi, ói, áo, éo, ío.
Diphthongs are often found in Portuguese loans. Morpheme-final [au̯] is only attested
in words of Portuguese origin and onomatopoeia.

Kulina		Portuguese
irimáo	'lemon'	*limão*
sabáo	'soap'	*sabão*
papéo	'paper, book'	*papel*
sapéo	'hat'	*chapéu*
ahói	'rice'	*arroz*
herói	'watch'	*relógio*

The morpheme-final diphthongs [ai̯], [ɛi̯] and [iu̯] are not attested in Portuguese loans.
Since these diphthongs occur word-finally in Portuguese and Portuguese words are
freely borrowed into Kulina, this gap can be considered accidental.

Diphthongs occur only in a small number of words other than Portuguese loans.
Many of these are onomatopoeic and contain reduplications. They include names of
bird and frog species which are agent nouns derived from the calls of the animals
(section 14.1.3). As mentioned in section 2.1.3.1, in the agentive noun *mamaizade* 'liar',
which is derived from *maiza-* 'to lie', only the syllable /ma/ is reduplicated, not /mai/.
In agentive animal names, however, diphthongs are reduplicated. This is an impor-
tant argument for considering morpheme-final diphthongs to be phonologically
monosyllabic and morpheme-internal diphthongs to be phonologically disyllabic. A
reduplicated diphthong is also found in the word *héihéi*, an onomatopoeic instrumen-
tal noun (section 14.1.2) referring to a type of wind instrument.

reduplicated diphthongs in derived nouns:

instrumental noun: *héi-héi* a wind instrument
agent noun: *phái-phái-de* a frog species

Onomatopoetic animal names also display a number of other phonological peculiarities, which are treated in section 2.10.1. But diphthongs also occur in a number of words which do not appear to be onomatopoetic (and are not loans from Portuguese, either), including a number of proper names.

aphái koko 'duckling'
kowái 'vocative for pet tortoises'
Otái a man's name
Zobái a man's name
zéi 'hot'
héo 'to paint (face/body)'

The words *aphái koko ~ apha koko* 'duckling' and *kowái ~ kowa* 'vocative for pet tortoises' are also attested with a monophthong /a/ instead of the diphthong /ai/.

2.2 Consonants

2.2.1 Inventory and realisations

Kulina has 16 consonant phonemes, shown in table 7 in the spelling used in the present work.

Table 7. Consonant phonemes

	bilabial	dental	alveolar	velar	glottal
voiced obstruents	b	d	z		
voiceless unaspirated obstruents	p	t	s	k	h
voiceless aspirated obstruents	ph	th	sh	kh	
nasals	m		n		
flap			r		
approximant	w				

/b/ is a voiced bilabial plosive [b].

/p/ is a voiceless unaspirated bilabial plosive [p].

/ph/ is usually a voiceless aspirated bilabial plosive [pʰ]. It is very occasionally pronounced as a bilabial fricative [ɸ] or as a labiodental fricative [f].

/d/ is a voiced dental plosive [d̪]

/t/ is a voiceless unaspirated dental plosive [t̪].

/th/ is a voiceless aspirated dental plosive [t̪ʰ].

/k/ is a voiceless unaspirated velar plosive [k].

/kh/ is a voiceless aspirated velar plosive [kʰ].

/z/ is pronounced as a voiced alveolar affricate [dz] or as a voiced alveolar fricative [z]. In a recorded song sung by two men both consistently pronounce /z/ as a voiced palatal plosive [ɟ], which may be an older pronunciation of the phoneme. Note that [ɟ] is the most common pronunciation of the corresponding phoneme in Jarawara (Dixon 2004a: 18).

/s/ is pronounced as an unaspirated voiceless alveolar affricate [ts] or as an unaspirated voiceless alveolar fricative [s].

/sh/ is usually an aspirated voiceless alveolar affricate [tsʰ]. Some speakers pronounce it as an aspirated voiceless alveolar fricative [sʰ]. It is occasionally pronounced as a voiceless postalveolar fricative [ʃ].

/m/ is a voiced bilabial nasal [m].

/n/ is a voiced alveolar nasal [n].

/r/ is a voiced alveolar flap [ɾ]. In villages further upriver, both in Brazil and in Peru, /r/ is commonly pronounced as a lateral [l] in the vicinity of /i/. This is not the case in Santa Júlia.

/h/ is a glottal fricative.

/w/ is mostly pronounced as a voiced bilabial approximant [β̞] before /e/ and /i/. In this position it can also be pronounced as a voiced labiodental fricative [v]. Before /a/ it is pronounced as a voiced labiovelar approximant without lip-rounding [w̜]. It does not occur before /o/. In phonetic transcriptions in the present work, /w/ is generally represented as [w], whether it is pronounced [β̞] or [w̜] (which is predictable from the environment).

Table 8 shows the consonant system in IPA spelling, using the most common variants of those which show (free) variation. For /w/, both allophones are given.

Table 8. Consonant phonemes in IPA spelling of main variants

	bilabial	dental	alveolar	velar	glottal
voiced obstruents	b	d̪	dz		
voiceless unaspirated obstruents	p	t̪	ts	k	h
voiceless aspirated obstruents	pʰ	t̪ʰ	tsʰ	kʰ	
nasals	m		n		
flap			ɾ		
approximant	β̞~w̞				

2.2.2 Phoneme /s/

The phoneme /s/ is an innovation of the Madihá branch of Arawan. It is frequent in Portuguese loans, where it replaces the phonemes /s/ and /ʃ/, as well as the allophone [ʧ] of the phoneme /t/. Otherwise, it is relatively rare, occurring only in loans from other indigenous languages and in onomatopoeia. It is discussed in detail in Dienst (2005a). See also section 2.10.2.

/s/ is not found in any morpheme containing an aspirated consonant (/ph, th, kh, sh/). The reason for this is the fact that /s/ is found (almost) exclusively in loans whereas aspirated consonants are largely restricted to the native vocabulary (and possibly older loans, which date back to before the innovation of /s/.)

The only aspirated consonant that is also found in more recent loans is /sh/, which occurs in the Spanish loans *koshiro* 'knife' and *mashito* 'machete' (section 15.5.1) and in *harishi* 'sweet potato', a loan from a language of the Arawakan family (section 15.5.3). But its co-occurrence in a morpheme with /s/ is barred by a constraint against the co-occurrence of homorganic aspirated and voiceless unaspirated obstruents in the same morpheme (section 2.7).

2.2.3 Phoneme /r/

The phoneme /r/ is common in non-word initial position. Word-initially, it is found in Portuguese loans, where it replaces /l/, e.g. *rata* 'tin, can' (from Portuguese *lata*) and *rona* 'tarpaulin' (from Portuguese *lona*).

In some cases, /r/ replaces word-initial Portuguese /r/, e.g. in *rizi* 'hammock' from Portuguese *rede* (which is used alongside the more common native word *phowi* 'hammock'). In Acre, like in most parts of Brazil, Portuguese /r/ is pronounced [χ] or [h] and

in most loans, it is replaced by Kulina /h/, e.g. *haizo* 'radio' from Portuguese *rádio* and *hema* 'paddle' from Portuguese *remo*.

Apart from Portuguese loans, only the following words beginning with /r/ occur in my data.

rami	'ayahuasca (a vine and a hallucinogenic drink made from it)'
rasho	'plant species'
rerede	'insect species'
ria na-	'to swing'
robo	'lizard species'
rohi and *romi*	'vocatives for pet titi monkeys'

Rerede 'insect species' has the form of an agent noun and is likely to be derived from an onomatope **re*, describing the sound made by the insect. As such it is not fully subject to the general phonological constraints of the language (see section 2.9.1).

Rami 'ayahuasca' is likely to be a loan from a Panoan language (cf. Sharanawa *rami* 'ayahuasca' [Rivier and Lindgren 1972: 103[7]]) and *robo* 'lizard species' from an Arawakan language (cf. Proto-Arawakan **lupu* 'lizard' [Payne 1991: 411])

The origin of the other words is not known, but their small number suggests that /r/ used to have a defective distribution, not occurring word-initially at all, and that it became a phoneme with unrestricted distribution due to borrowing. (/r/ does occur morpheme-initially in native suffixes, such as the negative suffix *-ra*, and in the clitic *=ra* 'only'.)

According to Dixon (2000b: 42), Proto-Arawan words beginning with /r/ may have lost their initial syllable in Kulina. If this assumption is correct, Kulina has gone from a phase of unrestricted distribution of /r/ to one of defective distribution and then again to the present state of unrestricted distribution.

2.2.4 Glottal stop

A syllable whose onset slot is not filled by a consonant phoneme may be pronounced with a glottal stop as its onset. The glottal stop is in free variation with zero.

hee	[hɛʔɛ ~ hɛɛ]	'yes'
shia	[tsʰiʔa ~ tsʰia]	'spider'

Free variation is to be understood not only in the sense that every syllable which can be pronounced [ʔV] can as well be pronounced [V], but also in the sense that every

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7 Rivier and Lindgren give the form <*rambi*>, but this is phonologically /rami/ according to Ministerio de Educación (1999: 23).

syllable which can be pronounced [V] can also be pronounced [ʔV]. The glottal stop does therefore not constitute a phoneme.

The frequency of occurrence of the glottal stop is much higher between identical vowels, as in the example *hee* 'yes' above, but even in those cases it is mostly omitted. (See section 2.9 for a discussion of the phonological form of *hee*.)

In his comparative work on the Arawan family, Dixon considers the glottal stop a Kulina phoneme (Dixon 2004a: 67) or a possible phoneme in some dialects of Kulina (Dixon 2004b: 13), but the more recent primary sources on Kulina agree that it is not phonemic (Tiss [2004: 27–28, 32] for the Juruá dialect, Monserrat and Silva [1986: 9] for the Envira dialect, Adams Liclan and Marlett [1990: 103] for the Peruvian Purus dialect and the present work for the Brazilian Purus dialect.)

In Deni, however, glottal stops are phonemic and this was presumably also the case in Kulina at an earlier stage. The loss of phonemic glottal stops led to cases of directly adjacent vowels. Where both vowels had the same quality, one syllable has been dropped in some words.

Deni	Kulina					
ime'eni	*imeni*	<	**imeeni*	<	**ime'eni*	'his/her mother'
kashi'i	*kashi*	<	**kashii*	<	**kashi'i*	'capsicum'

2.3 Syllables

Kulina syllables have the structure (C)V(V). The first vowel slot can be filled by any of the four vowel phonemes. The second vowel slot can be empty or filled by /i/ or /o/. The vowel in the second slot must be different from the one in the first. The consonant slot can be empty or filled by one of the sixteen consonant phonemes. The consonant /w/ cannot occur before the vowel /o/. All other logically possible CV-syllables are attested.

CV-syllables are the most common ones in any position of a Kulina morpheme. V-syllables are common in morpheme-initial position, but much rarer elsewhere in the morpheme. However, non-morpheme-initial V-syllables are more common in the Purus dialect than in the Juruá dialect due to the loss of inter-vocalic /w/ in many words (section 2.6.4.2).

CVV-syllables only occur morpheme-finally (section 2.1.3). VV-syllables are not attested, but should be able to occur, in principle, in morpheme-final position. Table 9 shows the distribution of the different syllable-shapes within morphemes.

Table 9. Syllable shape and position in the morpheme

	V	CV	CVV	VV
morpheme-initial	common	common	---	---
morpheme-internal	rare	common	---	---
morpheme-final	rare	common	rare	?

Empty C-slots

When the C-slot of a syllable doesn't contain a phoneme, the following phonetic phenomena can occur:

–   A non-word-final syllable consisting only of /i/ or /o/ can form a phonetic diphthong with the preceding syllable (section 2.1.3.1).
–   The C-slot can be filled by a (non-phonemic) glottal stop (section 2.2.4).
–   If a syllable consisting only of a vowel other than /i/ is preceded by /i/, the C-slot can be filled by a (non-phonemic) approximant [j].

    shia   [tsʰi'a ~ tsʰi'ʔa ~ tsʰi'ja]   'spider'
–   If a morpheme-initial syllable consisting only of a vowel other than /o/ is preceded by /o/, a (non-phonemic) approximant [w] can fill the C-slot (section 2.5). This epenthetic [w] will be represented in the spelling of the examples and texts throughout this work.

    o-w-athi   [oatʰi ~ owatʰi]   'my voice'

2.4 Stress

The primary stress falls on the last syllable of a phonological word.

botani	[bọta'ni]	'stingray'
ima	[i'ma]	'story'
shikata	[tsʰika'ta]	'sour'

In (diachronically) complex words, the secondary stress falls on the last syllable of the first (historical) morpheme.

hinomadini	[hi̞nụmadi'ni]	'daughter-in-law'
hidobadi	[hi̞dọba'di]	'son-in-law'

The words *hinomadini* and *hidobadi* are not synchronically segmentable, though it is clear (from other kinship terms in Kulina and Deni) that *hino* and *hido* mean 'grandchild', *madini* 'mother' and *badi* 'father'. Thus, *hinomadini* 'daughter-in-law' literally

means 'the mother of one's grandchildren' and *hidobadi* 'son-in-law' is 'the father of one's grandchildren'. The secondary stress falls on the final syllable of the historical morpheme *hino ~ hido* 'grandchild' in both cases, although a different number of syllables occurs after them in the two words.

2.5 /w/ and /o/

A peculiar relation exists between the phonemes /w/ and /o/. As mentioned above, /wo/ is the only syllable with the canonical CV-structure which is illicit in Kulina phonology. The opposite order of the two phonemes, /o.w/ (with a syllable boundary between them) is possible across a morpheme boundary, as in the following example.

(1)   *o-wati*
      1SG-liver
      'my liver'

But such an occurrence of the phoneme /w/ after /o/ and before a vowel other than /o/ does not differ phonetically from an empty C-slot between /o/ and another vowel, as in the example below.

(2)   *o-w-athi*
      1SG-EPENTH-voice
       'my voice'

When /o/ is immediately followed by any of the three other vowel phonemes, it can be pronounced with or without an off-glide [w]. Thus, *o-w-athi* 'my voice' can be [o̜athi] or [o̜wathi]. The same two pronunciations are possible when the phoneme /w/ occurs between /o/ and another vowel. *O-wati* 'my liver' can be pronounced [o̜wati], as would be expected, but the /w/ can also be phonetically elided, resulting in [o̜ati].

   Although the epenthetic [w] between /o/ and another vowel is optional, it is consistently represented in the examples and texts, reflecting the phonetic equivalence between the sequences /oV/ and /owV/.

   When there is a morpheme boundary after /o/, it is usually clear whether /o/ is followed by an underlying phoneme /w/ or not since other word forms show the underlying structure; e.g. 'his liver' is *wati* and 'his voice' is *athi*. The pronunciation of these word forms shows that the first lexeme stem begins with /wa/ and the second with /a/.

   But when the sound sequence [o̜V ~ o̜wV] occurs morpheme-internally, e.g. in [zo̜wato ~ zo̜ato] 'girl' and [pho̜wi ~ pho̜i] 'hammock', it is not obvious if it is to be interpreted as underlying /oV/ or /owV/.

The original underlying form may have been /oV/ in some cases and /owV/ in others, but since nothing indicates that such a distinction exists in the modern language, a uniform phonological representation for all morpheme-internal occurrences of [ǫV ~ ǫwV] is appropriate. The question is which representation it should be, /oV/ or /owV/.

Arguments for /owV/:
–   The overwhelming majority of non-morpheme-initial syllables have the structure CV, not V. Where onsetless syllables occur, they are mostly due to /w/-deletion in the Purus dialect or to borrowing. Representing a syllable following /o/ as /wV/, rather than /V/ would therefore better fit the general phonological pattern of the language.
–   The verb *owi-* 'go out (fire, lamp)' loses its initial /o/ when it takes the noun class prefix *ka-* (section 2.6.4.1), but retains the [w].

> *ka-*   +   *owi-*   >   *ka-wi-*
> NCL   go.out

The /w/ is clearly a phonemic segment in the prefixed verb form and should be considered to have the same status in the full verb stem, where it occurs after /o/.
–   As pointed out by Dixon (2004a: 22) for Jarawara, where the same analytical problem is found, when a syllable following /o/ is reduplicated, the second instance has an onset /w/, which cannot be interpreted as an off-glide of the preceding vowel (and is not in free variation with zero).

(3)   *tia=za   ethe   [no.wɛ-wɛ]   o-na-na*
        2=IO   dog   show-DL   1SG-AUX-IFUT
        'I'm going to show you two dogs.'

In this respect, [w] differs from [j], which occurs as an (optional) off-glide after /i/ (section 2.3). When a syllable beginning with [j] is reduplicated, the [j] does not occur in the second instance of the syllable. E.g. the word *dia* 'to make (an arrow)' is commonly pronounced [di'ja], but when the last syllable is reduplicated to indicate a dual object, the word takes the form *diaa* [di.ja'a ~ di.ja'ʔa], with an optionally inserted glottal stop.

(4)   *o-kha   boba   [di.ja-'(ʔ)a]   o-ka-na-na*
        1SG=ASS   arrow   make.arrow-DL   1SG-NCL-AUX-IFUT
        'I'm going to make two arrows.'

Arguments for /oV/:

– Regularity of the pronoun system is an argument brought forward by Tiss[8] (2004: 80). Kulina has the following four basic pronouns:

[ǫa ~ ǫwa]   1SG
[tia]   2
[pǫa ~ pǫwa] 3m
[ia]   1NSG

The interpretation of the second syllable of the first person singular pronoun and the third person masculine pronoun as /a/, rather than /wa/, yields a regular paradigm, in which the second syllable of all four pronouns is /a/, while the first syllable is the same as the corresponding prefix of the possessive marker and (with the exception of *po-*) also the same as the person prefix of verbs. This would allow the segmentation of the pronouns into a prefix and a stem, as suggested by Tiss:

o-a   1SG
ti-a   2
po-a   3m
i-a   1NSG

Interestingly, Dixon (2004a: 21) gives a similar argument for the opposite solution. Jarawara has the following first and second person singular pronouns:

[ǫwa ~ ǫa]   1SG
[tiwa]   2SG

Dixon argues that representing [ǫwa ~ ǫa] as *owa* yields a form which is analogous to the second person form *tiwa*.

   A comparative survey of the Arawan languages shows that the Kulina third person masculine pronoun [pǫwa ~ pǫa] seems to be a Madihá innovation and that [ia] for the first person non-singular is a more recent Kulina innovation, for which Deni has the older pronoun *ari* (which has cognates in Suruwahá and Paumari). The replacement of *ari* by *ia* in Kulina can be interpreted as an analogical change. In the present Kulina paradigm, only [ǫwa ~ ǫa] and [tia] can be traced back to Proto-Madi-Madihá, the common ancestor language of Kulina and Jarawara; [tia] goes most likely back to the form [tiwa] preserved in Jarawara. Diachronically, Dixon's argument is therefore also valid for Kulina. Since [tia] was

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8 Tiss implicitly uses this argument for the analysis of the personal pronouns as consisting of a person prefix and a base *-a*. In other morphemes, he represents [oV ~ owV] as <owV>.

presumably */tiwa/ at an earlier stage, the corresponding first person form was
probably */owa/.

    Synchronically, however, Tiss's analysis is not vitiated by the fact that *ia* is
an innovation. It could be argued that -*a* has developed into a new morpheme in
Kulina, the stem of basic pronouns.

–   It has been argued above that the glottal stop is not a phoneme because it is in
free variation with zero. The same holds true for [w] after /o/. Applying the same
standard for the two sounds, [w] following /o/ could therefore also be considered
non-phonemic.

Of all the arguments for and against considering [w] after /o/ to be a phoneme, the
occurrence of [w] in reduplicated syllables appears to be the most compelling one.
That [w], unlike [j], is reduplicated shows that the former is more than a phonetic
surface phenomenon. It will therefore be represented as a phoneme, e.g. [no(w)ɛ] 'to
show' will be spelt *nowe*.

    When [w] (optionally) occurs between a prefix ending in /o/ and another mor-
pheme beginning with a different vowel, it will be glossed EPENTH for *epenthetic
consonant*, as in the following example.

(5)   *owino*
     o-w-ino
     1SG-EPENTH-tooth
     'my tooth'

Adams Liclan and Marlett (1990: 104) mention the fact that [w] tends to occur between
/o/ and any vowel other than /o/. They consider [w] in this position to be non-phone-
mic. Tiss (2004: 31) points out that the insertion of [w] is not always possible between
/o/ and /i/ and gives *koiza* 'a traditional beverage and festivity' as an example of a
word in which /oi/ can't be pronounced [owi]. As mentioned in section 2.1.3.1, *koiza* is
one of only three words of this type in my data. *Koiza* is probably a loan from another
indigenous language while the two other words, *biskoita* 'biscuit' and *koize* 'spoon'
are of Portuguese origin. It seems, thus, that the occurrence of instances of the vowel
sequence /oi/ which do not allow the insertion of [w] is the result of borrowing and of
rather recent origin. There are several ways how these numerically marginal cases can
be distinguished from the numerous words such as *zowihi* 'brown capuchin monkey'
which contain the sequence [oi ~ owi].

    The analysis proposed here is that *zowihi* is phonologically /zo.wi.hi/, with a pho-
nemic /w/ and that *koiza* is /ko.i.za/, with an onsetless syllable /i/. An alternative
view is to regard *zowihi* as /zo.i.hi/ with an non-phonemic [w] and *koiza* as /koi̯.za/
with a monosyllabic diphthong /oi̯/. It would also be possible to combine phonemic
/w/ and phonemic diphthongs and analyse the two words as /zo.wi.hi/ and /koi̯.za/,
respectively. But it is not possible to do without both phonemic /w/ and diphthongs

since this would lead to the forms /zo.i.hi/ and /ko.i.za/, which would incorrectly show the two words to have the same phonological structure. As Tiss rightly observed, the phonological analysis in Adams Liclan and Marlett (1990) does not account for this phonological distinction.

Adams Liclan and Marlett (1990: 104) consider [o̞] and [w] to be allophones of one phoneme /o/. Since phonemes are defined rather than described (as far as the question of complementary distribution is concerned), the suggestion that [o̞] and [w] are allophones cannot be judged to be true or false, only to be useful or not. I do not consider it to be useful. Adams Liclan and Marlett distinguish syllabic /o/, which occurs in the V-slot of the syllable and is represented by them as <o>, and non-syllabic /o/, which occurs in the C-slot of the syllable and is represented as <w>. As pointed out by Dixon for Jarawara (2004a: 22), it is indeed necessary to mark the difference between "syllabic /o/" and "non-syllabic /o/" in some way in the written representation of the language since disyllabic /oV/-sequences and monosyllabic /wV/-sequences would otherwise be indistinguishable, as the examples in table 10 show.

Table 10. Different analyses of [o̞] and [w]

	present work		Adams Liclan and Marlett (1990)	
	phonological analysis	graphic representation	phonological analysis	graphic representation
'his liver'	/wa.ti/	<wati>	/oa.ti/	<wati>
'my voice'	/o.a.tʰi/	<owathi>	/o.a.tʰi/	<oatʰi>

Adams Liclan and Marlett analyse the monomorphemic word /wati/ 'his liver' as /oati/, but they acknowledge that it has a syllable less than /oathi/ 'my voice', which consists of the syllabic prefix *o-* 'first person singular' and the stem *athi* 'voice'. Therefore, they represent the same phoneme /o/ (according to their analysis) with two different characters.

It should also be noted that /o/ and /w/ show a different behaviour as the first phoneme of an inalienably possessed noun. Nouns beginning with /o/ do not allow any prefix to be attached. The nouns beginning with /w/ allow prefixes and drop the /w/ if the prefix ends in /i/. (See section 8.1.3.1 for examples.) This different morphophonemic behaviour of /o/ and /w/ makes the one-phoneme analysis appear even more questionable.

2.6 Morphophonemic processes

Among the morphophonemic processes found in Kulina are fusion, assimilation, apophony (or ablaut), elision, and lenition.

2.6.1 Fusion

Neighbouring vowels are fused under certain circumstances. A distinction must be made between the obligatory morphophonological process of vowel fusion and the purely phonetic phenomenon of optional vowel contraction.

2.6.1.1 Phonological fusion

When the prefixes *ti-* (second person) and *i-* (first person non-singular and quotation form) are attached to an inalienably possessed noun which begins with /a/, /e/, or /i/, the prefix vowel is fused with the stem-initial vowel to form a single phoneme /e/ in the case of /i-a/-fusion and /i-e/-fusion and a single phoneme /i/ in the case of /i-i/-fusion. A detailed description of this process is given in section 8.1.3.1.

   In the case of verbs, the fusion or non-fusion of prefix and stem can serve to express a semantic distinction, but this is only attested for the two verbs *akha-* 'bring, take away' and *wada-* 'sleep'. In the case of *akha-*, the fusion of the prefix *ti-* or *i-* with the following /a/ to /e/ expresses a movement towards the deictic centre, i.e. 'bringing' whereas the preservation of distinct vowels /i/ and /a/ expresses a movement away from the deictic centre, i.e. 'taking away', as in the following examples.

(6)   *karia*   *okha*   *amonehe*   *ekhani*
        karia   o-kha   amonehe   i-akha-ni
        white.person   1SG-ASS   woman   3-bring/take.away-DECL.f
        'The white person has brought my wife.'

(7)   *karia*   *o-kha*   *amonehe*   *i-akha-ni*
        white.person   1SG-ASS   woman   3-bring/take.away-DECL.f
        'The white person has taken my wife away.'

In the case of *wada-* 'sleep' (which loses its initial /w/ when it takes a prefix ending in /i/, see section 2.6.4.2), the prefix is usually fused with the verb stem. Non-fusion expresses that the sleeping takes place away from the deictic centre.

(8)   *tedahi*
        ti-wada-hi
        2-sleep-IMP.f
        'Sleep!'

(9)   *tiadanihi*
        ti-wada-ni-hi
        2-sleep-HOME-IMP.f
        'Sleep at home!'

The other verb stems beginning with a vowel or /w/ fall into three different categories. Verbs of the first category, including *akha-* 'learn' in example (10), never fuse with a prefix, while those of the second category, including *wahina-* 'spear' in example (11), always fuse with the prefixes *i-* and *ti-*. Verbs of the third category drop their stem-initial vowel when they take a prefix. See section 2.6.4.1 on vowel elision for examples.

(10)   *madiha   athi   i-atha-ni*
       Kulina   language   1NSG-learn-DECL.f
        'We are learning the Kulina language'

(11)   *zabisho   aba   imei   ehinai*
       zabisho   aba   ime-i   i-wahina-i
       boy   fish   big-m   3-spear-DECL.m
       'The boy speared a big fish'

2.6.1.2 Phonetic contraction

When a word beginning with a vowel is preceded by another word ending in an identical vowel, the two vowels are fused in normal speech. The resulting single vowel is the nucleus of the stressed syllable of the first word. The phonetic result of the fusion is thus that the second word appears to lose its initial vowel.

(12)   *o-kha   amonehe*   [ụˈkʰa mọnɛˈhɛ]
       1SG-ASS   woman
       'my wife'

(13)   *shamo   o-na-ni*   [tsʰaˈmọ naˈni]
       not.know   1SG-AUX-DECL.f
       'I don't know.'

This phonetic fusion across word boundaries is optional. It can be avoided for the sake of clarity and does not occur if the speaker pauses between the words.

2.6.2 Assimilation

Assimilation can affect the vowels /a/ and /i/ and the consonant /k/.

2.6.2.1 Assimilation of /a/ to /e/

a) Contact assimilation

A morpheme-final /a/ is assimilated to a contiguous morpheme-initial /e/.

(14) *pama + e   → pamee*
      two   f   'two(f)'

(15) *oza   to   + ka   + edi + ni   → oza tokeedini*
      house   AWAY   NCL   fall   DECL.f   'The house collapsed.'

b) Distant assimilation

Where a phoneme /e/ results from the fusion of /i/ and /a/, an /a/ in a neighbouring syllable in the same grammatical word is assimilated to the /e/.

(16) *ti + ahari   →   *tehari   →   teheri*
      2   mouth   'your mouth'

The same assimilation takes place in the masculine form of inalienably possessed nouns whose stem ends in /a/. The masculine form is marked either by a suffix *-ne* or by raising of the stem-final /a/ to /e/. In either case, a preceding /a/ is assimilated. The assimilation can affect two contiguous syllables, as in examples (17) and (18).

(17) *ama   + -ne   → *amane → emene*
      blood   m   'his blood'

(18) *abatha   + {final /a/→ /e/} → *abathe → ebethe*
      cheek   m   'his cheek'

The assimilation does not take place across another syllable with a different vowel.

(19) *nashopa + {final /a/→ /e/} → nashope*
      saliva   m   'his saliva'

Apart from the masculine forms of inalienably possessed nouns, an /e/ resulting from apophony does not assimilate a neighbouring /a/. In the following example, the admonitive suffix *-↑rana* raises the final /a/ of the subject plural suffix *-mana* to /e/, but the other vowel of the plural suffix, as well as the other vowels in the word, remain unaffected.

(20) *khi i + ka   + na   + mana + ↑rana → khi ikanamanerana*
      see 3   NCL   AUX   PL.A   ADMON   'so that they may not see it'

2.6.2.2 Assimilation of /i/ to /e/

There are two possessed nouns whose masculine form has the structure /iCe/, *ide/
ideni* 'back' and *ime/imani* 'flesh'. (The form before the slash is masculine and the
one after it is feminine.) A first person singular possessor is marked by the prefix *o-*
on the masculine form of possessed nouns (followed by an epenthetic /w/ if the noun
stem begins with a vowel). In the case of the two words in question, many, but not all,
speakers lower the stem-initial /i/ to /e/ after this prefix.

(21)   *o-w-ide* → *o-w-ede*   'my back'

(22)   *o-w-ime* → *o-w-eme*   'my flesh'

This assimilation shows the general dispreference of Kulina for three different vowels
in a trisyllabic word[9] and the assimilating effect of /e/. In the case of nouns which end
in /o/, the stem-initial /i/ remains unchanged.

(23)   *o-w-ino*   'my tooth'

(24)   *o-w-ipo*   'my (lower) lip[10]'

2.6.2.3 Assimilation of /k/ to /kh/

The verbal prefix *ka-*, which has a variety of functions, including marking the *ka*-noun
class (section 3.5.2), takes the form *kha-* when it occurs on a verb beginning with /kh/.

(25)   *moto*   *khakhahonani*
         moto   Ø-ka-kha-hona-ni
         boat   3-NCL-go-HITHER-DECL.f
         'The boat is coming.'

(26)   *tati*   *khakhowezanai*
         Ø-tati   Ø-ka-khowa-↑zana-i
         3-head   3-?-bald-ENGULFING-DECL.m
         'He is bald.'

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9 Dixon (1995:272–273) mentions the dislike for trisyllabic words with three different vowels as a com-
mon feature of the Arawan languages.
10 *Ipo* originally meant 'lower lip', the word for 'upper lip, beak' being *bono*, but many speakers in
Santa Júlia now use *ipo* for both upper and lower lips and *bono* only for beak.

2.6.3 Apophony

Apophony, or ablaut, is the change of the quality of a vowel of a morpheme in certain word forms. In Kulina, several verbal suffixes, listed below, trigger the raising of an /a/ which immediately precedes them to /e/ or /i/.

In the case of inflecting main verbs, /a/ is raised to /e/, except when the preceding vowel of the verb stem is an /i/. In this case /a/ is raised to /i/. The auxiliary *ha-* and some directionals raise /a/ to /e/. The other directionals raise /a/ to /i/. The auxiliary *na-* raises /a/ to /i/ in most cases, but before the negation suffix -↑*hera* /a/ is raised to /e/.

directional suffixes (section 4.2.3.1):

-↑*hiza*	'across'
-↑*khima*	'past'
-↑*ma*	'(from) below or inside'
-↑*mina*	?
-↑*moha*	'across over'
-↑*mora*	'ashore'
-↑*na*	'out'
-↑*pha*	'in(to) water'
-↑*phi*	'through, across'
-↑*za*	'in, into'
-↑*zana*	'engulfing'

Aktionsart suffix:

-↑*mani*	'again' (section 4.2.4.2)

negation suffixes:

-↑*hera*	inflectional negation (section 4.2.5)
-↑*ra*	derivational negation (section 5.5)

(27)   *o*   + *kha*   + ↑*na* + *na*   → *o-khe-na-na*
       1SG   move.SG   out   IFUT   'I'm going to walk out (of the house).'

(28)   *witha* + ↑*za* + *hari*   → *withi-za-hari*
       sit   in   NAR.m   'He is sitting inside (a hut).'

(29)   *hipa* + ↑*ra*   *o*   + *na* + *ni*   → *hipe-ra o-na-ni*
       want   NEG   1SG   AUX   DECL.f   'I don't want it/to.'

(30)   *bare*   *hika*   + ↑*hera* + *ni*   →   *bare hike-hera-ni*
      banana run.out   NEG.f   DECL.f   'There are lots of bananas.'

When the directional -↑*na* 'out' is attached to the auxiliary *na-*, not only the auxiliary undergoes apophony, becoming *ni-*, but also the directional, becoming -*ne*.

(31)   *makha*   *shapoto*   *za*   *hopha*   Ø + *na*   + ↑*na*   + *i*
      snake   basket   LOC   run   3   AUX   OUT   DECL.m

    →   *makha shapoto=za hopha ni-ne-i*
       'The snake is escaping from the basket.'

2.6.4 Elision

Root-initial vowels and the approximant /w/ are elided in certain morphological forms.

2.6.4.1 Vowel elision
Several lexical roots begin with a vowel which only surfaces word-initially. The vowel is dropped when the root takes a prefix. This process affects both verbs and nouns and vowels of all qualities. But not all root-initial vowels are dropped when a prefix is attached. Whether the vowel is retained or dropped is a morphophonological feature of the lexeme.

a) Verbs
Most Kulina verbs are non-inflecting and can therefore not be affected by the process described here. There is only a small number of vowel-initial inflecting verbs. Of those beginning with /a/, /e/, or /i/ some elide the vowel when they take a prefix, others don't, as can be seen in the following examples with the prefix *o-* (first person singular) and the suffix -*na* (immediate future).

vowel elision:		no vowel elision, epenthetic /w/ after *o-*:	
aha-	'penetrate sexually'	*atha-*	'learn'
o-ha-na	'I'm going to penetrate'	*o-w-atha-na*	'I'm going to learn'
ehete-	'dance'	*ebezo-*	'paint oneself'
o-hete-na	'I'm going to dance'	*o-w-ebezo-na*	'I'm going to paint myself'
ida-	'hit'	*ithome-*	'play'
o-da-na	'I'm going to hit'	*o-w-ithome-na*	'I'm going to play'

Only two inflecting verbs with initial /o/ are attested, *ohari-* 'be one' and *owi-* 'go out (fire, lamp)'. Both undergo vowel elision when they take a prefix. *Owi-* takes the form *-wi-*, which is evidence for the phonemic status of /w/ after /o/, as discussed in section 2.5.

owi- without a prefix: (32)   *zipho*   *Ø-owi-ni*
                                  fire(f)   3-go.out-DECL.f
                                  'The fire went out.'

owi- with a prefix: (33)   *noparina*   *Ø-ka-wi-ni*
                                  oil.lamp(f-ka)   3-NCL-go.out-DECL.f
                                  'The oil-lamp went out.'

b) Nouns
There are only one or two nouns which lose their initial vowel in the inalienably possessed form. They belong to a closed group with only three members which is treated in section 3.3.2.3. The members of this small group are unique in taking the prefix *ta-* in their inalienably possessed form (in addition to the suffix *-ri*, which is more widely used.)

free form	inalienably possessed form (m)	
ima	*ta-ima-ri*	'story'
ahie	*ta-hie-ri*	'song'
oza	*ta-za-ri*	'house'

While *ima* 'story' preserves its initial /i/[11], the /o/ of *oza* 'house' is lost in the possessed form. In the case of *ahie* 'song', it is not possible to decide if the stem-initial /a/ has been dropped or if the two contiguous /a/-phonemes of the prefix and the stem have been fused.

2.6.4.2 Deletion of /w/

The deletion of /w/ has a synchronic and a diachronic aspect. Diachronically, the phoneme /w/ has been lost from many morphemes in the Purus dialect of Kulina. These cases can be described synchronically as a (purely phonological) dialectal difference between Purus-Kulina and Juruá-Kulina. Some examples are given in table 11.

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11 In the Envira dialect of Kulina, *ima* 'story' has a variant *wima* (Silva and Monserrat 1984: 28). The form *ima* appears thus to be the result of the recent loss of the initial consonant /w/, which explains why the vowel /i/ is preserved after the prefix *ta-*.

Table 11. Elision of /w/ in Purus-Kulina

	Purus-Kulina	**Juruá-Kulina**	**Deni**
'squirrel'	*makaari*	*makawari*	*makavari*
'non-indigenous person'	*karia*	*kariwa*	*kariva*
'peach palm'	*zaida*	*zawida*	*zavida*

/w/ has always been deleted in the morpheme-internal sequence /iwa/ and mostly in syllables which are neither word-final nor word-initial, but seldom in word-initial or final syllables (except finally in the sequence /iwa/). In a few cases, /w/ has been lost in only a part of the villages on the Purus. Thus, the yellow-rumped cacique *(Cacicus cela)*, a bird species, is called *kaasiro* in Santa Júlia and *kawasiro* by the Kulina in Peru, whereas the plural stem of the suppletive verb 'move' is *hawi* in Santa Júlia and *hai* in Peru.

Synchronically, /w/-deletion occurs in Purus-Kulina as the result of certain morphological processes, e.g. when a prefix ending in /i/ is attached to a stem beginning with /wa/. In these cases /w/ is always dropped. As a second step, /i/ and /a/ are then usually fused to /e/. (See section 2.6.1.1 for a case in which the fusion does not take place and the sequence /ia/ is preserved.)

(34) *ti* + *wadi* + *haro* → **ti-adi-haro* → *tedi-haro*
　　 2　　be.angry　　NAR.f　　　　　　　　　　　　　'you are angry'

An example of /w/-loss due to suffixation is given in section 2.6.6 b).

2.6.5 Lenition of /k/

When the prefix *ka-* is preceded by another prefix and is followed by /k/ or /kh/, the /k/ of *ka-* is lenited to /w/.

When the prefix that precedes *ka-* ends in the vowel /o/, the underlying /w/ is imperceptible since there is no overt contrast between underlying /owa/ and /oa/. It is nevertheless represented in the following and all other examples where it occurs, since it is here considered to be a phoneme of the underlying structure.

(35) *anobeze* *to* + *ka* + *kha* + *i*
　　 peccary　　AWAY　　NCL　　move.SG　　DECL.m

　　 →　　*anobeze to-wa-kha-i*
　　　　　　'The collared peccary went away.'

When *ka-* is preceded by a prefix which ends in /i/, the /w/ which results from the lenition of /k/ is elided since the sound sequence /iwa/ is illicit in the Purus dialect of Kulina.

ka → *wa → a/ i__k(h)

(36)	*amonehe*	*[poni*	*bedi]*_o		*iakiboi*
	amonehe	poni	bedi		i-ka-k-ibo-w-i
	woman	3f	his/her.son		3-NCL-EPENTH-leave-EPENTH-DECL.m
	'The woman left her son at home.'				

In example (36), the prefix *ka-* indicates that the woman left her son inside a house; *oza* 'house' is a member of the *ka*-noun class. When *ka-* is prefixed to *ibo-* 'leave', an epenthetic /k/ is inserted. In the example, *ka-* is preceded by the prefix *i-*, indicating that the subject of the verb is third person and that the verb agrees in gender with its object. Between *i-* and the epenthetic /k/, *ka-* is lenited to **wa-* and the /w/ subsequently elided.

2.6.6 Combination of morphophonemic processes

a) vowel assimilation and contraction
When the alienable possessive markers *okha* 'my', *tikha* 'your', etc. precede a word beginning with /e/, the /a/ of the possessive marker is usually assimilated to the /e/ and the two /e/s are then contracted.

(37)	*o-kha*	*ehedeni*	[ų̥kʰa ehedeni]	→	[ų̥kʰe ehedeni]	→	[ų̥kʰehedeni]
	1SG-ASS	child					
	'my child'						

In slow speech, no assimilation or fusion takes place. Occasionally only the first step takes place, the word-final /a/ is assimilated, but the vowels are not contracted.

b) front raising of /a/, elision of /w/ and contact assimilation
The verb *tawa-* 'stand up' can be used with or without the directional suffix *-ma* 'away', without any apparent difference in meaning. The suffix *-ma* triggers the front raising of the second stem vowel. Besides, the /w/ of the stem is deleted in the form with the directional suffix, which brings the two stem vowels into direct contact and leads to an assimilation of the first to the second. There is no basis for ordering the apophonic raising of the stem-final /a/ and the elision of /w/, but these processes must both precede the assimilation of the /a/ of the first syllable to the /e/ of the second syllable since such an assimilation takes only place when the vowels are in direct contact.

(38) o   + tawa   + na   →   o-tawa-na
      1SG   stand.up   IFUT   'I'm going to stand up.'

(39) o   + tawa   + ↑ma + na   → *o-tae-ma-na → o-tee-ma-na
      1SG   stand.up   AWAY   IFUT   'I'm going to stand up.'

The verb *teema-* (< tawa-ma-) has probably been lexicalised and the connection between *tawa-* and *teema-* is not transparent for the speakers.

c) Lenition of /k/, elision of /w/ and fusion of /i/ and /a/
When the first person non-singular prefix *i-* or the homonymous third person prefix co-occurs with the noun class prefix *ka-* on a verb beginning with /k/ or /kh/, three phonological processes take place.

1) lenition of /k/   i-ka-   →   i-wa-
2) elision of /w/   i-wa-   →   i-a-
3) fusion of /i/ and /a/   i-a-   →   e-

The result of these three phonological processes is that the noun class marker *ka-* only surfaces as a lowering of the first person non-singular or third person prefix from *i-* to *e-*, as the following examples with and without *ka-* show.

(40) *makhidehe*   *tahapa*   *ekathemani*
      makhidehe   tahapa   i-ka-kathema-ni
      man   casting.net   3-NCL-mend-DECL.f
      'The man mended the casting-net.'

(41) *amonehe*   *etero*   *i-kathema-ni*
      woman   clothes   3-mend-DECL.f
      'The woman mended the clothes.'

The underlying *ka-* in example (40) cross-references the object *tahapa* 'casting-net', which is a member of the *ka*-class, whereas the object of (41), *etero* 'clothes', is not.

2.7 Phonotactics of obstruents

There are several constraints on the co-occurrence of obstruents in a morpheme. Kulina has twelve obstruents, eleven of which can be classified according to two criteria[12]:

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12 The twelfth obstruent is /h/, for which voicing distinction is not relevant.

1. voice onset time (voicing and aspiration)
– voiced
– voiceless unaspirated
– voiceless aspirated

2. place (and manner) of articulation
– bilabial plosives
– dental plosives
– alveolar affricates
– velar plosives

The obstruent phonemes are shown in table 12. There is no voiced velar plosive.

Table 12. Obstruents

	bilabial plosives	dental plosives	alveolar affricates	velar plosives
voiced	b	d	z	
voiceless unaspirated	p	t	s	k
voiceless aspirated	ph	th	sh	kh

CONSTRAINT 1: VOICELESS ASPIRATED OBSTRUENTS
Different aspirated obstruents (/ph, th, kh, sh/) do not co-occur in a morpheme. The cases in which the same aspirated obstruent seems to occur twice in a morpheme may in fact all be instances of reduplication.

This is reminiscent of a phenomenon in Sanskrit and Ancient Greek known as Grassmann's law (Hock 1991: 111–112). Grassman's law is a case of dissimilation that affected words which originally had two or more aspirated segments. All but one of those segments have lost their aspiration. Evidence that such a process also applies in Kulina and Deni comes from words that are historically complex, but no longer fully segmentable into separate morphemes.

The Kulina word for 'eyebrow', *nokoshi*, is likely to be a historical compound or derivation with *nokho* 'eye' as its first element, which means that the segment /kh/ has lost its aspiration in *nokoshi*. The same applies in Deni, which has *nukhu* 'eye' and *nukushi* 'eyebrow'.[13]

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13 Besides 'eyebrow', Kulina *nokoshi* and Deni *nukushi* also mean '(finger/toe) nail'. Dixon (2004b:65) mentions a likely relationship between the words for 'eye' and '(finger/toe) nail' in Kulina and Deni. His assumption is based on the incorrect Kulina form **nokhoshi* for '(finger/toe) nail' in Silva and Monserrat (1984:44, 118) and the likewise erroneous Deni form **nukhushi* in Koop and Koop (1985:121).

In the following case, the dissimilation process has worked differently in Kulina and Deni. The Deni word for 'anaconda' is *makaphuve,* which contains *makha* 'snake' as its first element, but as in the case of *nukushi*, the /kh/ has been deaspirated. (The meaning of *phuve* is not known.) In Kulina, an anaconda is called *makhape*, which is cognate with *makaphuve*, but has lost the aspiration of /ph/. In addition to that, *makhape* has been affected by a regular sound change **phowV > phV*. In Deni, the segments /uv/, corresponding to Kulina /ow/, have been preserved. Two further examples of this sound change in Kulina are shown below.

Kulina				Deni		
'anaconda'	*makha**pe***	<	**makha**phowe***	*maka**phuve***	<	**makhaphuve*
'flood'	***pha**ni*	<	****phow**ani*	***phuva**ni* (Koop and Koop 1985: 128)		
'rib'	***pha**ri*	<	****phow**ari*	***phuva**ri* (Koop and Koop 1985: 129)		

CONSTRAINT 2: VOICELESS UNASPIRATED AND ASPIRATED PLOSIVES
A voiceless unaspirated and an aspirated obstruent with the same place of articulation (/p/ and /ph/, /t/ and /th/, /k/ and /kh/, /s/ and /sh/) cannot occur in neighbouring syllables of the same morpheme.

CONSTRAINT 3: VOICED AND VOICELESS OBSTRUENTS
In Purus-Kulina no morphemes are attested in which a voiced stop (/b/ or /d/) precedes a voiceless unaspirated stop with the same place and manner of articulation (/p/ or /t/) in the next syllable, nor are there any morphemes in which /z/ precedes /sh/ in the next syllable. There are at least two words, *dope* 'underside' and *doshe* 'send', which have undergone a phonological change in the dialect which eliminated those sound combinations. In the Juruá dialect, only one of the two words has undergone a phonological change.

		'underside'		'send'
Purus-Kulina	b → d	*dope*	z → d	*doshe*
Juruá-Kulina	b → d	*dope*		*zoshe*
Deni		*bope*		*zoshe*
Jarawara		*bofe*		*jose*[14]

Table 13 gives an overview of the the obstruent combinations in disyllabic morphemes which are excluded by the constraints described in 2.2.2 and 2.7. For morphemes with more than two syllables the constraints apply to any two neighbouring syllables.

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14 The <j> in the Jarawara spelling adopted here corresponds to the phoneme spelt <z> in Kulina and Deni. The usual Jarawara pronunciation is [j].

Three hyphens indicate illicit combinations. Three hyphens in parentheses indicate combinations which are unattested for historical reasons discussed in section 2.2.2 above.

Table 13. Constraints on the combination of obstruents in disyllabic morphemes

2nd syl. → 1st syl. ↓	b	p	ph	d	t	th	z	s	sh	k	kh
b		---									
p			---								
ph		---				---		(---)	---		---
d				---							
t						---					
th		---			---			(---)	---		---
z									---		
s			(---)			(---)			---		(---)
sh		---				---		---			---
k											---
kh		---				---		(---)	---	---	

2.8 Phonology of word classes

Monosyllabic grammatical words are found in some, but not in all word classes. The monosyllabic words found in some word classes are also phonological words, whereas those in other word classes are clitics.

a) Nouns and adjectives
Nouns and adjectives must have at least two syllables.

b) Verbs
Verbs can be monosyllabic. Non-inflecting verbs are also monosyllabic phonological words. (Inflecting verbs usually have at least one affix and occur thus in polysyllabic word forms.)

c) Postpositions and particles
Postpositions and particles can be monosyllabic, in which case they are enclitics, i.e. they form one phonological word with the grammatical word which precedes them. Since stress falls on the last syllable of a phonological word, enclitics are stressed, except when followed by another enclitic.

(42) *oza=za*   [o̜dza'dza]
      house=LOC
      'in the house'

(43) *owa=pi*   [o̜(w)a'pi]
      1SG=TOP.f
      'I' (topicalised)

The enclitic *=ra* 'only' may indicate that the phonological word is the domain of the presumed historical constraint that /r/ could not occur word-initially during a past period in Kulina history. *=ra* is a grammatical word, but it never occurs at the beginning of a phonological word. Its origin is uncertain, but it may be a cognate of the accusative marker *=ra* in other Arawan languages, in which case it would be of Proto-Arawan origin and have survived the initial-/r/ constraint, showing that this constraint affected the phonological word.

2.9 Phonology of 'yes'

The word *hee*, which means 'yes' (among other things, see section 7.9), can be pronounced with a glottal stop between the vowels, as is always the case between adjacent vowels in Kulina (section 2.2.4). This pronunciation corresponds to the form /heʔ(e)/, which Parker (1996) claims to be "a basic universal template or canonical form for the lexical item 'yes'". However, data in Parker (no date), which contains 698 words for 'yes' in 575 languages, suggest that the specific form /heʔe/ is an areal phenomenon of northern Bolivia, south-eastern Peru and adjacent areas of Brazil (a region where Parker himself has done fieldwork), rather than a global phenomenon. Parker (no date: 13) acknowledges that in the list of words for 'yes' he presents, there is much more variation in the quality of the vowels than is the case with the consonants (which seems to be unsurprising, given that the criterion for inclusion of an item in Parker's list is the presence of either the consonant /h/ or the consonant /ʔ/ or a nasal vowel, while the quality of the vowel is irrelevant). Parker's claim that /h/ and /ʔ/ occur in words for 'yes' more frequently than could be explained by chance may be valid, but the very specific form he gives seems to be areally biased. Even for the occurrence of /h/ and /ʔ/ Parker (no date: 14) states that the percentage of matches in the languages he analysed was highest "in some parts of South America".

2.10 Phonologically exceptional words

Two groups of words can violate certain phonological rules. One is onomatopes and the other recent loans from Portuguese.

2.10.1 Onomatopoeia

Onomatopoeic words describe various kinds of sounds, including many made by animals. The names of several animal species are agent nouns derived from the onomatope describing the sound they make (section 14.1.3).

It was already mentioned in section 2.1.3.2 that phonological diphthongs are often found in onomatopoeic words, e.g. *phái.phái.de* [pʰaɪpʰaɪˈdɛ] 'a frog species'. While the occurrence of diphthongs is not restricted to onomatopoeia and loans, they are quite common in these two kinds of words and rare elsewhere.

The sound [j] usually occurs only non-phonemically between an /i/ and another vowel (section 2.3), e.g. in the second person personal pronoun *tia* [tija]. The name of a type of frog, *ie.ie.de* [jɛjɛˈdɛ], is the only attested case in which [j] occurs word-initially.

Another word for a frog species is *br.br.de* with a syllabic /r/. This word is only attested from one speaker and it is the only example of a word with vowelless syllables and syllabic consonants.

2.10.2 Loans

Kulina has borrowed words from Portuguese, Spanish, Nheengatu and various neighbouring indigenous languages (section 15.5). The phonology of Portuguese loans, treated separately below, can deviate substantially from the canonical Kulina pattern. Loans from other languages show only two phonological peculiarities (both of which are also found in Portuguese loans).

The first one is the innovated phoneme /s/, treated in section 2.2.2. This phoneme has been perfectly integrated into the Kulina consonant system and only historical linguistic evidence can demonstrate that it is the result of borrowing. /s/ is found in many Portuguese loans, but the innovation of the phoneme predates the Portuguese influence on Kulina.

2.10.2.1 Diphthongs before affricates

The second apparent peculiarity of loans is the occurrence of diphthongs before affricates. The word *koiza* [ko̝ɪdza] 'a traditional beverage and celebration' was already mentioned in sections 2.1.3.1 and 2.5 as one of only three words with the non-morpheme-final diphthong [o̝ɪ]. *Koiza* was probably borrowed from another indigenous language, where it had a form similar to [koja], as in the name of the beverage in Yine

(Arawakan), *koya* (Nies 1986: 133), and in Kanamari (Katukinan), *koyah*[15]. The sound [j] is marginal in Kulina (section 2.10.1) and the pronunciation [ko̯idza] is presumably the result of rendering a word with this sound into a form that is easy to articulate for Kulina speakers, albeit one that does not correspond to the general phonotactic pattern of the language.

One of the few other words (apart from onomatopoeia) in which the diphthong [o̯i] is found is *koize* 'spoon', a loan from Portuguese *colher* [ko'λε(χ)]. To Kulina speakers, [ko'λε] will sound more or less like [ko'jε] and it is thus unsurprising that it has been borrowed into Kulina as *koize* [ko̯idzε], paralleling the borrowing of [koja] as *koiza* [ko̯idza].

While the diphthong [o̯i] is very rare, [a̯i] is more frequent (section 2.1.3). One example of this diphthong is found in *raraiza* [rara̯idza] 'orange (noun)', from Portuguese *laranja* [la'r̃ẽʒa]. In this word, it is the Portuguese postalveolar [ʒ] that is rendered into [i̯dz], just as palatal [j] and [λ] were in the words discussed above.

Another example of a loan from an indigenous language is *kapaizo* [kapa̯idzo] 'papaya[16]', though it is not known from which language it was borrowed. Deni has *kavazu* 'papaya', without a diphthong. The idiosyncratic correspondence between Kulina /p/ and Deni /v/ indicates that the word is indeed a loan. Kanamari has *kapayo* 'papaya'. The phonological and phonetic correspondence between Kulina *kapaizo* and Kanamari *kapayo* is the same as between Kulina *koiza* and Kanamari *koyah* above (except for the final /h/ in Kanamari *koyah*).

Diphthongs are also found before the two voiceless affricates. *Aisa* [a̯itsa] 'vocative for pet howler monkeys' is most likely a loan, as indicated by the phoneme /s/, and related to the word *asa* 'howler monkey' in Deni, which does not have a diphthong. *Baishi* [ba̯itsʰi] 'vocative for pet tortoises' has the diphthong [a̯i] before /sh/, but it is not known if this word is a loan.

The phenomenon described here is limited to a rather small number of words and further research is required to determine if it is really restricted to loans.

2.10.2.2 Portuguese loans

The pronunciation of Portuguese loans, which are discussed in Dienst (2008a), varies between the preservation of the original pronunciation and complete phonetic and phonological assimilation. There is variation from word to word, but also from speaker to speaker. Speakers who have a certain command of Portuguese tend to pre-

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15 In Kanamari, loans ending in a vowel in the language of origin often take a final /h/, so that this additional segment of *koyah* as compared to the Yine word *koya* cannot be taken as evidence for the direction of borrowing.

16 Kulina *kapaizo* and English *papaya* may have the same origin. The English word is a loan from Spanish, which is believed to have borrowed it from a language of the Arawakan family. Arawakan languages are also a likely source for loans in Kulina.

serve many elements of the original pronunciation of recent loans while monolinguals quickly adapt them to Kulina phonology.

In Popular Brazilian Portuguese, /s/ is the only consonant which can occur syllable-finally. In Portuguese loans, the syllable-structure with /s/ as coda is sometimes preserved, e.g. in *biskoita* 'biscuit' from Portuguese *biscoito* [bisˈkoi̯tu]. Unlike syllable-initial /s/, which is usually pronounced as an affricate [ts], syllable-final /s/ is always a fricative [s]. The pronunciation of the word for 'school', from Portuguese *escola* [isˈkɔla], varies between [isˈkɔ̥la], [isˈkɔ̥ra] and [tsikɔ̥ˈra]. The last form is completely adapted to Kulina phonology.

The phonological form of Portuguese loans is not fully predictable. The final vowel in *remo* 'paddle' and *biscoito* 'biscuit, cookie' becomes /a/ in Kulina *hema* and *biskoita*, while the same vowel in Portuguese *rádio* 'radio' and *dinheiro* 'money' becomes /o/ in Kulina *haizo* and *zinero*. The word for 'manioc flour', from Portuguese *farinha*, is *paria* in the Purus dialect and *pariza* in the Juruá dialect.

3 Nouns

Nouns can be divided into the following subclasses:

Table 14. Subclasses of nouns

Noun subclasses:	
A	free nouns
A1	proper nouns
A2	common nouns
B	kinship nouns
C	inalienably possessed nouns
C1	with animate possessors
C2	with inanimate possessors

The defining criterion for distinguishing subclasses A, B and C is possession, of which there are three types in Kulina: alienable possession (with a free noun as the possessed), kinship possession and inalienable possession.

Free nouns and kinship nouns are divided between two genders, masculine and feminine. Inalienably possessed nouns do not have an inherent gender. They agree in gender with their possessor.

3.1 Free nouns

Free nouns can be divided into proper nouns and common nouns. Proper nouns are names of people, dogs[17] and places. A name as such always has a singular meaning, although a person's name can take the non-singular marker *deni* to denote a group of people including the bearer of the name. Common nouns, on the other hand, are indeterminate with respect to number. *Boba* 'arrow' can refer to one or any other number of arrows. *Poo ohipai* 'I ate manioc' can mean that I ate one or several manioc tubers or just part of one tuber, i.e. 'some manioc', an uncountable quantity.

While *poo* 'manioc' can be used as a count noun or a mass noun, other words, such as *pasho* 'water' and *paria* 'manioc flour', can only be used as mass nouns. These words cannot take a non-singular number marker and always require singular agreement on verbs.

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17 The use of proper names for other animals has not been observed. The Kulina keep wild animals of various species as pets and have a set of words for calling them, but those are not proper names. They are treated in section 15.3.

3.1.1 Non-singular marking

Those proper nouns and common nouns which have human referents can be used with the non-singular marker *deni*[18]. The effect of the non-singular marker differs in two respects between proper nouns and common nouns. Firstly, in the case of proper nouns, *deni* changes the meaning of the noun phrase from singular to non-singular whereas in the case of common nouns it gives a non-singular meaning to a noun phrase that would otherwise be unspecified with regard to number. Secondly, the plural of names is an associative plural with the name itself only referring to one of the persons of the group in question while the plural of common nouns is what Moravcsik (2003: 476) calls a type plural with the noun referring to each of the people covered by the plural.

type plural:
(44)   *amonehe-deni*
       woman-NSG
       'women' (= a group of people each of whom is a woman)

associative plural:
(45)   *Zowi-deni*
       NAME.m-NSG
       'Zowi and others (who are not Zowi)'

The associative plural can be used for any plurality of people perceived as a group, e.g. a hunting party.

According to Adams Liclan and Marlett (1990: 107), *deni* "never follows simple nonhuman nouns such as 'dog.'" But the use of *deni* with *ethe* 'dog' is attested in the following example from a hunting story recorded in Santa Júlia in 2003. Its use is thus restricted to animates, rather than just humans.

(46)   *[ethe   deni]*$_S$ *"háo háo"*   *Ø-ke-na-de*
       dog   NSG   "bow wow"   3-NSG-say-PAST
       'The dogs were barking.'

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18 This is the morpheme after which the Deni people are named. While the Kulina have clan names consisting of an animal name and the word *madiha* 'people', e.g. *Zomahi madiha* 'Jaguar people', the Deni clans have names ending in *deni*, e.g. *Upanavadeni, Tamakurideni, Dimadeni* (Koop and Lingenfelter 1980: 1).

3.1.2 Common nouns

Common nouns are the largest group of nouns. They constitute the only word (sub-) class whose members are categorised according to both gender and noun class. Another criterion for categorising common nouns is countability.

As explained above, common nouns are unspecified for number and only nouns with animate referents can take the non-singular marker *deni*. Other forms of number marking are not restricted to animate nouns. Non-finite forms of the verbs *ohari-* 'to be one' and *pama-* 'to be two' can be used as attributes of any countable noun and the number of countable subjects and objects is also marked in the morphology of verbs in a variety of ways, such as verb stem suppletion, affixation and reduplication, as described in chapter 4. Uncountable subjects, on the other hand, always require the use of the singular stem of suppletive verbs and no uncountable noun can be cross-referenced by a verb morpheme marking dual, plural or non-singular number.

3.1.3 Proper nouns

Proper nouns are names of people, dogs and places. The gender of the names of people and dogs is determined by the sex of the referent. The names of villages and towns take feminine agreement, those of rivers and streams masculine agreement.

It seems that all Kulina names for people are gender-specific. The etymology of most names is obscure. Some people have body part nouns as their names. These nouns are inalienably possessed (section 3.3). When a male is given such a noun as a name, it takes the form for a masculine third person possessor, e.g. *Ino* as *ino* 'his tooth' and *Isho* as *isho* 'his leg'. In the case of females, the name has the form for a feminine third person possessor, e.g. *Inoni* as *inoni* 'her tooth' and *Tatini* as *tatini* 'her head'.

3.2 Kinship nouns[19]

A distinction must be drawn between semantic kinship nouns and grammatical kinship nouns. A semantic kinship noun is a noun which expresses the family relationship between its referent and the referent of its possessor. In Kulina, some semantic kinship nouns show different grammatical characteristics than free (or alienably possessed) nouns. These form the category of grammatical kinship nouns. The remaining semantic kinship nouns belong to the lexical category of free nouns.

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19 Koop and Lingenfelter (1980: 21) call the Deni kinship terminology system, which is very similar to that of Kulina, 'an ethnographic example of Dravidian cousin terminology and the bifurcate merging pattern for avuncular terminology'.

For some kinship terms there are three suppletive forms. One is used as a voca-
tive, one with a first or second person possessor and one with a third person pos-
sessor. Other kinship terms have only two forms and some have only one, as shown
in table 15. The family members for whom no vocative form is given are called by
their name. As can be seen in the table, a distinction between 'grandson' and 'grand-
daughter' is only made with a third person possessor. Otherwise the same form is
used for grandchildren of both sexes. In the table, grammatical kinship nouns are
shown in italics.

Table 15. Kinship terms

	vocative	first or second person possessor	third person possessor
grandfather	idi	idi	*biridi*
grandmother	ini	ini	*midini*
father	abi	abi	*imei*
mother	ami	ami	*imeni*
paternal uncle, stepfather	abi owaa	abi owaa	*ime owaa*
paternal aunt, mother-in-law	asho	asho	*mashodini*
maternal uncle, father-in-law	koko	koko	*bihedi*
maternal aunt, stepmother	ami onii	ami onii	*imenonii*
older brother	ato	ato	*owaa*
older sister	asi	asi	*onii*
younger brother	tati	*kote*	*owaa*
oldest younger brother of a female	tati	*kote*	*karimakhi*
younger sister	mashi	*kote*	*onii*
oldest younger sister of a male	mashi	*kote*	*karipene*
husband	---	makhi	makhi(dehe)
wife	---	amonehe	*bedimeni*
man's brother-in-law	wabo	wabo	wabo
man's sister-in-law, woman's brother-in-law	owini	owini	owini
woman's sister-in-law	karadi	karadi	karadi
son	ato	ehedeni	*bedi*
daughter	asi	ehedeni	*bedeni*

	vocative	first or second person possessor	third person possessor
cross-nephew[20], son-in-law	---	*hidobadi*	*hidobadi*
cross-niece[21], daughter-in-law	---	*hinomadini*	*hinomadini*
parallel nephew[22] or parallel niece[23]	---	*hakama*	*hakama*
grandson	hino	*hinodini*	*hinodi*
granddaughter	hino	*hinodini*	*hinodini*

Grammatical kinship nouns are in italics.

Kinship nouns which can only refer to males are masculine and those only referring to females are feminine. Words which can refer to people of either sex take either gender, in accordance with the sex of the referent. When referring to people of both sexes in the dual or plural, these words take masculine agreement. (Gender is not relevant for vocatives since no other words can agree with them.)

A semantic kinship noun is not a grammatical kinship noun if it falls into one of the following two categories:
- words which are used as vocatives
- words which are also used as nouns with a non-kinship meaning

Which words belong to the former category can be seen in table 15. The words of the latter category are *makhi(dehe)* 'man, husband', *amonehe* 'woman, wife' and *ehedeni* 'child (young person or offspring)'.

3.2.1 Possession of grammatical kinship nouns

Possession is the defining criterion for classifying grammatical kinship nouns as a grammatically distinct lexical subcategory. Grammatical kinship nouns are inherently possessed, which means that for example the word *imei*, when used without an overt possessor, doesn't simply mean 'father' but rather 'his/her father', i.e. the noun itself expresses that the referent has a third person possessor. If there is an overt third person possessor, it occurs immediately before the kinship noun, without any additional marking.

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20 son of a sibling of the opposite sex
21 daughter of a sibling of the opposite sex
22 son of a sibling of the same sex
23 daughter of a sibling of the same sex

(47) *Mahini   imeni*
NAME(m)   his/her.mother
'Mahini's mother'

(48) *karia   bedeni*
white.person   his/her.daughter
'the white person's daughter'

A first or second person possessor is expressed by the common first and second person prefixes, which are also used to mark the possessor in the two other kinds of possession (chapter 8) and the subject of verbs (section 4.2.1.1):

o-   first person singular
ti-   second person
i-   first person non-singular

In the case of kinship nouns which can be used for people of either sex, the sex of the possessee is indicated by the gender of agreeing words.

(49a) *o-hinodini   Ø-pemi-i*
1SG-grandchild   3-be.hungry-DECL.m
'My grandson is hungry.'

(49b) *o-hinodini   Ø-pemi-ni*
1SG-grandchild   3-be.hungry-DECL.f
'My granddaughter is hungry.'

(50a) *ti-kote   Ø-kha-hona-i*
2-younger.sibling   3-move.SG-HITHER-DECL.m
'Your younger brother is coming.'

(50b) *ti-kote   Ø-kha-hona-ni*
2-younger.sibling   3-move.SG-HITHER-DECL.f
'Your younger sister is coming.'

3.2.2 Lexical forms

The forms of the Kulina kinship nouns are highly interesting, though they cannot yet be fully explained. The fact that no distinction is made between 'father-in-law' and 'maternal uncle', 'mother-in-law' and 'paternal aunt', 'son-in-law' and 'cross-

nephew', and 'daughter-in-law' and 'cross-niece' shows that the Kulina have traditionally preferred cross-cousin marriages.

For third person possessors, there are special words for the oldest of a woman's younger brothers and for the oldest of a man's younger sisters. The two words, *kari-makhi* 'oldest younger brother' and *karipene* 'oldest younger sister' share the first two syllables, *kari-*. Clearly, the rest of *kari-makhi* is the word *makhi* 'man'. The corresponding *-pene* in *kari-pene*, which does not exist as a free form in modern Kulina, can therefore be assumed to originally have had the meaning 'woman' and to be a cognate of Jarawara *fana* 'woman' and the Deni kinship noun *panadi* 'wife'.

Several of the male kinship nouns for third person possessors end in *-di*, while the corresponding female nouns end in *-dini*.

male:	female:	
biridi	*midini*	'grandfather/grandmother'
bihedi	*mashodini*	'father-in-law/mother-in-law'
hidobadi	*hinomadini*	'son-in-law/daughter-in-law'
hinodi	*hinodini*	'grandson/granddaughter'

It is likely that the final syllable /ni/ in the female nouns has the same origin as the ending *-ni* on the feminine form of inalienably possessed nouns (section 3.3.2). (Note that the terms for most male relatives in the list contain /b/, like *abi* 'father' and those for most female relatives /m/, like *ami* 'mother'.)

While the Deni word for 'father', *ime'i*, is basically identical[24] with *imei* in Kulina, the Deni word for mother is *ime'eni*, corresponding to *imeni* in Kulina. Almost certainly the Kulina form is a contraction of the more conservative Deni form. In Deni the words for 'father' and 'mother' show the same correspondence as the words 'son' and 'daughter' in both Deni and Kulina.

ime'-i	*ime'-eni*	'father/mother' (Deni only)
bed-i	*bed-eni*	'son/daughter' (Kulina and Deni)

In the case of grandfather, grandmother and mother-in-law, the form for third person possessors contains the form for vocative and first and second person possessors while the two forms of the lexeme father-in-law are completely different.

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24 A difference between the Deni and Kulina forms is that Deni *ime'i* has a phonemic glottal stop, whereas glottal stops in Kulina are not phonemic (section 2.2.4). Kulina *imei* can be pronounced [imɛ'i or imɛ'ʔi].

	1st/2nd possessor,	
3rd possessor:	vocative:	
bir**idi**	**idi**	'grandfather'
mid**ini**	**ini**	'grandmother'
m**asho**dini	**asho**	'mother-in-law'
bihedi	koko	'father-in-law'

The reason for this is that *koko*, which Dixon and Aikhenvald (1999: 8) call "[p]robably the most pervasive lexeme" in the Amazonian languages, is almost certainly a loan which replaced the original word in some, but not in all functions.

The word *bedimeni* '(his) wife' is composed of *bedi* '(his/her) child(ren)' and *imeni* '(his/her) mother' and has thus the literal meaning 'the mother of his children'.

That *bedimeni* '(his) wife' has been fully lexicalised can be shown by the following fact. When a word beginning with a vowel is preceded by a word beginning with an identical vowel, only one vowel surfaces, as in the following example.

(51a) *Zowi*   *imeni*   [zowimeni]
         NAME.M   mother
         'Zowi's mother'

But if the speaker pauses between the two words, both vowels are pronounced:

(51b) *Zowi imeni*   [zowi…imeni]

In the case of *bedimeni*, however, even when a speaker pauses in the middle of the word, e.g. when syllabifying a recorded text, the original second /i/ can never reappear.

         bedimeni   [bedi…meni], not [*bedi…imeni]

That *bedimeni* is not interpreted as 'the mother of his children' by present-day speakers can also be seen from the fact that it is used for 'wife' even when a couple doesn't have children.

The forms for third person possessors of the nouns denoting the six possible blood relationships within a nuclear family are homonymous with the masculine and feminine forms of the adjectives 'big', 'small' and 'other'.

kinship nouns				adjectives		
imei	'(his/her) father'	*imeni*	'(his/her) mother'		*imei* (m), *imeni* (f)	'big'
bedi	'(his/her) son'	*bedeni*	'(his/her) daughter'		*bedi* (m), *bedeni* (f)	'small'
owaa	'(his/her) brother'	*onii*	'(his/her) sister'		*owaa* (m), *onii* (f)	'other'

The semantic relation between the nouns and the adjectives is obvious, but it remains to be shown which is the older meaning.

3.2.3 'Son' and 'daughter' in the Juruá dialect

In the Juruá dialect of Kulina, different words for 'son' and 'daughter' are used as vocatives and with first or second person possessors than in the Purus dialect, as shown in table 16.

Table 16. 'Son' and 'daughter' in the Purus and Juruá dialects

		Purus dialect	Juruá dialect
Vocative	Son!	ato	nephe
	Daughter!	asi	hata
first or second person possessor	son	ehedeni	*hakama*
	daughter	ehedeni	*khato*
third person possessor	son	*bedi*	*bedi*
	daughter	*bedeni*	*bedeni*

Grammatical kinship nouns are in italics.

Presumably, the Juruá vocabulary is the original one. The words *hakama* and *khato* are no longer used for 'son' and 'daughter' of a first or second person possessor in the Purus dialect. The word *ehedeni* 'child' is used instead. While the word *hakama*, which means 'son' in the Juruá dialect, is used for 'parallel nephew' and 'parallel niece' on the Purus, the word *khato* 'daughter' has disappeared from the Purus dialect and there is a functional explanation for this fact. 'My older brother' is *o-kha ato* in Kulina. (The relational morpheme *kha* occurs in the alienable possessive construction, which is used for free nouns, such as *ato* 'older brother' [chapter 8].) Since the final vowel of *o-kha* is the same as the initial vowel of *ato*, the two words are fused and pronounced [okʰato] in normal speech, thereby becoming homonymous with *o-khato* 'my daughter'. As *khato* can only be used with a first or second person possessor, it occurs exclusively in forms which are homonymous with 'my/your/our older brother'. And while it is possible to pronounce *okha ato* 'my brother' carefully as [okʰa ato], *o-khato* 'my daughter' can only be pronounced [okʰato] and is thus always ambiguous. It is therefore clearer to speak of 'my child' instead of 'my daughter' and this is exactly what happens in the Purus dialect.

Since *khato* 'daughter' only occurs in the forms *okhato* 'my daughter', *tikhato* 'your daughter', *ikhato* 'our daughter', one could consider segmenting these words

as **o-kha to, *ti-kha to, *i-kha to*, i.e. a free noun **to* 'daughter' with an alienable possessor. Two arguments speak against this analysis. Firstly, **to* would be the only monosyllabic noun in Kulina. And secondly, the other kinship terms which are only used with first and second person possessors, *kote* 'younger sibling' and *hakama* 'son' (in the Juruá dialect), are also grammatical kinship nouns (i.e. they take the possessive markers *o-, ti-, i-*, not *o-kha, ti-kha, i-kha*).

That *khato* 'daughter' in the Juruá dialect of Kulina is a retention can be seen from the fact that it has the cognate *khatu* in Deni. Like the Kulina word, its Deni cognate can only be used with a first or second person possessor. Koop and Koop (1985: 145) report the existence of a noun *tu* 'daughter' in Deni. This is presumably due to the analysis of *o-khato*, *ti-khato* described and rejected for Kulina in the previous paragraph.

The word *ato* is used in both the Purus and the Juruá dialect for 'older brother (vocative and first or second person possessor)'. The same applies for *asi* 'older sister (vocative and first or second person possessor)'. Besides, these words are used as vocatives for 'son' and 'daughter' in the Purus dialect. In this function, *ato* and *asi* have replaced the older vocative forms *nephe* 'son!' and *hata* 'daughter!', which are used on the Juruá. These words are still used in old stories on the Purus. One day, there were five or six men in my house when the word *hata* occurred in a story that I was translating with one of them. In a collective effort, they were able to remember that *hata* was a word for a younger female relative and that the corresponding word for a male person was *nephe*. But they could not recall what kind of relation *hata* and *nephe* referred to and they were unsure if the words could only be used as vocatives or also otherwise.

3.3 Inalienably possessed nouns

Inalienably possessed nouns are one of the three subcategories of nouns, as shown in table 14. This section deals with their semantic characteristics, their internal structure and the question how they can be derived from words of other word classes. The inalienable possessive construction is treated in section 8.1.3.

3.3.1 Semantics

The class of inalienably possessed nouns consists of words that are typically found in such a class cross-linguistically (Chappell and McGregor 1996), given that grammatical kinship nouns form a separate category. Most nouns of this class can be grouped into the following subcategories:

1.   The names of all human and animal body parts except for the free nouns *mashi* 'vulva, vagina' and *hehebeko* 'fontanel'.

2. The names of plant parts. For 'leaf', there is a possessed noun *ephe/aphani* and a free noun *bebe*.

3. The names of parts of objects, such as 'tip' and 'handle' and words for pieces of objects, such as 'shred', 'a piece of something cut lengthwise' and 'a piece of something cut widthwise'.

4. Spatial relations such as 'back' and 'underside'.

5. The word for 'egg' and the names of most bodily secretions and excretions. Exceptions are *ama* 'menstrual blood, gore', *shonoba* 'mucus', and *zoho* 'mother's milk', which are free nouns.

6. The names of immaterial or amorphous emanations such as 'voice, language', 'noise', 'smell' and 'smoke'.

7. A few words for persons or objects associated with the possessor; 'companion', 'sleeping place', 'path' (derived from a free noun for 'path').

There is also a probably open class of inalienably possessed abstract nouns derived from stative verbs, such as 'weight' from 'heavy' and 'heat' from 'warm' (section 3.3.2.2).

3.3.2 Gender marking and derivation

Almost all possessed nouns have a masculine and a feminine form, agreeing in gender with their possessor. The feminine form of possessed nouns is formed in a completely regular way by adding the suffix *-ni* to the base of the noun. For the formation of the masculine form, two groups of nouns have to be distinguished. The first one is made up of words ending in *-ri* and is discussed in section 3.3.2.3. The nouns of this group do not take any gender marker in the masculine form. In the second group of nouns (with a base not ending in *-ri*), there are two different markers of the masculine gender; one is the suffix *-ne* and the other is the raising of stem-final /a/ to /e/. The vowel raising applies recursively to /a/ in preceding syllables which are not separated from the stem-final /a/ by a vowel of a different quality.

The raising of /a/ to /e/ applies to the masculine forms of all possessed nouns whose stem ends in /a/. There is nothing corresponding to this marker for nouns whose stem ends in a different vowel. The suffix *-ne* occurs on the masculine form of possessive nouns which are derived from words of other word classes while the words whose primary function is that of a possessed noun do not receive a masculine suffix[25].

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25 Dixon (1995) assumes that all possessed nouns with the feminine suffix *-ni* originally had a masculine suffix *-ne*, but this seems questionable. In Paumari, all third person feminine forms of possessed nouns have the suffix *-ni* while only some of the masculine third person forms have a suffix *-na,* corresponding to the distribution of *-ni* and *-ne* in Kulina. Paumari also has a suffix *-i* occurring on certain

Since the phonologically conditioned gender marker /a/-raising and the grammatically conditioned gender marker -*ne* are independent of each other, four formal categories of masculine forms of possessed nouns not ending in -*ri* can be distinguished, as shown in table 17.

Table 17. Marking of the masculine form of possessed nouns

		stem ends in /a/	stem does not end in /a/
possessed nouns not ending in -ri	**primary**	raising of final /a/ to /e/	no overt marking
	derived	suffix -*ne* and raising of final /a/ to /e/	suffix -*ne*
possessed nouns ending in -ri		no overt marking	no overt marking

Possessed nouns can be combined to form complex lexemes, e.g. *ene / ene-ni* 'nose' and *odi-ne / odi-ni* 'hole' form *ene odi-ne / ene-ni odi-ni* 'nostril'. Some possessed nouns are only found as the second element of such combinations. In the lists below, only complex nouns with such an otherwise unattested second element are included.

3.3.2.1 Primary possessed nouns

The following members of the closed class of basic (underived) possessed nouns are attested.

feminine	masculine	
abathani	*ebethe*	'cheek'
anadani	*enede*	'chin'
apani	*epe*	'navel'
aphani	*ephe*	'leaf; wing'
arobeni	*arobe*	'piece of something cut lengthwise'
ashapani	*eshepe*	'chewed or squeezed piece (e.g. of sugar-cane, lemon)'
ashirani	*ashire*	'tree trunk; the whole'
athini	*athi*	'voice, language, words'
bakhoni	*bakho*	'chest, breast'
bihini	*bihi*	'arm'
bobini	*bobi*	'piece of something cut widthwise'
bodini	*bodi*	'belly; the inside'
bononi	*bono*	'beak; upper lip; fruit'
dathoni	*datho*	'land; underside'

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possessed nouns (in a form called 'nonspecific' by Chapman and Derbyshire 1991: 256). The ablaut in the suffixless masculine Kulina forms could go back to the fusion of stem-final /a/ and a suffix -*i*.

feminine	masculine	
---[26]	denephe	'testicles and scrotum'
dopani	dope	'underside'
doroni	doro	'groin'
ebenoni	ebeno	'tongue'
edeni	ede	'plant, trunk, stalk'
eneni	ene	'nose; tip'
eteroni	etero	'carapace, bark, skin (of fruit)'
haboni	habo	'root'
howini	howi	'shoulder'
ideni	ide	'back'
imani	ime	'flesh'
inoni	ino	'tooth'
iponi	ipo	'(lower) lip'
ishoni	isho	'leg, shank'
ishoni zahani	isho zehe	'calf (of leg)'
khorohani	khorohe	'nudity'
konani	kone	'hair'
korimani	korime	'shadow, reflection, image, sculpture, model'
kotani	kote	'tip'
mahikoni	mahiko	'shred'
mahoni	maho	'smell'
matani	mete	'buttocks; tree stump'
mathoni	matho	'neck; palm heart'
moweni	mowe	'flower, blossom'
mowini	mowi	'noise'
nashopani	nashope	'saliva'
naphani	nephe	'egg'
nathini	nathi	'back (of something)'
nodini	nodi	'plant, cob'
nokhoni	nokho	'eye; core; (obsolete) penis'
nokoshini	nokoshi	'eyebrow'
onini	oni	'name; namesake'
panakhoni	panakho	'thigh'
panoni	pano	'face'
pitoni	pito	'knee'
taboroni	taboro	'sleeping place'

---

26 This is the only case in which the speakers wouldn't produce a word form which has no referent. Female body parts always have a masculine form, which is used with first and second person possessors, and the speakers used a feminine form to say that there is no women's semen (listed in brackets in section 3.3.2.3).

feminine	masculine	
tabothoni	*tabotho*	'small piece, morsel'
tamidini	*tamidi*	'throat'
tashani	*teshe*	'companion'
tatini	*tati*	'head'
tetepini	*tetepi*	'top'
tonani	*tone*	'bone, fishbone'
tonani aphonani	*tone aphone*	'bone marrow'
wapini	*wapi*	'skin'
wariboni	*waribo*	'ear'
watini	*wati*	'liver'
zapani	*zepe*	'hand'
zotoni	*zoto*	'anus; faeces'
zotoni moweni	*zoto mowe*	'flatulence'

3.3.2.2 Derived possessed nouns with suffixes *-ne/-ni*

This derivation is of Proto-Arawan origin (cf. Dixon 1995) and the nouns that take it can be divided into two groups. One group of words has come through to modern Kulina with the suffix from older stages of the language, some going back to Proto-Arawan. In most cases these nouns can still be linked to other words in the modern language from which they were once derived. But the phonological correspondence between those lexemes and the possessed nouns is not always completely regular since these are not cases of synchronic derivation and the base lexeme and the derived noun may have changed independently over time. Most of the possessed nouns in this group are derived from free nouns. Only one is related to a modern dynamic verb. The possessed noun for blood (of Proto-Arawan origin) is derived from a word which can function both as a free noun and as a stative verb in modern Kulina. The following is a list of attested nouns of this group.

feminine	masculine		related lexeme	
ashikoni	*ashikone*	'vein'	*ashiko*	'fibrous'
amani	*emene*	'blood'	*ama*	'blood(y)'
atini	*atine*	'thorn'	*atia*	'thorn'
hawini	*hawine*	'path'	*hawi*	'path'
ideni phatani	*ide phetene*	'kidney'	?	
inini	*inine*	'branch'	?	
izoni	*izone*	'belly'	*izo*	'faeces'
madoni	*madone*	'rope'	*mado*	'vine, rope'
makhani	*mekhene*	'snake, maggot'	*makha*	'snake'
odini	*odine*	'hole'	*odi*	'hole'
okohani	*okohene*	'ashes'	*okoha*	'ashes'

feminine	masculine		related lexeme	
okoni	*okone*	'ashes'	*okoha*	'ashes'
shokoni	*shokone*	'foam'	*shoko*	?
tanikhoni	*tanikhone*	'sweat'	*tanikho*	'to sweat'
zaani	*zeene*	'uterus'	?	
ziphoni	*ziphone*	'fire'	*zipho*	'fire, firewood'

The second group of nouns with *-ne/-ni* are those in which the suffix is a productive derivational morpheme which attaches in a regular way to a base lexeme of the modern language. As a productive suffix, *-ne/-ni* can only be used on stative verbs. The following list shows some examples. Some cases show an idiosyncratic semantic change in the derived form.

feminine	masculine		base	
ahiboni	*ahibone*	'cooked meat'	*ahibo*	'tasty'
esheni	*eshene*	'smoke'	*eshe*	'full of smoke'
khanahani	*khenehene*	'weight'	*khanaha*	'heavy'
obani	*obene*	'dirt'	*oba*	'dirty'
okini	*okine*	'fat'	*oki*	'fat' (adj.)
phahani	*phehene*	'liquid'	*phaha*	'wet'
phokoni	*phokone*	'heat'	*phoko*	'warm'
pinini	*pinine*	'handle'	*pini*	'full of branches'
shiahani	*shiehene*	'shine'	*shiaha*	'light' (adj.)
shiporini kharani	*shipori kherene*	'Adam's apple'	*khara*	'hard'

The derivation from stative verbs is probably as old as the denominal one, but since the former is still productive, deverbal derivations of ancient origin cannot be easily distinguished from modern ones as long as there is still a regular correspondence in form between the base and the derived word.

3.3.2.3 Possessed nouns ending in *-ri/-ri-ni*

Besides the derivation with *-ne/-ni* described in section 3.3.2.2, which is used with free nouns as well as (mainly stative) verbs, there is a second way of deriving possessed nouns, which can only be applied to free nouns. In this derivation, the suffix *-ri* is added to a free noun to form the masculine form of a possessed noun and the two suffixes *-ri* and *-ni* are combined in the feminine form. (There is no raising of stem-final /a/ in the masculine form of this derivation.) Usually, these suffixes only transform a free noun into a possessed noun, without any change in meaning. They can be used, for example, with the two body part nouns which are free nouns.

free noun		possessed noun, fem. form		possessed noun, masc. form	
hehebeko	'fontanel'	*hehebeko-ri-ni*	'her fontanel'	*hehebeko-ri*	'his fontanel'
mashi	'vagina'	*mashi-ri-ni*	'her vagina'		

In one attested case the meanings of the free and the possessed noun differ. *Zoho* is a free noun meaning 'mother's milk' while the possessed noun *zoho-ri-ni* means 'her breasts' (in addition to 'her breast milk').

   This derivation is also found with a variety of other free nouns, but it is unclear if it can be used with all nouns that refer to possessible objects or if there is some restriction. It is also not known what the purpose of this derivation is since the free noun could alternatively take an alienable possessor.

   The possessed nouns derived from the three words *ahie* 'song', *ima* 'story', and *oza* 'house' have a special form with the additional prefix *ta-*. *Ahie* and *oza* lose their initial vowel in the possessed form while *ima* doesn't. (See section 2.6.4.1 for the phonological process involved.)

feminine	masculine		base	
ta-hie-ri-ni	*ta-hie-ri*	'song'	*ahie*	'song'
ta-ima-ri-ni	*ta-ima-ri*	'story'	*ima*	'story'
ta-za-ri-ni	*ta-za-ri*	'house'	*oza*	'house'

Besides the words ending in *-ri-ni/-ri* which are regularly derived from free nouns, there are also a number of possessed nouns which are not related to any free noun or other word in modern Kulina. There are two possible explanations for this. Either *-ri* is the last syllable of the root of these words. In this case, they would be underived possessed nouns of the type discussed in section 3.3.2.1. Or *-ri* is the derivational suffix described above, but the words from which the possessed nouns were derived no longer exist in the modern language, in which case they would belong to the category of derived possessed nouns treated above in this section.

   There are over 20 words of this type, listed below. Compared to the just over 60 underived nouns listed in section 3.3.2.1, this number is far too big to assume that these are all underived nouns which coincidentally end in a syllable that is homonymous with the derivational suffix *-ri*. Besides, several of these nouns have four syllables, whereas those not ending in *-ri* never have more than three.

   Therefore, *-ri* must originally have been a suffix in most of the possessed nouns where it occurs. But synchronically the *-ri* is not a segmentable morpheme any more and must be considered a part of the modern stem. Synchronically, nothing distinguishes these nouns from those of section 3.3.2.1 (except that some have four syllables). */ri/* has probably never been a suffix in the word *ori/ori-ni* 'horn', which would have had a monosyllabic stem if */ri/* had been a separate morpheme at some point. This is improbable since Kulina doesn't have monosyllabic noun stems. But in *phari/ phari-ni* 'rib', which also has a disyllabic masculine form, */ri/* could nevertheless be

a fossilised suffix since the Deni cognate of this word is *phuvari* 'rib' (Koop and Koop 1985: 129), which has an additional syllable that has been lost in Kulina.

feminine	masculine	
aharini	*ahari*	'mouth'
amorini	*amori*	'foot'
amorini kokorini	*amori kokori*	'ankle'
badadarini	*badadari*	'side of the body at the height of the buttocks'
bakhoni tabarini	*bakho tabari*	'soul'
bonokhorini	*bonokhori*	'heart'
inoni shohorini	*ino shohori*	'gum'
inorini	*inori*	'(space on the) side (of someone or something)'
karaborini	*karabori*	'part of the trunk of certain palms, e.g. oil palm'
khoborini	*khobori*	'knee' *(obsolete)*
moshoshorini	*moshoshori*	'tailbone'
nakorini	*nakori*	'lower back'
nokhoni birini	*nokho biri*	'grave'
orini	*ori*	'horn, sting'
pharini	*phari*	'rib'
shiparini	*shipari*	'bile'
shiporini	*shipori*	'throat'
tatakarini	*tatakari*	'palate'
tizorini	*tizori*	'knee'
washakarini	*washakari*	'lungs'
washarini	*washari*	'forehead'
(zowirini)	*zowiri*	'semen'
zoporini	*zopori*	'tail; penis'

Contrary to the claim made above that the suffix *-ri* can only be attached to free nouns, Adams Liclan and Marlett (1990: 116) state that "[s]ome body-part names have the syllable *ri* and are derived from verbs. These include *-cʰipari* 'gallbladder' (cf. *cʰipa* 'urinate'), *-ʒohori* 'chest' (cf. *ʒoho* 'carry'), *-kʰobori* 'knee' (cf. *kʰobo* 'crawl'), and *-hahacʰiri* 'lung' (cf. *hacʰi* 'breathe')."

On closer scrutiny, their four examples turn out to represent at least three different cases. *Zohori* doesn't mean 'chest' but 'breasts' and it is derived from the free noun *zoho* 'mother's milk', not from the homonymous verb 'to carry'. *Hahashiri* 'lungs' has the verbal root *hashi* 'to breathe' from which an instrumental noun *ha-hashi* 'instrument/place for breathing' has been derived. The suffix *-ri* has then been attached to the nominal base *ha-hashi*, not directly to the verb.

In the Purus dialect of Kulina, the word for 'gallbladder' has the form *shipari* given by Adams Liclan and Marlett, but in the Juruá dialect the word for 'bile' is *shipawari* (Tiss 2004: 142). This is a typical case of loss of /w/ and subsequent loss of a syllable

in the Purus dialect (*shipawari > *shipaari > shipari*). Thus, *shipari* cannot have been formed by adding *-ri* to *shipa* 'urinate'. It is nevertheless conceivable that the words *shipa* and *shipa(wa)ri* are related and that at an earlier stage of the language the suffix *-ri* was attached to a verb **shipawa*. The form of the modern verb *shipa* in the Juruá dialect could shed light on this question, as it might or might not have an additional syllable /wa/. Unfortunately, the verb *shipa* (or a corresponding form) doesn't exist on the Juruá, where only the verb *kazokha-* 'urinate' is used, which is also common on the Purus.

While it is not impossible that *shipa(wa)ri* 'gallbladder' and *khobori* 'knee' were historically derived from the verbs *shipa* 'urinate' and *khobo* 'crawl', the words are not synchronically segmentable and no new words can be derived from verbs by attaching the suffix *-ri*. In those cases where *-ri* is synchronically segmentable, it is invariably attached to a noun.

3.3.2.4 Possessed nouns without masculine and feminine forms

Some possessed nouns do not have a masculine and a feminine form. They belong to two small groups. The first are nouns which can only take non-human and, with the exception of *hinede* 'owner', only inanimate possessors.

batho	'lower reaches (of a river)'
hinede	'owner'
hiphe	'other bank'
inidi	'bank, shore'
mota	'rest'

The noun *bodi/bodini*, listed in section 3.3.2.1, occurs in the masculine or feminine form, as appropriate, when used with a human or animal possessor – in which case it means 'belly'. But speaking of a house, the masculine form *bodi* is used for 'inside', although *oza* 'house' is a feminine word. (The use of the feminine form in *oza bodini* 'the inside of the house' is judged acceptable but is not attested.) Other spatial relational nouns, however, occur in the feminine form when used with *oza*.

The second group of nouns which don't have a masculine and a feminine form are some body part nouns which only occur as the second element of complex possessed nouns. One example is *bazini*, which is attested in the following lexemes.

masculine	feminine	meaning of complex noun	meaning of first element
amori bazini	*amorini bazini*	'big toe'	'foot'
isho bazini	*ishoni bazini*	'calf (of leg)'	'leg'
zepe bazini	*zapani bazini*	'thumb'	'hand'

In the case of *zoto*, there is some variation. In elicitation of the word for 'elbow', several speakers used the feminine form with a feminine possessor, *amonehe bihini zotoni* 'the woman's elbow', but not with the first person, *o-bihi zoto*, where the feminine form of *zoto* would also be expected. Other speakers used the masculine form even with a feminine possessor, *amonehe bihini zoto* 'the woman's elbow'. *Zoto* is attested in the following complex possessed nouns.

masculine	feminine	meaning of complex noun	meaning of first element
amori zoto	*amorini zoto*	'heel'	'foot'
bihi zoto	*bihini zoto(ni)*	'elbow'	'arm'
matho zoto	*mathoni zoto*	'part of skull above nape'	'neck'

Zoto and the feminine form *zotoni* used by some speakers are homonymous with the possessed noun *zoto/zotoni* 'faeces', though different forms of the Jarawara cognates[27] suggest that they have a different history. But it seems likely that the words have the same ultimate origin since the cognates of *zoto/zotoni* mean 'buttocks', rather than 'faeces', in some Arawan languages (Dixon 1995: 284), which bears an obvious semantic relation to the heel as the 'back end of the foot' and the elbow as the 'back end of the (bent) arm'.

3.4 Change of lexical subcategory

It is, in principle, possible for a language with two or more possessive constructions to allow certain nouns to occur with different kinds of possessors, e.g. either alienably or inalienably possessed (Chappell and McGregor 1996: 3).

In Kulina, such a use with different kinds of possessors implies a change from one into another of the three lexical subcategories free noun, inalienably possessed noun and grammatical kinship noun.

In the case of grammatical kinship nouns, such a change is impossible. The few members of this group are always used as such and no other noun can be used as a possessee in a grammatical kinship construction. As has been discussed above, all the semantic kinship nouns which also have a non-kinship meaning, such as *makhi* 'man, husband' and *amonehe* 'woman, wife', are free nouns, even when used in their kinship meaning.

Due to lexical replacement, the Kulina class of grammatical kinship nouns has shrunk. Kulina and Deni share the free noun *amonehe* 'woman' (spelt *amunehe* in Deni), which has no known cognates outside the Madihá branch of the Arawan

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27 'Faeces' has the forms *joto* (m) and *joti* (f) in Jarawara, while 'heel' is *teme jotofi* (m), *tame jotofi* (f). (Dixon 2004a: 350–351; *teme/tame* is 'foot').

family. The Deni word for 'wife' is the grammatical kinship noun *panadi*, which does have cognates in other Arawan languages (Dixon 2004b: 66), probably including the second part of Kulina *kari-pene* 'oldest younger sister of a man', as mentioned in section 3.2.2. In Kulina however, the word *amonehe* is used not only for 'woman', as in Deni, but also for 'wife' (with a first or second person possessor), probably replacing a grammatical kinship noun cognate with Deni *panadi*. The replacement of *khato* 'younger sister' and *hakama* 'younger brother' by the free noun *ehedeni* 'child' in the Purus dialect of Kulina was described in section 3.2.3. (*Hakama* survives in the sense of 'parallel nephew, parallel niece' in that dialect.)

As membership in the grammatical kinship class is immutable, the only possible changes between nominal subcategories are from alienable to inalienable possession and vice versa. Such a change is usually marked by an affix. The prefix *to-* is used to transform a possessed noun into a free noun (section 8.1.3.5). A few possessed nouns are (diachronically) derived from free nouns with the suffix *-ne/-ni* (section 3.3.2.2), while the second suffix with this function, *-ri*, is more widely used and possibly productive (section 3.3.2.3).

Only a few words are known to be used as free nouns and as possessed nouns in the same form. *Etero* is the masculine form of a possessed noun meaning 'carapace, bark, skin (of fruit)'. It is also used as a (feminine) free noun meaning 'clothes'. Since clothes are a recent innovation in Kulina culture and the word has cognates in other Arawan languages which are possessed nouns and mean 'skin, bark' (Dixon 2004b: 48), it appears more than likely that the possessed form of the Kulina noun is the older one.

Bihini is another word that can function as a free or a possessed noun, meaning either '(her) arm' (possessed noun) or 'stream' (free noun). Again, the possessed noun seems to be the original one, as evidenced by cognates which are possessed nouns and have the meanings 'arm, back leg, hand, fan, wing, feather' (Dixon 2004b: 50).

3.5 Gender and noun class

Noun classes constitute a grammatical agreement system. In a language with such a system each noun is classed into one of two or more groups, the noun classes. (Some of the nouns may belong to more than one noun class, with or without a difference in meaning.) Words of certain other word classes are inflected to show agreement with nouns. Kulina has two such noun class systems, which is a rare phenomenon cross-linguistically, but also found in Kulina's closest relative, Western Jamamadi, and at least one other Arawan language, Paumari (Aikhenvald 2000: 70–77, 2010).

3.5.1 Gender

The word *gender* is commonly used to refer to noun classes in systems with just two classes in which (almost) all nouns referring to male humans belong to one noun class (or gender), called masculine, and (almost) all nouns referring to female humans belong to the other noun class (or gender), called feminine. *Gender* is also often used in the description of languages with a slightly larger number of noun classes if two of these classes can be identified as masculine and feminine. The terminology goes back to the Greek philosopher Protagoras, who distinguished "masculine", "feminine" and "inanimate" nouns in Greek in the 5th century BCE (Aikhenvald 2004b: 1031).

One of the two Kulina noun class systems is a typical gender system and will therefore be referred to as such.[28] It has two genders, masculine and feminine. The gender of nouns with human referents is determined by the biological sex of the referents. Nouns which can only refer to males, such as *makhidehe* 'man' and *zabisho* 'boy', are masculine, those which can only refer to females, such as *amonehe* 'woman' and *zowato* 'girl', are feminine. A word which can refer to people of either sex, e.g. *ehedeni* 'child' and *madiha* 'person, Kulina', can be used with either gender. When speaking of two or more people, including members of both sexes, the masculine form is used (which is thus functionally unmarked in this context. See section 3.5.1.5 for a discussion of markedness.)

Each animal name has a default gender, e.g. *awi* 'tapir' and *bado* 'deer' are feminine, while *anobeze* 'collared peccary' and *hizama* 'white-lipped peccary' are masculine. But when the sex of the referent in question matters, masculine agreement is used for male animals and feminine for females.

Inanimate nouns are divided between the masculine and the feminine gender without any apparent semantic motivation. (Further study may reveal some tendencies, but probably no rules that would make gender assignment predictable.)

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28 The two terms 'gender' and 'noun class' are used here mainly for convenience. Corbett (1991:146) argues that it is not useful to distinguish strictly between gender systems and noun class systems. Due to historical accidents, the separate concepts of 'gender' (based on the Indo-European prototype) and 'noun class' (based on the Bantu prototype) have developed in the Western linguistic tradition, but according to Corbett there are no clear criteria for dividing similar agreement systems of other languages into two different types. While this may be a valid point for typological work, it does not appear to be a compelling argument against using the two terms in the description of a single language with two agreement systems. The problem with classifying *all* known agreement systems into gender and noun class systems is that the two concepts are based on prototypes and not distinguished by definition. In the description of Kulina, however, we are only faced with *two* agreement systems, one of which is very similar to the agreement system of Romance languages such as French and Portuguese, while the other is not. There can therefore be no doubt as to which of the two systems, if any, might be called a gender system. Since it is easier to distinguish between a gender system and a noun class system in Kulina than between noun class system I and noun class system II, the fact that two distinct terms exist will be made use of.

As explained above, Kulina nouns fall into three main morphosyntactic groups:
- free nouns,
- kinship nouns,
- inalienably possessed nouns.

Each free noun and kinship noun is either masculine or feminine or can be used with either gender without changing its form. Most inalienably possessed nouns, however, have a masculine and a feminine form (section 3.3.2). Agreement involving inalienably possessed nouns is discussed in section 3.5.1.4.

3.5.1.1 Agreement within the noun phrase

The words which have different masculine and feminine forms and which, as noun phrase constituents, show gender agreement with the head of a noun phrase are demonstratives, some adjectives, inflecting stative verbs, participles, the relative form of verbs and the topic marker.

Demonstrative:
(52a) *a-haro*   *amonehe*
       DEM-f   woman
       'this woman'

(52b) *a-hari*   *makhidehe*
       DEM-m   man
       'this man'

Adjective:
(53a) *amonehe*   *onii*
       woman   other.f
       'the other woman'

(53b) *makhidehe*   *owaa*
       man   other.m
       'the other man'

Inflecting stative verb:
(54a) *ethe*   *sowe-i*
       dog   black-m
       'a (male) black dog'

(54b) *ethe   sowe-ni*
      dog   black-f
      'a (female) black dog'

      Relative form of (quantifying) verb:
(55a) *amonehe   pame-e*
      woman   two-f
      'two women'

(55b) *makhidehe   pama-a*
      man   two-m
      'two men'

      Topic marker:
(56a) *[amonehe=pi]*$_S$ *Ø-zokhe-pa*
      woman   TOP.f 3-die.SG-HPAST
      'The woman died.'

(56b) *[makhidehe=pa]*$_S$ *Ø-zokhe-pa*
      man   TOP.m   3-die.SG-HPAST
      'The man died.'

3.5.1.2 Verbal agreement

About half of the verbal TAM-suffixes (listed in section 4.2.2) and the negation suffix *-hara/-↑hera* have a masculine and a feminine form. Verbs show gender agreement only when one or more of these affixes are used in a verb form.

a) Agreement of intransitive dynamic verbs and stative verbs
Intransitive dynamic verbs and stative verbs agree in gender with their subject.
    Intransitive dynamic verb *zokhe-* 'die':

(57a) *amonehe   Ø-zokhe-hera-ni*
      woman   3-die.SG-NEG.f-DECL.f
      'The woman didn't die.'

(57b) *makhidehe   Ø-zokhe-hara-i*
      man   3-die.SG-NEG.m-DECL.m
      'The man didn't die.'

Stative verb *koma* 'ache':

(58a) *makhidehe* *shipori* *koma* *tai*
  [makhidehe shipori]$_S$ koma to-na-ni
  man   throat.m ache 3-AUX-DECL.m
  'The man's throat is aching.'

(58b) *amonehe* *shiporini* *koma* *tani*
  [amonehe shipori-ni]$_S$ koma to-na-ni
  woman throat-f ache 3-AUX-DECL.f
  'The woman's throat is aching.'

b) Agreement of transitive dynamic[29] verbs

A transitive verb can agree in gender either with its subject or with its direct object. While the agreement pattern of intransitive verbs can be described by one simple rule, the rules governing the agreement of transitive verbs are highly complex.

Antipassive

Adams Liclan and Marlett (1991) try to explain verbal gender agreement in Kulina with the concept of antipassive. They claim that "simple transitive clauses" have object agreement while those with subject agreement are antipassive. Their analysis is based on Relational Grammar and they consider S and O in active clauses to be absolutive and A to be ergative. In an antipassive clause, A is absolutive and O is a *chômeur*. The authors give the following four criteria for distinguishing "simple transitive" and "antipassive" clauses:

	"simple transitive clause"	"antipassive"
1) gender agreement	with direct object	with subject
2) third person subject prefix	*i-* (ergative)	Ø- (absolutive)
3) subject number affix	*-mana*	*ki-*
4) object number suffix	*-bakhi*	no agreement

What they fail to realise is that three of their four criteria are interdependent. The use of the object number marker *-bakhi* is optional. The subject number prefix *ki-* (corresponding to *ke-* in the dialect of Santa Júlia) cannot co-occur with certain other affixes, including the object number marker *-bakhi* (section 4.2.1.3), and the synonymous suffix *-mana* has to be used instead. The third person subject prefix *i-* cannot

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29 The two main types of Kulina verbs have been given the semantic labels 'stative' and 'dynamic', but the distinguishing criteria are mainly morphological and syntactic (see chapters 4 and 5). Not all 'dynamic verbs' are semantically dynamic. The class also includes verbs such as *ohari-* 'to be one' and *kaphira-* 'to not have'.

co-occur with *ki-* (or *ke-*). The following two examples show how the occurrence of the morphemes is interrelated. In the first example, there is no morpheme blocking the use of the subject non-singular marker *ke-*, whose presence prevents the use of the third person subject prefix *i-*. In the second example, the presence of the object non-singular marker *-bakhi* necessitates the use of *-mana* instead of *ke-* as a subject non-singular marker. The absence of *ke-* allows *i-* to appear.

(59)   *hizama*   *to*   *Ø-ke-na-i*
          white.lipped.peccary   shoot   3-NSG.A-AUX-DECL.m
          'They shot one or more white-lipped peccaries.'

(60)   *hizama*   *to*   *i-na-bakhi-mana-i*
          white.lipped.peccary   shoot   3-AUX-NSG.O-NSG.A-DECL.m
          'They shot more than one white-lipped peccary.'

Adams Liclan and Marlett describe two independent phenomena. The first one is characterised by their criteria 1 and 2: Transitive verbs either agree in gender with their direct object and take the third person subject prefix *i-* (except before *ki- ~ ke-*) or they agree in gender with their subject and a third person subject is zero-marked.

The second phenomenon they describe, but do not understand, is that *-bakhi* blocks *ki- ~ ke-* and *ki- ~ ke-* blocks *i-*. This shows in their criteria 2, 3 and 4: *i-*, *-mana* and *-bakhi* co-occur, but *ki-* cannot occur with *i-* or *-bakhi*.

There is thus the following overlap between the two phenomena. A third person subject is marked by *Ø-* when the verb agrees in gender with the subject *or* when the subject non-singular prefix *ki- ~ ke-* is used. These two cases are completely independent of each other. The second phenomenon Adams Liclan and Marlett describe, blocking of certain morphemes by others, has nothing to do with gender agreement.

What Adams Liclan and Marlett's paper deals with is the first phenomenon, namely that the third person subject prefix *i-* is related to gender agreement with the object and the absence of the prefix to gender agreement with the subject (see table 23 in section 4.2.1.1). Only these first two of the four criteria they give for distinguishing "simple transitive" and "antipassive" clauses are valid, but this does not automatically vitiate their claim that Kulina has an antipassive. A clause type marked by only two features could still be an antipassive.

A compelling argument against the antipassive analysis is given by Dixon (2004a: 422). Certain person-number combinations of subject and object require subject agreement of the verb. This makes the claim that the clause-type with subject agreement is derived highly doubtful. Both clauses with A-agreement and with O-agreement will therefore be considered here to be basic, neither being derived from the other.

Criteria for gender agreement

Transitive verbs mostly agree in gender with their direct object. In certain cases, however, a verb can or has to agree with its subject. The criteria 1) to 6) given here make A-agreement obligatory. In the case of 7), it is optional.

1) Verb

The following (semantically untypical) verbs always agree in gender with their subject.

awa-	'experience, suffer'
kahi-	'have'
kaphira-	'not have'

In the example below, the human subject is masculine while the third person object, a nominalisation, is feminine. While other verbs would always agree with O in such a constellation, *awa-* agrees with A.

(61) *makhidehe   koma-ni   Ø-awa-i*
         man   drunk-NMLZ.f   3-experience-DECL.m
         'The man is drunk.' Lit. 'The man is experiencing drunkenness.'

See section 8.2.2 for examples with *kahi-* and *kaphira-*.

2) Reflexive

Since the subject and the object of a reflexive are coreferential, gender agreement itself cannot be recognised as A- or O-agreement. But if the subject is third person, the person prefix is Ø-, not *i-*, indicating subject gender agreement.

(62) *hizama   powa   Ø-nahima-hari*
         white.lipped.peccary(m)   3.m   3-hide-NAR.m
         'The white-lipped peccary hid (itself).'

3) Person and number

As table 18 shows, gender agreement of the verb depends on person and number of both subject and object when the subject is third person and the object is first or second person. (A verb agreeing with the first or second person is always feminine, section 3.5.1.3)

Table 18. Gender agreement according to person and number

subject	direct object	agreement
3rd singular	1st or 2nd	A-agreement
3rd non-singular	1st or 2nd singular	O-agreement with non-singular affix A-agreement without non-singular affix
3rd non-singular	1st or 2nd non-singular	A- or O- agreement with non-singular affix A-agreement without non-singular affix

A verb which has a third person singular subject and a first or second person object always agrees in gender with the subject.

A 3rd singular, O 1st singular, A-agreement:

(63) *wahara   owa   oro   to-Ø-za-i*
      mosquito(m)   1SG   bite   3-AUX-IN-DECL.m
      'A mosquito bit me.'

A 3rd singular, O 2nd singular, A-agreement:

(64) *osonaa   tia   shite   Ø-na-i*
      Kashinawa   2   shoot.with.arrow   3-AUX-DECL.m
      'The Kashinawa has shot you with an arrow.'

A 3rd singular, O 1st non-singular, A-agreement:

(65) *ethe   ia   Ø-ta-kha-i*
      dog   1NSG   3-PL.O-bite-DECL.m
      'The dog has bitten us.'

If the subject is third person non-singular and the object is first person singular or second person singular, the verb agrees with the object if the verb has a subject non-singular marker (either *ke-* or *-mana*, example [66]). If the verb has neither of these markers, it agrees in gender with the subject, as in example (67), where the verb requires a plural subject for semantic reasons, but where subject number is marked neither on the subject nor on the verb.

A 3rd non-singular, O 1st singular, verbal non-singular suffix *-mana*, O-agreement:

(66) *karia-deni   owa   hore   i-na-khi-mana-haro*
      white.person-NSG   1SG   wrap   3-AUX-ITE-NSG.A-NAR.f
      'The white people wrapped me (in a blanket).'

A 3rd non-singular, O 1st singular, no verbal subject number affix, A-agreement:

(67) *karia*   *owa*   *Ø-ka-moko-waha-ni-i*
       white.person   1SG   3-APPL-be.surrounded-IN.CIRCLE-BACK-DECL.m
       'The white people surrounded me.'

If the subject is third person non-singular and the object is first person non-singular or second person non-singular and if the verb has either of the affixes *ke-* and *-mana*, it can agree in gender with either the subject, example (68), or the object, example (69). Further research is required to determine what other factors the agreement depends upon. If the verb does not have a non-singular marker *ke-* or *-mana*, it always agrees in gender with the subject, example (70).

       A 3rd non-singular, O 1st non-singular, non-singular suffix *-mana*, A-agreement:
(68) *ehedeni   bazima   ia   bishi   ta-bakhi-mana-i*
       child   many   1NSG   pinch   3.AUX-NSG.O-NSG.A-DECL.m
       'A lot of children pinched us.'

       A 3rd non-singular, O 1st non-singular, non-singular suffix *-mana*, O-agreement:
(69) *awani   ia   kha   i-na-bakhi-mana-ni*
       wasp(m) 1NSG   sting   3-AUX-NSG.O-NSG.A-DECL.f
        'The wasps stung us.'

       A 3rd non-singular, O 1st non-singular, no verbal subject number affix, A-agreement:
(70) *ethe   bazima   ia   Ø-ta-kha-i*
       dog   many   1NSG   3-PL.O-bite-DECL.m
        'Many dogs have bitten us.'

4) Verb and subject person
The verbs *hipa-* 'eat' and *ze na-* 'drink' always take A-agreement when A is third person.

(71) *o-kha   amonehe   bani   Ø-hipa-ni*
       1.SG-ASS   woman(f)   meat(m) 3-eat-DECL.f
       'My wife ate meat.'

When A is first or second person, agreement is with O.

(72) *owa   nako   bani   o-hipa-i*
       1SG   too.m   meat(m) 1SG-eat-DECL.m
       'I, too, ate meat.'

5) No object

When a transitive verb is used without an overt or inferred object, it agrees in gender with its subject. This could be described as the intransitive use of an S/A-ambitransitive verb.

(73) *tomaithani*   *o-hipa-ni*   *hini*
      in.the.afternoon   1-eat-DECL.f   NFUT
      'I'm going to eat in the afternoon.'

6) Third person subject and non-patient object

In certain cases, the verb agrees with a third person subject when the object isn't a patient. In the following example, the verb *hia ma-* means 'reheat' and has 'food' as its patient-object.

(74) *o-kha*   *amonehe*   *hihipa*   *hia*   *imai*
      o-kha   amonehe   hihipa   hia   i-na-ᵠma-i
      1SG-ASS   woman   food   make.warm   3-AUX-UP-DECL.m
      'My wife is reheating the food.'

In the next example, *hia na-*, with the same verb stem as the previous example, means 'to warm'. It has 'sun' as a direct object, which is clearly not a patient, and agrees in gender with the subject.

(75) *o-kha*   *amonehe*   *mahi*   *hia*   *Ø-na-ni*
      1SG-ASS   woman   sun(m)   make.warm   3-AUX-DECL.f
      'My wife is warming herself in the sun.'

With the same verb and object, gender agreement is with the non-patient direct object if the subject is first or second person.

(76) *mahi*   *hia*   *o-na-i*   *hini*
      sun(m)   make.warm   1SG-AUX-DECL.m   NFUT
      'I'm going to warm myself in the sun.'

7) Indefinite object

When the object of a clause is generic or indefinite, the verb can agree with the subject. (In the following two examples, subject and object agreement can only be gleaned from the prefixes *to-* and *i-*, respectively.)

(77) *makhidehe*   *poroko*   *ethe*   *to-ha-i*
      man   pig   raise   3-AUX-DECL.m
      'The man raises pigs.'

When the object is definite, the verb agrees with it, if none of criteria 1 to 6 applies.

(78) *makhidehe   poroko   ethe   i-ha-bakhi-i*
      man   pig   raise   3-AUX-NSG.O-DECL.m
      'The man is raising the pigs.'

A-agreement and O-agreement in Kulina show a certain similarity to the conjugation of Hungarian verbs. Transitive verbs in Hungarian have an indefinite conjugation, which is like the conjugation of intransitive verbs, and a definite conjugation with different person-number suffixes. The definite conjugation is used when a verb has a definite third person object, but not when it has a first or second person object, although these objects are necessarily definite.

A-agreement in Kulina is like the inflection of intransitive verbs: the verb agrees in gender with its subject and the third person subject prefix of the verb is Ø- (see table 23). This means that A-agreement and the inflection of intransitive verbs can be described as a single inflectional pattern, which corresponds to the indefinite conjugation of Hungarian.

O-agreement constitutes a second inflectional pattern with a different third person subject prefix, *i-*, and gender agreement with the object. A notable parallel to the definite conjugation in Hungarian is that O-agreement doesn't usually occur when the object is first or second person (in the case of a third person subject only if both subject and object are plural and the object is morphologically marked as plural, as shown in table 18). In the case of a third person object, O-agreement is obligatory if the object is definite and optional if the object is indefinite, which is again partially analogous to the definite-indefinite distinction in Hungarian.

3.5.1.3 Agreement with first or second person

When agreeing with a first or second person referent, different word classes show three different agreement patterns:

1. First and second person always take the same agreement as masculine nouns:
    –   inalienably possessed nouns (section 3.5.1.4)
    –   inflecting postpositions (section 7.2.2)
2. First and second person always take the same agreement as feminine nouns:
    –   inflecting dynamic verbs (section 4.1.1)
    –   auxiliaries of non-inflecting dynamic verbs (section 4.1.1)
    –   auxiliaries of non-inflecting stative verbs (sections 5.1 and 5.3)
    –   topic marker (section 7.7.1)
    –   particle *nako/naki* 'also' (section 7.7.3)

3. First and second person take masculine or feminine agreement according to the sex of the referent(s):
   – inflecting stative verbs (section 5.2)
   – inflecting adjectives (section 6.5)

The different gender agreement of different word classes with first and second person heads is one of the aspects which make the question of markedness in Kulina a complex issue (section 3.5.1.5)

3.5.1.4 Agreement of and with inalienably possessed nouns

With few exceptions, inalienably possessed nouns have a masculine and a feminine form (section 3.3.2). When these nouns have a first or second person possessor, they always occur in the masculine form.

(79)   *o-zepe*
        1SG-hand.m
        'my hand'

(80)   *ti-tati*
        2-head.m
         'your head'

It can be argued that within an inalienable possessive construction, the possessor is the head because the possessee agrees with it in gender, but the two elements possessor and possessee together form the head of their noun phrase. Other constituents of the noun phrase and the clause agree in gender with the unit possessor + possessee and not with either of these two elements alone.

That other constituents do not simply agree with the possessor of an inalienably possessed noun can be seen in the agreement of adjectives which inflect for gender. These adjectives agree with the sex of the referent of a first or second person subject. Thus, a male speaker would say the following:

(81)   *hada-i*   *o-ha-ni*
        old-m   1SG-COP-f
        'I'm old.'

A female speaker would say:

(82)   *hada-ni*   *o-ha-ni*
        old-f   1SG-COP-f
        'I'm old.'

The gender of the adjective agrees with the sex of the speaker in the two examples above (unlike the gender of the copula, which is always feminine with a first person subject). But when an adjective agrees with an inalienably possessed noun and its first or second person possessor, it is always feminine, regardless of the sex of the speaker or addressee, so that a male speaker would say (just like a female speaker):

(83)   *o-zepe*   *ime-ni*
       1SG-hand.m   big-f
       'My hand is big.'

If the adjective agreed only with the possessor, it would be in the masculine form for a male speaker in the above example.
That other constituents do not simply agree with the inalienably possessed noun, either, can be show with complex possessed nouns, as the following.

(84)   *makhidehe   zepe   nokoshi*
       man   hand.m   nail.m
       'the man's fingernail'

(85)   *amonehe   zapa-ni   nokoshi-ni*
       woman   hand-f   nail-f
       'the woman's fingernail'

(86)   *o-zepe*   *nokoshi-ni*
       1SG-hand.m   nail-f
       'my fingernail'

It is not the case that possessed nouns are inherently feminine and always trigger feminine agreement, as can be seen from the first example, in which the word *nokoshi* '(finger)nail' occurs in the masculine form, agreeing with masculine third person *makhidehe zepe* 'man's hand'. Nor is it the case that the feminine agreement form of a possessed noun is inherently feminine and the masculine agreement form is inherently masculine, as can be seen from the third example, in which the feminine form *nokoshi-ni* agrees with the masculine form of 'hand' and its first person possessor.

Therefore, agreement involving an inalienable possessive construction can only be described as being governed by possessor and possessed together. If the possessor is third person masculine, external agreement with the possessive construction is masculine, otherwise, it is feminine.

In the case of complex possessed nouns, the primary possessor and the first possessed noun together are the possessor of the second possessed noun, e.g. in example (84) *makhidehe zepe* 'the man's hand' is the possessor of *nokoshi* '(finger)nail', not *zepe* 'hand' alone (nor *makhidehe* 'man' alone).

3.5.1.5 Markedness

There is no simple answer to the question whether one of the two genders in Kulina is more marked than the other. Formal, grammatical, and semantic markedness must be distinguished. The latter two are generally grouped together as functional markedness, which has relative infrequency as its defining criterion (e.g. Aikhenvald and Dixon 1998: 60).

a) Formal markedness
<u>Negation suffix *-hara/-↑hera*</u>
The most common way of indicating gender in Kulina is through different masculine and feminine forms of verb suffixes. In most cases, neither of a pair of suffixes is more marked than the other. The only suffix which can be said to have a more marked feminine form is the negation suffix *-hara/-↑hera*. Firstly, the feminine form of the suffix itself is marked since *-hara/-↑hera* is most likely to go back to two separate morphemes, *ha* and *-ra*, with raising of the vowel /a/ of original *ha* to /e/ in the feminine gender. Secondly, the feminine form of the suffix causes a final /a/ of the preceding morpheme to be raised to /e/, too, as in the second of the following two examples.

(87a)   *ethe*   *khi*   *o-na-hara-pa*
       dog   see   1SG-AUX-NEG.m-HPAST
       'I didn't see the (male) dog.'

(87b)   *ethe*   *khi*   *oneherapa*
       ethe   khi   o-na-↑hera-pa
       dog   see   1SG-AUX-NEG.f-HPAST
       'I didn't see the (female) dog.'

The assumption that *-hara/-↑hera* originally consisted of two morphemes is based on the following evidence. In Kulina, the intramorphemic sound sequence /eCa/ only occurs in loans. Otherwise, /e/ preceding /a/ in the next syllable is only found across morpheme boundaries, often resulting from the raising of /a/ in the final syllable of the first morpheme to /e/, triggered by the second morpheme. The negative suffix *-↑ra*, which derives stative verbs from other stative verbs, as well as from dynamic verbs, has just this effect and is likely to have the same origin as the second syllable of the inflectional negation suffix *-hara/-↑hera* used on dynamic verbs.

    The original first morpheme of *-hara/-↑hera* could have been the copula *ha-*, as assumed by Monserrat and Silva (1986: 43). Tiss (2004: 193) rejects this hypothesis because the copula *ha-* itself can take the suffix *-hara/-↑hera*. But this only shows that the first syllable of the suffix cannot be synchronically interpreted as the copula. It doesn't exclude the possibility that it derived from the copula.

    The Kulina conjunction meaning 'but' represents a case that is analogous with the suffix *-hara/-↑hera*. The word for 'but' has two forms, *naraa* and *neraa*. In the

Purus dialect, each speaker uses almost exclusively one of the two forms. *Naraa* is used primarily in the villages further upriver, whereas most of the speakers in Santa Júlia and the neighbouring villages use *neraa*. But according to Tiss (2004: 339), in the Juruá dialect, *naraa* is the masculine form and *neraa* the feminine form of the word. *Naraa/neraa* is composed of the auxiliary *na-* and the subordinating verbal suffix *-raa* 'although'. Thus, the /a/ of *na-* is raised in the feminine form only, as was assumed above for the /a/ of the original morpheme *ha* the suffix *-hara/-↑hera*.

<u>Possessed nouns</u>
In the case of primary possessed nouns, the masculine and the feminine form both have one marker, though the masculine marker, raising of final /a/ to /e/, only surfaces in nouns which end in /a/.

Derived possessed nouns of the type that takes the suffixes *-ne* and *-ni* have a masculine form that is more marked since it also raises stem-final /a/ to /e/. The possessed nouns formed with the suffix *-ri* have no overt gender marker in the masculine form, only the additional suffix *-ni* in the feminine form, which is thus the marked form of this derivation.

Overall, feminine forms are more often formally marked than masculine ones, but the difference in markedness is quite small.

b) Grammatical markedness
Agreement with the first and second person is a question of relevance for grammatical markedness. If the first and second person always trigger the occurrence of one gender in agreeing words, the other gender can be said to be marked.

As was discussed in section 3.5.1.3, the first and second person trigger feminine agreement of most word classes, but adjectives and inflecting stative verbs show agreement with the biological sex of the referent and inalienably possessed nouns show invariable masculine agreement. The unit first or second person possessor + inalienably possessed noun, however, requires feminine agreement. Overall, it can be said that the masculine gender is grammatically more marked since exclusively feminine agreement with the first and second person is more common.

Nominalisations of words of other word classes, such as abstract nouns derived from verbs (section 14.1.1) are generally feminine, which makes masculine the marked gender for this criterion.

c) Semantic markedness
Speaking of a group of people of both sexes, the masculine gender is used, which means that the feminine is semantically marked.

(88)   *zomahi*   *wapima*   *madiha*   *i-ta-kha-i*
       jaguar   many   people   3-PL.O-kill-DECL.m
       'Many jaguars killed people.' (Masculine agreement of the verb with the object.)

d) Conclusion

While the feminine gender is semantically marked and formally somewhat more marked, the masculine gender is grammatically more marked. Neither gender can be said to be generally more marked than the other.

3.5.2 *Ka*-class

The second nominal agreement system, besides gender, involves the noun class marker *ka-*. The morpheme *ka-* occurs as a prefix on verbs, showing agreement with certain nouns. *Ka-* contrasts with zero.

3.5.2.1 *Ka*-class and number

Ka- does not co-occur with the object plural prefix *ta-* (section 4.2.1.3). It is also omitted in most other cases when a *ka*-class noun is used with plural reference. The noun in (89) has a singular meaning and the verb takes *ka-*. In (90), which has a plural object, as indicated by the prefix *ta-*, *ka-* is omitted.

(89) *ahi=za*   *mowi*   *khi*   *o-ka-na-ni*
      DEM.f=LOC   night.monkey   see   1SG-NCL-AUX-DECL.f
      'Here I saw a night monkey.'

(90) *ahi=za*   *mowi*   *o-ta-khi-ni*
      DEIC.f=LOC   night.monkey   1SG-PL.O-see-DECL.f
      'Here I saw night monkeys.

3.5.2.2 Members of the *ka*-class

A *ka*-class is also found in Paumari (Chapman and Derbyshire 1991: 254–259), one of the few other languages of the Arawan family, which suggests that the class was already present in Proto-Arawan. But while the agreement works in a similar fashion in Kulina and Paumari, the class appears to have a widely divergent membership in the two languages. With regard to the occurrence of *ka-*, Kulina nouns fall into three categories[30]:

1. The vast majority of nouns are in the non-*ka*-class. They never trigger the occurrence of *ka-* on agreeing words.

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30 There is some variation among speakers with respect to *ka*-class-membership of lexemes. In the case of the Portuguese loan *poroko* 'pig', it has been observed that one speaker consistently treated it as a *ka*-class noun whereas others didn't, though when asked another speaker found the use of this lexeme as a *ka*-class noun acceptable.

2. A rather small number of nouns is in the *ka*-class. Verbs agreeing with these words usually take the prefix *ka*-. The question why this is not always the case is discussed in section 3.5.2.3.
3. In the case of certain nouns, the use or omission of *ka*- expresses a difference in meaning (section 3.5.2.4).

The *ka*-class in Kulina includes both free nouns and inalienably possessed nouns. But there are no nouns with human referents in the class, which means that the third morphosyntactic group of nouns, grammatical kinship nouns, is not represented in the *ka*-class.

Many *ka*-class nouns can be grouped into small clusters of words with similar meanings or at least some common semantic features, but there seems to be no common trait that links all the nouns in the class (except that they all have non-human referents).

The following words have been found to belong to the *ka*-class. *Denephe* 'testicles' and all the lexemes with two forms, separated by a slash, are inalienably possessed nouns, which do not have an inherent gender. The gender of the other nouns is given in brackets. There is no correlation between *ka*-class and gender.

a) running waters
weni (m)   'river'
bihini (m)   'big stream'
bihitati (m)   'small stream'

b) thin, straight objects
bihi/bihini   'arm'
boba (m)   'arrow'
dodo (f)   'pestle'
isho/ishoni   'leg'
kanowa (f) (Port.)   'canoe'
mahonana (f)   'sugar-cane'

c) objects which shine in the dark
abaziko (m)   'moon; month'
abaziko bedi (m)   'star'
amowa (m)   'star; firefly sp.'
koropa (m)   'Venus'
shishiede (f)   'lightning; firefly sp.'

d) artefacts, except those made of clay
baosa (f) (Port.)   'river ferry'
haizo (m) (Port.)   'radio'

hoho (m)	'bottle'
kakadi (f)	'fan'
koize (f) (Port.)	'spoon'
koshiro (f) (Span.)	'knife'
moto (f) (Port.)	'boat'
panera (f) (Port.)	'metal cooking pot'
phowa (f)	'mortar'
phowi (m)	'hammock'
wiwithari (f)	'bench'

e) mammals

mowi (f)	'night monkey'
orowa (m)	'titi monkey'
pishi (m)	'squirrel monkey and various tamarin spp.'
anobeze (m)	'collared peccary'
warikoze (f)	'great long-nosed armadillo'
banipe (f)	'giant anteater' (obsolete in the Purus dialect)
hozawa (f)	'giant anteater'
modo (f)	'lesser anteater'
modo tiriri (f)	'silky anteater'
makaari (m)	'squirrel sp.'
nokhopiko (m)	'squirrel sp.'

f) birds

abariza (f)	'turkey vulture'
onowana (m)	'king vulture'
waba (f)	'potoo'

g) fish

akomi (f)	'piranha'
bama (f)	'pacu'

h) body parts

waribo/wariboni	'ear'
ino/inoni	'tooth'
denephe	'testicles'
mashi (m)	'vulva, vagina'
panakho/panakhoni	'thigh'
amori/amorini	'foot'

Some words belong to more than one group, e.g. a pestle is both a thin, straight object and an artefact not made of clay. Each of these nouns is only listed once, under the first of the categories to which it belongs.

3.5.2.3 Omission of *ka*-class agreement

Nouns of the *ka*-class do not always trigger the occurrence of *ka*- on agreeing verbs. But while in the case of the nouns treated in section 3.5.2.4 below the use or omission of *ka*- expresses a semantic difference, this seems not to be the case for the regular *ka*-class nouns listed in section 3.5.2.2 above.

A possible explanation for the inconsistent use of *ka*- with regular *ka*-class nouns is that the *ka*-class may be losing ground in the language. It seems that *ka*- is used quite consistently with very common and essential words, such as *anobeze* 'collared peccary', the main source of meat in Santa Júlia. But the giant anteater, *hozawa*, is a rare animal which is not eaten by the Kulina and therefore probably not often discussed and certainly not of any importance to the people. Words for such unimportant referents trigger *ka*-class agreement much less frequently and possibly no longer in the case of all speakers.

One speaker recorded a story with *hozawa* taking *ka*-class agreement, but when a sentence with *hozawa* was elicited from her, she omitted *ka*- in the agreeing verb. For this speaker, the use of *ka*- with *hozawa* may only be preserved in traditional stories. But other speakers could be found who also produced elicited sentences with *ka*- agreeing with *hozawa*.

In their manuscript dictionary of Peruvian Kulina, Boyer and Boyer (2000: 6) translate the entry for *kahari*- (i.e. the verb *ohari*- 'be one' with the prefix *ka*-) as 'one made or produced thing' and the entry for *kapama*- (i.e. the verb *pama*- 'be two' with the prefix *ka*-) as 'two made or produced things'. Though even in Peru the marker *ka*- is not used exclusively to cross-reference artefacts, Boyer and Boyer's translation reflects two trends.

Firstly, there is an ever-increasing number of artefacts coming to the Kulina and the speakers generally cross-reference them with *ka*-, even when they see an object for the first time and do not have a name for it, so that recent Portuguese loans make up a substantial part of the members of the *ka*-class.

Secondly, the trend to avoid *ka*- with words which are not artefacts seems to be stronger in Peru than in Santa Júlia, so that *ka*- may actually be in the process of becoming a marker of artefacts in the Peruvian subdialect.

3.5.2.4 Semantic effects of *ka*-

The use of *ka*- can have a variety of semantic effects, which depend on the lexemes with which *ka*- agrees.

Ka- is used to disambiguate sentences with certain polysemous nouns:

Table 19. Semantic effects of *ka-*

	ka	non-ka
oza	'house'	'roof'
poo	'manioc plant'	'manioc tuber'
zipho	'firewood'	'fire'
zepe/zapani	'hand'	'finger'
zopori	'penis'	'tail'

The following two examples differ only in the occurrence of *ka-* in the first, which indicates that *zopori* means 'penis' and not 'tail' in this sentence.

(91a) *zazio*　　　　　*zopori*　　　*wishi*　*okahizana*
　　　　zazio　　　　　　zopori　　　　wishi　o-ka-na-�hiza-na
　　　　howler.monkey　tail/penis.m　cut　1SG-NCL-AUX-THROUGH-IFUT
　　　　'I'm going to cut the howler monkey's penis off.'

(91b) *zazio*　　　　　*zopori*　　　*wishi*　*ohizana*
　　　　zazio　　　　　　zopori　　　　wishi　o-na-�hiza-na
　　　　howler.monkey　tail/penis.m　cut　1SG-AUX-THROUGH-IFUT
　　　　 'I'm going to cut the howler monkey's tail off.'

The names of many, probably all, tree species are used with *ka-* as long as a tree is standing. When it has been cut, it is referred to without using *ka-*. (The word *awa* 'tree, wood' never takes *ka-*agreement.)

Almost all fruits have the same name as the trees on which they grow. The name of a fruit (and tree) is used with *ka-* to refer to a fruit which is still hanging on a tree. When a fruit has been picked or fallen from the tree, the noun is used without an agreeing *ka-*.

Some containers such as bottles and buckets trigger the use of *ka-* when they are full, but not when they are empty.

Ka- also serves an anaphoric function. In certain cases, a covert argument can virtually be identified due to the presence or absence of *ka-*. For example, the only places which are usually swept are houses and the squares in front of the houses. Since *oza* 'house' takes *ka-* and *boroni* 'square' doesn't, the use of *ka-* with the verb *howe* 'sweep' indicates that a house is meant.

(92)　　*Hidapa=na*　*howe*　　*o-ka-na-na*
　　　　now=NFC　　　sweep　　1SG-NCL-AUX-IFUT
　　　　'Now I'm going to sweep the house.'

3.5.2.5 Agreement of verbs

The *ka*-class agreement of verbs is different from their gender agreement. Verbs can agree in gender only with their subject or direct object. While stative verbs, as in example (93), and intransitive dynamic verbs, as in example (94), agree in noun class with their subject, just as they do in gender, the rules for gender agreement of transitive dynamic verbs with A or O that were given in section 3.5.1.2 do not apply to *ka*-class agreement. When a verb has a direct object that belongs to the *ka*-class, it always takes the prefix *ka*-, even in the case of those verbs which can never agree in gender with their direct object.

(93) *makaari*   *Ø-ka-zokhe-i*
      squirrel(m)   3-NCL-die.SG-DECL.m
      'The squirrel died.'

(94) *o-panakho*   *koma*   *to-ka-na-ni*
      1SG-thigh.m   hurt   3-NCL-AUX-DECL.f
      'My thigh is hurting.'

The verb in example (95), *kahi-* 'have', is one of those which always agree in gender with their subject. In the example, the verb has a masculine form agreeing with the subject *makhidehe* 'man'. But the verb also has the prefix *ka*-, indicating that the head of the object *oza imeni* 'big house' is a member of the *ka*-class.

(95) *makhidehe*   *oza*   *ime-ni*   *Ø-ka-kahi-i*
      man(m)   house(f-ka)   big-f   3-NCL-have-DECL.m
      'The man has a big house.'

Ka-class agreement is not restricted to S and O. A verb can also agree in *ka*-class with an indirect object.

3.5.2.6 Agreement with an inalienable possessive construction

A verb agreeing with an argument that contains an inalienable possessive construction takes the *ka*-class marker if either the possessor or the possessed is a *ka*-class noun. This parallels gender agreement with an inalienable possessive construction. As demonstrated in section 3.5.1.4 above, gender agreement is with the complex NP-head consisting of inalienable possessor and possessee and not with either of them alone. The same can be said of *ka*-class agreement. The complex NP-head triggers *ka*-class agreement, no matter which of its constituents is in the *ka*-class.

Both possessor and possessed of O-NP are non-*ka*-class nouns, non-*ka* agreement with O:

(96) *zomahi   nokho   saka   ozai*
[zomahi   nokho]$_O$ saka   o-na-$^\emptyset$za-i
jaguar(m)   eye   gouge   1SG-AUX-IN-DECL.m
'I gouged the jaguar's eye.'

Possessor of O-NP is a *ka*-class noun, *ka*-agreement with O:

(97) *anobeze   nokho   saka   okazai*
[anobeze   nokho]$_O$ saka   o-ka-na-$^\emptyset$za-i
collared.peccary(m-ka)   eye   gouge   1SG-NCL-AUX-IN-DECL.m
'I gouged the collared peccary's eye.'

Possessed of S-NP is a *ka*-class noun, *ka*-agreement with S:

(98) *o-w-amori   tiro   to-ka-na-ni*
1SG-EPENTH-foot(m-ka)   break   3-NCL-AUX-DECL.f
'I broke my foot.' (lit.: 'My foot broke.')

3.5.3 Comparison of gender and noun class

Gender and *ka*-class differ with respect to the kinds of nouns they categorise. Free nouns and kinship nouns have a lexical gender whereas inalienably possessed nouns don't. Free nouns and inalienably possessed nouns are divided into *ka*-class members and non-*ka* class members (and a number of words which belong to both classes), but this is not the case with grammatical kinship nouns. No kinship nouns are found in the *ka*-class. This fact can be described in two ways:

1. Only free nouns and inalienably possessed nouns fall into two different noun classes. For kinship nouns, this grammatical category doesn't exist.
2. Kinship nouns, like all other nouns with human referents, are in the non-*ka* class.

The second account has the advantage of being somewhat simpler, but it is not possible to decide which one, if any, is more correct than the other so that it may be said non-committally that the category of noun class is irrelevant for kinship nouns.

Table 20. Lexical gender and noun class of noun subcategories

noun subcategory	gender	*ka*-class
free nouns	yes	yes
kinship nouns	yes	irrelevant
inalienably possessed nouns	no	yes

Gender and noun class also differ in that various word classes show gender agreement, but only verbs take the noun class marker *ka-*.

Table 21. Agreeing word classes

agreeing word class	gender agreement	*ka*-class agreement
dynamic verbs	yes	yes
inflecting stative verbs	yes	no
inflecting adjectives	yes	no
topic marker	yes	no
adnominal demonstratives	yes	no
local adv. demonstratives	yes	no
inalienably possessed nouns	yes	no

While verbs can agree in gender only with their subject or direct object, they can agree in *ka*-class also with an indirect object.

With respect to inalienably possessed nouns, gender and noun class show two differences and one commonality. The commonality is that a word outside an inalienable possessive construction which agrees with it in gender and noun class doesn't agree with either possessor or possessee alone, but with the entire complex head, consisting of both elements. One of the differences is that within the inalienable possessive construction, the possessee agrees in gender, but not in noun class with the possessor. The second difference is that each inalienably possessed noun can be categorised as a member or non-member of the *ka*-class, but it cannot be categorised as masculine or feminine. An inalienably possessed noun does not have an inherent gender.

3.6 Complex nouns

A noun lexeme can consist of a head noun followed by a modifier. This is particularly common in the names of animals and plants.

3.6.1 Adjectives as modifiers

The adjectives *potahari/potaharo* 'greater' and *birihari/biriharo* 'lesser' are used in animal and plant names to distinguish bigger and smaller species (section 6.4.1). These adjectives are descriptive, but at the same time also defining, since they serve to specify particular species. (They cannot be used to describe an individual as big or small.)

Since *potahari/potaharo* or *birihari/biriharo* and the noun it modifies form a semantic unit – a species name –, noun and adjective must be considered a single lexical item.

(99) *sibore*   *pota-haro*
      Amazon.river.turtle   greater-f
      'giant Amazon river turtle (*Podocnemis expansa*)'

For further examples see section 6.4.1.

3.6.2 Stative verbs as modifiers

While most stative verbs are usually not inflected, colour verbs and a few other common members of the class often take the inflectional suffix *-i/-ni* (section 5.2).

(100) *etero*   *makho-ni*
       clothes   red-f
       'red clothes'

But when a stative verb is part of a complex noun, it does not take the suffix *-i/-ni*. Instead, its last syllable is reduplicated.

(101) *zomahi*   *makho-kho*
       big.feline   red-REDUP
       'puma'

A puma is not simply a big feline with a red coat, but a different animal than a jaguar, the other big feline of Amazonia. *Makho-kho* therefore has a defining, rather than a descriptive function and the meaning of the lexeme *zomahi makhokho* 'puma' is not equivalent to the sum of the meanings of its elements, unlike the noun phrase *etero makhoni* 'red clothes' in the previous example.
    Further examples:

(102) *bare*   *weshe-she*
       banana   yellow-REDUP
       'kind of banana (Port: *banana-ouro*)'

(103) *awani*   *sowe-we*
       wasp   black-REDUP
       'wasp sp.'

3.6.3 Modifying possessed noun plus stative verb

A common type of modifier consists of a possessed noun and a stative verb which describes the possessed noun. This corresponds to English modifiers such as *white-lipped* in *white-lipped peccary* or *black-fronted* in *black-fronted nunbird*. The adjectives used in this type of modifier have the same form as the ones discussed in section 3.6.2 above, i.e. their last syllable is reduplicated.

(104) *pishi*   *[bono-ni   pako-ko]*
      small.monkey   lip-f   white-REDUP
      'emperor tamarin' (lit. 'white-lipped little monkey')

(105) *shiri*   *[tati   makho-kho]*
      turtle   head.m   red-REDUP
      'turtle sp.' (lit. 'red-headed turtle')

(106) *shiri*   *[tati   bazi-zi]*
      turtle   head.m   big-REDUP
      'turtle sp.' (lit. 'big-headed turtle')

3.6.4 Idiosyncratic modifiers

The modifier of a complex noun can also be an idiosyncratic morpheme, which does not occur elsewhere in the language, e.g. *koka masara*, the name of a woodpecker species, consists of the head noun *koka* 'woodpecker' and the modifier *masara*, which occurs only in this lexeme.

4 Dynamic verbs

Kulina verbs fall into two main categories. These categories are given semantic labels here, *dynamic verbs*, discussed in the present chapter, and *stative verbs*, which are discussed in the following chapter. While these names characterise a difference in meaning between most dynamic verbs on the one hand and most stative verbs on the other hand, the criteria for assigning a verb to either category are mostly syntactic and morphological. However, the labels *dynamic* and *stative* are justified by the semantic effect of conversion (section 5.7).

The category of stative verbs has been identified by earlier writers, but not as one of the two main types of verbs. Adams (1987: 13) calls them "adjectival verbs" and sees them as one of four categories, besides "transitive", "unergative intransitive" and "unaccusative intransitive" verbs. Tiss (2004: 43) sees stative verbs as a subclass of non-inflecting verbs.

4.1 Verbal morphology and the structure of the predicate

A verbal predicate is headed by a main verb. It can contain one or more auxiliaries and a secondary verb. Arguments of the verb are not considered here to be part of the predicate.

4.1.1 Inflection types

Morphologically, dynamic main verbs fall into the following two major categories:
–   inflecting verbs
–   non-inflecting verbs

An inflecting verb is inflected through the attachment of prefixes and suffixes to the main verb stem. About one quarter of dynamic verbs belong to this category, whereas the majority of verbs are of the non-inflecting type and cannot take any affixes, except nominalising suffixes. The inflection of a non-inflecting verb requires the use of an auxiliary. The auxiliary, which does not have any lexical meaning, follows the main verb and takes all other affixes.

Non-inflecting dynamic verbs can be divided into two subcategories according to the auxiliary they take:
–   non-inflecting verbs with the auxiliary *na-*
–   non-inflecting verbs with the auxiliary *ha-*

Non-inflecting verbs with the auxiliary *na-* constitute a large and open class. When a Portuguese verb is borrowed or used ad hoc in a Kulina sentence, it always takes the form of a non-inflecting verb with *na-*, as in the following example.

(107) "piranha *owa* mordi *Ø-na-haro*" *o-na-de* *karia=kha=za*.
piranha 1SG bite 3-AUX-NAR.f 1SG-AUX-PAST white.people=ASS=LOC
'"A piranha bit me" I said in Portuguese.'

In the example, the speaker quotes himself saying something in Portuguese. The direct speech, however, consists of a Kulina sentence. Only the lexemes for 'piranha' and 'bite' are in the original language of the quotation. To accommodate the Portuguese verb to Kulina syntax, it is followed by the auxiliary *na-*. (The other function of *na-*, that of a speech report verb following direct speech [section 12.5], is illustrated by its second instance in the example.)

The number of non-inflecting verbs which take the auxiliary *ha-* is quite small; only the following are attested. (The verb *ha-* is also the Kulina copula, section 10.1.1.)

bodi ha-	'be crushed to death'
ethe ha-	'bring up' (O: animal)
ha(o) ha-	'be tired'
hawi ha-	'move' (S: pl.; suppletive verb with inflecting sg. and dl. forms, sect. 4.5)
hite ha-	'swell'
horo ha-	'have leishmaniasis'
kaisha ha-	'feel itchy'
meze ha-	'bring up' (O: animal)
mimihi ha-	'have diarrhoea'
nokho ha-	'wake up' (intrans.)
ono ha-	'burn' (intrans.)
osho ha-	'be swollen'
phaha ha-	'be wet'
shomi ha-	'have worms'

The only attested transitive verbs with the auxiliary *ha-* are *ethe ha-* and *meze ha-*, which both mean 'to bring up (an animal)'. Both verbs can also be used with the auxiliary *nana-*, i.e. the auxiliary *na-* with the causative prefix *na-*. *Ethe nana-* and *meze nana-* mean 'to bring up (a child or an animal)'. As a noun, *ethe* means 'dog' while *meze* means 'foster child'. In Deni and in the Sivakoedeni dialect of Western Jamamadi, *meze* means 'dog'. (The words *ethe* and *meze* are presumably older than the first contact of Madihá speakers with dogs. The new meaning 'dog' has been assigned to different existing words in the different Madihá varieties.)

The verb *ha(o) ha-* 'be tired' is usually used in the sentence [haoha'ni] 'I am tired'. This surface form does not reveal if it is the result of phonetic contraction of neighbouring identical vowels or not (section 2.6.1.1), i.e. if the underlying form is *hao ohani* (affected by contraction) or *ha ohani* (without contraction). When asked to say 'We are tired.', some speakers give *hao ihani*, others *ha ihani*, which shows that they analyse [haoha'ni] in different ways.

4.1.2 Affixation

Kulina has various verbal prefixes and a considerable number of verbal suffixes. When a verb takes two or more prefixes or suffixes, they occur in a predictable order. Some affixes, e.g. subject person prefixes, are in a paradigmatic relationship and take the same position (or slot) in the verb structure. Other affixes do not form a paradigm, but nevertheless take the same position and are mutually exclusive, so that they can also be said to fill the same slot.

Table 22 shows the complete structure of both inflecting and non-inflecting verbs with the positions of all affixes except nominalising suffixes. There are a number of differences between the morphology of main verbs and auxiliaries. The following concern the kind of affix a verb can take and the position of the affix and are therefore shown in the table:

– The suffix *-zanapo* 'along the way' takes different positions on inflecting main verbs (slot K) and auxiliaries (slot E).
– Inflecting verbs can take an O number prefix[31] and non-inflecting verbs an S/A number prefix. These prefixes both occur in slot B.

A number of separate words can occur in the predicate after the inflecting main verb or auxiliary. They are given without a slot letter in the table.

Slots E and G in table 22 are marked by asterisks, indicating that more than one suffix can occur in each of them. They could be more adequately described as two or more slots each, but due to the rarity of most combinations occurring in these slots, it is currently not possible to assign all the morphemes that occur in them to clearly defined positions in relation to each other (see section 4.2.3.1).

Many Kulina suffixes have a masculine and a feminine form. They will usually be given with the masculine form before and the feminine form after a slash, e.g. "the suffix *-hari/-haro*" means "the suffix with the masculine form *-hari* and the feminine form *-haro*".

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31 The same O number prefix *ta-* can also be taken by non-inflecting verbs, but the prefix turns them into inflecting ones (section 4.2.1.3).

Table 22. Structure of the predicate

slot	inflecting verb	non-inflecting verb
	---	main verb stem
A	S/A person prefix or directional prefix	
B	O number prefix or noun class marker	S/A number prefix or noun class marker
C	valency-changing prefix	
D	main verb stem	auxiliary
E*	auxiliary-deleting directional suffixes	auxiliary-deleting directional suffixes, *zanapo* 'along the way'
F	reciprocal-collective suffix	
G*	non-auxiliary-deleting directional suffixes	
H	*mani* 'again'	
I	O number suffix	
J	S/A number suffix	
K	*bote* 'almost', *po* 'first', *poma* 'again', *zanapo* 'along the way'	*bote* 'almost', *po* 'first', *poma* 'again'
L	negation	
M	*kha* 'still'	
N	narrative suffix	
O	tense, mood, modality, evidentiality	
	secondary verb	
	future or purpose marker	
	interrogative clitic	

The slots marked by an asterisk can be filled by more than one suffix.

4.1.3 Secondary verb

Kulina has a secondary verb of completion, *hika-*, which can occur after an inflecting main verb or an auxiliary. It requires the verbal slot L to be empty and M to be filled with the non-finite suffix *-a/-e*. A predicate with the secondary verb thus has the following structure:

predicate with inflecting main verb: *main verb – secondary verb*
predicate with non-inflecting main verb: *main verb – auxiliary – secondary verb*

The secondary verb is discussed further in section 4.3.

4.2 Morphology of main verbs and auxiliaries

This section treats the affixes of table 22 in detail. Where inflecting main verbs and auxiliaries differ, the former are dealt with first and the latter in an immediately following subsection.

4.2.1 Agreement markers

A Kulina verb agrees with one or two arguments in four grammatical categories: person, number, gender and noun class.

4.2.1.1 Subject person (slot A)

Kulina grammatically distinguishes four persons:
– first person singular
– first person non-singular
– second person
– third person

The traditional terminology, which speaks of "first person singular (1sg)" and "first person plural (1pl)" misleadingly suggests that the primary difference between 1sg and 1pl is one of number while it is in fact one of person. The so-called "first person plural" is either 1st + 2nd (+ 3rd) person or 1st + 3rd person (Siewierska 2004: 82). The difference between "first person singular" and "first person non-singular" will therefore be considered here to be one of person, not number. (The labels *first person singular* and *first person non-singular* will be kept because they are readily understood.)

The person of the subject is cross-referenced on the verb. As shown in table 23, the first and second person forms are consistently marked by a prefix (with one exception in the first person non-singular). The case of the third person is more complex. Intransitive verbs do not take a person prefix in the third person. The absence of a person prefix thus indicates the third person in the finite forms of verbs, which is in accordance with a universal tendency of the third person to be the least formally marked.

Transitive verbs can agree in gender either with their subject or with their direct object. (See section 3.5.1.2 for the question when they agree with which argument.)

A transitive verb with a third person subject does not take a subject person prefix if it agrees in gender with its subject. But if the verb agrees in gender with its direct object, a third person subject is marked by the prefix *i-* (homonymous with the first person non-singular subject prefix), except if a non-inflecting verb with the auxiliary *na-* occurs with the non-singular prefix *ke-* on the auxiliary. In this case, third person subjects are always zero-marked, whether the auxiliary of the non-inflecting verb agrees with the subject or object.

Table 23. Subject person prefixes

	intransitive verbs	**transitive verbs, gender agreement with A**	**transitive verbs, gender agreement with O**
first singular	*o-*	*o-*	*o-*
first non-singular	*i-*[32]	*i-*	*i-*
second	*ti-*	*ti-*	*ti-*
third	*Ø-*	*Ø-*	*i-* *(Ø-* before the non-singular prefix *ke-)*

(108) *o-pemi-ni*
       1SG-be.hungry-DECL.f
       'I'm hungry.'

(109) *i-pemi-ni*
       1NSG-be.hungry-DECL.f
       'We are hungry.'

(110) *ti-pemi=ki*
       2-be.hungry=Q.f
       'Are you hungry?'

(111) *Ø-pemi-ni*
       3-be.hungry-DECL.f
       'She is hungry.'

Prefix *ti-* with auxiliary *na-*
The second person prefix *ti-* and the auxiliary *na-* are usually fused to *ta-*.

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32 The first person plural of the suppletive verb 'move' has the form *hawi Ø-ha-*, without a subject person prefix (section 4.5).

(112)   *kapaizo   hero   ta=ki?*
       kapaizo   hero   ti-na=ki
       papaya   eat   2-AUX-Q.f
       'Did you eat papaya?'

(113)   *koro taho!*
       koro ti-na-ho
       hook 2-AUX-IMP.m
       'Hook fish!' (SG)

The fusion cannot take place when *ti-* and *na-* are separated by a morpheme in slot B or C, such as the S/A non-singular prefix *ke-*, example (114), the noun class marker *ka-*, example (115), or the causative prefix *na-,* example (116). The latter is homonymous with the auxiliary, but doesn't fuse with *ti-*.

(114)   *koro   ti-ke-na-ho!*
       hook   2-NSG.A-AUX-IMP.m
       'Hook fish!' (NSG)

(115)   *botha   ti-ka-na-hi   a-haro   oza*
       burn   2-NCL-AUX-IMP.f   DEM-f   house(f)
       'Burn this house!'

(116)   *wahi   ti-na-na-ho   ethe*
       far   2-CAUS-AUX-IMP.m   dog(m)
       'Take the dog away.'

While no fusion of *ti-* and the auxiliary *na-* takes place when they are separated by another morpheme simply because fusion is impossible under such circumstances, the fusion of *ti-* and *na-* can also be omitted when they are contiguous. In this case, the preservation of the two complete morphemes expresses a movement away from the deictic centre (usually the speaker). The following two examples differ only in that *ti-na-* is fused in the second, but not in the first. This difference expresses movement in opposite directions (in relation to the speaker). As discussed in section 2.6.1.1, the same semantic distinction is made by fusing or not fusing two contiguous vowels in the case of the inflecting verb *akha-* 'bring, take away'.

(117)   *bare   zoho   ti-na-hi!*
       banana   carry   2-AUX-IMP.f
       'Take the bananas away!'

(118)   *bare   zoho   tahi!*
       bare   zoho   ti-na-hi
       banana   carry   2-AUX-IMP.f
       'Bring the bananas!'

4.2.1.2 Subject number (slots B and J)

In some cases, a three-way number distinction is made between singular, dual and plural (i.e. more than two). In other cases, there is only a two-way distinction between singular and non-singular (i.e. more than one).

    The number of the subject can be indicated by the verb in two different ways. The most common one is the use of a non-singular affix in the second or third person. Inflecting verbs take the non-singular suffix *-mana*[33] (slot J). (See below for auxiliaries.) For the first person, a separate number marker is redundant since there are different person markers for first person singular and non-singular. Nevertheless, *-mana* is also occasionally used with a first person non-singular subject.

(119)   *amonehe   bazima   poo   i-kaari-mana-i*
       woman   all   manioc   3-cook-NSG.A-DECL.m
       'All the women are cooking manioc.'

(120)   *ti-didi-mana-hi!*
       2-be.silent-NSG-IMP.f
       'Be silent!' (more than one addressee)

The second way to indicate the number of the subject is stem suppletion. This applies only to a small number of common intransitive verbs. (There are also suppletive transitive verbs, but their stem suppletion indicates the number of the direct object.) Suppletive verbs are treated in section 4.5.

Auxiliary *na-*

On the auxiliary *na-*, non-singular number is marked by two different affixes, which are in complementary distribution. The suffix *-mana*, which is used with inflecting main verbs, is also used with *na-* if the auxiliary has one or more of the following affixes:
–   noun class prefix *ka-*
–   applicative prefix *ka-*
–   causative prefix *na-*
–   object non-singular suffix *-bakhi*

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33 In the Juruá dialect, this suffix triggers the raising of an immediately preceding /a/ to /e/.

- any directional suffix (listed in section 4.2.3.1)
- suffix -⁰*zanapo* 'along the way; while moving; for an extended period of time'
- suffix -⁰↑*mani* 'again'

Auxiliary *na-* with noun class prefix *ka-* and non-singular suffix *-mana*:

(121) okha   mashi moda okanana,   khi ikanamanerana
       o-kha   mashi moda o-ka-na-na,   khi i-ka-na-mana-↑rana
       1SG-ASS   vulva cover 1SG-NCL-AUX-IFUT   see 3-NCL-AUX-NSG.A-ADMON
       'I am going to cover my vulva, lest they see it.'

Auxiliary *na-* with applicative prefix *ka-* and non-singular suffix *-mana*:

(122) zowato   owa   haha   i-ka-na-mana-ni
       girl   1SG   laugh   3-APPL-AUX-NSG.A-DECL.f
       'The girls are laughing at me.'

Auxiliary *na-* with directional suffix *-ni* 'home' and non-singular suffix *-mana*:

(123) amonehe poo   hore   hore   i-na-ni-mana-hari
       woman   manioc   carry.on.back   carry.on.back   3-AUX-HOME-NSG.A-NAR.m
       'The women are carrying the manioc home.'

Auxiliary *na-* with suffix -⁰↑*mani* 'again' and non-singular suffix *-mana*:

(124) hiri   timanimanahi
       hiri   ti-na-⁰mani-mana-hi
       sing   2-AUX-AGAIN-NSG.S-IMP.f
       'Sing again!' (addressing more than one female)

If the auxiliary has none of the affixes listed above, subject non-singular is marked by the prefix *ke-*.

(125) zanikowa   khi   Ø-ke-na-i
       tortoise   find   3-NSG.A-AUX-DECL.m
       'They found tortoises.'

In the Purus dialect of Kulina (in both Brazil and Peru), the third person prefix *i-* does not co-occur with the prefix *ke-* (unlike the homonymous first person non-singular prefix, which does co-occur with *ke-*, as in example [130] below). While a third person subject is usually marked by the prefix *i-* if the verb agrees with the object and unmarked if the verb agrees with the subject, a third person subject is always unmarked in an auxiliary form containing *ke-na-*, as in the following example, in which the auxiliary agrees with the masculine object of the clause.

(126) *[amonehe   wapima]*_A   *bata*   *ba*   *Ø-ke-na-i*
      woman(f)   all   woven.hammock(m)   weave   3-NSG-AUX-DECL.m
      'All the women are weaving hammocks.'

In the Juruá dialect of Kulina, the prefixes *i-* and *ke-* do occur together, as can be seen in the following two examples from Tiss (2004: 210, 216; glosses and translations are mine).

(127) *powa-deni*   *awa*   *dama*   *i-ke-na-ni*
      3-NSG   tree   grab   3-NSG-AUX-DECL.f
       'They grabbed the tree.'

(128) *takara*   *dama*   *i-ke-na-hari*
      chicken   grab   3-NSG-AUX-NAR.m
      'They grabbed the chicken.'

Auxiliary *ha-*

The auxiliary *ha-* takes the suffix *-mana* in the same cases as the auxiliary *na-* does (see above). Besides, *ha-* also takes *-mana* when it occurs with the third person subject prefix *i-*, which is the case when the auxiliary agrees in gender with the direct object of the predicate.

(129) *[amonehe   wapima]*_A   *[bani   bedi]*_O   *ethe*   *i-ha-mana-i*
      woman(f)   all   animal(m)   small   raise   3-AUX-NSG.A-DECL.f
      'All the women are raising pets.'

When *ha-* occurs without any of the affixes which require the use of *-mana*, non-singular number is marked by two affixes, the prefix *ke-* and the suffix *-↑ra*.

(130) *bazima*   *ha*   *ikeheraharo*
      bazima   ha   i-ke-ha-↑ra-haro
      all   be.tired   1NSG-NSG-AUX-NSG-NAR.f
      'We are all tired.'

(Most other affixes occur on the auxiliary *ha-* in the same form and at the same place as on the auxiliary *na-*. An exception is that *ha-* does not take the first person non-singular prefix *i-* in the plural form of the suppletive verb 'move' [section 4.5].)

4.2.1.3 Object number (slots B and I)

Dual, plural or non-singular number of an object can be marked in the following ways:
–   suffix *-bakhi* (non-singular)

- prefix *ta-* (plural)
- partial stem reduplication (dual)
- stem suppletion (dual and plural)

Suffix *-bakhi*

The suffix *-bakhi* marks non-singular number of direct and indirect objects. This marker can thus be ambiguous when there are both a countable direct object and a countable indirect object. Besides, *-bakhi* is also attested as a subject non-singular marker on two intransitive verbs, *shona-* 'be born' (example [4.27]) and *sara na-* 'disperse'.

-bakhi marking non-singular number of O:
(131) *o-kha   takara   o-tapa-bakhi-i*
       1SG-ASS   chicken   1SG-feed-NSG-DECL.m
       'I'm going to feed my chickens.'

-bakhi marking non-singular number of IO:[34]
(132) *sowiko   zowato-deni=za   da   o-na-bakhi-ni*
       beads   girl-NSG=IO   give   1SG-AUX-NSG-DECL.f
       'I gave the beads to the girls.'

-bakhi marking non-singular number of S:
(133) *Ø-pama-a   to-shona-bakhi-i*
       3-two-REL.m   3-be.born-NSG-DECL.m
       'Two (children) were born.'

Prefix *ta-*

The prefix *ta-* indicates that the direct object is plural, i.e. larger than two. It can occur on inflecting as well as non-inflecting verbs. On non-inflecting ones, it has a unique morphological effect – it turns them into inflecting verbs. It therefore never occurs on an auxiliary, but is always prefixed to the (originally) non-inflecting verb stem. For this reason the prefix is listed in table 22 as occurring only on inflecting verbs (in slot B).

(134) *homo   o-**ta**-shite-haro*
       spider.monkey   1SG-PL-shoot.with.arrow-NAR.f
       'I've shot several spider monkeys.'

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34 The non-singular marker in this example cannot refer to the direct object because *sowiko* 'beads' is a mass noun and doesn't allow the use of a non-singular marker.

Compare the example above to the following, without *ta-*, where the verb *shite* occurs in its usual non-inflecting form with the auxiliary *na-*.

(135) *homo*   *shite*   *o-na-de*
       spider.monkey   shoot.with.arrow   1SG-AUX-PAST
       'I shot a spider monkey.'

Partial stem reduplication

The dual of the direct object can be expressed through the reduplication of the final syllable of the verb stem if the latter has at least two syllables. If the verb stem is monosyllabic, object dual is indicated by the triplication of the stem vowel.

(136) *takara*   *dama-ma*   *o-na-na*
       chicken   grab-DL   1SG-AUX-IFUT
       'I'm going to grab two chickens.'

(137) *siba*   *kororo*   *oziphana*
       siba   koro-ro   o-na-$^{\emptyset}$za-$^{\uparrow}$pha-na
       stone   throw-DL   1SG-AUX-IN-WATER-IFUT
       'I'm going to throw two stones into the water.'

(138) *zomahi*   *ehedeni*   *kha-aa*[35]   *i-na-i*
       jaguar   child   bite.dead-DL   3-AUX-DECL.m
       'The jaguar killed two children.'

Stem suppletion

A few verbs mark direct object number by stem suppletion. These are treated in section 4.5.

Summary

The prefix *ta-* and partial stem reduplication have complementary functions (dual versus plural of the direct object). But the function of *-bakhi* is more comprehensive, encompassing those of the two other markers, as shown in table 24. It is not clear what determines the choice of the number marker for direct objects. Stem suppletion is restricted to a small group of verbs which do not make use of the other types of object number marking. Table 24 shows the functions of *-bakhi*, *ta-* and partial stem reduplication.

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35 Kulina doesn't have phonemic vowel length (section 2.1.2). This is a trisyllabic word, [kʰaʔaʔʔa] in careful pronunciation. More casually, however, the word is pronounced [kʰaː] with one long vowel which has a rising intonation.

Table 24. Object number marking (excluding stem suppletion)

object number	direct object	indirect object
two	***-bakhi*** or partial stem reduplication	***-bakhi***
more than two	***-bakhi*** or ***ta-***	***-bakhi***

4.2.1.4 Noun class (slot B)

Certain Kulina nouns are cross-referenced on the verb by the noun class prefix *ka-*. The prefix can cross-reference the subject, direct object or indirect object of the verb. For details about the noun class system see section 3.5.2, especially 3.5.2.5.

The prefix *ka-* becomes *wa-* when it is preceded by another prefix. When *ka-* is prefixed to the verb *kha-* 'move', it is assimilated to the latter and also takes the form *kha-*, except when preceded by another prefix, in which case the previous rule applies and it becomes *wa-*.

(139) *moto   khakhahonani*
       moto   Ø-ka-kha-hona-ni
       boat   3-NCL-move-HITHER-DECL.f
       'The boat is coming closer.'

(140) *towakhaniki?*
       to-ka-kha-ni=ki
       3.AWAY-NCL-move.SG-BACK=Q.f
       'Is (the boat) going back?'

Some verbs have a deletable initial vowel. These verbs usually drop the initial vowel when they take a prefix. But when they take the prefix *ka-*, the initial vowel is preserved and an epenthetic /k/ is inserted between the prefix and the deletable vowel.

(141) *poroko   pamaa   wakidabakhina*
       poroko   Ø-pama-a   o-ka-k-ida-bakhi-na
       pig   3-be.two-REL.m   1SG-NCL-EPENTH-beat-NSG.O-IFUT
       'I'm going to kill two pigs (beating them dead).'

(142) *parato   namiza   owakibana*
       parato   nami=za   o-ka-k-iba-na
       plate   ground=LOC 1SG-NCL-EPENTH-put-IFUT
       'I'm going to put the plate on the ground.'

4.2.1.5 Gender

Intransitive verbs agree in gender with their subject while transitive verbs agree either with their subject or their direct object (section 3.5.1.2). Unlike person, number and noun class, gender is not marked by a separate morpheme. It is marked on the negation suffix and about half of the TAM-suffixes. These suffixes have distinct masculine and feminine forms, like the declarative suffix with the masculine form *-i* and the feminine form *-ni*.

(143) *makhidehe*   *Ø-zokhe-i*
      man   3-die-DECL.m
      'The man died.'

(144) *amonehe*   *Ø-zokhe-ni*
      woman   3-die-DECL.f
      'The woman died.'

A verb form which happens not to contain any suffix with masculine and feminine forms does not indicate gender, like the following examples with the hodiernal past suffix *-pa*.

(145) *makhidehe*   *Ø-zokhe-pa*
      man   3-die-HPAST
      'The man died today.'

(146) *amonehe*   *Ø-zokhe-pa*
      woman   3-die-HPAST
      'The woman died today.'

4.2.2 Tense, mood, modality, evidentiality (slots N and O)

Markers of tense, mood, modality and evidentiality take the final two suffix positions on a verb. Most of the suffixes of this category are used either exclusively in main clauses or exclusively in subordinate clauses. Only the combination of the suffix *-i/-ni* and the inflecting postposition *hini* occurs in both clause types, with different functions.

main clause suffixes:
-ᵒzati	recent past
-pa	hodiernal past
-de	prehodiernal past
-i / -ni	declarative

-hari / -haro	narrative
-na	immediate future, hortative
-i hini / -ni hini	near future (also purpose in subordinate clauses)
-i towi / -ni towi	general future
-pazaha / -pazehe	future interrogative
-rana / -rane	non-firsthand evidential
-ᵉↄ̂rana	admonitive
-a	exclamative
-ho / -hi	imperative

subordinate clause suffixes:

-a / -e	relative
-i hini / -ni hini	purpose (also near future in main clauses)
-naha / -nehe	concurrence
-raa	contrastive
-za	temporal, causal
-zama	temporal, causal

Most of the suffixes listed above are mutually exclusive. The only attested cases of combination are narrative + hodiernal past *-hari-pa/-haro-pa* and narrative + pre-hodiernal past *-hari-de/-haro-de*.

4.2.2.1 Past tenses

Kulina has three past tenses:

-ᵉzati	recent past
-pa	hodiernal past
-de	prehodiernal past

The recent past tense is used to stress the recency of an event. Recency is not a matter of absolute distance in time, but rather of a speaker's judgement. How long something is considered to be recent will depend on the kind of event. Thus, a recent arrival could date back several days or even weeks, while a recent meal is one that has just been finished. The recent past suffix *-ᵉzati* is homonymous with the adjective *zati* 'new'. When *-ᵉzati* immediately follows the auxiliary *na-*, the latter is omitted.

(147) *marasia   mitha   tizatiko?*
       marasia   mitha   ti-na-ᵉzati=ko
       watermelon   buy   2-AUX-IPAST=Q.m
       'Have you bought the watermelon now?'

(148)   *okhehedeni*   *pasho*   *ze*   *zati*
      o-kha   ehedeni   pasho   ze   Ø-na-⁰zati
      1SG-ASS   child   water   drink   3-AUX-IPAST
      'My child has just drunk water.'

The hodiernal past with the suffix *-pa* is used to refer to events of the day of speaking.

(149)   *owa=pi*   *ahói=ra*   *apa*   *o-na-pa*
      1SG=TOP.f   rice=only   eat   1SG-AUX-HPAST
      'I've only eaten rice today.'

It can be used to express the present relevance of an event.

(150)   *o-hipa-pa*
      1SG-eat-HPAST
      'I have already eaten.' Implies: 'I'm not hungry. I don't want to eat now.'

If a speaker doesn't want to emphasise that something has just happened or is still relevant, he or she will use one of the suffixes discussed in section 4.2.2.2 rather than the immediate or hodiernal past.

    The prehodiernal past, marked by the suffix *-de*, is used to refer to a time before the day of speaking.

(151)   *i-tapari*   *Ø-hika-zama,*   *hawi*   *Ø-ha-ni-de*
      1NSG-food.m   3-end-NFTC   move.PL   1NSG-AUX-BACK.HOME-PAST
      'When we ran out of food, we returned home.'

(152)   *maithakhazama*   *Peru=za*   *o-madi-kha-de*
      formerly   Peru=LOC   1SG-live-BEFORE-PAST
      'I used to live in Peru.'

4.2.2.2 Narrative and declarative

The suffixes *-i/-ni* and *-hari/-haro* are among the most common ones occurring on Kulina verbs. They can both be used with present or past time reference. Adams (1987: 43) calls the form *-i/-ni* "incompletive aspect" and the form *-hari/-haro* "completive aspect" though she states "The distribution of the completive and incompletive aspect suffixes is not clear to us." Tiss (2004: 155, 157) calls *-i/-ni* "imperfective aspect" and *-hari/-haro* "perfective aspect".

    But the difference between *-i/-ni* and *-hari/-haro* is not one of aspect. Even speaking of "the difference between" the two forms reflects a wrong approach since

although they occur in complementary distribution and have different functions, they don't specifically contrast with each other.

That *-i/-ni* is not an incompletive or imperfective aspect can be shown with the following example.

(153)   *Ø-zokhe-i*
        3-die-DECL.m
        'He died.'

The example shows the normal way of saying 'He died'. If *-i/-ni* was imperfective and *-hari/-haro* perfective, the latter form would be expected.

The form *-hari/-haro* is frequently used in narratives (also in the first person singular, e.g. in sentences [2.5], [2.10] and [2.11] of text 2), where *-i/-ni* almost never occurs, except in direct speech, as in the following example.

(154)   *hamohamo* *Ø-kha-hona-hari.*   *naza* *wa-wa*   *Ø-na-haro.*
        monster   3-move.SG-HITHER-NAR.m   then   shout-REDUP   3-AUX-NAR.f

        "ti-kha-rona-hi!   *hamohamo*   *Ø-kha-hona-i."*
        2-move.SG-DOWN-IMP.f   monster   3-move.SG-HITHER-DECL.m

        Ø-na-haro
        3-say-NAR.f

        'The monster was coming. Then she shouted "Come down (from the tree)! The monster is coming."'

The example contains two instances of the sentence 'The monster is/was coming'. When the speaker in the story is quoted, *-i* is used. In the sentence which is not a quotation, *-hari* occurs. Besides quotations in stories, the form *-i/-ni* is used to state a fact. This form will therefore be referred to as the *declarative*, while *-hari/-haro* will be named *narrative*.

The explanation for the use of the two forms in the example above is thus the following. In the quotation, the speaker in the story states as a fact something that is an actual event for her as a person in the story. In the sentences which are not quotations, the story-teller marks the verbs as belonging to a narrative, rather than a statement.

In sentences elicited as translations from Portuguese, the speakers almost always produce declarative sentences, but there are some exceptions, including the following examples.

(155) okha   ami   owa   mihi   taharo
       o-kha   ami   owa   mihi   to-na-haro
       1SG-ASS   mother   1SG   give.birth   AWAY-AUX-NAR.f
       'My mother gave birth to me.'

(156) o-kha   amonehe   o-na-hia-haro
       1SG-ASS   woman   1SG-CAUS-be.pregnant-NAR.f
       'I (have) made my wife pregnant.'

In speech elicited through short video clips, both the declarative and the narrative were frequently used, reflecting the fact that describing a single action shown in a video can be seen as narrating a very short story or as stating as a fact the action that has been observed.

The declarative can be described as a mood marker, though not all verb forms in the declarative mood take the declarative suffix. But declarative is the default mood of clauses in the declarative form and the declarative suffix cannot co-occur on a verb with the interrogative or the imperative suffix. (Declarative sentences can be turned into interrogative ones through rising intonation, though.)

The narrative, however, can co-occur with the interrogative suffix, so that the narrative suffix cannot be said to mark declarative mood. But even if we concede that narrative is not a mood, the label *narrative* does not seem to be suitable for a suffix which is used in questions and one might ask if the function of *-hari/-haro* has to be defined differently.

At this point, a comparison with Deni proves useful. The suffix *-hari/-haro* has cognate forms in Deni while *-i/-ni* apparently doesn't, at least not in a function corresponding to the declarative in Kulina. The Deni form *-ari/-aru* appears to be a general non-future. The Kulina declarative *-i/-ni* is therefore quite likely to be an innovation, replacing the older *-hari/-haro* in a particular function.

A possible consequence of a new grammatical form partially replacing an older one is that the functional domain of the older form appears to be incoherent. This is the case because the part of the older, more comprehensive domain which was lost may have been the central one, so that the remaining functions appear to be unrelated bits and pieces. If we assume that this has happened in Kulina, it is not surprising to find that the form *-hari/-haro* can be used in both narratives and questions.

The narrative is much more likely to be used in complex sentences or in utterances which comprise several sentences than in a one-clause utterance. The narrative is also more likely to be used for the past and the declarative for the present. But these are mere consequences of their functions, not independent properties. Something that is still ongoing is more likely to be reported as a fact than to be narrated while something that happened in the past will more likely be narrated. A single clause will rarely be a narrative, but by telling not only what happened but also how it hap-

pened, one already turns the announcement of a fact into a story. The functions of the declarative and narrative forms require further study.

4.2.2.3 Immediate future – hortative

The immediate future form of the verb takes the suffix *-na*. In the first person singular, this form is used to express that the speaker has the intention to do something right away. In the first person non-singular, it is mostly used as a hortative, calling others to an immediate joint action. The form can also be used in the second and third person.

(157)   *aba   ime-i   o-naitha-na   kokoro=za*
        fish   big-m   1SG-catch-IFUT   fish.hook=INSTR
        'I'm going to hook a big fish.'

(158)   *hina   hapi   i-na-na*
        come.on   take.bath   1NSG-AUX-IFUT
        'Come on, let's take a bath.'

The speakers disagree on whether it is also possible to use the immediate future for non-volitional events, as in the following examples, which were found acceptable by some, but not all speakers.

(159)   *?pasho   Ø-kha-na*
          water   3-move.SG-IFUT
          'It is going to rain.'

(160)   *?amonehe   Ø-zokhe-na*
          woman   3-die-IFUT
          'The woman is going to die.'

4.2.2.4 Near and general future

Besides the immediate future, Kulina has a near future and a general future. The near future is formed by the declarative form of the verb followed by the purposive postposition (which has the form *hini* in Santa Júlia, *hine* in Peru and *wahine* on the Juruá). The general future consists of the declarative form of the verb and the postposition *towi*, which marks a noun phrase as a goal.

The near future is used when something is observably about to happen (e.g. clouds indicate that it is soon going to rain) or an action is already being prepared. A case in point is the introductory sentence of narratives, which is often along the lines of 'Now I'm going to tell a(n old) story (of our ancestors)' and occurs in the near future (or the immediate future), never in the general future.

The general future is used for something that is planned or expected, but not yet in preparation or in sight.

Examples with near future:

(161) *nazana   okha   oza   owa   owakathemani   hini*
naza=na   o-kha   oza   owa   o-ka-kathema-ni   hini
then=NFC   1SG-ASS   house   1SG   1SG-NCL-repair-DECL.f   NFUT
'Then I'll repair my house.'

(162) *o-kha   ima   tia=za   wati   o-na-ni   hini*
1SG-ASS   story   2=IO   tell   1SG-AUX-DECL.f   NFUT
'I'm going to tell you my story.'

Examples with general future:

(163) *o-kha-ni-hera-ni   towi*
1SG-move.SG-BACK-NEG.f-DECL.f   FUT
'I will not return.'

(164) *batho   wahi   owa   motha   o-kha-ni   towi*
lower.reaches   DST.LOC   1SG   alone   1SG-move.SG-DECL.f   FUT
'I will go downriver by myself.'

(165) *zo   o-na-ni-ni   towi*
punt   1SG-AUX-HOME-DECL.f   FUT
'I will punt home.'

4.2.2.5 Future interrogative

In questions about the future, the verb can take the suffix -*pazaha/-pazehe*, though there are other ways of forming questions about the future, such as the use of the enclitic =*ko/=ki* on the near and general future forms (section 4.4).

(166) *neheko=ma   na-za   ti-kha   zama   ti-kha-ni-pazehe?*
what=UCOM   AUX-TC   2-ASS   village   2-move.SG-home-FUT.INT.f
'When are you going home?'

The exact function of this form is unclear. It could not be determined if -*pazaha/-pazehe* can only be used in questions or also in statements.

4.2.2.6 Non-firsthand evidential

The non-firsthand evidential is used to describe events that the speaker neither saw nor heard. It is used for reported and inferred information. The suffix has the masculine form *-rana* and the feminine form *-rane*.

(167) *hidapana   bakho   Ø-ke-na-rana*
       now   arrive   3-NSG-AUX-NFRST.m
       'They've just arrived (I am told).'

(168) *awi   to   Ø-ke-na-rane*
       tapir(f) shoot   3-NSG-AUX-NFRST.f
       'They've shot a tapir (I am told).'

Though the exact scope of the meaning of this verb form is not yet clear, it seems to be typical for one of the two evidential markers in a binary evidentiality system (Aikhenvald 2004a: 25–38). But *-rana/-rane*, which is rarely used, is not the only form that can be used to convey non-firsthand information and it does not clearly contrast with one particular other verb form. Rather than one of two choices in a pure evidentiality system, it is one of various forms in a complex TAM-system.

4.2.2.7 Admonitive

The admonitive is used to express a warning or a concern, often to call upon the addressee to prevent an impending danger. It is formed with the suffix -*ᵒ↑rana*.

(169) *pahi   tiedimerana*
       pahi   ti-edima-↑rana
       watch.out   2-fall-ADMON
       'Watch out, you are going to fall.'

(170) *i-pemi-rana*
       1NSG-be.hungry-ADMON
       'We are going to starve.'

Use with auxiliary *na-*

Like many directionals, the admonitive -*ᵒ↑rana* is an auxiliary-deleting suffix. If there is no other suffix between the auxiliary *na-* and the suffix -*ᵒ↑rana*, the former is deleted.

(171) *bowi   etero   wazi   irana*
       bowi   etero   wazi   i-na-ᵒrana
       cow   clothes   chew   3-AUX-ADMON
       'The cow is going to chew the clothes.'

(172) *he*   *tirana*
       he   ti-na-�
       he   ti-na-ᵒrana
       drown   2-AUX-ADMON
       'You are going to drown.'

(173) *ethe*   *tia*   *kha*   *rana*
       ethe   tia   kha   Ø-na-ᵒrana
       dog   2   bite   3-AUX-ADMON
       'The dog is going to bite you.'

The deletion of the auxiliary *na-* distinguishes the admonitive from the masculine form of the non-firsthand evidential. In the case of inflecting verbs and non-inflecting ones which take the auxiliary *ha-*, the raising of a preceding /a/ to /e/ serves the same purpose. This is also the case for verbs with the auxiliary *na-* if another suffix occurs between *na-* and -ᵒ↑*rana,* in which case the auxiliary is preserved, as in example (174) below. If the vowel preceding -ᵒ↑*rana* is not /a/, the admonitive is homonymous with the masculine non-firsthand evidential.

(174) *okha*   *mashi* *moda* *okanana,*   *khi* *ikanamanerana*
       o-kha   mashi   moda   o-ka-na-na,   khi   i-ka-na-mana-↑rana
       1SG-ASS   vulva   cover 1SG-NCL-AUX-IFUT see 3-NCL-AUX-NSG-ADMON
       'I am going to cover my vulva, lest they see it.'

4.2.2.8 Exclamative

The exclamative with the suffix *-a* is used when a speaker suddenly announces something that he or she is experiencing or observing and that is not in the context of something said before. While the meaning of the exclamative includes a mirative element, providing *unexpected* information (DeLancey 1997), it seems to go too far to say that it marks facts that are *contrary to the expectation* of the speaker, as claimed by Tiss (2004: 261).

(175) *o-pemi-a!*
       1SG-be.hungry-EXCL
       'I'm hungry!'

(176) *Sabino*   *Ø-kha-hona-a!*
       NAME   3-move.SG-HITHER-EXCL
       'Sabino is coming!'

The exclamative is also commonly used on the quotation verb *na-*, which occurs after direct speech (section 12.5).

(177) *okhehedeni   "waza   borasa"   naa!*
      o-kha   ehedeni   owa=za   borasa   Ø-na-a
      1SG-ASS   child   1SG=LOC   biscuit   3-say-EXCL
      'My child says "I want biscuits."!'

4.2.2.9 Imperative

The imperative is marked by the masculine form *-ho* and the feminine form *-hi*. It is only attested with first and second person subjects. In the second person, the Kulina imperative has the function that verb forms called imperative commonly have; it is used to tell the addressee(s) to do or not to do something.

(178) *tiapi   awa   oniiza   tithimahi*
      tia=pi   awa   onii=za   ti-witha-↑ma-hi
      2=TOP.f   tree   other=LOC   2-sit-BELOW-IMP.f
      'Sit below the other tree!'

(179) *ti-didi-mana-hi!*
      2-be.quiet-NSG-IMP.f
      'Be quiet!' (two or more addressees)

(180) *ti-hipa-hara-ho!*
      2-eat-NEG.m-IMP.m
      'Don't eat it!' (masculine form of the verb agreeing with the unnamed object)

In the few attested examples in the first person singular and non-singular, the imperative suffix is always preceded by the suffix *-kha*. It is not clear what the function of this form is.

(181) *o-hipa-kha-hi*
      1SG-eat-?-IMP.f
      'I would like to eat.' (?)

4.2.2.10 Dependent forms

Four TAM-suffixes occur exclusively in adverbial clauses. The concurrence suffix expresses that the events of the main clause and the subordinate clause are simultaneous. It has the masculine form *-naha* and the feminine form *-nehe*. The suffix *-raa* has a contrastive meaning while *-za* and *-zama* are temporal-causal subordinating suffixes.

There is also one TAM-form which is used in both main and adverbial clauses: *-i hini / -ni hini*, which marks near future in main clauses, has a purposive meaning in adverbial clauses. For details and examples see chapter 13.

The suffix *-a/-e* marks the predicate of a relative clause (section 12.1).

4.2.3 Directional affixes

Kulina has more than two dozen directional suffixes and one multifunctional prefix which can be used with a directional meaning.

4.2.3.1 Directional suffixes (slots E and G)

There are at least 27 directional suffixes, which occur between the verb root and the number suffixes. A movement is inherent to the meaning of some directionals, e.g. *-hona* 'coming closer', but not all, e.g. not in the case of *-pha* 'in(to) water'. If a directional is not inherently dynamic, it can also indicate location, so that part of the directionals are actually directional-locationals. For the sake of simplicity they will also be referred to as directionals.

Several directionals cause the raising of an /a/ in the immediately preceding syllable. Whether the /a/ is raised to /e/ or /i/ depends on the morpheme in which the raising occurs, as described in chapter 2. In the list below, the directionals which trigger vowel raising are marked by an upward arrow "↑". The symbol is also used in the examples when relevant.

-bakosha	'along/on the bank of a river or the shore of a lake'
-bina	'between objects'
-ᵒ↑hiza	'across'
-hona	'moving closer, hither'
-khi	'repeatedly' (iterative)
-⁽ᵒ⁾↑khima	'past'
-kosha	'across; sitting on the ground'
-⁽ᵒ⁾↑ma	'below; up'
-makosha	'up'
-maro	'up'
-↑mina	?
-misha	'following (someone or something)'
-⁽ᵒ⁾↑moha	'across over'
-⁽ᵒ⁾↑mora[36]	'ashore, inland'

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36 In the Juruá dialect, *-↑mora* doesn't delete *-na*.

-↑na	'out'
-ni	'back'
-↑pha	'in(to) water'
-⁽ᵠ⁾↑phi	'through, across'
-ri	'down; on(to) a raised surface'
-riza	'moving around (in different directions); plural marker'
-rona	'down'
-⁽ᵠ⁾↑shi	?
-thima	'along a river or stream'
-ti	?
-waha	'turning in a semicircle, moving in circles'
-ᵠ↑za	'in, into'
-ᵠ↑zana	'engulfing'

The suffix *-riza* has two distinct functions. The first is directional, indicating that the subject of the verb is moving in different directions. The second function is to indicate that S or O is plural and that the referents of S or O are each individually involved in the state of affairs expressed by the verb, not participating in a joint undertaking (as S) or affected by a single act (as O). *-riza* thus refers to an aimless movement or unco-ordinated events which coincide by chance (or at least not because they are planned) and randomness can be seen as a general semantic feature of the suffix.

-riza 'in different directions, around':
(182) *ehedeni* *Ø-kha-riza-i* *tohozi=za*
       child 3-move-AROUND-DECL.m stilt=INSTR
       'The boy is walking around on stilts.'

-riza as plural marker:
(183) *bazima* *i-tati* *baha-baha* *Ø-na-riza-ni*
       all 1NSG-head ache-REDUP 3-AUX-PL-DECL.f
       'We all have a headache.'

Auxiliary *na-*
When certain directional suffixes are used with the auxiliary *na-*, the root of the auxiliary is always omitted. These suffixes are indicated by a superscript empty set character "ᵠ" in the list above. Other directional suffixes only lead to the omission of the root *na-* if the auxiliary also has a prefix. If the auxiliary followed by such a suffix is prefixless, the root is retained in the form *ni-* since all the directional suffixes which cause *na*-deletion also trigger vowel-raising. The suffixes of this second group have an empty set character in brackets "⁽ᵠ⁾" in the list above. The remaining suffixes, i.e. those not marked by either "ᵠ" or "⁽ᵠ⁾", never delete the auxiliary.

The directional suffix - ^{(∅)↑}*shi*, which is marked as deleting *na-* only if a prefix is present, is not attested without a prefix co-occurring on the auxiliary, so that it is not possible to say if the auxiliary would be deleted before - ^{(∅)↑}*shi* if there were no prefix. (When there is no person prefix, - ^{(∅)↑}*shi* always occurs together with the directional prefix *to-* 'away' [section 4.2.3.2].)

The suffix -[↑]*pha* is not attested as the first directional on an auxiliary at all, so that it is not known if it would lead to the deletion of *na-* or not; -[↑]*pha* is usually used in the combination - ^{∅↑}*zi-pha (< - ^{∅↑}za-[↑]pha)* 'in(to) water'.

(The auxiliary *ha-* is not affected by auxiliary-deleting suffixes, but is omitted in certain cases for a different reason [section 4.2.3.2].)

Examples (184) to (187) show the use of the directionals -^{∅↑}*hiza* 'across' and -^{∅↑}*za* 'in' after *na-* with and without a prefix. In each case, *na-* is omitted.

(184) *epe*   *wishi*   *ohizahari*
       epe   wishi   o-na-^{∅↑}hiza-hari
       umbilical.cord.m   cut   1SG-AUX-ACROSS-NAR.m
       'I cut his umbilical cord.'

(185) *kona*   *hizanii*
       kona   Ø-na-^{∅↑}hiza-ni-i
       swim   3-AUX-ACROSS-BACK-DECL.m
       'He swam back across the river.'

(186) *siba*   *koro*   *oziphana*   *weniza*
       siba   koro   o-na-^{∅↑}za-[↑]pha-na   weni=za
       stone   throw   1SG-AUX-IN-WATER-IFUT   river=LOC
       'I'm going to throw a stone into the river.'

(187) *makhidehe*   *hapi*   *hapi*   *ziphai*
       makhidehe   hapi   hapi   Ø-na-^{∅↑}za-[↑]pha-i
       man   take.bath   take.bath   3-AUX-IN-WATER-DECL.m
       'The man is taking a bath.'

Examples (188) to (191) contain the directionals -^{(∅)↑}*ma* 'up' and -^{(∅)↑}*mora* 'ashore, inland'. The auxiliary *na-* is omitted in (188) and (190), where it has a prefix, but not in (189) and (191) without a prefix.

(188) *tibihi*   *hoka*   *omana*
       ti-bihi   hoka   o-na-^{(∅)↑}ma-na
       2-arm.m   pull   1SG-AUX-UP-IFUT
       'I'm going to pull up your arm.'

(189)   *tokozo*   *bohe*   *nimai*
             tokozo   bohe   Ø-na-$^{(\emptyset)\uparrow}$ma-i
             black.caiman   dive   3-AUX-UP-DECL.m
             'The black caiman is surfacing.'

(190)   *mapiri*   *hoka* *imoraharo*   *madoza*
             mapiri   hoka   i-na-$^{(\emptyset)\uparrow}$mora-haro   mado=za
             anaconda   pull   3-AUX-ASHORE-NAR.f   rope=INSTR
             'They are pulling an anaconda ashore with a rope.'

(191)   *hopha*   *nimoranii*
             hopha   Ø-na-$^{(\emptyset)\uparrow}$mora-ni-i
             run   3-AUX-INLAND-BACK-DECL.m
             'He is running back up the river bank.'

Order of the directional suffixes

As some of the examples above show, a verb form can have more than one directional. The suffixes *-hona* 'hither' and *-ni* 'back, home' are frequently used after other directionals and there are two other very common combinations, *-zi-ma* (< *-za-*$^{\uparrow}$*ma*) 'inside' and *-zi-pha* (< *-za-*$^{\uparrow}$*pha*) 'in(to) water'. All other possible combinations are only occasionally used, which makes it difficult to determine which unattested combinations are possible at all and which is the overall order of the directional suffixes.

     One important point is the position in relation to the suffix *-*$^{\uparrow}$*ra*, which marks dual reciprocal and collective plural (section 4.2.6.3). The auxiliary-deleting suffixes *-*$^{\emptyset\uparrow}$*za* 'in(to)' and *-*$^{\emptyset\uparrow}$*zana* occur before *-*$^{\uparrow}$*ra*, whereas *-hona* follows *-*$^{\uparrow}$*ra*. No other directionals are attested together with *-*$^{\uparrow}$*ra*, so that it is currently not possible to say with certainty in which order they would occur. Generalising on the basis of the attested cases, the slot before the dual reciprocal suffix has been called *auxiliary-deleting directionals* and the one following that suffix *non-auxiliary-deleting directionals* in table 22.

Examples with directionals before and after the dual reciprocal suffix *-*$^{\uparrow}$*ra*:

(192)   *hishi*   *toka**zera**ni*
             hishi   to-ka-na-**$^{\emptyset}$za-$^{\uparrow}$ra**-ni
             smell   3-RCP-AUX-IN-RCP-DECL.f
             'They are hugging each other.'

(193)   *khizo*   *kani**rehona**i*
             khizo   Ø-ka-na-$^{\uparrow}$**ra-hona**-i
             follow   3-RCP-AUX-RCP-HITHER-DECL.m
             'They are coming, following one another.'

4.2.3.2 Directional prefix (slot A)

The directional prefix *to-* expresses a movement away from the deictic centre (which is usually the speaker). *To-* takes the same position as the person prefixes and can only occur in those verb forms which do not take a person prefix, i.e. the third person of intransitive verbs and the third person of transitive verbs when they agree in gender with their subject. Since *to-* only occurs with third person subjects, it can be said to mark person as well as direction.

(194) *Naoza   Ø-kha-rona-i*
      NAME   3-move.SG-DOWN-DECL.m
      'Naoza is coming down.' (speaker is downstairs)

(195) *Naoza   to-kha-rona-i*
      NAME   3.AWAY-move.SG-DOWN-DECL.m
      'Naoza is going down.' (speaker is upstairs)

When a transitive verb agrees in gender with its object, a third person subject is cross-referenced with the prefix *i-*, which takes precedence over *to-*, so that the latter prefix doesn't occur in such verb forms.

Auxiliary *ha-*

The auxiliary *ha-* cannot be used without a prefix, except in the irregular first person plural form of the verb 'move' (section 4.5). In the third person, *ha-* takes the prefix *to-* even when there is no movement away from the deictic centre. In this case, *to-* only indicates third person.

(196) *zipho=za   bare   ono   to-ha-ni*
      fire-LOC   banana   burn   3-AUX-DECL.f
      'The banana burnt in the fire.'

When a movement towards the deictic centre is expressed, the prefix *to-* cannot be used. In this case, when *ha-* cannot take any prefix, it is omitted in the surface form of the predicate.

(197) *naza=pa   shabira   hai   honahari*
      naza=pa   shabira   hai   Ø-ha-hona-hari
      then=TOP.m   giant.otter move.PL   3-AUX-HITHER-NAR.m
      'Then the giant otters came.'

Auxiliary *na-*

When *to-* is prefixed to the auxiliary *na-*, the two morphemes are fused, resulting in the form *ta-*.

to-na > ta

(198) *ehedeni   hopha   tai*
      ehedeni   hopha   to-na-i
      child   run   AWAY-AUX-DECL.m
      'The boy is running away.'

If *to-* and *na-* are separated by another morpheme, such as the noun-class prefix *ka-*, the fusion cannot take place.

to-ka-na – no fusion

(199) *anobeze*   *[bihini   hiphe   wahi]   kona*
      collared.peccary   stream   opposite.bank   DST.LOC   swim

      to-ka-na-i
      AWAY-NCL-AUX-DECL.m

      'The collared peccary is swimming to the opposite bank of the stream.'

If *na-* is preceded by *to-* and followed by an auxiliary-deleting suffix, e.g. *-⁰za* 'in', deletion takes precedence over fusion: *na-* is deleted and no fusion takes place.

to-na-⁰za > to-za

(200) *makhidehe   bohe   tozai*
      makhidehe   bohe   to-na-⁰za-i
      man   dive   AWAY-AUX-IN-DECL.m
      'The man is diving.'

4.2.4 Aktionsart

Under the heading *Aktionsart*, this section groups together all the verbal suffixes other than directionals which have a lexical meaning rather than a grammatical function. They do not form a class of any kind in the grammar of the language. In particular, they do not take the same position in the verb.

4.2.4.1 Suffix *-⁰zanapo* 'along the way, for a long time' (slots E and K)
The suffix *-⁰zanapo* is akin to directionals, both semantically and morphologically. One of its meanings is directional, namely 'along the way, while moving' while its second meaning is temporal: 'for an extended period of time'.

(201) *Kanaú   towi   o-madi-zanapo-haro*
      NAME   GOAL   1SG-live-LONG.TIME-NAR.f
      'I kept waiting for Kanaú.'

Like some directionals, -*ᵉzanapo* is an unconditionally auxiliary-deleting suffix. That is to say that when -*ᵉzanapo* is used with the auxiliary *na-*, the verb stem is always omitted, whether the word form has a prefix or not. -*ᵉzanapo* is not attested together with directionals and it always takes the first suffix position with non-inflecting verbs. (Otherwise, it couldn't delete *na-*.) What sets -*ᵉzanapo* apart from directional suffixes (besides the fact that it also has a non-directional meaning) is its position on inflecting verbs. On those verbs, it takes the position after the subject non-singular marker -*mana*. It is the only suffix known to take different positions on main verbs and auxiliaries.

-*ᵉzanapo* after the non-singular marker -*mana* on a main verb:
(202) *Ø-mitha-**mana-zanapo**-w-i*   *hini*
      3-listen-NSG-LONG.TIME--EPENTH-DECL.m   NFUT
      'They are going to listen for a long time.'

-*ᵉzanapo* before the non-singular marker -*mana*, deleting the auxiliary *na-*:[37]
(203) *horihori*   ***zanapomana**hari*
      hori-hori   *Ø-na-**ᵉzanapo-mana**-hari*
      play.*hohori*-REDUP   3-AUX-ALONG.THE.WAY-NSG-NAR.m
      'They were playing the *hohori*[37] along the way.'

4.2.4.2 Suffix -*⁽ᵉ⁾↑mani* 'again' (slot H)
The suffix -*⁽ᵉ⁾↑mani* means 'again'. It is a conditionally auxiliary-deleting suffix, i.e. the auxiliary *na-* is omitted before -*⁽ᵉ⁾↑mani* only if a prefix is present. Otherwise, *na-* takes the form *ni-* before -*⁽ᵉ⁾↑mani*, since the suffix causes the raising of /a/ in the preceding syllable. The position of -*⁽ᵉ⁾↑mani* is after the non-auxiliary-deleting directionals and before the object non-singular suffix -*bakhi*.

(204) *okomene*   *zaki*   *nimaniharo*
      o-koma-ne   zaki   *Ø-na-↑mani-haro*
      1SG-hurt-NMLZ.m   bite   3-AUX-AGAIN-NAR.f
      'I'm in pain again.' (lit. 'My wound is biting again.')

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37 *Hohori* is the name of an earthen wind instrument.

(205) *hero*　　　　*omanina*
　　　hero　　　　o-na-(∅)mani-na
　　　eat.juicy.fruit　1SG-AUX-AGAIN-IFUT
　　　'I'm going to eat some fruit again.'

4.2.4.3 Suffixes *-bote* 'almost', *-po* 'first' and *-poma* 'again' (slot K)

The suffix *-bote* means 'almost'. It does not allow any other suffixes to be attached to it. It is always followed by the auxiliary *na-*, which takes the suffixes that come after *-bote*. The position of *-bote* is after the subject plural suffix *-mana* and before the negation suffix. In the case of inflecting verbs, it shares the position with *-∅zanapo*.

(206) *∅-wada-ni*
　　　3-sleep-DECL.f
　　　'She's sleeping.'

(207) *∅-wada-bote*　　　*na-ni*
　　　3-sleep-ALMOST　　AUX-DECL.f
　　　'She's sleepy.' or 'She's almost (falling) asleep.'

The meaning of *-po* is 'first' and that of *-poma* 'again'. The latter can co-occur with *-(∅)↑mani* 'again'. It is not clear what semantic difference, if any, exists between them. The morphemes *-po* and *-poma* take the same position as *-bote* and, in the case of inflecting verbs, *-∅zanapo*.

(208) *tia*　*hiri*　*tapohi*
　　　tia　hiri　ti-na-po-hi
　　　2　　sing　2-AUX-FIRST-IMP.f
　　　'You sing first!'

(209) *wati-wati*　　*o-na-poma-na*　　　　*[o-kha*　　*ima*　　*hada-ni]*o
　　　tell-REDUP　1SG-AUX-AGAIN-IFUT　1SG-ASS　story　old-f
　　　'I am again going to tell an old story of mine.'

(210) *taide*　*howe*　*timanimanapomahi*
　　　taide　howe　ti-na-(∅)mani-mana-poma-hi
　　　first　sweep　2-AUX-AGAIN-NSG-AGAIN-IMP.f
　　　'First sweep (the square) again!' (more than one addressee)

4.2.4.4 Suffix *-kha* 'still' (slot M)

The position of the suffix *-kha* 'still' is immediately behind the negation suffix.

(211) *poo*   *ani-kha-i*
       manioc   exist-STILL-DECL.m
       'There is still manioc (left).'

The combination of the negation suffix and *-kha* means 'not yet'. See section 4.2.5 for examples.

4.2.5 Negation (slot L)

The verbal negation suffix has the masculine form *-hara* and the feminine form *-↑hera*.

(212) *owapi*   *osonaa*   *oheherani*
       owa=pi   osonaa   o-ha-↑hera-ni
       1SG=TOP.f   Kashinawa   1SG-be-NEG.f-DECL.f
       'I am not a Kashinawa.'

(213) *zamatapa*   *Ø-ka-hara-i*
       food(m)   3-be.cooked-NEG.m-DECL.m
       'The food isn't cooked.'

The position of the negation suffix in the verb is after the Aktionsart suffixes *-bote*, *-po* and *-poma* and before *-kha* 'first, already'. The morpheme combination *-hara-kha/-↑hera-kha* means 'not yet'.

(214) *tihipeherakhaki?*
       ti-hipa-↑hera-kha-ki
       2-eat-NEG.f-ALREADY-Q.f
       'Haven't you eaten yet?'

(215) *ohipeherakhani*
       o-hipa-↑hera-kha-ni
       1SG-eat-NEG.f-ALREADY-DECL.f
       'I haven't eaten yet.'

4.2.6 Valency change

There are three types of valency change: causative, applicative and reciprocal.

4.2.6.1 Causative (slot C)

The causative marker *na-* occurs immediately before the root. It derives a transitive verb from an intransitive one, with the subject of the intransitive verb becoming the object of the transitive verb, e.g. *na-hia-* 'to make pregnant' from *hia-* 'to be pregnant'.

(216a) *amonehe   Ø-hia-ni*
      woman   3-be.pregnant-DECL.f
      'The woman is pregnant.'

(216b) *o-kha   amonehe   o-na-hia-haro*
      1SG-ASS   woman   1SG-CAUS-be.pregnant-NAR.f
      'I've made my wife pregnant.'

(217a) *zipa   Ø-barari-ni*
      earthen.pot   3-break-DECL.f
      'The pot has broken.'

(217b) *ti-kha   zipa   o-na-barari-ni*
      2-ASS   earthen.pot   1SG-CAUS-break-DECL.f
      'I have broken your pot.'

(218a) *nono   tomi   Ø-na-i*
      baby   suckle   3-AUX-DECL.m
      'The baby is suckling.'

(218b) *owa   nono   tomi   o-na-na-na*
      1SG   baby   suckle   1SG-CAUS-AUX-IFUT
      'I'm going to suckle the baby.'

If the verb stem begins with /e/, the vowel of *na-* is assimilated, e.g. in *neebezo-* 'paint someone', derived from *ebezo-* 'paint oneself'.

(219a) *o-w-ebezo-na*
      1SG-EPENTH-paint-IFUT
      'I'm going to paint myself.'

(219b) *amonehe   bedi   i-ne-ebezo-w-i*
        woman   his/her.son   3-CAUS-paint-EPENTH-DECL.m
        'The woman painted her son.'

The causative of *zokhe-* 'to die' shows an idiosyncratic reduplication of *na-*: *nanazo-khe-* 'to kill'. (Both *zokhe-* and *nanazokhe-* are singular stems of suppletive verbs. Cf. section 4.5.)

In one attested case, a formal causative has an unpredictable meaning. The verb *naitha-* 'to catch with a rope or fishing line' is a causative derivation of *witha-* 'to sit on the ground'.

The only attested verb with the prefix *na-* which is derived from a transitive verb is *naatha-* 'to teach' from *atha-* 'to learn'. *Naatha-* has two direct objects, corresponding to the subject and direct object of *atha-*.

(220a) *[ti-kha   ahie]*$_O$ *o-w-atha-na*
        2-ASS   song   1SG-EPENTH-learn-IFUT
        'I'm going to learn your song.'

(220b) *[o-kha   ahie]*$_O$ *tia*$_O$ *o-na-atha-na*
        1SG-ASS   song   2   1SG-CAUS-learn-IFUT
        'I'm going to teach you my song.'

There is no known syntactic difference between the two objects of *naatha-*. The verb can agree in gender with only one of the objects, but the verb forms in the few attested examples, including (220b), are not gender-marked, so that it is not possible to say if the verb always agrees with the same object.

The causative prefix can also be used on nouns, as in the case of *mado* 'rope', from which the verb *na-mado-* 'to tie' is derived.

4.2.6.2 Applicative (slot C)

Like the causative prefix, the applicative prefix *ka-* occurs immediately before the verb root. (No cases of co-occurrence of the two prefixes are attested.) The applicative adds a direct object to the argument structure of a verb. Intransitive verbs are thus turned into transitive ones, e.g. the intransitive *maiza-* 'to lie' into the transitive *ka-maiza-* 'to cheat'.

(221a) *makhidehe   Ø-maiza-hari*
        man   3-lie-NAR.m
        'The man is lying.'

(221b) *makhidehe   owa   Ø-ka-maiza-i*
       man   1SG   3-APPL-lie-DECL.m
       'The man cheated me.'

But *ka-* can also be affixed to transitive verbs. In the attested cases, this turns an oblique argument or adjunct marked by the enclitic *za* into a direct object. *Tapa-* 'to feed' has the person(s) or animal(s) fed as its direct object. The food can be expressed as an instrumental adjunct. *Ka-tapa* means 'to cook' and has the food as its direct object.

(222a) *takara   karia   i-tapa-i   tapa=za*
       chicken   white.person   3-feed-DECL.m   maize=INSTR
       'The white person fed the chickens with maize.'

(222b) *amonehe   bazima   Ø-ka-tapa-mana-ni   bani*
       woman   all   3-APPL-feed-NSG-DECL.f   meat
       'All the women are cooking meat.'

While the verb *ka-tapa* 'to cook' is monotransitive, like the base verb *tapa-* 'to feed', the monotransitive non-inflecting verb *da* 'to give' can be turned into a ditransitive one with the prefix *ka-*. With the basic form of the verb the recipient is an oblique argument marked by *za*, but when the applicative prefix is added to the predicate, the recipient becomes a direct object while the syntactic function of the original direct object, the gift, remains unchanged. There appears to be no grammatical difference between the two direct objects of the ditransitive verb.

(223a) *makhidehe powa bihi-kha   amonehe=za   da   to-ka-na-i*
       man   3.m   arm-ASS   woman=IO   give   3.away-CL-AUX-DECL.m
       'The man is giving his bracelet to the woman.'

(223b) *pasho   tia   da   okanana,   ze   tani   hini*
       pasho   tia   da   o-ka-na-na   ze   ti-na-ni   hini
       water   2   give   1SG-APPL-AUX-IFUT   drink   2-AUX-DECL.f   PURP
       'I'm going to give you water for you to drink.'

As the examples above show, the semantic and grammatical effects of the applicative are not completely regular and need to be described on the lexical level.

4.2.6.3 Reciprocal

The reciprocal transforms a transitive verb into an intransitive one, the referents of whose subject are both agents and patients. There are different forms for dual and

plural reciprocals. Both forms share the prefix *ka-*. It is not clear if this is the same morpheme that is used for the applicative or a homonymous one.

Dual reciprocal (slots C and F)

In the dual reciprocal, *ka-* occurs immediately before the verb stem while the position of the second affix, *-↑ra* (with the allomorph *-↑re* after /i/), is between the auxiliary-deleting directional suffixes and the other directional suffixes (section 4.2.3.1).

(224) *kakiderai*   *pamaa*
       Ø-ka-k-ida-↑ra-i   Ø-pama-a
       3-RCP-EPENTH-beat-RCP.DL-DECL.m   3-two-REL.m
       'The two of them are fighting.'

(225) *makhidehedeni*   *ka-zawe-ra-i*
       makhidehe-deni   Ø-ka-zawa-↑ra-i
       man-NSG   3-RCP-insult-RCP-DECL.m
       'The two men are insulting each other.'

When the dual reciprocal affixes *ka-* and *-↑ra* are attached to the auxiliary *na-*, the suffix *-↑ra* causes the vowel of *-na* to be raised to /i/, while the vowel of *-↑ra* itself is raised to /e/.

(226) *bishi*   *kanirei*
       bishi   Ø-ka-na-↑ra-i
       pinch   3-RCP-AUX-RCP-DECL.m
       'The two of them pinched each other.'

(227) *ehedeni*   *poni*   *tati-ni-deni*   *shiri*   *ka-ni-re-ni*
       ehedeni   poni   tati-ni-deni   shiri   Ø-ka-na-↑ra-ni
       child   3f   head-f-NSG   comb   3-RCP-AUX-RCP-DECL.f
       'The two girls are combing each other's hair.'

(228) *"niha*   *atori"*   *nahari*   *"dama*   *ikanirena"*
       "niha   atori"   Ø-na-hari   "dama   i-ka-na-↑ra-na"
       come.on   mate   3-say-NAR.m   grab   1NSG-RCP-AUX-RCP-IFUT
       'He said "Come on, mate! Let's hug each other."'

Plural reciprocal (slot C)

The plural reciprocal is formed through reduplication. Inflecting verbs become non-inflecting in this form. The full stem of monosyllabic and disyllabic verbs is reduplicated and followed by the auxiliary *na-*, which takes the reciprocal prefix *ka-* and all other affixes. In the case of trisyllabic verbs, only the first syllable is reduplicated.

(229)   *bishi-bishi*   *Ø-ka-na-i*
         pinch-RCP   3-RCP-AUX-DECL.m
         'They pinched one another.' (more than two)

(230)   *ethe*   *kha-kha*   *Ø-ka-na-i*
         dog   bite-RCP   3-RCP-AUX-DECL.m
         'The dogs bit one another.' (more than two)

Collective use of ka-…-[↑]ra

The form *ka-…* -[↑]*ra*, which is used for the dual reciprocal, has a different function with intransitive verbs. It marks a collective involvement of the referents of the subject of the verb. In this function, *ka-…* -[↑]*ra* indicates plural number and does not change the valency of the verb.

(231)   *he*   *tokanirei*
         he   to-ka-na-[↑]ra-i
         drown   3-COLL-AUX-COLL-DECL.m
         'They drowned.' (more than two)

4.3 Secondary verb *hika-*

As a main verb, *hika-* means 'to end, to be used up'.

(232)   *o-kha*   *ima*   *Ø-hika-ni*
         1SG-ASS   story   3-end-DECL.f
         'My story is over.'

(233)   *bare*   *Ø-hika-ni*
         banana   3-end-DECL.f
         'There aren't any bananas left.'

Hika- is also the plural stem of the suppletive verb 'to die' (section 4.5).

(234)   *makaari*   *to-hika-i*
         squirrel   3-die.PL-DECL.m
         'Many/Several squirrels died.'

When *hika-* is used as a secondary verb, it immediately follows an inflecting main verb or the auxiliary of a non-inflecting main verb. The inflecting main verb or auxiliary takes all the usual affixes except for the narrative and the TAM-suffixes. The suffix *-a/-e* occurs at the end of the inflecting main verb or auxiliary, in place of the

TAM-markers. If the vowel preceding the feminine form of the suffix is an /a/, it is assimilated to the suffix. The secondary verb *hika-* doesn't take any affixes except for the TAM-markers. The main verb or auxiliary and the secondary verb agree in gender with the same argument, according to the rules explained in section 3.5.1.2.

The construction with *hika-* is used to say that an activity or a process has been completed or that all the entities in question have been affected by it.

(235) *o-nomi-e*   *hika-ni*
       1SG-get.well-NFIN.f   complete-DECL.f
       'I'm completely well again.'

(236) *tawe*   *ohipee*   *hikani*
       tawe   o-hipa-e   hika-ni
       guava   1SG-eat-NFIN.f   complete-DECL.f
       'I have eaten all the guavas.'

(237) *pasho*   *ze*   *onee*   *hikani*
       pasho   ze   o-na-e   hika-ni
       water   drink   1SG-AUX-NFIN.f   complete-DECL.f
       'I have drunk all the water.'

(238) *poroko*   *amonehe*   *takara*   *i-ta-kha-a*   *hika-i*
       pig   female   chicken   3-PL.O-bite-NFIN.m   complete-DECL.m
       'The sow bit all the chickens dead.'

4.4 Interrogative

Polar questions are marked by the clitic *=ko/=ki* (section 7.4.2), which follows the clause constituent that is being questioned. If the scope of the question comprises the whole clause, the polar question marker follows the predicate. It can only be attached to the following of the TAM-markers listed in section 4.2.2:

– recent past   *-ᵒzati*
– narrative   *-hari / -haro*
– near future   *-i hini / -ni hini*
– general future   *-i towi / -ni towi*

(239) *marasia*   *mitha*   *tizatiko?*
       marasia   mitha   ti-na-ᵒzati=ko
       watermelon buy   2-AUX-IPAST=Q.f
       'Have you just bought the watermelon?'

(240) *ti-kha-ni-haro=ki?*
       2-move.SG-HOME-NAR.f=Q.f
       'Are you going home?'

(241) *tepi*   *phoko*   *raharoki?*
       ti-wapi   phoko   Ø-hira-haro=ki
       2-skin   hot   3-AUX-NAR.f-Q.f
       'Are you hot?'

(242) *hawi*   *ti-ha-ni*   *hini=ki?*
       move.PL   2-AUX-DECL.f   NFUT=Q.f
       'Are you going to return?'

(243) *to-kha-ni-i*   *towi=ko?*
       AWAY-move.SG-HOME-DECL.m   FUT=Q.m
       'Will he go home?'

The interrogative particle can also be attached to a verb form without any TAM-marker.

(244) *ti-kha*   *amonehe*   *Ø-hia=ki?*
       2-ASS   woman   3-be.pregnant=Q.f
       'Is your wife pregnant?'

(245) *ti-kha*   *ato*   *ani=ko?*
       2-ASS   older.brother   exist=Q.m
       'Do you have an older brother?'

4.5 Suppletive verbs

A number of verbs have suppletive stems. In the case of intransitive verbs, the stem indicates subject number and in the case of transitive verbs direct object number. Suppletive verbs always have distinct forms for singular and plural. Only some have a third form for dual. The others use either the singular or the plural stem or both for dual as well. The verb 'move' has different stems for first and second person dual and for third person dual.

Intransitive verbs with suppletive stems do not take the subject plural affixes
-mana and *ke-* while the transitive ones do not take the object plural affixes *-bakhi*
and *ta-*. These number markers are made redundant by the stem suppletion. Intransitive
suppletive verbs are shown in table 25 and transitive ones in table 26.

The plural of the suppletive verb 'move' is irregular, missing the first person non-
singular prefix *i-*, as the following paradigms show, the first of which has no direc-
tional suffix and the second the directional suffix *-hona* 'hither'. The non-singular
paradigm of the regular verb *nokho ha-* 'wake up (intransitive)' is given for compari-
son.

Table 25. Intransitive verbs with suppletive stems

	Singular	**Dual**	**Plural**
'run, flee'	*hopha na-*	*zaha-*	*domo kha-*
'move'	*kha-*	*kada- 1.+2. person*	*hawi ha-*[38]
		weda- 3. person	
'lie on the ground'	*pona-*[39]	*koda-*	*domo pona-*
'fall'	*shona-*	*shona-, katoha-*	*katoha-*
'be born'[40]	*shona-*	*shona-, katoha-*	*katoha-*
'stand'	*wa-*	*ba-*	*domo wa-*
'sleep'	*wada-*	*wada-*	*ka(h)adiha-*
		ka(h)adiha-	
'sit on the ground'	*witha-*	*hashi na-*[41]	*hashi na-*
'die'	*zokhe-*	*zokhe-,*	*hika-*
		pamahona-	

	hawi ha- 'go.PL'	*hawi ha-hona-* 'come.PL'		*nokho ha-* 'wake up'
1pl	*hawi **Ø**-ha-ni*	*hawi **Ø**-ha-hona-ni*	1nsg	*nokho **i**-ha-ni*
2pl	*hawi ti-ha-ni*	*hawi ti-ha-hona-ni*	2nsg	*nokho ti-ke-he-ra-ni*
3pl m	*hawi to-ha-i*	*hawi Ø-Ø-hona-i*	3nsg m	*nokho to-ke-he-ra-i*
3pl f	*hawi to-ha-ni*	*hawi Ø-Ø-hona-ni*	3nsg f	*nokho to-ke-he-ra-ni*

38 In Peru, this verb has the plural form *hai ha-*, which occurs in examples (197), (486), (591), and
(630).

39 The verb *pona-* loses its second syllable when it takes a directional suffix, such as *-ri* 'on a raised
surface'. Thus 'to lie on a raised surface' has the singular stem *po-ri-* and the plural *domo po-ri-*. The
formation of the dual is regular: *koda-ri-*.

40 The suppletive stem forms of the verbs 'be born' and 'fall' are the same, but while 'be born' always
takes the prefix *to-* in the third person, 'fall' usually doesn't.

41 While in Santa Júlia the plural form of the verb 'to sit (on the ground)' is also used for the dual, a
different dual form *paima-* is used in the village Maronaua. When *paima-* takes a directional suffix,
the stem loses the vowel /i/, e.g. in *pama-ri-* 'to sit on a raised surface (dual)'. The form *pama-* of the
verb stem 'to sit (dual)' is homonymous with the numeral verb 'to be two'.

The first person plural declarative of the verb 'move' would be expected to be *hawi i-ha-ni*. Since the final vowel of *hawi* is the same as the initial vowel of *ihani*, this hypothetical form would be pronounced [hawi hani] with complete fusion of the identical vowels (section 2.6.1.2). [hawi hani] is indeed the pronunciation of the verb form in question, but the underlying prefix *i-* that was no doubt originally there has been lost. Since nothing can be inserted between a non-inflecting verb and its auxiliary and since a speaker does usually not pause between the two words, the original prefix would virtually never surface in the pronunciation. As a result of this constant absence from the surface form, the verb form has been reanalysed and all the speakers of the Purus dialect who were asked decidedly rejected the pronunciation [*hawi ihani], insisting that it must be [hawi hani]. Although [hawi hani] is also the usual pronunciation on the Juruá river, the speakers there found [hawi ihani] acceptable.

This loss of the prefix *i-* in the Purus dialect has not occurred with other verbs, e.g. *hapi i-na-ni* 'we are taking a bath' is usually pronounced [hapi nani], but speakers also accept [hapi inani], which shows that the prefix is still present in their mental representation. The reason that it could be lost in the case of *hawi hani* may lie in the morphology of the auxiliary *ha-*. In its normal pronunciation [hapi nani], the first person non-singular *hapi inani* 'we are taking a bath' is homonymous with the third person singular *hapi nani* 'she is taking a bath'. The careful pronunciation of the first person form disambiguates the two. First person plural [hawi hani], however, is not homonymous with any other verb form. This is because the auxiliary *ha-* usually occurs with the prefix *to-* in the third person and if the prefix is omitted the auxiliary stem is, too. The third person of the auxiliary begins either *to-ha-* or *Ø-Ø-*, never *Ø-ha-*. The first person plural beginning *Ø-ha* is therefore distinct from all other verb forms, which allowed the person prefix *i-* to be dropped.

Table 26. Transitive verbs with suppletive stems

	Singular	Dual	Plural
'hang up'	wena-	bone-	domo wena-
'kill'	nanazokhe-	napamahona-	(na)nahika-
'put'	iba-	koda-	wa na-
	watha-		
'take'	idi-	zaba-	nakha-

In the singular, there are two different verbs meaning 'to put'. The verb *watha-* is used for objects which are round or almost round and for containers. Other objects take the verb *iba-*. There are only one dual and one plural form corresponding to the two verbs in the singular. The following examples show the use of the two different verbs with the objects *parato* 'plate' and *panera* 'metal cooking pot'.

(246) *parato   namiza   owakibana*
  parato   nami=za   o-ka-k-iba-na
  plate   ground=LOC   1SG-NCL-EPENTH-put-IFUT
  'I'm going to put the plate on the ground.'

(247) *panera   namiza   okaathana*
  panera   nami=za   o-ka-watha-na
  metal.cooking.pot   ground=LOC   1SG-NCL-put-IFUT
  'I'm going to put the cooking pot on the ground.'

4.6 Infinitive

The infinitive is formed with the suffix -*de*, which is attached to the stem of both inflecting and non-inflecting verbs. In the infinitive, non-inflecting verbs are used without an auxiliary. Infinitives can also be formed from inflecting verbs with directional affixes.

(248) *hipa-de*
  eat-INF
  'to eat'

(249) *towakhanide*
  to-ka-kha-ni-de
  AWAY-APPL-move.SG-BACK-INF
  'to take back'

The infinitive is used in complement clauses, purposive linking and the progressive aspect, which are discussed in section 12.3.

4.7 Participle

The participle suffix has the masculine form -*i* and the feminine form -*ni*, like the declarative. Though this suffix occurs in the TAM-position, it does not mark tense, aspect or modality, but the syntactic function of a verb. A participle is a modifier in a noun phrase. The head of the noun phrase is either the S-argument of the participle, as in example (250), or its O-argument, as in examples (251) – (253). The participle follows the head and agrees with it in gender. It does not take a subject person prefix, which is why it cannot be considered the predicate of a subordinate clause, unlike the fully inflected relative form (section 12.1)

(250)   *ora*   *mahowi*   *khi*   *tahari*
        [ora   maho-w-i]$_O$ khi   to-na-hari
        genipap(m)   fall-EPENTH-PTCP.m   see   3-AUX-NAR.m
        'He saw the fallen genipap fruit.'

(251)   *irimáo*   *shipo*   *tozai*   *koro*   *onai*
        [irimáo   shipo   to-na-$^\emptyset$za-i]$_O$ koro   o-na-i
        lemon(m)   squeeze   AWAY-AUX-IN-PTCP.m   throw   1SG-AUX-DECL.m
        'I'm throwing the squeezed lemon away.'

(252)   *[poo*   *pha*   *na-i]$_O$*   *khamanowi*   *Ø-hipa-i*
        manioc(m)   plant   AUX-PTCP.m   paca(m)   3-eat-DECL.m
        'A paca has eaten the planted manioc.'

(253)   *[bare*   *do*   *na-ni]$_O$*   *kazi*   *o-na-na*
        banana(f)   mash   AUX-PTCP.f   take   1SG-AUX-IFUT
        'I'm going to take (some) mashed banana.'

4.8 Quantifying verbs

The only basic native words for numbers in Kulina, *ohari-* 'be one' and *pama-* 'be two', are dynamic verbs. They can form the predicate of a main clause. (There are compound forms for three and four, but nowadays Portuguese numerals are used from three onwards. See section 7.6.1 for an example.)

(254)   *makhidehe*   *nokho*   *oharii*
        makhidehe   nokho   Ø-ohari-i
        man   eye.m   3-be.one-DECL.m
        'The man has only one eye.' Lit. 'The man's eye is one.'

(255)   *okhehedeni*   *pamai*
        okha   ehedeni   Ø-pama-i
        1SG-ASS   child   3-be.two-DECL.m
        'I have two children.' Lit. 'My children are two.'

Ohari- and *pama-* are frequently used as modifiers of an argument, taking the form of a relative clause with the subordinate suffix *-a/-e* (section 12.1), The final vowel of *pama-* is assimilated to the suffix *-e*. (This is a case of regular contact assimilation [section 2.6.2.1].)

(256) *hizama*   *Ø-ohari-a*   *Ø-zokhe-i*
    white.lipped.peccary   3-be.one-REL.m   3-die-DECL.m
    'One white-lipped peccary died.' Lit. 'A white-lipped peccary, which was one,
    died.'

(257) *amonehe oharie*   *boroniza*   *hirihiri*   *tozani*
    amonehe Ø-ohari-e   boroni=za   hiri-hiri   to-na-ᵒza-ni
    woman   3-be.one-REL.f square=LOC sing-REDUP 3.AWAY-AUX-IN-DECL.f
    'One woman is singing on the square.' Lit. 'A woman who is one is singing on
    the square.'

(258) *makhidehe*   *Ø-pama-a*   *khi*   *o-na-bakhi-hari*
    man   3-be.two-REL.m see   1-AUX-NSG.O-NAR.m
    'I saw two men.' Lit. 'I saw men who were two.'

(259) *amonehe*   *pamee*   *khi*   *onabakhini*
    amonehe   Ø-pama-e   khi   o-na-bakhi-ni
    woman   3-be.two-REL.f   see   1-AUX-NSG.O-DECL.f
    'I saw two women.' Lit. 'I saw women who were two.'

In Santa Júlia, most speakers do not distinguish masculine *oharia* and feminine
oharie. They use only *oharie*. This is probably due to a partial assimilation of the suffix
-a to the final /i/ of *ohari-*, which resulted in homonymy of the masculine and femi-
nine forms. For those speakers, *oharie* it thus not gender-marked (while masculine
pamaa and feminine *pamee* are distinguished by everybody). In the villages further
upriver, the distinction between *oharia* and *oharie* is preserved. My main consultant
in Santa Júlia, Ikobo, rejected my use of *ohari-e* as an attribute of a masculine noun,
insisting that it must be *ohari-a*, although he himself usually uses *oharie*, as in the
following example.

(260) *zophinehe*   *ohari-e*   *mahi*   *aha=ma*   *na-za*
    zophinehe   Ø-ohari-e   [mahi   aha=ma   na-za]ₐ𝒹ᵥ.𝒸ₗ
    shaman   3-be.one-REL   sun   DEIC.m=UCOM   AUX-TC

tokheziphahari
to-kha-↑za-↑pha-hari
3.AWAY-move.SG-IN-WATER-NAR.m

'At this time of the day, one shaman went into the water.' Lit. 'When the sun
was like this (i.e. as it is now), a shaman, being one, moved into the water.'

That the shaman in the example is male can be seen from the fact that the verb form *tokheziphahari* 'went into the water', which agrees with *zophinehe* 'shaman' in gender, has the masculine form *-hari* of the narrative suffix.

As regular dynamic verbs, *ohari-* and *pama-* can be used with verbal affixes such as directional suffixes (261), person prefixes (262), and the noun class prefix (263) – (264).

(261) *amonehe*   *izoniza*   *bedi*   *pamizai*
      amonehe   izoni=za   bedi   Ø-pama-↑za-i
      woman   belly-f=LOC   her.child   3-be.two-IN-DECL.m
      'The children in the woman's belly are two.' ('The woman is pregnant with twins.')

(262) *ipamee*   *ikahadihana*
      i-pama-e   i-kahadiha-na
      1NSG-be.two-REL.f   1NSG-sleep.NSG-IFUT
      'Let's sleep, the two of us.'

(263) *moto*   *kapamee*   *keedahonani*
      moto   Ø-ka-pama-e   Ø-ka-weda-hona-ni
      boat(f)   3-NCL-be.two-REL.f   3-NCL-move.DL-HITHER-DECL.f
      'Two boats are coming.'

Ohari- loses its initial vowel when it takes a prefix.

(264) *tahapa*   *kaharie*   *mitha*   *okanana*
      tahapa   Ø-ka-ohari-e   mitha   o-ka-na-na
      casting.net   3-NCL-be.one-REL.f   buy   1SG-NCL-AUX-IFUT
      'I am going to buy one casting-net.'

Two further quantifying verbs are *siba na-* 'be many' and *hikahara-* 'be many', which consists of the verb root *hika-* 'end' and the negative suffix *-hara/-↑hera*. These verbs are normally used as main clause predicates, not as noun phrase modifiers. The non-verbal quantifiers *bazima* and *wapima*, both meaning 'many, all', and *sibema*, meaning 'many', are used in the latter function (sections 7.6.2.1 and 7.6.2.2).

(265) *madiha*   *siba*   *ta-i*
      Kulina   be.many   3.AUX-DECL.m
      'There are a lot of Kulina.'

(266)   *i-kha*   *zama=za*   *Ø-hika-hara-i*
         1NSG-ASS   village/forest=LOC   3-end-NEG-DECL.m
         'There are lots of them in our area.' (referring to a palm species)

(267)   *pasho*   *hikeherani*
         pasho   Ø-hika-↑hera-ni
         rain   3-end-NEG-DECL.f
         'It's raining a lot.'

5 Stative verbs

Stative verbs are one of two types of verbs in Kulina, besides dynamic verbs (chapter 4). Stative verbs fall into three subclasses: a large majority which takes the auxiliary *na-*, a small group of inflecting stative verbs and a second small group which takes the auxiliary *hira-*. They will be discussed separately in the following sections. The differences between stative and dynamic verbs are summarised in section 5.8.

5.1 Stative verbs with auxiliary *na-*

As with non-inflecting dynamic verbs, the auxiliary *na-* immediately follows the stative verb.

(268) *owa=pi* *ima* *o-na-ni*
1SG=TOP.f fat 1SG-AUX-DECL.f
'I'm fat.'

(269) *tabakhora* *ti-na-ni*
bad/ugly 2-AUX-DECL.f
'You are bad/ugly.'

(270) *khara* *tai*
khara to-na-i
hard 3.AUX-DECL.m
'It is hard.'

(271) *o-kha* *oza* *oba* *to-ka-na-ni*
1SG-ASS house(f-ka) dirty 3-NCL-AUX-DECL.f
'My house is dirty.'

The third person prefix *to-* and the auxiliary *na-* are fused, as in example (270), unless they are separated by the noun class marker *ka-*, as in example (271).

to-na- > *ta-*
3-AUX   3.AUX

to-ka-na   no fusion
3-NCL-AUX

The second person prefix never fuses with the auxiliary. Thus, the auxiliary *na-* always has the following singular forms with stative verbs:

1SG	*o-na-*
2SG	*ti-na-*
3SG	*ta-* (< to-na-)
3SG with noun class marker	*to-ka-na-*

The same forms of the auxiliary are used with dynamic verbs to express a movement away from the deictic centre (section 4.2.3.2) and, in a few cases, to distinguish otherwise homonymous verbs. Otherwise, the second person prefix is fused with *na-* and the third person does not take the prefix *to-* after a verb. The regular paradigm of *na-* used with dynamic verbs has the following singular forms:

1SG	*o-na-*	
2SG	*ta-*	*(< ti-na-)*
3SG	*na-*	*(Ø-na-)*
3SG with noun class marker	*ka-na-*	*(Ø-ka-na-)*

As can be seen in the two paradigms, the first person singular of *na-* has the same form with dynamic and stative verbs, so that the surface structure of a clause does not show if it contains an intransitive dynamic verb or a stative verb.

stative verb:
(272)   *ibo*   *o-na-ni*
        lazy   1SG-AUX-DECL.f
        'I'm lazy.'

dynamic verb:
(273)   *hapi o-na-ni*
        bath 1SG-AUX-DECL.f
        'I'm bathing.'

But the difference becomes clear when the subject is changed to a different person.

stative verb:
(274)   *ibo*   *tai*
        ibo   to-na-i
        lazy   3-AUX-DECL.m
        'He is lazy.'

dynamic verb:
(275)   *hapi Ø-na-i*
        bath 3-AUX-DECL.m
        'He is bathing.'

5.1.1 Plural marking

The plural of stative verbs is marked by the morpheme *-khiri*. In the case of stative verbs which take the auxiliary *na-*, *-khiri* occurs between the main verb and the auxiliary. In the second person plural, the plural number is also marked by the prefix *ke-* on the auxiliary. The prefix *to-*, which occurs in the third person singular, is not used after *-khiri*, i.e. in the third person plural. Thus, the plural has the following paradigm:

1pl   MAIN VERB-*khiri i-na-*
2pl   MAIN VERB-*khiri ti-ke-na-*
3pl   MAIN VERB-*khiri na-*

(276)   *ia   bazima   khara-khiri   i-na-ni*
         1NSG   all   strong-PL   1NSG-AUX-DECL.f
         'We are all strong.'

(277)   *weshe-khiri   ti-ke-na-ni*
         clean-PL   2-NSG-AUX-DECL.f
         'You are clean.'

(278)   *ima-khiri   Ø-na-i*
         fat-PL   3-AUX-DECL.m
         'They are fat.'

5.1.2 Dual marking

Dual is marked by reduplication of the last syllable of the verb. The auxiliary has the same form as the plural in the first person and as the singular in the second and third person:

1DL   MAIN VERB-REDUP *i-na-*
2DL   MAIN VERB-REDUP *ti-na-*
3DL   MAIN VERB-REDUP *ta-*

(279)   *bika-ka   i-na-na*
         good-DL   1NSG-AUX-IFUT
         'The two of us are going to get well.'

(280) *weshe-she*   *ti-na-ni*
       clean-DL   2-AUX-DECL.f
       'You two are clean.'

(281) *Ø-pama-a*   *wizari-ri*   *ta-i*
       3-be.two-REL.m   tall-DL   3.AUX-DECL.m
       'Two of them are tall.'

5.1.3 Intensifier *bote*

The intensifier *bote* 'very' can be used immediately after a stative verb. In this case, the verb occurs without the auxiliary *na-*. *Bote* cannot co-occur with the plural marker *-khiri*.

(282) *tia*   *ima*   *bote*
       2   fat   very
       'You are very fat.'

(283) *makhidehe*   *zokhe*   *bote*
       man   be.a.good.hunter   very
       'The man is a very good hunter.'

When stative verbs are used with *bote* and thus without the auxiliary *na-*, the copula *ha-* may be used, immediately following the intensifier.

(284) *mato* *ephe* *wito*   *ta-i*,   *habo* *khara* *bote* *to-ha-za*
       taro   leaf   withered   3.AUX-DECL.m root   hard   very   3-COP-TC
       'The taro leaves are withered while its roots are very hard.'

Note that when used with a dynamic verb *-bote* is a suffix meaning 'almost' and requires an additional auxiliary *na-*, rather than replacing *na-* (section 4.2.4.3).

5.2 Inflecting stative verbs

5.2.1 Colour verbs

Colour verbs (which are further discussed in section 15.1) are usually used without an auxiliary. Instead, they are inflected, taking the feminine ending *-ni* or the masculine ending *-i*.

(285) *amonehe=kha   etero   weshe-ni*
      woman=ASS   clothes(f)   yellow-f
      'The woman's clothes are yellow.'

(286) *o-tetepi=kha   pako-ni*
      1SG-top-ASS   white-f
      'My shirt is white.'

The surface form of these stative verbs is the same as that of inflecting adjectives, example (287), and the declarative form of inflecting dynamic verbs, example (288).

(287) *koriza   ime-ni*
      lake   big-f
      'The lake is big.'

(288) *o-kha   ehedeni   Ø-wada-ni*
      1SG-ASS   child   3-sleep-DECL.f
      'My daughter is sleeping.'

But the plural of colour verbs (among other categories) shows that they are indeed stative verbs. It is marked by *-khiri*, a morpheme which only occurs with stative verbs. The colour verbs lose their ending and *-khiri* is followed by the auxiliary *na-,* so that the plural construction is identical with that of the stative verbs discussed in section 5.1 above.

(289) *madiha   bazima   mopo-khiri   Ø-na-i*
      Kulina   all   white-PL   3-AUX-m
      'All the Kulina are (painted) white.'

Two other points which set colour verbs apart from inflecting dynamic verbs are person marking and gender agreement with first and second person subjects. These points are of great importance because they reveal that the morphology of stative and dynamic verbs is fundamentally different and that neither of these two kinds of verb is a subclass of the other.

    Stative verbs, whether inflecting or not, do not have a person prefix slot. With a colour verb as the predicate, the first or second person is only indicated by the subject pronoun.

(290) *owa   naki   makho-w-i*
      1SG   also.f   red-EPENTH-m
      'I'm also (painted) red.' (male speaker)

(291) *tia   sowe-i*
       2   black-m
       'You are (painted) black.' (male addressee)

Dynamic verbs, however, are either inflecting, taking both person prefixes and finite suffixes, or they are non-inflecting and do not take either kind of affix, but are followed by an auxiliary which takes both.

    The stative verbs in examples (290) and (291) are in the masculine form, agreeing in gender with the male referents of the first and second person singular, respectively. This agreement pattern is different from that of dynamic verbs, which always take feminine forms when agreeing with the first or second person. (*Naki* 'also.f' in example [290] is feminine because this word, like dynamic verbs, is always feminine when agreeing with the first or second person.)

5.2.1.1 Intensifier *bote*
Colour verbs are not attested with the intensifier *bote*. A speaker consulted on the possibility of using *bote* with colours found its use acceptable if the verb is used without an inflectional suffix, like other stative verbs, which occur before *bote* without the auxiliary *na-*.

found acceptable:
(292) *makho   bote*
       red   very
       'very red'

5.2.1.2 Use of colour verbs with auxiliary *na-*
A further point that distinguishes inflecting stative verbs from inflecting adjectives is that in certain cases they do occur with the auxiliary *na-*. While stative verbs referring to colour are almost always inflected when the clause has an overt subject, *na-* is used when there is no other overt element in the clause.

(293) *pako   tani*
       pako   to-na-ni
       white   3-AUX-DECL.f
       'It is white.' or 'She is (painted) white.'

(294) *sowe   tai*
       sowe   to-na-i
       black   3-AUX-DECL.m
       'It is black.' or 'He is (painted) black.'

Besides, colour verbs are used with *na-* to denote properties other than colour. Both *weshe* 'yellow, white' and *mopo* 'white' can be used for 'clean'. *Pako* 'white' means 'blind' when referring to a person's eyes. *Sowe* 'black' in the sense of 'dirty' is only attested from the Juruá river.

(295)   *o-kha*   *etero*   *weshe*   *ta-ni*
       1SG-ASS   clothes(f)   white   3.AUX-f
       'My clothes are clean.'

(296)   *o-kha*   *etero*   *mopo*   *ta-ni*
       1SG-ASS   clothes(f)   white   3.AUX-f
       'My clothes are clean.'

(297)   *o-kha*   *etero*   *sowe*   *ta-ni*
       1SG-ASS   clothes(f)   black   3.AUX-f
       'My clothes are dirty.'

(298)   *amonehe*   *nokho-ni*   *pako*   *ta-ni*
       woman   eye-3f.ASS   white   3.AUX-f
       'The woman is blind.'

5.2.2 *Bika* 'good'

In the third person singular, the general stative verb for positive properties, *bika* 'good, beautiful, tasty, etc.', is often inflected in the same manner as colour verbs. But it is also used with the auxiliary *na-* and unlike in the case of colour verbs, this seems not to be related to a difference in meaning, as the following two examples show.

(299)   *bani bika-i*
       meat good-m
       'The meat is tasty.'

(300)   *zamatapa*   *bika*   *ta-i*
       nonflesh.food   good   3.AUX-DECL.m
       'The (nonflesh) food is tasty.'

When the subject of *bika* is a subordinate clause, *na-* is always used.

(301)   *[homo*   *hipa-ni]$_S$ *bika*   *ta-ni*
       spider.monkey   eat-nonfin.f   good   3.AUX-DECL.f
       'Eating spider monkey is good.'

The auxiliary *na-* is also used when the subject is not third person singular.

(302) *niha, bika ti-na=ki? owa=pi bika o-na-ni*
      hello good 2-AUX=Q.f 1SG=TOP.f good 1SG-AUX-DECL.f
      'Hello, how are you? I'm well.'

5.3 Stative verbs with auxiliary *hira-*

There is only a small number of stative verbs which take the auxiliary *hira-*. The attested words are listed below.

biri hira-	'big'
dako hira-	'hard; strong'
deke hira-	'tall'
khanaha hira-	'heavy' (used with auxiliary *na-* in some villages)
maitha hira-	'old'
mota hira-	'big; many'
nowe hira-	'non-existent, absent'
phawa hira-	'heavy'
phoko hira-	'hot'
witha hira-	'long, tall'

The auxiliary *hira-* is of a different nature than *na-*. While *na-* has a purely grammatical function, *hira-* and the stative verb it follows constitute a complex lexeme with a synchronically non-compositional meaning. Historically, however, the function of *hira-* must have been negation and it is quite likely to be composed of the negation suffix *-↑ra*, discussed below, and the copula/auxiliary *ha-*, whose vowel has been raised due to the suffix. Unlike *na-*, *hira-* can never be omitted and it always occurs immediately after the stative verb.

    Hira- occurs in its full form when it takes a person prefix or the noun class prefix *ka-*.

(303) *nowe o-hira-ni*
      absent 1SG-AUX-DECL.f
      'I'm not here.'

(304) *panera phoko Ø-ka-hira-ni*
      cooking.pot hot 3-NCL-AUX-DECL.f
      'The cooking pot is hot.'

(305) *ozabehe*   *mota*   *Ø-ka-hira-ni*
      communal.house   big   3-NCL-AUX-DECL.f
      'The communal house is big.'

But without a person or noun class prefix, i.e. with a third person subject which is not a member of the *ka*-noun class, *-hira* loses its first syllable and occurs as *-ra*.

(306) *bani*   *nowe*   *Ø-ra-hari*
      meat   non-existent   3-AUX-NAR.m
      'There's no meat.'

(307) *pasho*   *phoko*   *Ø-ra-ni*
      water   hot   3-AUX-DECL.f
      'The water is hot.'

Three of the stative verbs which take the auxiliary *hira-* can also be used with the auxiliary *na-*. One is attested as an inflecting stative verb, as well. Their meanings with the two different auxiliaries (or as an inflecting verb) show why a synchronic decomposition of the meanings of the stative verb stem and the auxiliary *hira-* is not possible:

khanaha rani	'it is heavy'	*khanaha tani*	'it is heavy'
phawa rani	'it is heavy'	*phawa tani*	'it is light'
phoko rani	'it is hot'	*phoko tani/phokoni*	'it is warm'

Khanaha 'heavy' has the same meaning with both auxiliaries. In some villages, one auxiliary is used and in the remainder the other. But *phawa* means 'light' with *na-* and the opposite, 'heavy', with *hira-*.

    For *phoko*, a distinction of degree is made, which can be expressed lexically in English with the adjectives 'warm' for *phoko ta-* and *phoko-* and 'hot' for *phoko ra-*.

    The form *phoko ta-* is only attested from the Juruá. Ikobo, one of my main consultants in Santa Júlia, accepts inflected *phoko-* only for soup, for which he makes the following distinction:

(308) *phehene*   *phoko-w-i*
      soup   hot-EPENTH-m
      'The soup is warm.'

(309) *phehene*   *phoko*   *Ø-ra-i*
      soup   hot   3-AUX-DECL.m
      'The soup is hot.'

This strict limitation for the use of inflected *phoko-* does not exist for everybody in Santa Júlia. Once, when a young girl walked by, a young man commented *"mashi phokowi"* 'hot vagina' to me. Asked about that utterance, Ikobo said that it should be *mashi phoko rai* and that *phokowi* is only for soup.

While *khanaha, phawa* and *phoko* are the only attested stative verbs which can take either *hira-* or *na-* as their auxiliary, several other stative verbs which take *hira-* are related to words of other word classes.

In spite of belonging to a different word class, *dako hira-* 'hard' is the antonym of the verb *dako* 'to be soft'. *Biri* 'big' is related to the adjective *biriharo/birihari* 'small kind, lesser'. *Witha* 'tall' may be related to *witha*, the singular stem of the suppletive verb 'sit'. Given the shortening effect of a sitting position, all of these stative verbs have a meaning which is opposite to that of the related words, similar to the relation between *phawa ra-* 'heavy' and *phawa na-* 'light'. In the light of these antonymic relations and the fact that **ha-↑ra-* is a plausible etymology for *hira-*, it is highly likely that *hira-* originally had a negating function.

A possible explanation for the modern synonymy of *khanaha rani* 'it is heavy' and *khanaha tani* 'it is heavy' is analogy. *Khanaha tani* is synonymous with *phawa rani* 'it is heavy'. Therefore, some speakers may have started to use the former with the same auxiliary as the latter, at a time when *hira-* was no longer felt to be a negator.

5.3.1 Plural marking

The plural marker *-khiri* occurs immediately after the auxiliary *hira-*. *-khiri* must be followed by an additional auxiliary *na-*, which takes the TAM-suffix. If the auxiliary *hira-* doesn't have a person or noun class prefix and thus loses its first stem syllable, it consists merely of the monosyllabic form *ra*, which is cliticised to the preceding verb stem.

(310)   *makhidehe*   *wapima*   *dako=ra-khiri*   *na-i*
       man   all   strong=AUX-PL   AUX-DECL.m
       'All the men are strong.'

5.3.2 Dual marking

Dual is marked by the reduplication of the last syllable of the verb.

(311)   *ia=pi*   *i-pame-e*   *dako-ko*   *i-hira-ni*
       1NSG=TOP.f   1NSG-two-f   strong-DL   1NSG-AUX-DECL.f
       'We two are strong.'

5.3.3 Intensifier *bote*

The intensifier *bote* occurs immediately after the auxiliary *hira-*, which does not take a TAM-suffix in this case. If the auxiliary doesn't have a prefix either, it is cliticised to the preceding verb stem.

(312) *siba   phawa=ra   bote*
       stone   heavy=AUX   very
       'The stone is very heavy.'

5.4 Attributive use of stative verbs

Inflecting as well as non-inflecting verbs can be used as modifiers within a noun-phrase.

5.4.1 Inflecting stative verbs

Inflecting stative verbs take the same suffixes *-i* (m) and *-ni* (f) in attributive as in predicative function. An attributive stative verb is a constituent of the noun phrase it modifies.

(313) *owa=pi   [oba   bika-ni]$_O$ o-kahi-ni.*
       1SG=TOP.f   canoe   good-f   1SG-have-DECL.f
       'I have a good canoe.'

(314) *[etero   makho-ni]$_O$ mitha   o-na-ni*
       clothes   red-f   buy   1SG-AUX-DECL.f
       'I have bought red clothes.'

5.4.2 Non-inflecting stative verbs

A non-inflecting stative verb which modifies a noun phrase forms the head of a relative clause (section 12.1). Its auxiliary takes the relative suffix *-a/-e*.

(315) *paria   [bazi-ra   te-e]$_{REL.CL}$ apa   o-na-na*
       manioc.flour   much-NEG   3.AUX-REL.f   eat   1SG-AUX-IFUT
       'I'm going to eat a bit of manioc flour.'

(316) *birihari*   [*okashasha*   *ta-a*]$_{REL.CL}$ *Ø-maho-w-i*
      acuri.palm   tasty   3.AUX-REL.m   3-fall.from.tree-EPENTH-DECL.m
      'The tasty acuri palm fruits fell from the tree.'

As in main clauses, the intensifier *bote* (section 5.1.3) can be used with stative verbs. Its use leads to the omission of the auxiliary *na-*, but not of the auxiliary *-(hi)ra*. As is typical of frequently used intensifiers, it is semantically bleached and can be seen as simply a grammatical morpheme that is needed to make a sentence grammatical.

(317) *hado*   [*koma*   *bote*]$_{REL.CL}$ *khi-de*   *hawi*   *Ø-ha-ni*
      bamboo   poisonous   (very)   look.for-INF   move.PL   1NSG-AUX-DECL.f

      hini
      NFUT

      'We will go and look for poisonous bamboo.'

(318) *oza*   [*oba*   *bote*]$_{REL.CL}$ *botha*   *o-ka-na-na*
      house   dirty   (very)   burn   1SG-NCL-AUX-IFUT
      'I'm going to burn the dirty house down.'

(319) *amonehe*   [*witha=ra*   *bote*]$_{RC}$ *o-kahi-na*
      woman   tall=AUX   (very)   1SG-marry-IFUT
      'I'm going to marry a tall woman.'

5.5 Negative suffix -↑*ra*

The productive morpheme -↑*ra* can be suffixed to both dynamic and stative verb stems. If the vowel preceding -↑*ra* is /a/, it is raised to /e/. This phonological rule applies recursively. The resulting word is always a stative verb with the opposite meaning of the word stem. It it thus possible to describe -↑*ra* as a derivational negation suffix which turns dynamic verbs into stative ones. But since dynamic verbs can also be converted into stative verbs without taking -↑*ra*, the suffix can as well be described as attaching exclusively to stative verbs, including those which have been converted from dynamic ones. Even in this case, however, -↑*ra* must be considered a derivational suffix. The inflectional negation of stative verbs is marked on the auxiliary.

In some cases, the word stem from which a stative verb with the suffix -↑*ra* is derived is not attested as a free form. One example is *pota-* 'big'. However, since this stem occurs not only in the stative verb *potera* 'small', but also in the adjective *pota-haro/pota-hari* 'greater' (section 6.1), it is clear that *potera* 'small' can be segmented into *pota-↑ra* 'big-NEG'.

(320) *awi   potera   tani*
　　　 awi   pota-↑ra   to-na-ni
　　　 tapir   big-NEG   3-AUX-DECL.f
　　　 'The tapir is small.'

5.6 Complement-taking stative verbs

Some stative verbs take one or two complements. A complement can be
–　an unmarked noun phrase,
–　a noun phrase with the associative particle *kha*,
–　a noun phrase with the postposition *za*,
–　a clause with the verb in the infinitive.

The basic position of the complement is before the predicate, but the actual constituent order depends on the information structure of a clause (chapter 11). In the following sections, the various stative verbs attested with complements are discussed individually.

5.6.1 *Akho* 'stingy' and *akhora* 'generous'

The stative verbs *akho* 'stingy' and *akhora* 'generous' can take two noun phrase complements. The first, marked by *kha*, is the object of someone's meanness or generosity. The second, marked by *za*, is the person in relation to whom the behaviour is shown.

(321) *owa=za   zamatapa=kha   akho   ti-na-ni*
　　　 1SG=CMPL   food=CMPL   mean   2-AUX-DECL.f
　　　 'You are stingy to me with food.'

(322) *ti-kha   zamatapa=kha   akho-ra   ti-na-ni*
　　　 2-ASS   food=CMPL   mean-NEG   2-AUX-DECL.f
　　　 'You are generous with your food.'

(323) *aba   kokoro=kha   akho   tai*
　　　 aba   kokoro=kha   akho   to-na-i
　　　 fish   hook=CMPL   stingy   3-AUX-DECL.m
　　　 'He is stingy with fish-hooks.'

The verbs can also be used without any complement.

(324)   *amonehe   akho   tani*
     amonehe   akho   to-na-ni
     woman   stingy   3-AUX-DECL.f
     'The woman is stingy.'

5.6.2 *Dishera* 'like' and *hipa* 'want; like'

Dishera 'like' and *hipa* 'want; like' can only take one complement. This complement can be either a noun phrase or an infinitival clause. If the complement is a noun phrase, it can be marked either by *kha* or by *za*. No difference in meaning has been found between the use of the two markers. The stative verb *hipera* 'not want; not like', which is derived from *hipa* with the suffix -↑*ra* (section 5.5), is used with the same types of complements as *hipa* and *dishera*.

Examples with complement noun phrases:
(325)   *[zabisho   pa-hari=za]   dishera   o-na-ni*
     boy   DEM-m=CMPL   like   1SG-AUX-DECL.f
     'I like that boy.'

(326)   *[poo   phehe-ne=kha]   dishera   o-na-ni*
     sweet.manioc   liquid-m=CMPL   like   1SG-AUX-DECL.f
     'I like caiçuma (a traditional beverage made from sweet manioc).'

(327)   *kasasaza   hipera   o-na-ni*
     kasasa=za   hipa-↑ra   o-na-ni
     liquor=CMPL   like-NEG   1SG-AUX-DECL.f
     'I don't like liquor.'

Examples with complement clauses:
(328)   *hipa   o-na-ni   [bora   pha-de]*
     like   1SG-AUX-DECL.f   ball   hit-INF
     'I like playing soccer.'

(329)   *hipa-de   dishera   o-na-ni*
     eat-INF   like   1SG-AUX-DECL.f
     'I like eating.'

Dishera, *hipa* and *hipera* can also be used without an overt complement, but this has to be regarded as complement omission since wanting and liking always require a semantic object.

(330)   *hipera*   *onani*
        hipa-↑ra   o-na-ni
        want-NEG   1SG-AUX-DECL.f
        'I don't want it.' or 'I don't want to.'

5.6.3 *Naato* 'know' and *shamo* 'not know'

The complement of *naato* 'know' and *shamo* 'not know' can be either an unmarked noun phrase or an infinitival subordinate clause (section 12.3). While a transitive verb (or its auxiliary) can agree in gender either with its subject or with its object, the auxiliary of a complement-taking stative verb always agrees with the clause subject. This can be seen in example (333), which has a first person subject and a third person complement and shows gender agreement of the auxiliary *na-* with the subject *ia* 'we', while a transitive verb with a first person subject and a third person direct object always agrees in gender with the object. This obligatory gender agreement with the subject (section 3.5.1.2) is the main reason for not considering the complement of a stative verb to be a direct object.

Complement clauses:
(331)   *zodo-de*   *naato*   *o-na-ni*
        write-INF   know   1SG-AUX-DECL.f
        'I know how to write.'

(332)   *tia=pi*   *shamo*   *ti-na-ni*   *[karia*   *athi*   *wati-de]*
        2=TOP.f   not.know   2-AUX-DECL.f   white.people language.m speak-INF
        'You can't speak Portuguese.'

Complement noun phrases:
(333)   *ia=pi*   *naato*   *i-na-haro*   *Naoza*
        1NSG=TOP.f   know   1NSG-AUX-NAR.f   NAME(m)
        'We know Naoza.'

(334)   *[karia*   *athi]*   *shamo*   *ta-i*
        white.people language.m not.know   3.AUX-DECL.m
        'He doesn't know Portuguese.'

Like other stative verbs, *naato* 'know' and *shamo* 'not know' take the plural marker *-khiri*.

(335) *tia-deni*   *shamo-khiri*   *ti-ke-na-ni*
       2-NSG   not.know-PL   2-NSG-AUX-DECL.f
       'You don't know (that).'

Naato and *shamo* can be used without a complement to mean 'knowledgeable' and 'ignorant' respectively.

(336) *shamo-khiri*   *ti-ke-na-ni*
       ignorant-PL   2-NSG-AUX-DECL.f
       'You are ignorant.'

5.6.4 *Zokhe* 'successful at hunting or fishing' and *more* 'unsuccessful at hunting or fishing'

The stative verb *zokhe* 'successful at hunting or fishing' is homonymous with the inflecting dynamic verb *zokhe-* 'die'. Its antonym is *more* 'unsuccessful at hunting or fishing'. These verbs can take game or fish, marked by *kha*, as a complement, but are also often used without a complement, as generic statements.

(337) *aba=kha*   *zokhe*   *o-na-ni*
       fish=CMPL   successful.at.fishing   1SG-AUX-DECL.f
       'I'm successful at fishing.'

(338) *aba=kha*   *more*   *ti-na-ni*
       fish=CMPL   unsuccessful.at.fishing   2-AUX-DECL.f
       'You are unsuccessful at fishing.'

5.7 Conversion

Stative verbs can be converted into dynamic ones and vice versa. This process is highly productive in both directions.

5.7.1 Conversion of stative verbs into dynamic verbs

Stative verbs, which usually denote a property or state, can be converted into inflecting dynamic verbs denoting a change of state. In the third person, these derived verbs take the prefix *to-*.

(339) *o-tabakhora-ni*
       1SG-bad-DECL.f
       'I have fallen ill.'

(340) *o-kha   amonehe   to-bika-ni*
       1SG-ASS   woman   3-good-DECL.f
       'My wife has got well.'

Compare (340) to the inflected stative verb in (341), without the prefix *to-*.

(341) *a-haro   zowato   bika-ni*
       this-f   girl   good-f
       'This girl is pretty.'

As expected, there is no prefix on the stative verb in (341) since stative verbs do not have a prefix slot. In order to add a person prefix, the inflecting stative verb can be turned into a non-inflecting one, as shown in the following example, which renders (341) into the second person.

(342) *tia=pi   bika   ti-na-ni*
       2=TOP.f   good   2-AUX-DECL.f
       'You are pretty.'

These are the paradigms of the stative verb *bika* 'good' and the dynamic verb *bika* 'get well' in the declarative form.

stative verb *bika* 'good'		dynamic verb *bika-* 'get well'	
1SG	*bika o-na-ni*	1SG	*o-bika-ni*
2SG	*bika ti-na-ni*	2SG	*ti-bika-ni*
3SG.m	*bika-i / bika ta-i*	3SG.m	*to-bika-i*
3SG.f	*bika-ni / bika ta-ni*	3SG.f	*to-bika-ni*
1DL	*bika-ka i-na-ni*		
2DL	*bika-ka ti-na-ni*		
3DL.m	*bika-ka ta-i*	1NSG	*i-bika-ni*
3DL.f	*bika-ka ta-ni*	2NSG	*ti-bika-mana-ni*
		3NSG.m	*to-bika-mana-i*
1PL	*bika(-khiri) i-na-ni*	3NSG.f	*to-bika-mana-ni*
2PL	*bika-khiri ti-ke-na-ni*		
3PL.m	*bika-khiri na-i*		
3PL.f	*bika-khiri na-ni*		

Besides the productive conversion discussed up to now, there is an idiosyncratic case of stative to dynamic verb conversion: the stative verb s*hiri* 'be cold' is used as a dynamic verb with an experiencer subject.

(343)   *pasho   shiri   ta-ni*
      water   cold   3.AUX-DECL.f
      'The water is cold.'

(344)   *o-shiri-ni*
      1SG-cold-DECL.f
      'I am cold.'

English uses the same construction in examples (343) and (344). Many other European languages require a different construction for the equivalent of (344), e.g. an experiencer dative subject (Haspelmath 2001), as in German *Mir ist kalt*. Completely different constructions are used e.g. in French *J'ai froid* and Portuguese *Estou com frio*. Kulina is similar to those European languages in not allowing the use of the literal translation of English 'I am cold.', instead requiring a special construction.

Unlike derived dynamic verbs denoting a change of state, the verb *shiri-* 'to feel cold' does not take the prefix *to-* in the third person, as the following example shows, which has a third person subject used in the same construction as (344).

(345)   *o-kha   ehedeni   Ø-shiri-i*
      1SG-ASS   child   3-cold-DECL.m
      'My son is (feeling) cold.'

Shiri 'be cold' is the only verb with which this type of stative-to-dynamic conversion is attested. The Kulina expression for 'I'm hot' is literally 'My skin is hot.' with the stative verb *phoko (hi)ra-*.

(346)   *owapi   phokorani*
      o-wapi   phoko=Ø-hira-ni
      1SG-skin.m   hot=3-AUX-DECL.f
      'I'm hot.'

5.7.2 Conversion of dynamic verbs into stative verbs

Most dynamic verbs typically refer to specific actions or processes which are going on at present or happened in the past or will or may occur in the future. But a sentence like *tortoises walk slowly* does not refer to any particular action. It has basically the same meaning as *tortoises are slow walkers* or simply *tortoises are slow* and refers to a

property of tortoises. When inflecting dynamic verbs are used to describe a property or characteristic, they are converted into stative verbs, taking the auxiliary *na-*. Verb stems can be converted together with directional affixes. As the two examples below show, the singular form of suppletive verb stems (section 4.5) is used in this type of clause.

(347)   *zanikowa*   *ohiza*   *kha-riza*   *ta-i*
       tortoise   slowly   move.SG-AROUND   3.AUX-DECL.m
       'Tortoises walk slowly.'

(348)   *awa=za*   *witha-ri*   *ta-i*   *akawa*
       tree=LOC   sit.SG-RAISED.SURFACE   3.AUX-DECL.m   leaf.frog
       'Leaf frogs sit on trees.'

5.8 Distinguishing stative and dynamic verbs

As mentioned at the beginning of this chapter, the surface structure of clauses containing stative verbs and intransitive dynamic verbs is sometimes identical. Besides, the fact that stative and dynamic verbs can readily be converted into each other lets them appear barely distinguishable at first blush. But as the various clear-cut morphosyntactic differences listed below show, their convertibility does not compromise their status as separate word classes.

a) Person marking
Inflecting dynamic verbs have a person prefix slot (section 4.2.1.1), inflecting stative verbs don't (section 5.2.1).

b) Plural marking
The plural marker of stative verbs is *-khiri* (section 5.1.1). Dynamic verbs have the subject plural markers *ke-* and *-mana* (section 4.2.1.2).

c) Gender agreement
Transitive dynamic verbs agree in gender either with their subject or with their object (section 3.5.1.2). Complement-taking stative verbs always agree in gender with their subject (section 5.6.3).

d) Infinitive
The infinitive suffix *-de* can be attached not only to inflecting dynamic verbs, but also to non-inflecting ones (which do not take an auxiliary when used with this suffix, section 4.6). Stative verbs, however, cannot take the suffix *-de*.

e) Degree modifier *bote*

The morpheme *bote* means 'very' when modifying a stative verb (section 5.1.3) and 'almost' when modifying a dynamic verb (section 4.2.4.3). Besides showing a semantic distinction, its morphosyntactic behaviour is also different with these two word classes.

When *bote* 'very' is used after a stative verb, the auxiliary *na-* is omitted. When *bote* 'almost' is used after a dynamic verb, an additional auxiliary *na-* is required. Thus, while both the majority of dynamic verbs and the majority of stative verbs are followed by one instance of *na-* when they are used without *bote*, there are two instances of *na-* after a dynamic verb and none after a stative verb when *bote* occurs.

It remains to be shown if this is a case of polysemy or homonymy, but in either case *bote* delivers two arguments for distinguishing dynamic and stative verbs. If it is a case of homonymy, the restriction of *bote* 'almost' to the use with dynamic verbs is one argument and the restriction of *bote* 'very' to the use with stative verbs is a separate argument. If it is a case of polysemy, the different meanings of the modifier with dynamic and stative verbs is one argument, and its different morphosyntactic behaviour with the different word classes is a second argument.

f) Prefix *to-*

When the prefix *to-* occurs on the third person forms of inflecting dynamic verbs or the auxiliary *na-* after a non-inflecting dynamic verb, it has one of the following functions:

1. to express movement away from the deictic centre (section 4.2.3.2)
2. to express a change of state (only in dynamic verbs derived from stative verbs, section 5.7.1)
3. to distinguish otherwise homonymous verbs (section 4.5)

When used with a stative verb, *to-* is a part of the paradigm which obligatorily occurs on the third person singular (and dual) form of the auxiliary *na-* (section 5.1). It cannot be used on the third person plural of *na-* (when used with a stative verb), nor on an inflecting stative verb.

g) Fusion of *ti-na-*

The second person prefix *ti-* and the auxiliary *na-* are usually fused to *ta-* after a dynamic verb (section 4.2.1.1). The fusion is only omitted to express movement away from the deictic centre (and maybe to distinguish otherwise homonymous verbs. This needs to be verified.) After a stative verb, *ti-na-* is never fused (section 5.1).

h) First and second person gender agreement

Inflecting dynamic verbs, as well as auxiliaries of non-inflecting ones, always take feminine forms when they agree with a first or second person argument (section 3.5.1.3). This is also the case with the auxiliaries of non-inflecting stative verbs. But inflecting

stative verbs behave like gendered adjectives in this respect. They occur in the masculine form when agreeing with a male first or second person subject (section 5.2.1).

i) Inflecting and non-inflecting lexemes
Dynamic verbs fall into three inflectional classes (section 4.1.1):
1. inflecting verbs
2. non-inflecting verbs which take the auxiliary *na-*
3. non-inflecting verbs which take the auxiliary *ha-*
   There is no clear semantic motivation for class membership.

The situation appears similar with stative verbs, which also show three forms of inflection:
1. inflection of the stative verb (section 5.2)
2. stative verb followed by the auxiliary *na-* (section 5.1)
3. stative verb followed by the auxiliary *hira-* (section 5.3)

But only the third type of inflection of stative verbs actually constitutes an inflectional class. As for the first two inflection types, there is only a tendency of a few stative verbs to prefer main verb inflection and of the majority of stative verbs to prefer the use of the auxiliary. Though they are not a separate class, there is a semantic feature shared by most stative verbs which prefer inflection: They denote colours. But they can be used with the auxiliary *na-* to express other meanings (section 5.2.1.2).

6 Adjectives

6.1 Members of the adjective class

While most words denoting properties are stative verbs (chapter 5), Kulina also has a small closed class of adjectives, which fulfils the typical functions of such a word class (Dixon 2004c: 10). Adjectives can function as noun modifiers (section 6.2) or as complements of copula and verbless clauses (section 6.4). One adjective, *owaa/onii* 'other' can also be a noun phrase head (section 6.3).

Adjectives are either primary or secondary (i.e. derived). The latter are nouns which can function secondarily as adjectives. The known members of the class are listed below. Some of these adjectives have a masculine and a feminine form (separated by a slash below), others don't.

<u>primary adjectives</u>

bedi / bedeni	'small; young (= a child)'
birihari / biriharo	'lesser' (in animal names)
birizati	'unripe'
bote	'old' (inanimates)
hadai / hadani	'old' (animates and inanimates)
imei / imeni	'big'
owaa / onii	'other'
potahari / potaharo	'greater' (in animal names)
siri	'improper, faulty, damaged'
tabira	'unmarried'
tati / tatini	'unripe'
zati	'new'

<u>secondary adjectives</u>

amonehe	'female'
makhi(dehe)	'male'
zabisho / zowato	'young (= not old)'

6.1.1 Primary adjectives

Several of the primary adjectives are homonymous with words in other word classes.

Three adjectives are homonymous with kinship terms (section 3.2). The semantic correspondences are so regular and transparent that it is obvious that the words are related. *Imei* 'his/her father' and *imeni* 'his/her mother' are homonymous with the masculine and feminine forms of 'big', respectively. *Bedi* 'his/her son' and *bedeni*

'his/her daughter' have the same forms as the adjective 'small'. And *owaa* 'his/her sister' and *onii* 'his/her brother' are homonymous with the adjective 'other'.

The adjective *hadai/hadani* 'old' is homonymous with the declarative form of the verb *hada-* 'to ripen'. Even the surface structures of simple sentences with the adjective and the verb are identical.

(349) *amonehe*   ***hada-ni***
       woman   old-f
       'The woman is old.'

(350) *bare*   ***hada-ni***
       banana   ripen-DECL.f
       'The banana has ripened./The bananas have ripened.'

But the difference between the underlying structures of examples (349) and (350) becomes obvious when additional information is encoded in the sentences.

(351) *amonehe*   ***hada-ni***   *to-ke-he-ra-ni*   *wapima*
       woman   old-f   3-PL-become-PL-DECL.f   all
       'All the women have grown old.'

(352) *bare*   ***hade-e***   *hika-ni*
       banana   ripen-NFIN.f   complete-DECL.f
       'All the bananas have ripened.'

While example (349) describes a state and does not need a copula, example (351) refers to a change of state and needs the copula *ha-* 'be, become'. This construction would be impossible if *hadani* was a verb in (351).

Examples (350) and (352) both refer to a change of state. The only difference in meaning is that (352) explicitly refers to all the members of the set in question. This is expressed through the secondary verb *hika-* 'complete', which can only be used together with another verb in this construction. It requires the main verb, *hada-*, to occur in a non-finite form, whereas it would be impossible to use an adjective with a non-finite suffix. The adjective *hadai/hadani* 'old' and the verb *hada-* 'ripen' are thus clearly distinguishable on morphosyntactic grounds.

Besides the adjective 'old', there are two other morphemes which have the form *bote*. One of them is a modifier with an intensifying meaning (translatable as 'very', section 5.1.3), which can be used with adjectives and stative verbs. Restrictions on the use of *bote* 'very' suggest that it is related to *bote* 'old'. While *bote* 'very' can be used with all stative verbs if it is semantically reasonable, it can only modify two adjectives, *hadai/hadani* 'old' and *imei/imeni* 'big'. One can say *hadai bote* 'very old', but not *bote bote 'very old'. Nor is it possible to say *zati bote 'very new'.

The third morpheme with the form *-bote* is a suffix meaning 'almost', which is used exclusively on dynamic verbs (section 4.2.4.3). This suffix may or may not have the same origin as 'very' and 'old', but it is now clearly a distinct morpheme from 'very'. The semantic, morphological, and distributional differences between *bote* 'very' and *-bote* 'almost' are important arguments for positing stative and dynamic verbs as different word classes (section 5.8).

The adjective *tati/tatini* 'unripe' has the same forms as the inalienably possessed noun *tati/tatini* 'his/her head'. Both lexemes have Jarawara cognates of the non-inflecting form *tati*. The Jarawara adjective *tati* is translated by Dixon (2004a: 335) and Vogel (2005: 159) as 'full-sized but not yet ripe', referring to fruits. Since a typical full-sized fruit is almost spherical, like a head, shape is the semantic link to 'head' and the words for 'unripe' and 'head' may be related, though they must already have existed as separate lexemes in Proto-Madi-Madihá, the common ancestor language of Kulina and Jarawara, given the close lexical correspondences between the two modern languages.

6.1.2 Secondary adjectives

Amonehe means 'woman, wife, female (noun)' and *makhi* or *makhidehe* means 'man, husband, male (noun)'. These nouns can also function as adjectives without changing their meaning, specifying the sex of the referent as 'female' or 'male'.

Zabisho and *zowato* mean 'boy' and 'girl', respectively. (Some speakers say that these words refer only to people of nubile age, but others also use them for babies.) While these words always specify the biological sex of a human referent, whether they are used as nouns or as adjectives, their function is of a more grammatical nature when they are used as adjectives with animal referents. Each noun denoting an animal has a grammatical gender and when a speaker does not wish to express specific information about the sex of an animal referent, agreement in the clause is with the grammatical gender of the noun (rather than with the sex of the referent). Thus, *zabisho* is used for 'young' with masculine animal nouns and *zowato* with feminine animal nouns. In this case, *zabisho* and *zowato* do not differ semantically, they are only two suppletive forms of an adjective meaning 'young'.

(353) *zomahi   zabisho*
      jaguar(m)   young.m
      'a young jaguar'

(354) *awi   zowato*
      tapir(f)   young.f
      'a young tapir'

It is possible, however, to use animal nouns with the non-default gender to specify the sex of the animal in question. In this case, the adjectives *zabisho* and *zowato* indicate sex as well as age.

(355) *zomahi   zowato*
       jaguar(m) young.f
       'a young female jaguar'

(356) *awi   zabisho*
       tapir(f) young.m
       'a young male tapir'

6.2 Adjectives as modifiers

All adjectives can be used as modifiers of a noun in a noun phrase. As such, they follow the head noun.

(357) *[oza   **siri**=za]*$_{NP}$ *o-madi-haro*
       house(f)   damaged=LOC   1SG-live-NAR.f
       'I'm living in a damaged house.'

(358) *na-haro   [o-kha   ima   **onii**=pi]*$_{NP}$
       this-f   1SG-ASS   story(f)   other.f=TOP.f
       'This is my other story.'

(359) *[etero   **bote**]*$_{NP}$ *mitha   o-ne-hera-ni*
       clothes(f)   old   buy   1SG-AUX-NEG.f-DECL.f
       'I haven't bought used clothes.'

6.3 Adjectives as heads of noun phrases and modifiers of headless noun phrases

Owaa/onii 'other' is the only primary adjective which can be used as the head of a noun phrase. It can also be used in two contrasting clauses, in which case the first *owaa/onii* means 'one' and the second 'the other'.

(360) *[**owaa**=pa]*$_{S}$ *Ø-witha-ri-hari*   *[**owaa**=pa]*$_{S}$ *Ø-wa-hari*
       other=TOP.m 3-sit-RAISED.SURFACE-NAR.m   other=TOP.m 3-stand-NAR.m
       'One is sitting (on a chair), the other is standing.'

Makhi(dehe) 'man; male', *amonehe* 'woman; female', *zabisho* 'boy; young' and *zowato* 'girl; young' can also function as head of a noun phrase, but they must then be interpreted as nouns.

Other adjectives are sometimes used as attributes of headless noun phrases, but this use requires a clear context. (361a) is a possible sentence, but without a clear referent of *bedi* 'small', it will be interpreted as (361b).

(361a) [Ø   ***bedi***]*ₙₚ*   *dama*   *i-na-i*
        NP-HEAD   small.m   catch   3-AUX-DECL.m
        'He/She caught the small one.'

(361b) ***bedi***   *dama*   *i-na-i*
        his/her.son   catch   3-AUX-DECL.m
        'He caught his son./She caught her son.'

6.4 Adjectives as complements of copula clauses and verbless clauses

6.4.1 Primary adjectives

Like nouns, primary adjectives can be used as complements of verbless clauses and of clauses with the copula *ha-*.

(362) *khamanowi*   ***bedi***
       paca   small.m
       'The paca is small.'

(363) *owa=pi*   ***tabira***   *o-ha-ni*
       1SG=TOP.f   unmarried   1SG-COP-DECL.f
       'I'm not married.'

(364) *okha*   *sapato*   ***zati***,   Ø   ***siri***   *harai*
       o-kha   sapato   ***zati***,   Ø   ***siri***   Ø-ha-hara-i
       1SG-ASS   shoe   new,   PRO   damaged   3-COP-NEG.m-DECL.m
       'My shoes are new, they aren't damaged.'

6.4.1.1 *Potahari/potaharo* and *birihari/biriharo*
The adjectives *potahari/potaharo* and *birihari/biriharo* correspond to the English adjectives 'greater' and 'lesser' in biological species names such as 'greater long-eared bat' and 'lesser long-eared bat', 'greater stick-nest rat' and 'lesser stick-nest rat', etc.

(365) *sibore*　　　　　*pota-haro*
　　　Amazon.river.turtle　greater-f
　　　'giant Amazon river turtle'

(366) *shibiri*　　　*pota-hari*
　　　bird.of.prey　greater-m
　　　'harpy eagle'

(367) *washori*　*pota-hari*
　　　tinamou　greater-m
　　　'great tinamou'

(368) *washori*　*biri-haro*
　　　tinamou　lesser-f
　　　'white-throated tinamou'

Potahari/potaharo and *birihari/biriharo* can only be used with the names of animals and plants of which there are big and small kinds. They usually occur as attributes but it is also possible to use them on their own as copula complements or verbless clause complements.

6.4.2 Secondary adjectives

The secondary adjectives *makhi(dehe)* 'male' and *amonehe* 'female' can be complements in their primary function as nouns. It is not possible to use them distinctly as adjectives in the same position.

(369) *[madiha*　*a-haro]*　**amonehe**
　　　person　　that-f　　woman/(female).
　　　'That person is a woman./(That person is female.)'

In the case of *zabisho* 'boy' and *zowato* 'girl', which can also function as a suppletive adjective 'young', a distinction can be drawn between the adjective and the nouns functioning as complements, but it is blurred and only based on semantics, not on grammatical differences.

(370) *madiha*　*a-hari=pa*　　**zabisho**
　　　person　that-m=TOP.m　boy
　　　'That person is a boy.'

(371) *o-kha*   *ehedeni=pa*   **zabisho**   *to-ha-i*
       1SG-ASS   child=TOP.m   young.m   3-AUX-DECL.m
       'My son is young.'

In example (370), the speaker says that the person he sees is a young male, not an old person or a female. If there is no context which suggests a contrastive interpretation 'young, not old', then the natural interpretation of *zabisho* is as a noun 'boy', which is the primary function of the word and includes two pieces of information, 'young' and 'male', whereas in its adjectival function, *zabisho* explicitly only refers to the age of the person, though it inevitably also specifies the sex of a human referent. In (371), the speaker gives one piece of information about his child, namely that he is young. If he wanted to say that the child is male, he would say the following:

(372) *o-kha*   *ehedeni=pa*   **makhidehe**
       1SG-ASS   child=TOP.m   man/male
       'My child is male.'

Since the question at issue is the son's age, not his sex, *zabisho* in (371) can be interpreted as the adjective 'young'.

6.5 Agreement with first and second person subjects

When an adjective agrees with the first or second person, the gender that the adjective takes is determined by the sex of the referent of the first or second person, i.e. inflecting adjectives take the masculine when they refer to a male and the feminine when they refer to a female. (Mixed groups take masculine agreement.) This is unlike all other agreeing word classes except inflecting stative verbs. Inalienably possessed nouns and inflecting postpositions are always masculine when they agree with the first or second person and all other word classes which show gender agreement invariably take the feminine in the same case. This can be seen for the copula *ha-* in examples (373) and (374). While the gender of *hadai/hadani* varies depending on whether the speaker is male or female, the copula is always feminine if the subject is first person.

(373) *owa=pi*   *hada-**i***   *o-ha-**ni***
       1SG-TOP.f   old-m   1SG-COP-DECL.f
       'I'm old.' (male speaker)

(374) *owa=pi*   *hada-**ni***   *o-ha-**ni***
       1SG-TOP.f   old-f   1SG-COP-DECL.f
       'I'm old.' (female speaker)

6.6 Combination of adjectives

The combination of adjectives is only attested in cases like (375), in which the first of two adjectives belongs to a complex lexical item, in this case *sibore potaharo*, the name of the species *Podocnemis expansa*, 'giant Amazon river turtle'.

(375) *sibore*   *pota-haro*   *bede-ni*
      Amazon.river.turtle   greater-f   young-f
      'young giant Amazon river turtle'

6.7 Distinguishing adjectives and stative verbs

Like adjectives, most stative verbs describe properties or states. Inflecting stative verbs take the same endings *-i* and *-ni* as most of the adjectives which are inflected for person, so that clauses with an adjective (example [376]) and an inflecting stative verb (example [377]) can appear to have the same structure.

(376) *ethe hada-i*
      dog old-m
      'The dog is old.'

(377) *ethe sowe-i*
      dog black-m
      'The dog is black.'

The criteria for distinguishing adjectives from stative verbs are a number of morphological processes which stative verbs can undergo while adjectives can't.

a) Number marking
Stative verbs are dualised by reduplication of the last syllable of the adjective stem (section 5.1.2) and pluralised by the morpheme *-khiri* (section 5.1.1). Neither of these forms of number marking is available to adjectives.

b) Suffix -↑*ra*
The productive derivational negative morpheme -↑*ra* (section 5.5) can be suffixed to stative and dynamic verbs to derive new stative verbs, but it cannot be used with adjectives.

c) Inflecting stative verbs

In certain cases, inflecting stative verbs (section 5.2) are used without their inflectional suffixes and with the auxiliary *na-* instead. Inflecting adjectives can never be used without their inflectional endings.

6.8 Summary

All adjectives can be used as attributes of noun phrases. Headless noun phrases require a clear context. Only *owaa/onii* 'other' can be the head of a noun phrase.

Adjectives can function as complements of copula clauses and verbless clauses, though in this position *makhi(dehe)* 'male' and *amonehe* 'female' cannot be distinguished from their primary nominal function. *Potahari/potaharo* 'greater' and *birihari/biriharo* 'lesser' do not usually function as complements.

7 Other word classes

This chapter deals with the words not treated in the previous four chapters. All but one of them fall into the closed word classes pronouns (section 7.1), postpositions (section 7.2), deictic nouns and demonstratives (section 7.3), interrogatives (section 7.4), adverbs (section 7.5), quantifiers (section 7.6), information structure markers and similar particles (section 7.7), clause linkers (section 7.8) and interjections (section 7.9). The word that does not fall into any word class is the associative particle *kha*, which is discussed in the last section of this chapter, immediately before the chapter on possession, in which it plays a central role.

7.1 Pronouns

7.1.1 Personal pronouns

Kulina has the following set of personal pronouns.

1sg	*owa*
2sg	*tia*
3sg m	*powa*
3sg f	*po-ni*
1nsg	*ia*
2nsg	*tia-deni*
3nsg m	*powa-deni*
3nsg f	*po-ni-deni*

Since there is no phonological contrast in Kulina between morpheme-internal /oa/ and /owa/, the pronouns *owa* and *powa* could be represented as /oa/ and /poa/. That would result in *owa, tia, powa* and *ia* all having /a/ as their second syllable, which could then be interpreted as a pronoun stem taking person prefixes. But, as has been argued in section 2.5, the present paradigm is probably the result of analogical changes and /a/ was not originally a separate morpheme. These four pronouns will therefore be taken to be monomorphemic.

The third person singular feminine pronoun *poni* can be analysed as *po-* indicating third person and *-ni* indicating feminine gender, but this analysis is not unproblematic. Tiss (2004: 80–81) assumes that the pronoun has the underlying form /po-a-ni/ and that the root *-a-* is only omitted in the surface form of the word. Such a deletion of the lexical root occurs in the case of the auxiliary *na-*, leading to word forms which consist only of a prefix and suffixes, but such an analysis of *poni* is not compatible with the assumption made here that *powa* and *ia* were formed in analogy with *owa* and *tia* and that /a/ is not a morpheme.

Poni could nevertheless go back to a form **powa-ni*, with the feminine suffix being attached to the monomorphemic pronoun *powa* and the resulting word losing its second syllable in the course of time. In this case *po-* would be the truncated word stem of *poni*. Another possible genesis is the idiosyncratic formation of *poni* from a prefix *po-*, which otherwise only occurs in the third person masculine possessive pronoun *po-kha*, and the feminine suffix *-ni*, without a lexical stem. There is currently no basis for deciding between these hypotheses and thus for determining whether *po-* is a word stem or a prefix.

The non-singular marker *deni* in the second and third person is the one also used with (mainly human) nouns (section 3.1.1).

7.1.1.1 Pronominal subjects

Kulina clauses do not need an overt subject. As person is always marked on the verb, first and second person subject pronouns do not give any additional information, but can be used for emphasis. The pronouns are required for the use of the topic marker *pa/pi* (section 7.7.1) and words such as *motha* 'alone' (section 7.5.3) and *nako/naki* 'also' (section 7.7.3), which must follow an overt noun phrase head.

(378) **[owa=pi]**ₛ   *o-w-ibo-na*
       1SG=TOP.f   1SG-EPENTH-stay-IFUT
       'I am going to stay.'

(379) *batho*   *wahi*   **[owa   motha]**ₛ   *o-kha-ni*   *towi*
       lower.reaches   DST.LOC   1SG   alone   1SG-go-DECL.f   FUT
       'I will go downriver on my own.'

(380) *kozia o-na-ni*   *hini;*   **[tia   naki]**ₛ   *ti-hipa-ni-hi*
       cook 1SG-AUX-DECL.f   NFUT   2   also.f   2-eat-HOME-IMP.f
       'I'm going to cook; you, too, go home and eat'

Third person pronouns are not completely redundant since they also indicate gender and the gender of the clause subject is not always marked on the verb. Nevertheless, third person subject pronouns are only sparsely used. Unlike first and second person pronouns, they are not necessary for the use of elements which need an overt NP-head since a nominal head can be used instead. But using a third person pronoun allows the speaker to employ those elements while omitting the nominal subject, as in the following example.

(381) *taide=pa*   *zama*   *to-kha-hari,*   **[powa   motha]**ₛ
       first=TOP.m   forest   AWAY-move.SG-NAR.m   3m   alone
       'First, he went to the forest, on his own.'

7.1.1.2 Pronominal direct objects

Unlike the person of the subject, the person of the direct object is not marked on the verb. Object pronouns are therefore not redundant and first or second person direct objects are expressed by a pronoun immediately preceding the predicate.

(382) *zomahi* ***owa*** *kha* *Ø-na-hara-pa*
      jaguar 1SG bite.dead 3-AUX-NEG-HPAST
      'The jaguar hasn't killed me.'

Third person objects, however, are not usually represented by a pronoun.

(383) *"Hari,*   *idana!"*   *onade*
      hari $Ø_O$ *i-ida-na*   o-na-de
      come.on O 1NSG-beat.dead-HORT 1SG-say-PAST
      'I said "come on, let's kill it!".'

7.1.1.3 Reflexive reading of pronouns

There is no special morphological or syntactic form for reflexives. The normal personal pronouns are used in clauses with a reflexive meaning.

(384) *ethe*$_A$ ***powa***$_O$ *eno-eno* *Ø-na-i*
      dog 3m lick-REDUP 3-AUX-DECL.m
      'The dog is licking itself.'

(385) *[owa* *naki]*$_A$ ***owa***$_O$ *o-nahima-ni*
      1SG too.f 1SG 1SG-hide-DECL.f
      'I hid (myself), too.'

The third person object pronoun *powa* is necessary for the reflexive reading of (384). In a non-reflexive clause it is usually omitted.

    The picture or reflection of somebody or something is not treated as being identical with the person or object, so that people who see a picture of themselves don't say "I see myself", but "I see my picture", using the inalienably possessed noun *korime* 'image, reflection'.

(386) *o-korime*   *khi-khi*   *o-na-ni*   *warowa=za*
      1SG-reflection.m see-REDUP 1SG-AUX-DECL.f mirror=LOC
      'I'm looking at myself in the mirror.' (lit. '...at my reflection in the mirror.')

When a transitive verb has only one overt argument and this argument is a pronoun in the same person (and gender, where applicable) as the verb, the overt argument

can only be interpreted as a reflexive object pronoun, not as a subject pronoun, as the possible and impossible syntactic variations of the following example illustrate.

(387) owa$_A$ makhidehe$_O$ wishi   o-na-de
       1SG   man   cut   1SG-AUX-PAST
       'I cut the man.'

It is possible to omit the subject of this clause or to omit both the subject and the object.

(388) Ø$_A$ makhidehe$_O$ wishi   o-na-de
       1SG   man   cut   1SG-AUX-PAST
       'I cut the man.'

(389) Ø$_A$ Ø$_O$ wishi   o-na-de
       1SG   3   cut   1SG-AUX-PAST
       'I cut him/her/it.'

But it is not possible to leave out only the object.

(390) *owa$_A$ Ø$_O$ wishi   o-na-de
       1SG   3   cut   1SG-AUX-PAST

Owa 'I' being the only overt argument and agreeing in person with the verb, it can only be interpreted as a reflexive object pronoun in the last example. The correct reading of the sentence is the following.

(390') Ø$_A$ owa$_O$ wishi   o-na-de
        1SG   1SG   cut   1SG-AUX-PAST
        'I cut myself.'

7.1.1.4 Pronominal indirect objects and adjuncts

Pronominal indirect objects, like nominal ones, are marked by the enclitic postposition =*za*.

(391) *poo*   **owaza**   *kaharia*   *da*   *tikanaho*
       poo   owa=za   Ø-ka-ohari-a   da   ti-ka-na-ho
       manioc   1SG=IO   3-NCL-be.one-REL.m   give   2-NCL-AUX-IMP.m
       'Give me a manioc plant!'

(The example has a discontinous direct object *poo...kaharia* 'one manioc plant'. [See section 9.3 for discontinuous noun phrases.] The noun class marker *ka-* indicates that a manioc plant, not a tuber, is meant.)

Adjuncts are marked by a postposition. While non-inflecting postpositions follow personal pronouns in the same way as nouns, inflecting postpositions show a different behaviour, which is discussed in section 7.2.2.

7.1.1.5 Personal pronouns as possessive markers

First and second person possessors in inalienable possessive constructions are marked by prefixes (section 8.1.3.1). Inalienably possessed nouns beginning with /o/, however, do not take any prefixes. If they have a first or second person possessor, it is expressed by a personal pronoun.

(392)   *owa oni*
      1SG name
      'my name'

(393)   *tia   oni*
      2   name
      'your name'

In all other cases, the form of the inalienably possessed noun itself (with its affixes) expresses the possessor. Nevertheless, a personal pronoun indicating the possessor can be preposed, as in example (394).

(394)   *wanakoni*$_A$ **[*po-ni* *tazari-ni]*$_O$ *i-ka-naato-ni*
      spider   3-f   dwelling-f   3-NCL-make-DECL.f
      'The spider is spinning its web.'

Though example (394) would be correct without the pronoun *poni*, its use disambiguates the structure of the sentence, as the following examples show. Example (395), without *poni*, has the same meaning as (394), but it is identical in form with (396), which could occur in a story, describing how somebody else is spinning the web for the spider.

(395)   *wanakoni*$_A$ *tazari-ni*$_O$ *i-ka-naato-ni*
      spider   dwelling-f   3-NCL-make-DECL.f
      'The spider is spinning its web.'

(396) Ø_A [wanakoni   tazari-ni]_O   i-ka-naato-ni
      3   spider   dwelling-f   3-NCL-make-DECL.f
      'He/She/It is spinning the spider's web.'

7.1.2 Possessive pronouns

Possessive pronouns are formed with the associative particle *kha* (section 7.10).

1SG	*o-kha*
2SG	*ti-kha*
3SG m	*po-kha*
3SG f	*po-ni=kha*
1NSG	*i-kha*
2NSG	*ti-kha-deni*
3NSG m	*po-kha-deni*
3NSG f	*po-ni-deni=kha*

In the first and second person and in the third person masculine, *kha* takes prefixes which correspond to the first syllable of the respective personal pronouns. In the third person feminine, *kha* is attached as an enclitic to the pronoun *poni*. The non-singular marker *deni* occurs between the pronoun and the particle in the third person non-singular feminine. But in the second person and the third person masculine, non-singular marker and associative particle have the opposite order.

    The use of the possessive pronouns is discussed in section 8.1.1.1.

7.2 Postpositions

The Purus dialect of Kulina has four non-inflecting postpositions, *ma, za, wahi* and *manako,* and four inflecting postpositions, *hini, towi, nophine/nophineni* and *tezehe/tazahani.* Sections 7.2.1 and 7.2.2 describe the form of non-inflecting and inflecting postpositions, respectively. Their meaning is discussed in detail in section 7.2.3. Section 7.2.4 deals with diachronic and dialectal issues.

7.2.1 Form of the non-inflecting postpositions

The position of postpositions is the second-last in a noun phrase (chapter 9). Within a phrase, they can only be followed by an information structure marker.

7.2.1.1 *Ma*, *za* and *wahi*

The monosyllabic postpositions *ma* and *za* are enclitics, forming one phonological word with the preceding grammatical word. They bear the stress of the phonological word, except when followed by an enclitic information structure marker, in which case the stress is shifted further back on that marker.

When a postposition occurs in a noun phrase with a pronominal head, the head takes the form of an independent personal pronoun, as the paradigm with *za* below shows.

personal pronoun		personal pronoun + postposition *za*	
owa	'I'	*owa=za*	'to me, with me'
tia	'you (SG)'	*tia=za*	'to you, with you (SG)'
powa	'he'	*powa=za*	'to him, with him'
poni	'she'	*poni=za*	'to her, with her'
ia	'we'	*ia=za*	'to us, with us'
tiadeni	'you (PL)'	*tiadeni=za*	'to you, with you (PL)'
powadeni	'they (m)'	*powadeni=za*	'to them (m), with them (m)'
ponideni	'they (f)'	*ponideni=za*	'to them (f), with them (f)'

The postpositions *ma* (which marks uneven comitative) and *wahi* (distal locative) have corresponding paradigms, except that *wahi* is a separate phonological word, not a clitic.

7.2.1.2 *Manako*

Manako is an inalienably possessed noun which refers to what is called *consideration* in English common law, i.e. a good, service or any other advantage received *in exchange for* something provided by the recipient. *Manako* can also be used as an inflecting postposition with the meaning 'in exchange for'. In this function, it is only attested with third person noun phrase heads and its form does not change according to the gender of the head noun (whereas the possessed noun *manako* has a masculine and a feminine form).

(397) [*tia=za*]$_{VCC}$ [*poo*]$_{VCS}$ [*ahói   manako*]$_{ADJU}$
        2=LOC   manioc(m)   rice(f)   EXCH
        '(Here is) manioc for you, in exchange for rice.'

7.2.2 Form of the inflecting postpositions

The inflecting postpositions *hini, towi, nophine/nophineni, tezehe/tazahani* and *manako* take the same position in a noun phrase as the non-inflecting postpositions,

i.e. the second-last, only followed by the information structure marker slot (which is often empty).

7.2.2.1 *Towi* and *hini*

Towi (which marks a goal) and *hini* (which marks cause and purpose) are considered inalienably possessed nouns with a grammatical function by Adams (1987: 8–9) and Tiss (2004: 84–86), an analysis based on the morphology of the two words. Their morphology does indeed give some evidence to support the assumption that *towi* and *hini* were originally nouns. But they have been strongly grammaticalised and from a semantic and syntactic perspective, it seems more appropriate to describe them as postpositions in the modern language.

The difference between inflecting and non-inflecting postpositions becomes evident when they are used with a pronominal head. While the non-inflecting postpositions *ma*, *za* and *wahi* are used with the personal pronouns, as shown above, *towi* and *hini* take person prefixes in the first and second person.

For the postposition *hini*, a person prefix is also attested for the third person masculine, both in the singular and the plural. The use of the prefix is optional in this case as a personal pronoun can be used instead. The same prefix can probably also be used with third person feminine of the postpostion *hini* and possibly also with *towi*, but it is not attested in these forms as they do not occur in the recorded texts and in elicitation the speakers always use a personal pronoun for the third person of *towi* and *hini*. The paradigms below show the attested forms.

o-towi	'for me'
ti-towi	'for you'
powa towi	'for him'
poni towi	'for her'
i-towi	'for us'
ti-towi-deni	'for you (PL)'
powa-deni towi	'for them (m)'
poni-deni towi	'for them (f)'

o-wihini	'because of me'
ti-hini	'because of you'
powa hini / i-hini	'because of him'
poni hini	'because of her'
i-hini	'because of us'
tia-deni hini / ti-hini-deni	'because of you (PL)'
powa-deni hini / i-hini-deni	'because of them (m)'
poni-deni hini	'because of them (f)'

After the first person singular prefix *o-*, *hini* has the form *wihini*. (See section 7.2.4.1 for the likely origin of this irregularity.) There are two alternative pronominal third person forms for *hini*, one using the full personal pronouns *powa* and *poni* and the other using the prefix *i-*. (The latter is only attested for male referents, but can presumably also be used for females in the same form, which is not gender-marked in Santa Júlia.) This use of the prefix *i-* for third person is remarkable since it does not have this function with possessed nouns, where *i-* occurs only in the first person non-singular and in the quotation form. The only other words which have *i-* as a third person marker are transitive verbs, which take that prefix when they agree in gender with their object. On inalienably possessed nouns, third person possessors are zero-marked.

Besides the additional prefix found on *hini*, there are further differences between the morphology of *hini* and *towi* on the one hand and that of possessed nouns on the other hand. According to Tiss (2004: 85), *hini* is a feminine form in the Juruá dialect and the corresponding masculine form of the word is *hine*. This mirrors the situation found in possessed nouns, almost all of which have a feminine form ending in *-ni* and some of which have a masculine form ending in *-ne* (section 3.3). The two forms *hini* and *hine* are also found in the Purus dialect, but there they are only dialectal variants for most speakers. *Hini* is used in Santa Júlia and the neighbouring villages and *hine* further upriver, in the villages on both sides of the Peruvian border. However, in October 2005 I noticed that Hohono, an old man from the village Nazaré, makes the gender distinction described for the Juruá dialect, using *hini* for feminine and *hine* for masculine. His son Biari uses only *hine*. This indicates that *hine/hini* has lost the gender distinction, which is a characteristic trait of possessed nouns, only recently in the Purus dialect and that the gradual transformation of the word from a noun into a postposition is an ongoing process.

In the case of *towi*, almost the opposite situation is found. Tiss (2004: 84), who describes the Juruá dialect of Kulina, states that *towi* cannot take the feminine suffix *-ni*, while Adams (1987: 9), in her grammar sketch of the Peruvian Purus dialect, gives a paradigm of *towi* with the third person singular feminine form *towi-ni*.

When *towi* is used with feminine nouns in Santa Júlia, it usually doesn't take the suffix *-ni*, but I have at least one example in my data where it does, given here as (398).

(398)   *o-kha*   *amonehe*   *towi-ni*   *howa*   *o-na-haro*
       1SG-ASS   woman   GOAL-f   long.for 1SG-AUX-NAR.f
       'I'm longing for my wife.'

Compare this to the following example from a different speaker, which has the same arguments and the same syntactic structure (except that the predicate is an inflecting verb), but where *towi* is used without the feminine suffix.

(399) *o-kha   amonehe   towi   o-nahora-ni*
      1SG-ASS   woman   GOAL   1SG-wait-DECL.f
      'I'm waiting for my wife.'

In Santa Júlia, gender agreement is thus optional for *towi* and no longer found in the case of *hini*. This can be seen as a step in the development of *towi* and *hini* from possessed nouns to postpositions.

7.2.2.2 *Nophine/nophineni* and *tezehe/tazahani*

Like *hini* and *towi*, the words discussed in this section function as grammatical markers, but their morphology is more similar to that of possessed nouns than is the case with *hini* and *towi*.

   Nophine/nophineni 'for fear of' has the same morphology as inalienably possessed nouns (section 3.3). It has a feminine form with the suffix -*ni* and a masculine form without a corresponding suffix. Used with a first or second person, *nophine* takes the masculine form while the person is marked by a prefix.

o-nophine   'for fear of me'
1SG-AVRS

Tezehe/tazahani 'together with' also has a masculine and a feminine form marked in the same way as the corresponding forms of inalienably possessed nouns, i.e. the suffix -*ni* in the feminine and recursive raising of /a/ to /e/ in the masculine form. The word could be expected to take pronominal prefixes, like the other inflecting postpositions, and as Tiss (2004: 87) shows, this is what it actually does in the Juruá dialect, from which example (400) comes.

(400) *papéo   wa   o-na-ni   towi   ti-tezehe*
      book   read.aloud   1SG-AUX-DECL.f   FUT   2-together.with.m
      'I will study together with you.' (Tiss 2004: 87)

In the Purus dialect, however, full personal pronouns rather than prefixes are used before *tezehe*, as in the following two examples. Like in in the case of *hini* and *towi*, this dialectal variation is between a more noun-like behaviour (use of pronominal prefixes) and a more postposition-like behaviour (use together with personal pronouns).

(401) *owa   [tia   tezehe]   mari   i-ka-zane-ra-na*
      1SG   2   together.with.m   grab   1NSG-RCP-ENGULFING-RCP-IFUT
      'You and I are going to grab each other.'

(402) *tia* *[owa* *tezehe]* *zama* *i-kada-na*
       2   1SG   ECOM.m   forest   1NSG-move.DL-IFUT
       'Let's go to the forest together, you and I.'

7.2.3 Function

Postpositions mark the syntactic function of adjuncts and of the indirect object of ditransitive verbs. The complement of certain stative verbs is also marked by a post-position (section 5.6).

Like non-inflecting postpositions, inflecting postpositions must always follow an overt noun phrase head. This distinguishes them from inalienably possessed nouns – to which they are more or less similar in form – since those nouns can themselves function as noun phrase heads. Below, the different functions of the postpositions are listed, together with the glosses which are used in the examples.

za marks
– the indirect object of ditransitive verbs   IO
– the complement of some stative verbs   ADJU
– (proximate) locative/allative/ablative adjuncts   PRX.LOC or LOC
– instrumental adjuncts   INSTR

Of the two locative-allative-ablative forms the proximate one *za* is functionally unmarked and usually used when the speaker doesn't want to make explicit that a distance is involved. It is therefore mostly simply glossed LOC and only PRX.LOC when contrasting with the distal locative-allative-ablative *wahi* or otherwise being specifically proximate.

wahi marks
– distal locative/allative/ablative adjuncts   DST.LOC

There is no objective minimal distance required for the use of this form. It is more frequently used in an allative or ablative sense than in a locative one.

ma marks
– uneven comitative adjuncts   UCOM

hini marks
– causal adjuncts   CAUS
– purposive and beneficiary adjuncts   PURP

towi marks
- goal adjuncts   GOAL

manako marks
- payment adjuncts   EXCH

nophine/nophineni marks
- aversive adjuncts (someone or something feared)   AVRS

tezehe/tazahani marks
- even comitative adjuncts   ECOM

The even comitative with *tezehe/tazahani* is used to coordinate participants of equal
importance. This usually includes comitatives with human participants. The uneven
comitative with *=ma* is used to mark something that is only an additive or accessory
to the main participant.

even comitative:

(403) *[bani   ime]   ahói   tazaha-ni   o-hipa-ni*
       game(m)   flesh.m   rice(f)   ECOM-f   1SG-eat-DECL.f
       'I ate meat and rice.'

(404) *owa   powa   tezehe   ekiderani*
       owa   powa   tezehe   i-ka-k-ida-↑ra-ni
       1SG   3m   ECOM.m   1NSG-RCP-EPENTH-hit-RCP-DECL.m
       'I'm fighting with him.'

uneven comitative:

(405) *mahonana*$_S$ *[etero-ni=ma]*$_{ADJU}$ *pasha   o-ka-na-ni*
       sugar.cane   skin-f=UCOM   chew   1SG-NCL-AUX-DECL.f
       'I'm chewing sugar cane with its skin.'

Further examples:
za - indirect object (recipient):

(406) *waza   koshiro   zoho   tahonahi*
       [owa=za]$_{IO}$ koshiro$_O$ zoho   ti-na-hona-hi
       1SG=IO   knife   carry   2-AUX-HITHER-IMP.f
       'Bring me the knife!'

za - adjective complement:

(407) *amonehe   owaza   hipera   tani*
       amonehe   [owa=za]_ADJU   hipa-↑ra   to-na-ni
       woman   1SG=ADJU   like-NEG   3-AUX-DECL.f
       'The woman doesn't like me.'

za - proximate locative:

(408) *[zipho=za]_ADJU   bare_S   ono   to-ha-ni*
       fire=PRX.LOC   banana   burn   3-AUX-DECL.f
       'The banana burned in the fire.'

za - proximate allative:

(409) *o-tanikho-ne_S   [nami=za]_ADJU   sho   Ø-na-ni*
       1SG-sweat-m   ground=PRX.LOC   drip   3-AUX-DECL.f
       'My sweat was dripping on the ground.'

za - instrumental:

(410) *poroko   zamiza   wakidana*
       poroko_O   [zami=za]_ADJU   o-ka-k-ida-na
       pig   axe=INSTR   1SG-NCL-EPENTH-beat.dead-IFUT
       'I'm going to kill a pig with the axe.'

wahi - distal allative:

(411) *[batho   wahi]_ADJU   [owa   motha]_S   o-kha-ni   towi*
       lower.reaches   DST.LOC   1SG   alone   1SG-move.SG-DECL.f   FUT
       'I will go downriver by myself.'

hini - cause:

(412) *[hamohamo   hini]_ADJU   Ø-zokhe-i*
       monster   CAUS   3-die.SG-DECL.m
       'He died because of the monster (i.e. the monster killed him).'

hini - purpose:

(413) *[makha   etero]_O   shoha   o-na-na,   [o-kha   sapéo   hini]_ADJU*
       snake   skin.m   skin   1SG-AUX-IFUT   1SG-ASS   hat   PURP
       'I'm going to skin the snake for my hat (i.e. to make a hat from the skin).'

hini - beneficiary:

(414) *zomi_O   [po-ni   hini]_ADJU   wishi   to-ka-Ø-hiza-i*
       bamboo   3-f   PURP   cut   3.AWAY-NCL-AUX-ACROSS-DECL.m
       'They cut bamboo for her.'

towi - goal:

(415) [*poo*   *towi*]_{ADJU}   *hawi*   *to-ha-haro*
       manioc   GOAL   move.PL   3-AUX-NAR.f
       'They are fetching manioc.'

manako - payment

(416) *sao*   *bare*   *manako*   *da*   *o-na-ni*   *hini*
       salt   banana(f)   EXCH   give   1SG-AUX-DECL.f   NFUT
       'I'm going to give (you) salt in exchange for bananas.'

nophine/nophineni - cause of fear

(417) *amonehe*   *kaphina-khiri*   *Ø-na-ni,*   *o-nophine*
       woman   afraid-PL   3-AUX-DECL.f   1SG-AVRS.m
       'The women are afraid of me.'

(418) [*dori*   *nophine-ni*]_{ADJU}   *domo*   *to-kha-i*
       sorcery   AVRS-f   COLL   3.AWAY-move.SG-DECL.m
       'They fled for fear of sorcery.'

tezehe/tazahani - even comitative

(419) *o-kha*   *asi*   *tazaha-ni*   *i-kada-na*
       1sg-ASS   older.sister   ECOM-f   1NSG-move.DL-IFUT
       'I'm going to go together with my older sister.'

7.2.4 Further diachronic and dialectal considerations

7.2.4.1 *Hini*

In the Purus dialect, *hini* (or *hine*) marks causal as well as purposive and beneficiary adjuncts. According to Tiss (2004: 85, 94), in the Juruá dialect *hine/hini* is only used with a causal meaning, while a different marker, *wahine,* is used for purposive and beneficiary.

It seems that *hine/hini* and *wahine* have been conflated in the Purus dialect. This could explain why *hini* has the irregular first person singular form *o-wihini* in Santa Júlia. Both Adams (1987: 9) and Tiss (2004: 86) give the regular form *o-hine* for their respective dialects.

7.2.4.2 *Za* and w*ahi*

The postposition *wahi*, which marks distal locative, allative and ablative adjuncts, is homonymous with the stative verb *wahi* 'be far away' and is likely to be historically derived from it.

Za is the most versatile postposition, but it marks a somewhat odd combination of functions, indirect object and instrumental, but only part of locative-allative-ablative (excluding distal locative-allative-ablative). It seems plausible that at an earlier stage *za* was the only postposition marking place and movement adjuncts and that it was partially replaced by *wahi*. Evidence for this hypothesis comes from Jarawara, which has a postposition *jaa* (Dixon 2004a: 488), which is cognate with Kulina *za* and serves as a marker of the indirect object and instrumental. In addition, *jaa* is the only locative-allative-ablative marker in Jarawara.

A further argument can be found in the derivational morphology of Kulina. The language has an instrumental-locational derivation, which serves to form deverbal nouns denoting instruments or locations (section 14.1.2).This derivation expresses a uniform instrument-location concept, which matches well with a single instrumental-locative postposition (as found in Jarawara), but less so with an instrumental-proximate locative postposition and a different one for distal locative (as found in modern Kulina).

7.3 Deictic nouns and demonstratives

7.3.1 Deictic nouns

Kulina has two deictic nouns, *aha/ahi* and *paha/pahi*, which can function as clause subjects or objects. It is not clear what the semantic difference between the two is.

(420)   [*aha*]$_{VCS}$ [*tia=za*]$_{VCC}$
       DEIC.m   2=PRX.LOC
       'This is for you.'

(421)   *ahi*   *tikhezimahi*
       ahi   ti-kha-↑za-↑ma-hi
       DEIC.f   2-move.SG-IN-BELOW-IMP.f
       'Come in!' (lit. 'Enter this [place]!')

Like other nouns, *aha/ahi* and *paha/pahi* can head an adjunct whose function is marked by a postposition. In this case, they function as demonstrative adverbials. Since a demonstrative adverbial is regularly formed by a head noun and a postposition, it constitutes a syntactic, not a lexical unit. There is thus no word class of adverbial demonstratives.

aha=za	'here (m)'	*paha=za*	'here (m)'
DEIC.m=PRX.LOC		DEIC.m=PRX.LOC	

ahi=za	'here (f)'	*pahi=za*	'here (f)'
DEIC.f=PRX.LOC		DEIC.f=PRX.LOC	
aha wahi	'there (m)'	*paha wahi*	'there (m)'
DEIC.m DST.LOC		DEIC.m DST.LOC	
ahi wahi	'there (f)'	*pahi wahi*	'there (f)'
DEIC.f DST.LOC		DEIC.f DST.LOC	

(422) *owa=pi   ahi=za   o-shona-za   o-napi-haro*
       1SG=TOP.f   DEIC.f=PRX.LOC   1SG-be.born-TC   1SG-grow-NAR.f
       'I was born and bred here.'

(423) *aha=za   anobeze   kahi   tade*
       aha=za   anobeze   kahi   to-na-de
       DEIC.m=PRX.LOC   collared.peccary   numerous   3-AUX-PAST
       'There used to be a lot of collared peccaries here.'

Aha/ahi and *paha/pahi* can take the suffix *-kha*, which expresses remoteness.

(424) *aha-kha   wahi   to-w-edima-i*
       DEIC.m-REM   DST.LOC   3-EPENTH-fall.down-DECL.m
       'He fell down there.'

Besides the regular forms *ahi wahi* and *aha wahi* mentioned above, there is also a contracted form *a-wahi* 'there, that way', in which the second syllable of *ahi/aha* is omitted and which therefore doesn't inflect for gender.

(425) *tia   a-wahi   ti-kha-hi,   owa   a-wahi*
       2   DEIC-DST.LOC   2-move.SG-IMP.f   1SG   DEIC-DST.LOC
       'You go that way, I (go) this way.' (speaker pointing in different directions)

7.3.2 Demonstratives

Kulina has a variety of demonstratives.

7.3.2.1 Form

All demonstratives end in the suffix *-hari/-haro*. There are two gendered disyllabic stems, *aha/ahi* and *paha/pahi* (which are homonymous with the deictic nouns). The demonstratives formed of these stems indicate gender both on the stem and the suffix. There are also monosyllabic stems *a* and *pa*, which are presumably shortened forms

of *aha/ahi* and *paha/pahi,* and a third monosyllabic stem *na. Aha/ahi* can be used with the suffix *-kha*, expressing remoteness, before *-hari/-haro*. A further demonstrative stem, *hida,* is only attested with the suffix *-kha*. Table 27 shows the attested demonstratives.

Table 27. Complex demonstratives

1-syllable stem		2-syllable stem		2-syllable stem with *kha*	
masculine	feminine	masculine	feminine	masculine	feminine
a-hari	*a-haro*	*aha-hari*	*ahi-haro*	*aha-kha-hari*	*ahi-kha-haro*
pa-hari	*pa-haro*	*paha-hari*	*pahi-haro*		
na-hari	*na-haro*				
				hida-kha-hari	*hida-kha-haro*

7.3.2.2 Function and meaning

Demonstratives can be used nominally (as noun phrase heads) or adnominally (as noun phrase modifiers). Used adnominally, a demonstrative usually precedes the head noun, though it may follow it, instead. Demonstratives and the interrogative *neheko* 'what, which' are the only noun phrase constituents other than a possessor which can precede the head noun. This distinguishes them from adjectives, which must always follow the head noun.

The suffix *-kha* in the demonstratives *aha-kha-hari/ahi-kha-haro* and *hida-kha-hari/hida-kha-haro* expresses remoteness from the deictic centre. It is not clear what the difference in meaning between the various demonstrative stems is. Pairs of different demonstratives are not used contrastively to express relative distance from the speaker. The speakers say, for example, *"aharo...aharo..."* or *"ahiharo...ahiharo...",* as in example (429), corresponding to English *'this (one)...that (one)...'* (Dixon 2003: 80).

(426) *botha*   *ti-ka-na-hi*   [***a-haro***   *oza*]$_O$
       burn   2-NCL-AUX-IMP.f   DEM-f   house
       'Burn this house!'

(427) ***ahahari***   *poroko*   *tidaho*
       [**aha-hari**   poroko]$_O$ ti-ida-ho
       DEM.m-m   pig   2-beat.dead-IMP.m
       'Kill this pig!'

(428) *madiha=kha*   [***a-haro***=*pi*]$_{VCS}$ *ama*
       Kulina=ASS   DEM-f=TOP.f   blood
       'In Kulina, this is (called) *ama*.'

(429) **ahi-haro**   mokawa=kha   hipe-↑ra   o-na-ni,   **ahi-haro**=ra
      DEM.f-f   shotgun=ASS   want-NEG   1SG-AUX-DECL.f   DEM.f-f=ONLY

      o-wa-ni
      1SG-WANT-DECL.f

      'I don't want this shotgun, I want that one.'

7.4 Interrogatives

7.4.1 Content interrogatives

Neheko 'what, which' is the main content interrogative. It can be used nominally (i.e. as a noun phrase head, [430] and [431]) or adnominally (i.e. as a noun phrase modifier, [432]).

(430) [a-hari=pa]_VCS   [neheko]_VCC?
      DEM-m=TOP.m   what
      'What is this?'

(431) [kahawiri]_A   [neheko]_O   kha   i-na-hari?
      ocelot   what   bite.dead   3-AUX-NAR.m
      'What (kind of animal) did the ocelot kill?'

(432) neheko   bani=ra   to   tanaha?
      [neheko   bani=ra]_O   to   ti-na-naha
      what   animal=ONLY   shoot   2-AUX-CONC
      'What animal did you shoot?'

7.4.1.1 Adverbial use of *neheko* without auxiliary
Like regular nouns, the interrogative nominal can head an adjunct marked by a postposition. In this case, it functions as an interrogative adverbial.

neheko=za   'where, whither, whence (proximate)'
what=PRX.LOC
neheko wahi   'where, whither, whence (distal)'
what DST.LOC
neheko towi   'why'
what GOAL

(433) *neheko=za   o-kha   phowi   shoke o-ka-na-i   hini?*
what=PRX.LOC 1SG-ASS hammock tie   1SG-NCL-AUX-DECL.m   NFUT
'Where can I hang my hammock?'

(434) *neheko   wahi   ti-kha-ni   hini?*
what   DST.LOC 2-move.SG-DECL.f NFUT
'Where are you going to go?'

(435) *neheko   towi   ehedeni   ohi-ohi   Ø-na-haro?*
what   GOAL   child   weep-REDUP   3-AUX-NAR.f
'Why is the girl crying?'

Since the adverbials discussed in this section are regular combinations of a noun phrase head and a postposition, they are syntactic, not lexical, units.

7.4.1.2 *Nehekoma na-*

Neheko occurs with the enclitic postposition =*ma* and the auxiliary *na-* in an interrogative construction meaning 'when', 'how' or 'how many/much'. When the question is 'when' or 'how', the auxiliary usually takes a non-finite suffix and the interrogative complex constitutes an adverbial clause (chapter 13) of the sentence.

(436) *[neheko=ma   na-za]   [i-kada-ni   hini]   i-pame-e?*
what=UCOM AUX-TC 1NSG-move.DL-DECL.f NFUT   1NSG-be.two-REL.f
'When are we two going to go?' Lit. 'Being with what are we going to go, we being two?'

Example (436) includes two subordinate clauses, *nehekoma naza* 'when' and *ipamee* 'we being two'. The main clause consists only of the predicate *ikadani hini* 'we are going to go'.

(437) *neheko=ma   Ø-na-a   boba   o-naato-w-i   hini*
what=UCOM 3-AUX-REL.m arrow 1SG-make-EPENTH-DECL.m NFUT
'How do I make an arrow?'

When the question is 'how much' or 'how many', the auxiliary *na-* of the interrogative complex is often the only verb of the sentence and takes a finite form. In this case, the interrogative complex can be analysed as the predicate of the clause and the morphologically unmarked noun phrase that the question refers to as the subject.

(438) *[koshiro   wati-ni   khara-ni]*_{SUBJ}   *[neheko=ma   Ø-na-ni]*_{PRED}?
knife   liver-f   hard-NMLZ.f   what=UCOM   3-AUX-DECL.f
'How much is (the price[42] of) the knife?'

7.4.1.3 *Nehekohari/nehekoharo* 'who, which'

The interrogative *neheko* 'what' can take the masculine suffix *-hari* and the feminine suffix *-haro*. As noun phrase heads, these complex interrogatives mean 'who' and as a noun phrase modifier, 'which'.

	NP-head:	NP-modifier:
neheko-hari	'who (m)'	'which (m)'
neheko-haro	'who (f)'	'which (f)'

(439) *neheko-hari   ti-kha   makhi?*
what-m   2-ASS   man
'Who is your husband?'

(440) *neheko-haro   ti-kha   amonehe?*
what-f   2-ASS   woman
'Who is your wife?'

(441) *nehekoharo   zozodo   towi   taharo*
neheko-haro   zo-zodo   towi   ti-na-haro
what-f   NMLZ-write   GOAL   2-AUX-NAR.f
'Which pen do you want?'

7.4.1.4 *Eheko*

Besides *neheko*, there is an alternative interrogative *eheko*, which is commonly used at least by some older speakers in natural speech. But it rarely occurs in elicitation and a speaker who frequently used *eheko* in recorded stories would always use *neheko* when asked to repeat the recorded sentences for transcription. Only after insistent questioning would he admit that he actually said *"eheko"* in the recording. *Eheko* is only attested in adverbial forms.

eheko=za   'where, whither, whence (proximate)'
eheko wahi   'where, whither, whence (distal)'
eheko towi   'why'

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42 The Kulina word for 'price', masculine *wati kherene*, feminine *watini kharani*, is a complex inalienably possessed noun which literally means 'liver hardness'.

(442) *eheko=za   o-kha   bani?*
      what=PRX.LOC   1sg-ASS   meat
      'Where is my meat?'

(443) *[tia=pi]*_{VCS}   *[eheko   wahi=kha]*_{VCC}?
      2=TOP.f   what   DST.LOC=ASS
      'Where are you from?'

It is not known if there is a difference in meaning between *neheko* and *eheko*. Their forms differ in the same way as the demonstratives *nahari/naharo* and *ahari/aharo*.

7.4.2 Polar question marker

Polar questions take the enclitic marker *=ko/=ki*, which is attached to the verb of a clause if the verb is within the scope of the question. See section 4.4 for examples. If only an argument or an adjunct falls within the scope of a polar question, *=ko/=ki* is attached to that constituent. The polar question marker agrees in gender with the head of the constituent it follows.

(444) *ti-kha   oza   zati=ki?*
      2-ASS   house(f)   new=Q.f
      'Is your house new?'

(445) *osonaa=ko?*
      Kashinawa=Q.m
      'Is he a Kashinawa?'

(446) *osonaa=ki?*
      Kashinawa=Q.f
      'Is she a Kashinawa?'

The forms *ko* and *ki* can both occur on constituents which do not have gender. They will usually agree with some other constituent of the clause or with some referent retrievable from context. It is not known if either form is unmarked and used when there is no context with which the particle could agree. The question which of the following two examples is used when needs further investigation.

(447a) *hidapana=ko?*
       now=Q.m
       'Now?'

(447b) *hidapana=ki?*
         now=Q.f
         'Now?'

7.5 Adverbs

The words grouped together in this section fall into the following three categories according to the elements they modify:
– sentential adverbs
– verb-modifying adverbs
– noun phrase-modifying adverb

7.5.1 Sentential adverbs

Sentential adverbs can function as adverbials modifying a clause or a whole multi-clausal sentence. The only adverbs of this kind in Kulina are time adverbs. Time adverbs usually occur clause-initially, or sentence-initially if the adverb modifies an entire complex sentence. (A time adverb rarely co-occurs with a clause linker in the same clause, but if it does, it follows the linker.)

hida-kha-za(-)ma	'early in the morning'
hidapa(=na)	'now, today'
maitha	'yesterday'
maitha-za(-)ma	'yesterday'
maitha-kha-za(-)ma	'a long time ago'
niza	'later'
wada shiaha	'the next day' (*wada* 'sleep' and *shiaha* 'get light')
za(-)ma-sha	'tomorrow'
(zi-)zi-za(-)ma-sha	'early in the morning'
zome	'at night'

Most of the adverbs listed above are polymorphemic. The remoteness suffix *-kha* is found word-internally twice (in *hidakhazama* 'early in the morning' and *maithakhazama* 'a long time ago'). The formative *sha* is found in *zizizamasha* 'early in the morning' and *zamasha* 'tomorrow'. Five of the adverbs contain *zama* (word-finally or followed by *sha*).This is likely to be a combination of the locative-instrumental postposition *za* and the comitative postposition *ma*.

   Like in many other languages, the word for 'tomorrow', *zamasha*, appears to be related to the word for 'early in the morning', *zizizamasha*. *Zamasha* 'tomorrow' is remarkable in that it seems to consist only of suffixes. In the villages further upriver

on the Purus 'tomorrow' has the form *zemasha*. In the Juruá dialect, *izamasha* is used for both 'tomorrow' and 'early'.

Wada shiaha 'the next day' consists of the verbs *wada* 'sleep (sg)' and *shiaha* 'to dawn, to get light'. It is used in stories and has a point in time in the story as its point of reference whereas *zamasha* 'tomorrow' has the present time of the speaker as its temporal point of reference. The verb 'sleep' has a suppletive stem with the plural form *kaadiha* (section 4.5). The form *kaadiha shiaha* for 'the next day' is also attested, but rare.

(448) wada   shiaha=pa   bakho   Ø-ke-na-hari
      sleep.SG   get.light=TOP.m   arrive 3-NSG-AUX-DECL.m
      'The next day, they arrived.'

In stories, *zamasha* 'tomorrow' is used in direct speech, as in the following example.

(449) "zamasha,   zizizamasha,   hopha   o-na-poma-na,   ami"
      tomorrow   early.in.the.morning go.get   1SG-AUX-AGAIN-IFUT   mother

      Ø-na-hari.
      3-say-NAR.m

      '"Tomorrow, early in the morning, I'll go and get some again, mother." he said.'

The adverb *hidapa* 'now, today' is always used with an enclitic information structure marker, sometimes with the topic marker *pa/pi (hidapa=pa, hidapa=pi),* but mostly with the narrow focus marker *na (hidapa=na).* The narrow focus marker is so frequently attached to *hidapa* that it is beginning to lose its status as a separate morpheme, as evinced by the attested form *hidapa=na=pi*, in which both the topic and the narrow focus marker are attached to the adverb. A likely explanation for this is that *hidapana* is no longer considered by the speakers who use this form to be a dimorphemic word meaning 'focal now', but just a monomorphemic word 'now', which can be topicalised.

7.5.2 Verb-modifying adverbs

The normal position of a verb-modifying adverb is before the main verb it modifies. Attested adverbs of this type are manner adverbs (all referring to speed) and place adverbs.

manner adverbs:
bikee   'fast'
ohiza   'slowly'
ohizama   'slowly'

(450)   *bikee   ti-kha-hona-hi!*
        fast   2-move-HITHER-IMP.f
        'Come quick!'

(451)   *rerede   ohiza   khariza   tani*
        rerede   ohiza   Ø-kha-riza   to-na-ni
        praying.mantis slowly   3-move.SG-AROUND 3-AUX-DECL.f
        'A praying mantis moves slowly.'

place adverbs:
taide   'ahead'   (< *tati* 'head')
zotode   'behind'   (< *zoto* 'anus')

The place adverbs *taide* and *zotode* also function as clause linkers (section 7.8). As such, they are always the first constituent of a clause and often take the topic marker *pa/pi*. As place adverbs they are normally only clause-initial if there is no overt subject (which they otherwise follow) and they do not usually occur with the topic marker.

(452)   *owa taide   o-kha-po-ni,   zotode ti-kha-hona-na*
        1SG ahead   1SG-move.SG-FIRST-DECL.f,   behind 2-move.SG-HITHER-IFUT
        'I'll go ahead, you'll come behind.'

7.5.3 Noun phrase-modifying adverb

The adverb *motha* 'alone' is used as a modifier in noun phrases, where it follows the head. It differs from adjectives in being able to occur in noun phrases which have a pronominal head and in being unable to function as a verbless clause complement.

(453)   *to-wada-hari   powa   motha*
        3.AWAY-sleep-NAR.m   3m   alone
        'He slept far away by himself.'

(454)   *[ia   motha]_{NP}   hawi   Ø-ha-ni-poma-haro*
        1NSG   alone   go.PL   1NSG-AUX-BACK-AGAIN-DECL.f
        'We returned on our own again.'

7.6 Quantifiers

7.6.1 Numerals

Kulina has only two basic native lexemes for numbers, *ohari-* 'be one' and *pama-* 'be two'. They do not constitute a word class of numerals, but are dynamic verbs. They were discussed in section 4.8.

For numbers above two, Portuguese numerals are used. As opposed to many other Portuguese loans, they are not phonologically assimilated. Unlike in Portuguese and like the native numbers *ohari-* 'one' and *pama-* 'two', they follow the head noun.

Kulina:	Popular Brazilian Portuguese:	Standard Portuguese:
semána tres	*três semana*	*três semana-s*
week three	three week	three week-PL
'three weeks'	'three weeks'	'three weeks'

7.6.2 Other quantifiers

There are four further quantifiers, *bazima* 'all, many', *wapima* 'all, many', *sibema* 'many', and *denima* 'more'. All four words end in the syllable /ma/. This can be assumed to have been a suffix originally, attached to *bazi* 'big, much', *wapi* 'the whole', *siba* 'be many' (which has its final /a/ raised to /e/), and *deni*. *Deni* now only occurs as a non-singular marker but may have been a lexeme at an earlier stage. The final /ma/ of the quantifiers may be related to the homonymous comitative postposition (section 7.2).

7.6.2.1 *Bazima* 'all, many' and *wapima* 'all, many'
No meaning difference could be found between *bazima* and *wapima*. Both are noun quantifiers which mean 'all' or 'many'. They are only attested with count nouns.

(455) *[amonehe   bazima]   poo   i-kaari-mana-i*
      woman   all   manioc   3-cook-PL.A-DECL.m
      'All the women are cooking manioc.'

(456) *[anobeze   wapima]ₛ   Ø-kahadiha-i*
      collared.peccary   all   3-sleep.NSG-DECL.m
      'All the collared peccaries are sleeping.'

Bazima and *wapima* can also be used pronominally, meaning 'everybody, all of them' or 'many'.

(457)   *akho-khiri*   *Ø-na-i*   *bazima*_S
        stingy-PL   3-AUX-DECL.m   all
        'All of them are stingy.'

(458)   *wapima*_A   *koiza*_O   *ze*   *Ø-ke-na-i*
        all   traditional.beverage   drink   3-NSG-AUX-DECL.m
        'Everybody drank *koiza*.'

In negative clauses, *bazima* and *wapima* always function as universal quantifiers, i.e. they mean 'all' (and may correspond to English 'none' or 'nobody'.)

(459)   *nowe*   *Ø-ra-i*   *wapima*
        not.exist   3-AUX-DECL.m   all
        'None of them exists (anymore).'

(460)   *wapima*   *wati-ra-khiri*   *Ø-na-i*
        all   talk-NEG-PL   3-AUX-DECL.m
        'Nobody (ever) talks.' or 'Everybody is taciturn.'

Bazima and *wapima* cannot be used as copula or verbless clause complements. A different construction, with either of the dynamic verbs *hikahara-* 'be many' and *siba na-* 'be many', has to be used to say 'X are numerous' or 'there are a lot of X'. (*Hikahara-* consists of the verb stem *hika-* 'to end' and the negation suffix *-hara/-↑hera*.)

(461)   *oza*   *tetepiza*   *abariza*   *hikeherani*
        oza   tetepi=za   abariza   Ø-hika-↑hera-ni
        house   top=LOC   vulture   3-end-NEG.f-DECL.f
        'There are a lot of vultures on the roof.'

(462)   *takara*   *siba*   *ta-i*
        chicken   be.many   3.AUX-DECL.m
        'There are a lot of chickens.'

7.6.2.2 *Sibema* 'many'

Sibema 'many' is much less common than *bazima* and *wapima*. It is only attested as a modifier of count nouns.

(463)   *madiha*   *sibema*   *Ø-madi-mana-hari*   *paha*
        Kulina   many   3-live-NSG-NAR.m   DEIC.m
        'Many Kulina live there.'

7.6.2.3 *Denima* 'more'

Denima 'more' is used both as a noun quantifier (modifying mass nouns as well as count nouns) and as a verb quantifier. It can also be used pronominally.

Noun quantifier:

(464) *denima   aba   ani=ko?*
       more   fish   exist=Q.m
       'Is there more fish?'

Pronominal use of noun quantifier:

(465) *denima   ani-i*
       more   exist-DECL.m
       'There is more.'

Verb quantifier:

(466) *pasho   to-hoko,   hawi   Ø-ha   denima*
       rain   CoS-dry   go.PL   1NSG-AUX   more
       'When the rain stopped, we walked on.'

(467) *denima   wi   i-na-poma-haro*
       more   dig   3-AUX-AGAIN-NAR.f
       'He/She dug (the hole) further'.

7.7 Information structure markers and similar particles

Kulina has a number of information structure markers and other particles occurring in the same position as the information structure markers.

7.7.1 Topic marker

The enclitic topic marker has the masculine form *=pa* and the feminine form *=pi*, which is also used for agreement with first and second person pronouns. It occurs after the topicalised constituent, which is usually a new topic, i.e. different from the topic of the previous clause. The use of the topic marker is optional, except in affirmative verbless clauses (section 10.2.2).

(468) *madiha   a-hari=pa   khi-khi   o-na-hara-i*
       person   DEM-m=TOP.m   see-REDUP   1SG-AUX-NEG.m-DECL.m
       'I don't know this person.' (lit. 'I have never seen this person.')

(469) *ikha*   *amonehepi*   *shabira*   *nahade*
i-kha   amonehe=pi   shabira   Ø-na-aha-de
1NSG-ASS   woman=TOP.f   giant.otter   3-CAUS-penetrate-PAST
'Our wives slept with giant otters.'

When the topic marker is attached to a noun phrase, it usually agrees in gender with the head of that noun phrase. But when it occurs after a first or second person subject in a clause which has a transitive verb as its predicate, the topic marker agrees in gender with the object (examples [470] to [472]), except if the verb belongs to the small group of verbs which cannot agree in gender with their object (section 3.5.1.2). When a first or second person pronoun occurs as the subject of one of those verbs, including *kahi-* 'have' and *kaphira-* 'not have', the topic marker on the subject always has the form *=pi*, agreeing with the subject pronoun (example [473]).

(470) *owa=pa*   *tapa*   *pha*   *o-na-i*
1SG=TOP.m   maize(m)   plant   1SG-AUX-DECL.m
'I'm planting maize.'

(471) *tiapa*   *poo*   *apa*   *tai?*
tia=pa   poo   apa   ti-na-i?
2=TOP.m   manioc(m)   eat   2-AUX-DECL.m
'Do you eat manioc?'

(472) *zanikowa*   *khide*   *okhaza,*   *makha*   *idade*
zanikowa   khi-de   o-kha-za,   makha$_O$ i-ida-de
tortoise   look.for-INF   1SG-move-TC   snake(m)   1NSG-beat.dead-PAST

iapa
ia=pa$_A$
1NSG=TOP.m

'When I went looking for tortoises, we killed a snake.'

(473) *owa=pi*   *abi*   *o-kaphira-ni*
1SG=TOP.f   father(m)   1SG-not.have-DECL.f
'I don't have a father.'

When the topic marker is attached to an adverbial clause, it agrees with the subject of the main clause.

(474) | *pasho* | *khazapa* | | *nowe* | *rai* | *sisipe* |
| pasho | Ø-kha-za=pa | | nowe | Ø-hira-i | sisipe |
| rain(f) | 3-move-TC=TOP.m | | not.exist | 3-AUX-DECL.m | blackfly(m) |

'When it's raining, there are no blackflies.'

The agreement of the topic marker on clause linkers is discussed in section 7.8.3.

7.7.2 Narrow focus marker

The enclitic =*na* marks narrow focus, i.e. focus which has only one constituent of a clause as its domain (Van Valin and LaPolla 1997: 208–210). Narrow focus is usually contrastive, except when a question word is focused. The use of the marker =*na* is optional.

(475) | *aba=kha=na* | *hipa* | *o-na-ni* |
| fish=ADJU=NFC | want | 1SG-AUX-DECL.f |

'It is fish that I want.'

(476) | *aharo* | *towi* | *oneherani,* | *ahikhaharo* | *towina* |
| a-haro | towi | o-na-↑hera-ni, | ahi-kha-haro | towi=na |
| DEM-f | GOAL | 1SG-be-NEG.f-DECL | DEM-REM-f | GOAL=NFC |

onani[43]
o-na-ni
1SG-AUX-DECL.f

'I don't want this one, I want that one.'

(477) | *neheko-hari=na* | *ti-kha* | *makhi?* |
| what-m=NFC | 2-ASS | man |

'Who is your husband?'

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43 This sentence with contrastive use of the demonstratives *aharo* and *ahikhaharo* was elicited from a bilingual speaker in Eirunepé, on the Juruá river, and reflects Portuguese usage. Proximate and distal demonstratives are not used contrastively on the Purus (section 7.3.2.2), where no one is bilingual in the sense of having two first languages.

(478) *naza=pa*   *imeni:*   "*ato,*   *ti-hipa-ni*   *hini*   *ki?*"   *naraa:*
then=TOP.m   his.mother   son!   2-eat-DECL.f   NFUT   Q.f   but

       "*niza,*   *owa=pi*   *zome=na*   *o-hipa-ni*   *hini.*"
       wait!   1SG=TOP.f   at.night=NFC   1SG-eat-DECL.f   NFUT

       'Then his mother (asked): "Son, are you going to eat?" But (he said): "Wait, I am going to eat at night."'

In the son's reply in the above example, the subject-topic *owa* 'I' has a topic marker, while *zome* 'at night', which is the only piece of new information in the clause, has a narrow focus marker.

7.7.3 *Nako/naki* 'also' and *=ra* 'only'

The particles *nako/naki* 'also' and *=ra* 'only' occur in the same slot of a noun phrase as the topic and the narrow focus marker, i.e. in the phrase-final position. The monosyllabic *=ra* is an enclitic.

(479) *[owa*   *naki]*   *bika*   *o-na-ni*
       1SG   also.f   good   1SG-AUX-DECL.f
       'I'm well, too.'

(480) *iaza*   *ima*   *hada-ni*   *naki*   *nowe*   *ra-ni*
       ia=za   [ima   hada-ni   naki]   nowe   Ø-hira-ni
       1NSG=LOC   story   old-f   also   not.exist   3-AUX-DECL.f
       'We don't have old stories, either.'

(481) *owa=pi*   *ahói=ra*   *apa*   *o-na-pa*
       1SG=TOP.f   rice=ONLY   eat   1SG-AUX-HPAST
       'I've only eaten rice today.'

Gender agreement of *nako/naki* is the same as for the topic marker (section 7.7.1). In most cases *nako/naki* agrees with the noun phrase it follows. But if it is used with a first or second person pronoun as the subject of a verb which agrees in gender with its object, *nako/naki* also agrees in gender with the object.

(482) *[owa*   *nako]*   *bani*   *o-hipa-i*
       1SG   also.m   meat(m)   1SG-eat-DECL.m
       'I have eaten meat, too.'

7.8 Clause linkers

Kulina has several sequencing clause linkers and a contrastive clause linker.

sequencing linkers:
naza	'then'
nazama	'then'
taide	'(at) first'
zotode	'thereafter; finally'

Taide and *zotode* can also function as place adverbs 'ahead' and 'behind' respectively (section 7.5.2).

contrastive linker:
naraa	'but, however'

7.8.1 Form

Naza, nazama and *naraa* are derived from (and homonymous with) non-finite forms of the auxiliary *na-,* formed with the temporal-causal subordinate suffixes *-za* and *-zama* and the concessive subordinate suffix *-raa* (section 13.3).

The two other sequencing linkers, *taide* and *zotode*, are derived from nouns. The Deni word corresponding to Kulina *taide* is *tatide* (Koop and Koop 1985: 143). Since the word for 'head' is *tati* in both languages, it can be assumed that Kulina *taide* and *zotode* are derived from *tati* 'head' and *zoto* 'anus'.

Naza, taide and *zotode* are mostly followed by the topic marker *pa/pi* (section 7.7.1). *Naza* can also be used with the narrow focus marker *na* (section 7.7.2). *Naraa* is never used with those markers. *Nazama*, which is not very frequently used, is not attested with a topic marker, either.

A clause linker, where present, is always the first constituent of a clause.

7.8.2 Function

Clause linkers serve a discourse function, namely to structure a narrative or other type of discourse as a cohesive text. The first clause of a story can begin with *taide=pa/taide=pi* 'first' and the last one with *zotode=pa/zotode=pi* 'finally'. Every intervening clause that refers to an event which is subsequent to the event of the previous clause can begin with *naza=pa/naza=pi* 'then' or, occasionally, the synonymous *nazama*. If the relationship between the clauses is contrastive, *naraa* 'however' is used.

The use of *zotode=pa/zotode=pi* is not restricted to the last sentence of a story. Meaning 'thereafter', it can also occur elsewhere, but it is usually used only once or twice in a whole story while *naza=pa/naza=pi* can occur dozens of times and *naraa* is also highly frequent.

A topic or narrow focus marker occurring with a sequencing linker may indicate the topicality or focality of the linker on the discourse level, but it doesn't indicate that the linker is the topic or focus of its clause. A clause introduced by *naza=pa* or *naza=pi* may very well have some other constituent marked as topic by *pa* or *pi*, as in example (483). (The same may be true for *naza=na* and the narrow focus marker *na*, but they are not very frequently used and such a case is not attested.)

(483) **naza=pa**   *madiha=pa*   *Ø-zokhe-i*
      then=TOP.m   person=TOP.m   3-die.SG-DECL.m
      'Then the man died.'

(484) **taide=pi**   *bodi*   *wahi*   *amonehe*   *withizaharo*   **naraa**
      taide=pi   bodi   wahi   amonehe   Ø-witha-↑za-haro   naraa
      at.first=TOP.f inside   DST.LOC   woman   3-sit.SG-in-NAR.f   however

      makhidehe   *amoshiniza*   *witharihari*
      makhidehe   amoshi-ni=za   Ø-witha-ri-hari
      man   outside-f=PRX.LOC   3-sit.SG-RAISED.SURFACE-NAR.m

      'At first, the woman was sitting inside, whereas the man was sitting outside.'

(485) *etero*   *sha*   *Ø-ke-na-hari.*   *hika.*   **zotode=pa**
      skin.m   peel   3-NSG.A-AUX-NAR.m   finish   thereafter=TOP.m

      he-heki=za   *heki*   *Ø-ke-na-hari.*
      NMLZ-grate=INSTR   grate   3-NSG.A-AUX-NAR.m

      'They peel the skin (of the genipap fruit). (They) finish (that). Thereafter, they grate (the fruit) with a grater.'

Following Quirk et al. (1985: 631–647), the syntactic function of clause linkers will be called *conjunct* (section 11.3).

7.8.3 Agreement

According to Tiss (2004: 339), *naza* 'then' and *naraa* 'however' are masculine forms in the Juruá dialect. The corresponding feminine forms are *neza* and *neraa*. (Tiss does not mention *nazama*.) *Neza* is not used on the Purus, but the forms *naraa* and *neraa*

are both found in the region. They are, however, dialectal variants, *naraa* being used in Santa Júlia and the neighbouring villages and *neraa* further upriver.

While the linkers themselves are thus not gender-marked in the Purus dialect, the topic marker *pa/pi*, which often occurs on the sequencing linkers, is. The question is what it agrees with. Usually, the topic marker of a sequencing linker agrees in gender with the topic of the clause in which it occurs. If a sentence has a sentence focus (and thus no topic), the topic marker mostly agrees with the subject of the clause.

agreement with S:

(486) *naza=pa*   *shabira*   *hai*   *Ø-Ø-hona-hari*
       then=TOP.m   giant.otter(m)   move.PL   3-AUX-HITHER-NAR.m
       'Then giant otters came.'

agreement with A:

(487) *naza=pi*   *imeni*   *wapi=kha=ra*   *da*   *i-na-bakhi-hari*
       then=TOP.f   his.mother   outside=ASS=ONLY   give   3-AUX-NSG.IO-NAR.m
       'Then his mother gave only the outer pieces (of the meat to other people).'

Since the sequencing linker always occurs clause-initially, it is a case of anticipatory agreement. Anticipatory agreement is only possible if the element which governs the agreement is already mentally activated when the agreeing element is uttered. But in narratives, speakers often say *"nazapi"* or *"nazapa"* while they are thinking about how to continue the story. It is therefore not uncommon to find clauses in which the topic marker of the connective adjunct agrees with the topic of the preceding clause, as in this example:

(488) *"epehi-na"*   *Ø-na-hari.*   *naza=pa*   *Ø-kha-rona-ni.*
       suffice-IFUT   3-say-NAR.m   then=TOP.m   3-move-DOWN-DECL.f
       '"That'll be enough" he said. Then, she climbed down.'

But in some cases, the topic marker does not agree with any constituent of either the preceding or its own clause, as in the following example, the first clause of which has overt A and O, which are both masculine, while the second clause has a covert S, which is also masculine, as indicated by the verbal tense suffix *-i*. Nevertheless, the second clause is introduced by *naza=pi*, with a feminine topic marker.

(489) *naza=pa*   *makhidehe*   *zanikowa*   *i-na-kha-mana-hari.*
       then=TOP.m   man(m)   tortoise(m)   3-CAUS-move.SG-NSG.A-NAR.m

       naza=pi   *"ha ha ha"*   *Ø-ke-na-i*   *na-de.*
       then=TOP.f   ha ha ha   3-NSG-say-DECL.m   say-PAST

       'Then the men carried the tortoises (home). Then they laughed.'

7.9 Interjections

Interjections cannot be integrated into any syntactic constructions except as (part of) a quotation in a direct speech construction (section 12.5). (490) is an example of a quoted interjection.

(490)   *"apaha"*   *Ø-na-de*
        stop.it   3-AUX-PAST
        'He/She said: "Stop it!"'

The following interjections are used:

a	'Nonsense!'
ái	used after a slip of the tongue
apaha	'Stop it!', 'That's enough!'
epehia	'That's enough!'
ha	reply when being called
hari	'Let's do it!'
hee	1) 'Hello.' Reply to *niha*.
	2) 'Goodbye.' Reply to *okhanini* 'I'm leaving'.
	3) 'Yes.'
hina	1) 'Let's go!'
	2) 'Let's do it!'
maki	'Be quiet!'
niha	'Hello.' Used by somebody arriving or the first of two people who meet.
niza(=na)	'Wait!', 'Not now!'
pahi	'Be careful!'
poni	'Stop it!'

The enclitic *na* in *niza=na* 'Not now!' is the narrow focus marker. The adverb *niza* 'later' can be used as an interjection with or without *na*.

   The following is an example of the use of the interjection *ái* after a slip of the tongue. The speaker names the members of a hunting party who are about to leave. When he mentions the last of the names he remembers that that man had already left earlier. He interrupts the sentence and after using the interjection *ái* starts a new one, explaining that he was wrong. The example begins with another interjection, *hina* 'Let's go!'.

(491) *"hina!"*   *i-na-de.*   *nazama*   *owa,*   *Cival,*   *Paizi,*
     lets.go   1NSG-AUX-PAST   then   1SG   NAME   NAME

     Mapa   *Shakire,*   *Isho,*   *Mimi*   *ái*   *Mimi=pa*
     NAME   NAME   NAME   NAME   no   NAME=TOP.m

     taide   *ori*   *to-khe-↑na-po-hari*   *na-de*
     in.front   paddle   3.AWAY-move.SG-OUT-FIRST-NAR.m   say-PAST

‘We said "Let's go!" Then I, Cival, Paizi, Mapa, Shakire, Isho, Mimi – no, Mimi had already paddled ahead.’

7.10 Associative particle

The enclitic particle *kha* is one of the most important grammatical morphemes of Kulina. Its major function is to mark associative modifiers in a noun phrase; it will therefore be named associative particle. This main function of *kha* is similar to that of 的 *de* in Mandarin (Li and Thompson 1981: 113–123). It is used with modifiers of various grammatical and semantic types which are in some way associated with the NP-head.

Section 7.10.1 deals with the form of associative modifiers and section 7.10.2 with their meaning. The next three sections treat other uses of *kha*; in complements of stative verbs (section 7.10.3), in adverbials (section 7.10.4) and in complex lexemes (section 7.10.5). Finally, section 7.10.6 discusses the question if *kha* is a member of a larger word class or if it constitutes a class of its own.

7.10.1 Form of associative modifiers

Kha is usually the last element of an associative modifier. The only exception to this is that the non-singular marker *deni* occurs after *kha* in the case of a pronominal modifier in the second person non-singular or third person non-singular masculine (see paradigm in section 7.1.2). Phonologically, *kha* is an independent word when it takes a prefix. Without a prefix, it is an enclitic.

Grammatically, the following entities occurring with *kha* as an associative modifier can be distinguished.
a)   pronominal prefix
b)   personal pronoun
c)   noun phrase with nominal head
d)   adverb
e)   clause

Pronominal prefixes and personal pronouns used with *kha* form a single paradigm. These forms are used as pronominal possessors in an alienable possessive construction (section 8.1.1). For the full paradigm with its free and bound pronominal forms see section 7.1.2.

The following examples show the different types of associative modifiers.

pronominal prefix as modifier:

(492)   *[[o-kha]*_{AM} *rapi]*_S   *papéo   tetepi-ni=za   Ø-po-ri-ni*
        1sg-ASS   pencil   book   top-f=LOC   3-lie-RAISED.SURFACE-DECL.f
        'My pencil is lying on top of the book.'

personal pronoun as modifier:

(493)   *[[poni=kha]*_{AM}   *zamatapa]*_O   *i-boti-mana-hari*
        3SG.f=ASS   food   3-steal-NSG-NAR.m
        'They stole her food.'

noun phrase as modifier:

(494)   *hidapana wati o-na-na   [[a-hari   wahano   zati=kha]*_{AM}   *ima]*_O
        now   tell 1SG-AUX-IFUT DEM-m dry.season new=ASS   story
        'Now I'm going to tell a story from this new dry season.'

adverb as modifier:

(495)   *[[maithakhazama=kha]*_{AM}   *madiha]*_S   *Ø-hika-mana-hari*
        a.long.time.ago=ASS   Kulina   3-die.PL-NSG-NAR.m
        'The Kulina of the old days have died.'

clause as modifier:

(496)   *[o-kha-ni-ni   hini=kha]*_{AM} *owa=za   borasa   da*
        1SG-move.SG-HOME-DECL.f   NFUT=ASS   1SG=IO   biscuit   give

        ta-ho
        2.AUX-IMP.m

        'Give me a biscuit for my returning home.'

In the last example, the direct object noun phrase 'a biscuit for my returning home' is discontinuous. The associative modifier *o-kha-ni-ni hini=kha* 'for my returning home' is separated from the head *borasa* 'biscuit' by the indirect object *owa=za* 'to me'. Associative clauses are further discussed in section 12.2.

While *kha* can be used with any of the five different elements listed under a) - e) above, the resulting syntactic constituent is always a noun phrase. Such a *kha*-noun phrase usually functions as a modifier of another noun phrase, but it can also func-

tion as an argument in a clause, in which case it may take a topic marker or similar particle, as in example (502) in section 7.10.2.

7.10.2 Meaning of associative modifiers

It is not possible to give an exhaustive list of the meanings of *kha*-modifiers since the *kha*-modification can be used to specify the head noun with any conceivable semantic aspect. The following are meanings which are typically found.

a)   owner (prototypical case of alienable possession)
b)   material
c)   topic
d)   location
e)   origin
f)   time
g)   author, performer

a) owner:
(497)   *o-kha*   *takara*   *ti-boti-hari*
        1SG-ASS   chicken   2-steal-NAR.m
        'You have stolen my chicken.'

b) material:
(498)   *zozodo*   *awa=kha*
        pen   wood=ASS
        'pencil'

c) topic:
(499)   *taide=pa*   *[mashosho=kha   ima]*$_O$ *wati*   *o-na-po-na*
        first=TOP.m   monster=ASS   story   tell   1SG-AUX-FIRST-IFUT
        'First, I'm going to tell the story about the monster.'

(500)   *[mosira=kha   ima]*$_S$ *Ø-hika-ni*
        bag=ASS   story   3-end-DECL.f
        'The story about the bag is over.'

d) location:
(501)   *[Santa Júlia=kha   madiha]*$_O$ *ti-mitha-mana-na*
        PLACE.NAME=ASS   people   2-hear-NSG-IFUT
        'You are going to hear the people of Santa Júlia.'

(502) *taide=kha=pa*   *hawi*   *to-ha-ni-hari*
       in.front=ASS=TOP.m   move.PL   3.AWAY-AUX-HOME-NAR.m
       'Those in front went home.'

e) origin:
(503) *pasho*   *meme=kha*
       water   sky=ASS
       'rain'

(504) *owa=pi*   *[Envira=kha*   *madiha]*~CC~   *o-ha-ni*
       1sg=TOP.f   RIVER.NAME=ASS   Kulina   1SG-COP-DECL.f
       'I'm a Kulina from the Envira river'

f) time:
(505) *maithazama=kha*   *kairo*   *ani-hari*
       yesterday=ASS   catfish.sp   exist-NAR.m
       'There's catfish from yesterday.'

(506) *maithakhazama=kha*   *ima*
       a.long.time.ago=ASS   story
       'an ancient story'

g) performer:
(507) *[ti-kha   ahie]*~O~   *o-w-atha-na*
       2-ASS   song   1SG-EPENTH-learn-IFUT
       'I'm going to learn your song.' (the song that you sang)

As the examples above show, the *kha*-modifier can occur before or after the head noun. There seems to be a preference for putting a material modifier after the head, as in example (498). Otherwise, the modifier occurs mostly prenominally. It can be separated from its head by another constituent, as in example (496). As mentioned before, an associative noun phrase may also be a clause argument, rather than an NP-modifier (example [502]).

7.10.3 Complements marked by *kha*

Unlike dynamic verbs, stative verbs cannot take a direct object. But some stative verbs do take a second argument besides the subject. In the case of some stative verbs, e.g. *hipa* 'want; like' and *dishera* 'like', this second argument, the complement, is marked by *kha*. See section 5.6 for details and further examples.

(508) *owa=pi*   *aba=kha*   *hipa*   *o-na-ni*
       1SG=TOP.f   fish=ASS   like   1SG-AUX-DECL.f
       'I like fish.'

7.10.4 Adverbial use of *kha*

Language names can be used adverbially with *kha*, e.g. *madiha=kha* 'in Kulina', *karia=kha* 'in Portuguese'.

(509) *madiha=kha*   *a-haro=pi*   *ama*
       Kulina=ASS   DEM-f=TOP.f   blood
       'In Kulina, this is (called) *"ama"*.' (speaker pointing at a blood stain)

7.10.5 Lexemes with *kha*

Kha can form complex lexemes with possessed nouns. This type of lexeme denotes objects which are associated with certain body parts or parts of objects. The first element of these lexemes, the possessed noun, has to be marked for possession in the same way as when it is used on its own, without *kha*. Thus, the word 'headband', formed with the possessed noun stem *tati* 'head', has the following inflection.

to-tati=kha   'headband(s)'
o-tati=kha   'my headband(s)'
ti-tati=kha   'your headband(s)'
tati=kha   'his headband(s)'
tati-ni=kha   'her headband(s)'
i-tati=kha   'our headband(s)'
ti-tati-deni=kha   'your (nsg) headband(s)'
tati-deni=kha   'their (m) headband(s)'
tati-ni-deni=kha   'their (f) headband(s)'

The dispossessive prefix *to-* (section 8.1.3.5) indicates that an inalienably possessed noun does not have a possessor and in most respects *to-tati=kha* 'headband' behaves like a free noun. But unlike free nouns, it cannot take an alienable possessor. The possessor marking is that of inalienably possessed nouns and it only affects the first element of the lexeme, which is an inalienably possessed noun. This can be seen in the third person singular feminine, which takes the suffix *-ni*. 'Her headband' is *tati-ni=kha*, with the suffix attached to the nominal constituent, not to the whole lexeme. In all other respects, the complex lexemes with *kha* are grammatically treated in the same way as simple nouns, e.g. postpositions occur after *kha*. In the following

example, *ti-badadari=kha* 'your pocket' has the nominal stem *badadari* 'area at the side of the body below the hip'.

(510) *tibadadarikhaza*   *kaneta*   *zo*   *tizahi*
       ti-badadari=kha=za   kaneta   zo   ti-na-ᵓza-hi
       2-area.below.hip=ASS=LOC   pen   put.into   2-AUX-IN-IMP.f
       'Put the pen into your pocket.'

Looking at the meanings of its constituents, *o-tati=kha* 'headband' can be translated as 'the object related to my head', but there is actually no element meaning 'object', so that the structure is '(the) Ø related to my head'. The fact that the element *tati* 'head' is inflected for person and number like a simple lexeme does not invalidate the analysis of *to-tati=kha* as a single complex lexeme. As pointed out by Stump (2005: 56–58), the independent inflection of a constituent of a complex lexical item is not uncommon and also found e.g. in English *sisters-in-law*.

Further examples:
(511) *to-bihi=kha*
       DISP-arm=ASS
       'bracelet'

(512) *to-matho=kha*
       DISP-neck=ASS
       'necklace'

(513) *o-w-isho=kha*
       1SG-EPENTH-leg=ASS
       'my trousers'

(514) *panera*   *tetepi-ni=kha*
       cooking.pot   top-f=ASS
       'the lid of the cooking pot'

(515) *amonehe*   *tetepi-ni=kha*
       woman   top-f=ASS
       'the woman's T-shirt'

Kha can also form new lexemes with free nouns, e.g. *makhi=kha* 'married woman' with *makhi* 'man, husband'. These lexemes behave grammatically like simple free nouns.

7.10.6 Categorisation of *kha* by word class

Adams (1987: 8) and Tiss (2004: 82) consider *kha* to be an inalienably possessed noun with a grammatical function, like *hini* and *towi* (section 7.2.2.1). But while the morphology of *hini* and *towi* provides evidence that these two words have indeed undergone a process of grammaticalisation and were originally inalienably possessed nouns, nothing indicates that this is also true for *kha*.

Even if modern *kha* went back to a noun diachronically, its synchronic classification as a possessed noun has no merit. As shown above, it functions mainly as a grammatical marker. As the marker of a complement of a stative verb, *kha* is in a paradigmatic relationship with the postposition *za* (section 5.6). As a marker of associative phrases, *kha* has a unique grammatical function.

Another important argument against classifying *kha* as a possessed noun is the third person masculine prefix *po-*, which occurs only on *kha*. Inalienably possessed nouns as well as kinship nouns have zero-marking in the third person:

associative particle:	inalienably poss. noun:	kinship noun:
po-kha	*Ø-tati*	*Ø-hidobadi*
3.m-ASS	3-head.m	3-nephew
'his (one)'	'his head'	'his/her nephew'

Thus, *kha* differs from possessed nouns both syntactically and morphologically. Besides, unlike a prototypical noun, it is void of any lexical meaning. It can therefore not be considered a noun, nor does it fit into any other lexical category. It constitutes a class of its own.

8 Possession

8.1 Attributive possession

As explained in sections 3.1 to 3.3, Kulina has three types of possession: alienable, inalienable and kinship. These three types are marked differently only if the possessor is a modifier of the possessee within a noun phrase and if the possessee is overtly present in the noun phrase.

8.1.1 Alienable possession

An alienable possessor is marked by the particle *kha*. Alienable possessor phrases fall within the wider category of associative phrases and *kha* is a general associative particle (section 7.10) rather than specifically a possession marker. In the alienable possession construction, the associative (possessor) phrase is a constituent of the noun phrase headed by the possessee. The unmarked position of the possessor is before the possessee, but the opposite order is occasionally used. The question under which circumstances this is the case requires further study.

8.1.1.1 Pronominal possessors
Pronominal possessors form the paradigm shown below (repeated from 7.1.2). The paradigm of personal pronouns is given for comparison (repeated from 7.1.1).

	pronominal possessors	personal pronouns
1SG	*o-kha*	*owa*
2SG	*ti-kha*	*tia*
3SG m	*po-kha*	*powa*
3SG f	*poni=kha*	*poni*
1NSG	*i-kha*	*ia*
2NSG	*ti-kha-deni*	*tia-deni*
3NSG m	*po-kha-deni*	*powa-deni*
3NSG f	*poni-deni=kha*	*poni-deni*

The pronominal possessors have diverse internal structures. Kulina has four basic personal pronouns, *owa* 'I', *tia* 'you', *powa* 'he', and *ia* 'we'. The corresponding possessive forms consist of *kha* with a prefix which is identical with the first syllable of the pronoun.

(516)   *o-kha*   *ima*
        1SG-ASS   story
        'my story'

(517)   *ti-kha   koshiro*
        2-ASS   knife
        'your knife'

(518)   *po-kha   oza*
        3-ASS   house
        'his house'

(519)   *i-kha*   *hi-hipa*
        1NSG-ASS   INSTR-eat
        'our food'

In the third person singular feminine, the full personal pronoun *poni* occurs before *kha* and in the third person non-singular feminine, both the pronoun and the non-singular marker *deni* stand before *kha*.

(520)   *[po-ni=kha]*   *koshiro*
        3-f=ASS   knife
        'her knife'

(521)   *[po-ni-deni=kha]*   *ahie*
        3-f-NSG=ASS   song
        'their (f) song'

In the second person non-singular and the third person non-singular masculine, however, *kha* precedes *deni*. Due to this order of the components, the person prefixes *ti-* and *po-* can be used, which can be attached to *kha*, but not to *deni*. In the second person non-singular feminine (shown above), on the other hand, the full pronoun *poni* is used, which does not need a base to attach to, so that *deni* and *kha* can occur in the more natural order, with the plural marker preceding the possessive marker.

(522)   *[po-kha-deni]*   *ima*
        3-ASS-NSG   story
        'their (m) story'

Adams (1987: 24) notes that there may be a marginal alternative form *powa-deni=kha* for a third person non-singular masculine possessor. This is in line with the descrip-

tion given above, namely that the prefix *po-* cannot be attached to *deni*. Thus the full pronoun *powa* has to be used when *deni* precedes *kha*.

8.1.1.2 Nominal possessors

When the possessor is a noun, *kha* is always the last element of the possessor phrase (section 7.10).

(523) *[makhidehe=kha]*   *mashito*
　　　 man=ASS　　　　 machete
　　　 the man's machete'

(524) *[idi-deni=kha]*　　　 *ima*
　　　 grandfather-NSG=ASS   story
　　　 'a story from the ancestors'

(525) *[amonehe　　 bede-ni=kha]　 etero*
　　　 woman　　　 small-f=ASS　　 clothes
　　　 'the little girl's clothes'

8.1.2 Kinship possession

See section 3.2.1.

8.1.3 Inalienable possession

Almost all inalienably possessed nouns have a masculine and a feminine form, whose formation is described in section 3.3.2. However, a small number of nouns which cannot take human possessors have only one form. They are listed in section 3.3.2.4.

8.1.3.1 Pronominal possessors

Without an overt possessor, the masculine form of a possessed noun is understood to have a third person singular masculine possessor and the feminine form to have a third person singular feminine possessor. Thus, the masculine form of the lexeme 'hand', *zepe*, means 'his hand' when there is no overt possessor and the feminine form *zapani* means 'her hand'.

　　For a possessor in the first person singular and non-singular and the second person singular, the prefixes *o-*, *i-* and *ti-* are used. They are always used with the

masculine form of the possessed noun. For the second person non-singular, the masculine form of the possessed noun takes the prefix *ti-* and is followed by the non-singular marker *deni*. *Deni* is also used for the third person non-singular masculine and feminine. It can only be used to mark the non-singular number of the possessor, not the possessee, though in the case of body parts multiple possessors imply multiple possessees.

The following is the full paradigm of the possessed noun *zepe/zapani* 'hand'.

1SG	*o-zepe*	'my hand(s)'
2SG	*ti-zepe*	'your hand(s)'
3SG m	*zepe*	'his hand(s)'
3SG f	*zapa-ni*	'her hand(s)'
1NSG	*i-zepe*	'our hands'
2NSG	*ti-zepe-deni*	'your hands'
3NSG m	*zepe-deni*	'their hands'
3NSG f	*zapa-ni-deni*	'their hands'

Possessed nouns which begin with a vowel or /w/ show morphophonological peculiarities with a first or second person possessor. The prefixes *ti-* and *i-* fuse with word-initial vowels in the following way:

(t)i-	*a*	>	*(t)e*
(t)i-	*e*	>	*(t)e*
(t)i-	*i*	>	*(t)ì*

ti-athi	>	*tethi*	'your voice'
ti-ebeno	>	*tebeno*	'your tongue'
ti-ino	>	*tino*	'your tooth'

Possessed nouns beginning with /wa/ drop the initial /w/ when *ti-* or *i-* is prefixed and then the same fusion as in nouns with initial /a/ takes place. (No possessed nouns beginning with /we/ or /wi/ are attested in the Purus dialect.)

(t)i- wa	>	**(t)i- a*	>	*(t)e*
ti-wati	>	**ti-ati*	>	*teti*	'your liver'

When the prefix *o-* occurs before /a/, /e/ or /i/, an epenthetic [w] is commonly inserted in the pronunciation (see section 2.5). In fast speech, the first two syllables [o.wV] of the resulting word form can be contracted to a single syllable [wV].

o- a	*>*	*owa*	*~*	*wa*		
o- e	*>*	*owe*	*~*	*we*		
o- i	*>*	*owi*	*~*	*wi*		
o-athi	*>*	*owathi*	*~*	*wathi*	'my voice'
o-ebeno	*>*	*owebeno*	*~*	*webeno*	'my tongue'
o-ino	*>*	*owino*	*~*	*wino*	'my tooth'

When *o-* is prefixed to a noun beginning with /wa/ the resulting form used in careful speech is completely regular. But it is possible to contract the first two syllables [o.wa] to [wa], which renders the form with prefix *o-* homonymous with the form without a prefix.

o-wa	*>*	*owa*	*~*	*wa*	
o-wati	*>*	*owati*	*~*	*wati*	'my liver' (cf. *wati* 'his liver')

Inalienably possessed nouns which begin with /o/ cannot take possessive prefixes. The first and second person personal pronouns have to be used instead.

owa oni	'my name' (lit. 'I name')
tia oni	'your name' (lit. 'you name')
ia oni	'our names' (lit. 'we name')

Table 28 compares the forms of a possessed noun with an initial consonant other than /w/ to those beginning with /w/ or a vowel. As the table shows, the third person singular masculine and the first person non-singular have the same form in the case of stems beginning with /e/ or /i/.

Table 28. Possessed nouns with initial regular consonant, /w/ or vowel

	nokho 'eye'	*wati* 'liver'	*athi* 'voice'	*ebeno* 'tongue'	*ino* 'tooth'	*oni* 'name'	
1SG	*o-nokho*	*o-wati*	*o-w-athi*	*o-w-ebeno*	*o-w-ino*	*owa*	*oni*
2SG	*ti-nokho*	*teti*	*tethi*	*tebeno*	*tino*	*tia*	*oni*
3SG m	*nokho*	*wati*	*athi*	*ebeno*	*ino*		*oni*
1NSG	*i-nokho*	*eti*	*ethi*	*ebeno*	*ino*	*ia*	*oni*

8.1.3.2 Nominal possessors

A nominal possessor occurs immediately before the possessed noun, which agrees with it in gender.

(526a) *makhidehe   bihi*   (526b) *amonehe   bihi-ni*
     man(m)   arm.m   woman(f)   arm-f
     'the man's arm(s)'   'the woman's arm(s)'

The non-singular of human possessors is marked by *deni* after the possessee.

(527a) *makhidehe   bihi-deni*   (527b) *amonehe   bihi-ni-deni*
     man(m)   arm.m-NSG   woman(f)   arm-f-NSG
     'the men's arms'   'the women's arms'

8.1.3.3 Complex possessed nouns

Possessed nouns can consist of two elements. In this case, the first element and its possessor together form the possessor of the second element. Thus in example (528) *makhidehe nokho* 'the man's eye' is the possessor of *kone* 'hair'. If the possessor of the first element is a first or second person pronoun, the second element is always feminine (while the first element is always masculine), as in example (530). For a more detailed discussion see section 3.5.1.4.

(528) *makhidehe   nokho   kone*
     man   eye.m   hair.m
     'the man's eyelashes'

(529) *amonehe   nokho-ni   kona-ni*
     woman   eye-f   hair-f
     'the woman's eyelashes'

(530) *o-nokho   kona-ni*
     1SG-eye.m   hair-f
     'my eyelashes'

8.1.3.4 Quotation form

For the purpose of naming an inalienably possessed noun as a lexical item of the language, without referring to any referent, the first person non-singular is used. Thus, when asked the word for 'eye' in their language, most Kulina answer *i-nokho*. (Some give the bare noun stem *nokho*. This seems to be the result of schooling.) At least two other languages of the region use the first person plural as the quotation form of inalienably possessed nouns. These are Suruwahá, which also belongs to the Arawan family, and Kanamari of the Katukinan family.

8.1.3.5 Dispossessive prefix *to-*

The prefix *to-* turns inalienably possessed nouns into free nouns. Like the first and second person prefixes, it is used with the masculine form of a simple noun while in the case of a complex possessee the first noun takes the masculine form and the second one the feminine form. *To-korime,* a word for 'spirit', i.e. a soul without a body, is the unpossessed form of *korime* 'his soul'. Hair that is lying on the floor and is thus no longer anybody's inalienable possession is called *to-tati konani*, from *tati* 'his head' and *konani* 'her hair'.

In the case of complex possessees such as *tati konani* 'hair', the prefix *to-* renders the first element into a free noun, but the second element remains inalienably possessed by the free noun formed with *to-*.

The fact that the second element of complex possessees occurs in the feminine form seems to indicate that the free nouns formed with *to-* are feminine. However, other constituents agreeing with them are not always feminine. According to Tiss (2004: 71–72) the word *to-korime* 'spirit' is masculine in the Juruá dialect while all other nouns with the prefix *to-* are feminine. In the Purus dialect, the situation seems not to be so simple. The word *to-w-athi* 'language, speech, story', for example, has been observed with both masculine and feminine agreement. The question of gender assignment for these words needs further investigation.

Like other free nouns, nouns with the dispossessive prefix *to-* can be alienably possessed.

(531) *zophinehe=kha*   *to-korime*
       shaman(m)=ASS   DISP-soul.m
       'The (dead) shaman's spirit.'

8.1.4 Covert possessee

A possessee need not be overtly present if it can be retrieved from the context. In this case, an associative noun phrase is used in pronominal function for all types of noun, free, kinship and inalienably possessed.

(532) *o-zepe*   *ime-ni,*   *ti-kha*   *bede-ni*
       1SG-hand.m   big-f   2-ASS   small-f
       'My hand is big, yours is small.'

While this construction can be used to refer to any covert possessee that is retrievable from the context, without a specifying context it is used for 'vulva, vagina'. Thus, *o-kha* means 'my vagina' if the context doesn't indicate a different meaning, *poni=kha* means 'her vagina' and *Maria=kha* is 'Maria's vagina'. Note that the word for 'vagina' is the only body part noun (apart from the one for a baby's fontanel) which is not

inalienably possessed (section 3.3.1). Using the noun for vagina, one would have to say *poni=kha mashi* for 'her vagina' whereas in the case of all other body parts, there is at most an affix marking the possessor, e.g. *zopori* 'his penis' doesn't have any overt marking of the possessor at all.

8.2 Predicative possession

There are different constructions for definite and indefinite possessees, but not for alienable, inalienable and kinship possession.

8.2.1 Definite possessee

Possession of a definite possessee is expressed by a verbless clause with the possessee as the subject. The possessor is expressed by an associative phrase as the clause complement.

(533)　*boba*　　*o-kha*
　　　　arrow　　1SG-ASS
　　　　'The arrow is mine.'

(534)　*a-hari=pa*　　　*ti-kha=ko?*
　　　　this-m=TOP.m　　2-ASS=Q.m
　　　　'Is this yours?'

An overt subject is not needed.

(535)　Ø　　　*abi=kha=ko?*
　　　　VCS　　my/your.father=ASS=Q.m
　　　　'Does this belong to my/your father?'

8.2.2 Indefinite possessee

8.2.2.1 Verb *kahi-* 'to have'
Possession of an indefinite possessee is expressed by the verb *kahi-* 'to have' with the possessor as the subject and the possessee as the object.

(536)　*wizaha*　　　*o-kahi-ni*
　　　　swidden(f)　　1SG-have-DECL.f
　　　　'I have a swidden.'

While other transitive verbs can agree in gender with either their subject or their object, *kahi-* always shows gender agreement with its subject. In example (537) the verb agrees in gender with the first person subject (which always requires agreeing dynamic verbs to be feminine, section 3.5.1.3), not with the third person object. Other transitive verbs always agree with the object when this is third person and the subject is first person.

(537)   *aba*   *o-kahi-ni*
        fish(m)   1SG-have-DECL.f
        'I have got (a/several/some) fish.'

The noun-class agreement of *kahi-* does not follow the same pattern as the gender agreement. *Kahi-* usually has human subjects, which are not members of the *ka*-class. But *kahi-* can show noun class agreement with its object. In example (538), the verb has a masculine suffix, agreeing in gender with the subject *makhidehe* 'man', not with the feminine object *oza* 'house'. But the verb also has the prefix *ka-*, agreeing with the object *oza*, which is a member of the *ka*-class (while *makhidehe* is not).

(538)   *makhidehe*   *oza*   *ime-ni*   *Ø-ka-kahi-i*
        man(m)   house(f-ka)   big-f   3-NCL-have-DECL.m
        'The man has a big house.'

A pragmatic difference is made between *kahi-*, which is used in offers (example [539]), and the existential verb *ani-* (section 10.4.1), which is used in requests (example [540]).

(539)   *bare*   *ti-kahi=ki?*
        banana   2-have=Q.f
        'Do you have bananas?' Offer: 'Do you want bananas?'

(540)   *bare*   *ani=ki?*
        banana   exist=Q.f
        'Are there bananas?' Request: 'Will you give me bananas?'

The verb *kahi-* 'to have' is homonymous with the verb 'to marry'. The latter, however, can agree in gender with its object, as example (541) shows, in which the verb has a feminine suffix, agreeing with the object, and the prefix *i-*, indicating object-agreement.

(541) *makhidehe   a-haro   zowato   i-kahi-ni*
　　　　man   DEM-f   girl   3-marry-DECL.f
　　　　'The man married that girl.'

8.2.2.2 Verb *kaphira-* 'to not have'

While it is not ungrammatical to negate *kahi-* 'to have' like other verbs, using the suffix *-hara/-↑hera*, the concept 'to not have' is almost exclusively expressed with the lexeme *kaphira-*. The Deni cognate of this word is *phira-* 'to not have', indicating that the initial /ka/ was originally a separate morpheme. According to Tiss (2004: 199), the Juruá dialect of Kulina has a verb *phira-* which means 'to not be useful/suitable'. 'To not have' is *kaphira-* in the Juruá dialect, like in the Purus dialect. Like *kahi-*, *kaphira-* always agrees in gender with its subject, as in example (542).

(542) *aba   o-kaphira-ni*
　　　　fish(m)   1SG-not.have-DECL.f
　　　　'I don't have (any) fish.'

The use of *kaphira-* with the noun class marker *ka-* is not attested and would be unexpected since the initial /ka/ of the verb was at least in the past a prefix and two different prefixes with the form *ka-* do not co-occur on the same word.

9 Noun phrases

9.1 Syntactic functions

The syntactic function of a noun phrase may be unmarked or marked by a postposition or the associative particle *kha*.

The syntactic function is unmarked if the noun phrase is
– the subject of any clause type,
– the direct object of a transitive verb,
– the complement of a copula or verbless clause (sections 10.1 and 10.2),
– the complement of the stative verbs *naato* 'know' and *shamo* 'not know' (section 5.6.3).

The syntactic function is marked by a postposition if the noun phrase is
– the indirect object of a ditransitive verb,
– a complement of certain stative verbs (section 5.6),
– a clause adjunct.

The syntactic function is marked by the associative particle *kha* if the noun phrase is
– a modifier of another noun phrase (section 7.10),
– a complement of certain stative verbs (section 5.6).

9.2 Constituents of the noun phrase

The head of a noun phrase can be a noun or a pronoun.
The following constituents can occur in a noun phrase with a nominal head.

A   *demonstrative (ch. 7, sect. 7.3.2) or interrogative (ch. 7, sect. 7.4.1)*
B   *associative modifier (ch. 7, sect. 7.10 and ch. 12, sect. 12.2)*
C   *inalienable possessor (ch. 3, sect. 3.3)*
D   head noun
E   *non-singular marker (ch. 3, sect. 3.1.1)*
F   *adjective (ch. 6)*
G   *participle (ch. 4, sect. 4.7) or relative clause (ch. 12, sect. 12.1)*
(E'   *non-singular marker)*
H   *quantifier (ch. 7, sect. 7.6)*
(A'   *demonstrative)*
I   *adverb (ch. 7, sect. 7.5.3)*
J   *postposition (ch. 7, sect. 7.2)*
K   *information structure marker or similar particle (ch. 7, sect. 7.7)*

Demonstratives either occur as the first constituent of a noun phrase (in slot A), or they follow the head noun (in slot A'). The interrogative *neheko* is only attested in slot A.

The only obligatory constituents of a noun phrase are the head and the postposition (where applicable; core arguments are not marked by a postposition). A noun phrase rarely contains more than one or two optional constituents.

The non-singular marker *deni* can occur immediately after the head noun (in slot E) or after an adjective, participle or relative clause (in slot E'). The distinction between slots E and E' can only be made if either of slots F and G is filled. If this is the case, the non-singular marker can occur twice (example [543]), though this is rarely the case. It usually occurs only in one of the two slots ([544] and [545]), without a difference in meaning. (The capital letters above the following examples indicate the noun phrase slots.)

```
          D     E        F      E'
(543)  amonehe-deni   hada-ni-deni   to-hika-ni
       woman-NSG      old-f-NSG      3-die.PL-DECL.f
       'The old women died.'
```

```
          D      E       F
(544)  madiha-deni   hada-i    to-hika-i
       person-NSG    old-m     3-die.PL-DECL.m
       'The old people died.'
```

```
          D         F       E'
(545)  amonehe    hada-ni-deni   to-hika-ni
       woman      old-f-NSG      3-die.PL-DECL.f
       'The old women died.'
```

Further examples:

```
                   A         D
(546)  makhidehe    [a-haro   zowato]_O   i-kahi-ni
       man          DEM-f     girl        3-marry-DECL.f
       'The man married this girl.'
```

```
          B           D     J    K
(547)  [i-kha       zama=za=pa]_ADJU    nowe      Ø-ra-i
       1NSG-ASS     area=LOC=TOP.m      not.exist  3-AUX-DECL.m
       'This one does not exist in our area.' (referring to a plant species)
```

    C   D   G

(548) *[bare ede-ni pame-e]ₛ Ø-napi-mana-ni*

    banana plant-f two-REL.f 3-grow-NSG-DECL.f

    'The two banana plants are growing.'

         D   E J

(549) *sowiko [zowato-deni=za]*ᵢₒ *da o-na-bakhi-ni*

    beads girl-NSG=IO   give 1SG-AUX-PL.IO-DECL.f

    'I gave the beads to the girls.'

      D   A'   J

(550) *[zabisho pa-hari=za] dishera o-na-ni*

    boy   DEM-m=CMPL like   1SG-AUX-DECL.f

    'I like that boy.'

When the head is a pronoun, there can be no demonstrative, interrogative, possessor or lexical modifier in the NP. A phrase with a pronominal head can thus have the following elements.

D **head pronoun**

E *non-singular marker*

H *quantifier*

I *adverb*

J *postposition*

K *information structure marker*

Examples:

     D   I

(551) *[owa motha]ₛ o-kha-na   [o-kha wizaha wahi]*ₐ𝒹ⱼᵤ

    1SG alone 1SG-move.SG-IFUT 1SG-ASS swidden DST.LOC

    'I'm going to my swidden on my own.'

         D J

(552) *[ethe bedi]ₒ [tia=za]*ᵢₒ *nowe o-na-na*

    dog   small 2=IO   show 1SG-AUX-IFUT

    'I'm going to show you a puppy.'

9.3 Discontinuous noun phrases

A noun phrase can be discontinuous, as in the following example.

(553) amonehe   zaha   tani   pamee
       [amonehe] zaha   to-na-ni   [pama-e]
       woman   run.DL 3.AWAY-AUX-DECL.f   two-REL.f
       'The two women fled.'

The subject noun phrase of the example above is *amonehe pamee* 'two women', with the first constituent of the phrase occurring clause-initially and the second clause-finally. The question why and how noun phrases are split is discussed in section 11.6.

9.4 Coordination and modification of modifiers

The inalienable possessor of a noun phrase head can itself be modified by an associative modifier, e.g. an alienable possessor. In example (554), *o-kha ethe* 'my dog' modifies *amori* 'paw'. *O-kha* 'my' modifies only the inalienable possessor *ethe* 'dog', not *ethe amori* 'dog's paw'. (The latter interpretation of the phrase is not impossible, but unlikely. It could then be translated as 'my dog paw', e.g. if someone owns only the paw of a dog. This reading would make sense in the case of a slaughtered game animal.)

(554) [o-kha   ethe]   amori
       1SG-ASS   dog   paw.m
       'my dog's paw'

In (555) the possessor *o-kha* modifies *bare ede-ni* 'banana plant', not only *bare* 'banana'. While the different semantic structures are reflected in the distinct morphosyntactic forms of the English translations, Kulina does not show the structural difference between (554) and (555).

(555) o-kha   [bare   ede-ni]
       1SG-ASS   banana   plant-f
       'my banana plant'

10 Copula, verbless and existential clauses

10.1 Copula clauses

10.1.1 The copula

The Kulina copula is the verb *ha-*, which also serves as the auxiliary of a small number of non-inflecting verbs (section 4.1.1) and of the progressive construction (section 12.3.3).

The copula has the following paradigm in the declarative form:

1SG   *o-ha-ni*
2SG   *ti-ha-ni*
3SG m   *to-ha-i*
3SG f   *to-ha-ni*

1NSG   *i-ha-ni* or *i-ke-he-ra-ni*
2NSG   *ti-ke-he-ra-ni*
3NSG m   *to-ke-he-ra-i*
3NSG f   *to-ke-he-ra-ni*

The verb *ha-* (when used as a copula as well as in most other cases) has a special form of non-singular marking: it takes the prefix *ke-* and the suffix *-↑ra* (which raises the preceding /a/ of the verb stem to /e/). The non-singular prefix *ke-* as well as the non-singular suffix *-↑ra* are only found on *ha-* and the auxiliary *na-*. (There is a homonymous negation suffix *-↑ra*, which occurs on other verbs [section 5.5].) In the first person non-singular, *ha-* occurs with and without the number affixes *ke-* and *-↑ra* without any difference in meaning. Since the person prefix *i-* already indicates non-singular number, the use of the number affixes is redundant. When the copula takes a directional suffix, the plural is formed with *-mana* instead of *ke-* and *-↑ra* (example [623]).

10.1.2 Constituent order and agreement

A copula clause has the following basic constituent order:

COPULA SUBJECT – COPULA COMPLEMENT – COPULA

The copula subject may be omitted or follow the copula. But the copula complement must be overt and it must always immediately precede the copula.

Like intransitive verbs, the copula agrees with its subject in person, gender, number and noun class. It does not agree in any grammatical category with its complement.

10.1.3 Function

Copula clauses express a relationship of identity or equation (A = B) or of category membership (A is a token of B) between the copula subject and a nominal copula complement. When the copula complement is an adjective, the clause expresses a relationship of attribution. The copula can have a stative meaning, 'be', or a dynamic meaning, 'become'. While the copula is necessary to express the concept 'become', as in examples (556) and (557), it is rarely employed with the meaning 'be', as in example (558). Usually, verbless clauses are used instead.

(556) [Ø]$_{CS}$ [hizama]$_{CC}$ o-ha-ni
       1SG   white.lipped.peccary(m)   1SG-COP-DECL.f
       'I became a white-lipped peccary.'

(557) [makhidehe]$_{CS}$ [zomahi]$_{CC}$ to-ha-i
       man   jaguar   3-COP-DECL.m
       'The man became a jaguar.'

(558) [owa=pi]$_{CS}$ [madiha]$_{CC}$ o-ha-ni
       1SG=TOP.f   Kulina   1SG-COP-DECL.f
       'I'm a Kulina.'

10.1.4 Peculiar use of *ka-* with the copula

The copula can take the prefix *ka-* when it is used with the adjective *hadai/hadani* 'old' in a clause with a human copula subject.

(559) owa=pi   hada-i   o-ka-ha-ni
       1SG=TOP.f   old-m   1SG-INTENS-COP-DECL.f
       'I am very old.' (male speaker)

But the use of *ka-* is not obligatory.

(560) owa=pi   hada-i   o-ha-ni
       1SG=TOP.f   old-m   1SG-AUX-DECL.f
       'I am old.' (male speaker)

As the translations of (559) and (560) indicate, the former example will be used by older people than the latter. One speaker described the difference between the two sentences in the following way. (560) is used by a person who is old, but who walks upright and without a stick while (559) is used by somebody who walks with a stick and whose back is bent from old age. In (559), *ka-* has been glossed as an intensifier, as this appears to be its function in the construction. But since this use is not attested elsewhere, only with *hadai/hadani*, it must currently be described as an idiosyncrasy.

10.2 Verbless clauses

Verbless clauses contain a verbless clause subject (VCS) and a verbless clause complement (VCC). The normal constituent order is VCS – VCC. The subject can be omitted if it is identifiable from the context.

10.2.1 Function

Verbless clauses are used to express the following concepts:
– identity, equation, reference or category membership
– attribution
– possession
– benefaction

reference:
(561)   *madiha=kha*   *[a-haro=pi]*$_{VCS}$ *[ama]*$_{VCC}$
         Kulina=ASS   DEM-f=TOP.f   blood(f)
         'In Kulina, this is (called) *ama*.' (speaker pointing at a blood stain)

attribution:
(562)   *[hazana]*$_{VCS}$ *[ime-i]*$_{VCC}$
         giant.armadillo   big-m
         'The giant armadillo is big.'

possession:
(563)   *[a-haro*   *oza=pi]*$_{VCS}$ *[o-kha]*$_{VCC}$
         DEM-f   house(f)=TOP.f   1SG-ASS
         'This house is mine.'

benefaction:

(564)   [aba]_{VCS}   [tia=za]_{VCC}   [paria   manako]_{ADJU}
        fish   2=PRX.LOC   manioc.flour   EXCH
        'The fish is for you, in exchange for manioc flour.'

10.2.2 Topic marker in verbless clauses

In verbless clauses, the subject usually takes the topic marker *=pa/=pi*, as in examples (561) and (563). This is almost always the case in affirmative clauses if the copula complement is a noun, i.e. in clauses which express identity, equation, reference or category membership, example (565). However, the topic marker is not used if the subject contains a different particle, e.g. *nako/naki* 'also', which is mutually exclusive with the topic marker, example (566).

(565)   [zipho   phe-phe=pi]_{VCS}   [kakadi]_{VCC}
        fire   INSTR-fan(verb)=TOP.f   fan(noun)
        'An instrument for fanning fire is (called) a fan.'

(566)   [abariza   naki]_{VCS}   [bani]_{VCC}   hera-ni
        vulture(f)   also.f   game(m)   NEG.f-DECL.f
        'Vultures aren't game, either.'

10.3 Negation of copula clauses and verbless clauses

There is only one negative clause type corresponding to affirmative verbless clauses and affirmative clauses with the copula *ha-* in the sense 'to be'. (The negation of copula clauses with *ha-* meaning 'to become' is not attested.) Like dynamic verbs, copula and verbless clauses are negated with the morpheme *-hara/-↑hera*. In the first and second person, the negation morpheme is suffixed to the copula *ha-*. This is the same position that the suffix *-hara/-↑hera* takes on other verbs, including the auxiliary *ha-* (whose morphology is partly different from that of the copula *ha-*).

(567)   tiapi   madiha   tiheherani
        tia=pi   madiha   ti-ha-↑hera-ni
        2=TOP.f   Kulina   2-COP-NEG.f-DECL.f
        'You are not a Kulina.'

In the third person, however, *-hara/↑-hera* occurs without a verb stem, taking the same suffixes as the negated copula in the first and second person.

(568) *zodo   bani   hara-i*
       opossum   game   NEG.m-DECL.m
       'Opossums aren't game.'

These stemless negative verb forms can be explained as a case of deletion of the copula stem *ha-*. The verb *ha-* usually takes the prefix *to-* in the third person, both as a copula and as an auxiliary (cf. copula paradigm above) so that the verb normally has prefixes for all persons. But there are certain cases in which *ha-* occurs without a prefix in the third person. In these cases, the verb stem itself is omitted.

    As a copula, *ha-* always takes the prefix *to-* in the third person when it is used affirmatively, but when it is used with a negation, there is no prefix, so that *ha-* itself is omitted.

Ø-ha-hara-i   >   *Ø-Ø-hara-i*
3-COP-NEG.m-DECL.m   stem deletion   3-COP-NEG.m-DECL.m

Thus, example (568) can be analysed as follows:
(568') *zodo   bani   Ø-Ø-hara-i*
        opossum   game   3-COP-NEG.m-DECL.m
        'Opossums aren't game.'

Further examples:
(569) *[o-kha   amonehe]*_{VCS}   *[osonaa]*_{VCC}   *Ø-Ø-hera-ni*
       1sg-ASS   woman   Kashinawa   3-COP-NEG.f-DECL.f
       'My wife isn't a Kashinawa.'

(570) *[oza]*_{VCS}   *[ime-ni   bote]*_{VCC}   *Ø-Ø-hera-ni*
       house   big-f   very   3-COP-NEG.f-DECL.f
       'The house isn't big.'

It should be noted that this is not a case of haplology. The stem of the copula as well as the auxiliary *ha-* is always omitted without a prefix, whether it is followed by *-hara/-↑hera* or not, as can be seen in the following example, where the stem of the auxiliary is omitted. Though there are two other instances of the syllable /ha/ in the predicate, neither occurs next to the position of the copula.

(571) *naza=pi   hawi   niharopi*
       naza=pi   hawi   Ø-ha-ni-haro=pi
       then=TOP.f   move.PL   3-AUX-BACK-NAR.f=TOP.f
       'Then they returned.'

10.4 Existential clauses

10.4.1 *Ani-*

The monovalent verb *ani-* is used to express that someone or something exists or is present. *Ani-* agrees with its argument in gender and number in the same way in which transitive and intransitive verbs agree with their subjects.

(572) *ami   ani=ki?*
      my/your.mother   exist=Q.f
      'Do you have a mother?'

(573) *ami   ani-ni*
      my/your.mother   exist-DECL.f
      'I have a mother.'

(574) *abi   ani=ko?*
      my/your.father   exist=Q.m
      'Do you have a father?'

(575) *abi   ani-i*
      my/your.father   exist-DECL.m
      'I have a father.'

(576) *ani-mana-i*
      be.present-NSG-DECL.m
      'They are here.'

While *ani-* shows gender and number agreement, which is expressed through suffixes, it doesn't inflect for person or noun class, which would require prefixes. *Ani-* is not attested with any prefix. In the case of noun classes, this means that nouns of the *ka*-class, which require a prefix *ka-* on other verbs, do not trigger the occurrence of the prefix on *ani-*.

As for person marking, the fact that a third person argument has zero-marking is expected, as this is also the case with the subject of intransitive verbs. A person prefix would be expected with a first or second person argument, but *ani-* is only attested in the third person.

Besides its existential meaning, *ani-* also has a locational meaning. Without a place adjunct it means 'be here, be present', as in example (576). When it is used with a place adjunct, its function is that of a locational 'be'.

(577) *neheko=za   o-kha   papéo   ani-ni?*
       what=LOC   1SG-ASS   book   be-DECL.f
       'Where is my book?'

10.4.2 *Nowe (hi)ra-*

The verb *ani-* 'exist, be present' is not normally negated. The most common way to express non-existence or absence is by means of the stative verb *nowe (hi)ra-*, which belongs to a small closed subclass of stative verbs discussed in section 5.3.

(578) *bani   nowe   Ø-ra-hari*
       meat   not.be   3-AUX-NAR.m
       'There is no meat.'

(579) *pasho   Ø-kha-za=pa   nowe   Ø-ra-i   sisipe*
       water(f) 3-move.SG-TC=TOP.m   not.be   3-AUX-DECL.m   blackfly(m)
       'When it's raining, there are no blackflies.'

The first syllable of the auxiliary *(hi)ra-* only surfaces when the auxiliary takes a prefix, which is the case in the first and second person and is possible, though not invariably the case, with *ka-*class nouns. (There seems to be no semantic motivation for the variation.)

   Nowe (hi)ra- can also be used to express non-identity, as in the following example, which is an answer to the question 'Who stole my chicken?'.

(580) *owa=pi   nowe   o-hira-pa*
       1SG=TOP.f   not.be   1SG-AUX-HPAST
       'It wasn't me.'

Since *nowe (hi)ra-* rarely occurs with a first or second person subject in natural speech and since speakers do not always observe *ka-*class agreement of *nowe (hi)ra-*, the lexeme occurs almost always without the first syllable of the auxiliary, in the form *nowe ra-*, which was misinterpreted by earlier authors as a single grammatical word, namely a verb (Adams 1987: 77), believed not to inflect for person (Tiss 2004: 198) or even to be subjectless (Monserrat and Silva 1986: 71).

   As the following example shows, *nowe (hi)ra-*, like *ani-*, can be used with a place adjunct.

(581) *i-kha   zama=za=pa   nowe   Ø-ra-i*
       1NSG-REL   area=LOC=TOP.m   not.exist 3-AUX-DECL.m
       'This one does not exist in our area.' (referring to a plant species)

In the examples above, *hira-* and *ra-* are glossed as AUX and *nowe* with the lexical meaning 'not.be, not.exist'. But, as explained in section 5.3, *(hi)ra-* is an integral part of the lexeme *nowe (hi)ra-* (though *nowe* can also be used alone as a one-word utterance meaning 'no' or 'there is none').

10.4.3 *Ma ra-*

Besides the use of *nowe (hi)ra-*, there is a second way to express non-existence, with a construction using *ma ra-*. Adams (1987: 77) analyses *"mara"* as an existential verb 'not exist', synonymous with *"no[w]era"*. But there are important differences between *ma ra-* and *nowe (hi)ra-*. Unlike the latter, *ma ra-* only occurs in the third person. And *ma ra-* cannot stand alone; it must always be immediately preceded by a noun phrase. It is possible to say *"nowe rai"*, meaning 'there is none', but one cannot simply say *"*ma rai"*. Kulina constituent order is generally determined by pragmatics and arguments of a verb can be omitted in most cases. (The only Kulina verb which must follow a noun phrase is the copula, which is always preceded by the copula complement.) It therefore appears unlikely that *ma ra-* is a (stative or dynamic) verb. Besides, a speaker has been observed pausing between *ma* and *ra-*, which makes it appear unlikely that the two syllables constitute a single (phonological and hence grammatical) word. *Ma ra* could be an idiomatic construction consisting of the enclitic comitative postposition *ma* 'with' and the negative morpheme -↑*ra*, which occurs as a derivational suffix on stative verbs (section 5.5) and is probably the origin of the second syllable of the inflectional verbal negation suffix -*hara/-↑hera* (section 4.2.5). The following examples are glossed accordingly, but this is a tentative explanation and the construction may turn out to have a different structure.

(582)   *madiha=ma   ra-i*
        person=with   NEG-DECL.m
        'There isn't anybody.'

(583)   *meme   eshe-ni=ma   ra-ni*
        sky   smoke-f=with   NEG-DECL.f
        'There are no clouds (lit. sky smoke).'

Ma ra- is also used idiomatically to express blindness and deafness.

(584)   *amonehe   nokho-ni=ma   ra-ni*
        woman   eye-f=with   NEG-DECL.f
        'The woman is blind.' Lit. 'The woman has no eyes.'

(585) *makhidehe*   *waribo=ma*   *ra-i*
       man   ear.m=with   NEG-DECL.m
       'The man is deaf.' Lit. 'The man has no ears.'

11 Verbal main clauses

A main clause which has a dynamic verb as its predicate can have constituents with the following syntactic functions:
– Predicate
– Subject (S or A)
– Direct Object (O)
– Indirect Object (IO)
– Adjunct(s)
– Conjunct

The predicate is the only obligatory constituent. There are several types of adjuncts, which take different positions in the clause (section 11.2). A clause can contain more than one adjunct.

11.1 Basic order of the predicate and its arguments

The constituent order of a Kulina clause is determined by syntactic and pragmatic rules. The order which is here considered to be basic is the one which occurs in clauses in which all constituents have the same pragmatic status, so that their order is determined exclusively by syntax. This is the case in clauses with a sentence focus (Van Valin and LaPolla 1997: 207). A sentence with a sentence focus has no topic and all its elements are presented as new information. Sentences of this type can be used to answer the question 'What is happening?' or 'What happened?'.

The basic constituent order of intransitive clauses is SV.

(586) *makhidehe*   *Ø-zokhe-i*
      man   3-die-DECL.m
      S   V
      'The man died.'

Transitive clauses have the basic constituent order AOV.

(587) *ethe*   *takara*   *[kha*   *i-na-i]*
      dog   chicken bite.dead   3-AUX-DECL.m
      A   O   V
      'The dog bit the chicken dead.'

The basic constituent order of ditransitive clauses is A IO O V.

(588) *makhidehe   amonehe=za   herói   [da   to-ka-na-hari]*
      man   woman=IO   watch   give   3.AWAY-NCL-AUX-NAR.m
      A   IO   O   V
      'The man is giving a watch to the woman.'

11.2 Adjuncts

The following clause constituents function as adjuncts:
a) adverbs and adverb phrases
b) noun phrases which are not in S, A, O, or IO function

Noun phrase adjuncts occur both with and without a postposition (section 7.2).
    The unmarked position of time adjuncts is immediately before the subject. Time adjuncts include, but are not restricted to, time adverbs (section 7.5.1). The following example begins with two time adjuncts: an adverb and a noun phrase.

(589) *[hidapana]*_{ADJU}, *[a-hari   wahano   dois   mil   e   três]*_{ADJU}
      now,   DEM-m   year   two   thousand and three

      *[idi-deni=kha   ehete]*_S   *Ø-hika-ni*
      grandfather-NSG=ASS   song   3-end-DECL.f

      'Now, in this year 2003, the songs of the ancestors are gone.'

The unmarked position of all other adjuncts is after the subject.

(590) *[Kanaú]*_S *[o-towi]*_{ADJU} *[moto   bede-ni=za]*_{ADJU} *Ø-kha-ni-poma-hari*
      NAME   1SG-GOAL   boat   small-f=INSTR   3-move.SG-BACK-AGAIN-NAR.m
      'Kanaú returned again in a small boat to (meet) me.'

11.3 Conjuncts

A conjunct is a clause constituent which consists of a clause linker (section 7.8) and, in most cases, a topic or narrow focus marker (section 7.7). It is always the first constituent of its clause.
    Whereas an adjunct adds something to the meaning of the clause, a conjunct links the clause to the preceding or following clause(s) of a text. Conjuncts therefore don't occur in isolated clauses. The following examples begin with the clause linkers *taide* 'first' and *zotode* 'then', respectively.

(591) *taidepi*   *hapide*   *hai*   *toheziphaharo*
      taide=pi   hapi-de   hai   to-ha-↑za-↑pha-haro
      first=TOP.f   bath-INF   move.PL   3-AUX-IN-WATER-NAR.f
      'First, they went bathing.'

(592) *zotode=pa*   *heheki=za*   *heki*   *Ø-ke-na-hari*
      then=TOP.m   grater=INSTR   grate   3-NSG-AUX-NAR.m
      'Then, they grate it with a grater.'

See section 7.8 for further examples.

11.4 Information structure

The basic or unmarked constituent order of a verbal main clause, which was described in the previous three sections, is the following.

conjunct
time adjuncts
S or A
other adjuncts
IO
O
predicate

The basic constituent order is sufficient to describe a clause with a sentence focus. But in natural speech, the scope of the focus of most sentences is more restricted. In these cases, the constituent order also depends on the information structure of the clause. This is most relevant for the topic of a clause. Usually, one of the following three phenomena affects the clause topic:
– omission
– fronting
– postposing

Topic omission:
The topic of a clause is usually omitted when it is the same as in the preceding clause or when there can be no doubt what the topic is. The following example consists of the first two sentences of a woman's account of how she weaves a bag (starting at a very early point in the process). The first sentence of the example has a sentence focus. Since it is the first sentence of the text and since there is no content overlap between the topic of the story 'weaving a bag' and the content of the sentence 'I plant cotton on my swidden', no element of the sentence can be construed as the topic.

Having a sentence focus, the clause shows unmarked constituent order. (There is no overt subject NP since the first person singular is indicated by the person prefix on the auxiliary and the personal pronouns are used in subject function for contrast or emphasis only.)

In the second sentence, the speaker continues to talk about the cotton mentioned in the first sentence. The cotton is the topic of the sentence and it is omitted.

(593) *okha*   *wizahaza*   *wepe*   *pha*   *onaharo.*   *moro*
      o-kha   wizaha=za   wepe   pha   o-na-haro.   Ø   moro
      1SG-ASS   swidden=LOC   cotton   plant   1SG-AUX-NAR.f   S.TOP   sprout

      taharo.
      to-na-haro.
      3-AUX-NAR.f

      'I plant cotton on my swidden. It sprouts.'

<u>Topic fronting:</u>
When the topic is not omitted, its normal position is at the beginning of the clause (after the conjunct, if the clause contains one). In the example below, the fish in the bag mentioned in the first sentence is the topic of the second sentence.

(594) *naza* *"wabo*   **[sako=kha aba]$_O$** *zoho* *ti-na-ni-ha*   *na-ho!"*
      then   brother-in-law   bag=ASS   fish   carry   2-AUX-home-?   AUX-IMP.m

      "[Hadema   tahapa   zoho i-ka-na-nehe]$_{ADV.CL}$ **[sako=kha   aba]$_O$**
      Waldemar   casting-net   carry 3-NCL-AUX-CONC.m   bag=ASS   fish

      [owa]$_A$ *zoho* *o-na-ni-ha*   *na-na.*   *hina!"*   *o-na-de.*
      1SG   carry 1SG-AUX-home-?   AUX-IFUT   let's.go   1SG-say-PAST

      'Then (he said): "Brother-in-law, take the fish in the bag home!". I said: "While Waldemar is carrying the casting-net, I'm going to carry the fish in the bag home. Let's go!"'

The second sentence consists of an adverbial clause (chapter 13) and a main clause. The predicates of both clauses contain the same verb *zoho na-* 'carry', but they have different subjects and different objects. The reason why subject and object are both overtly present in the main clause is that they contrast with the subject and the object of the adverbial clause, respectively: 'While *Waldemar* is carrying *the casting-net*, *I* am going to carry *the fish in the bag*.' Without the adverbial clause, the speaker would probably have omitted the arguments of the main clause and only uttered the predicate: *zoho onaniha nana* '(I) am going to carry (it).' With subject and object both present, the latter precedes the former in the main clause because it is the topic. The

adverbial clause does not contain a topic and its arguments occur in the basic order, subject before object.

Topic postposing:
Kulina is a verb-final language and the regular position of all other constituents is before the predicate. But sometimes speakers decide to add a topic NP at the end of a clause for emphasis or clarification after having omitted it in its more common fronted position. In this case, the topic occurs after the predicate, separated by an intonation break.

(595) *zanikowa*   *khide*   *okhaza,*   *makha*   *idade*
       zanikowa   khi-de   o-kha-za,   [makha]$_O$ [i-ida-de]$_{PRED}$
       tortoise   look.for-INF   1SG-move-TC   snake(m)   1NSG-beat.dead-PAST

       iapa
       [ia=pa]$_A$
       1NSG-TOP.m

‘When I went looking for tortoises, we killed a snake, we did.’

Omission and postposing of other constituents:
While fronting is peculiar to the topic of a clause, omission and postposing can also affect other constituents. Arguments of the predicate can be omitted or postposed if they are not in the focus of the clause. Adjuncts can also be postposed if they are not in the focus of the clause. (It is not possible to speak of the omission of adjuncts since adjuncts do not play a part in the valency of the predicate. If there is no adjunct, nothing has been omitted.)

There can be more than one postposed constituent in a clause. In this case, the postposed elements are separated by an intonation break not only from the predicate, but also from each other.

Two postposed place adjuncts:
(596) *[madiha]*$_A$ *[o-w-athi]*$_O$ *[Ø-mitha-mana-i   hine]*$_{PRED}$,
       people   1sg-EPENTH-voice.m   3-hear-NSG-DECL.m   NFUT

       [aha-kha]$_{ADJU}$, ***[Santa Júlia=za]***$_{ADJU}$
       DEM-REM   NAME NAME-LOC

‘The people will hear my voice, there, in Santa Júlia.’

11.5 Pronominal arguments

As mentioned above, independent personal pronouns occur in subject function for contrast or emphasis only. In most cases, they are omitted since subject person is indicated by a verbal prefix.

(597) Ø   *o-pemi-ni*
       S   1SG-be.hungry-DECL.f
       '(I) am hungry.'

(598) Ø   *ti-maiza-haro*
       S   2-lie-NAR.f
       '(You) are lying.'

(599) Ø   *Ø-zokhe-i*
       S   3-die.SG-DECL.m
       '(He) died.'

In direct object function, the first and second person pronouns behave differently from third person pronouns. Third person pronouns are usually not used in direct object function, except as reflexives. When the direct object is first or second person, however, an object pronoun is normally used.

Since the use of first and second person pronouns as objects is less marked than their use as subjects, they can only be interpreted as objects in constructions which appear to be ambiguous, as in example (601).

Example (600) has an overt subject and an overt object. In example (601) the direct object of example (600) has been omitted and the sentence looks as if it could be ambiguous, with the only overt argument, the first person singular pronoun being either the subject or the object. But in fact only the reflexive reading is possible. The pronoun cannot be interpreted as the subject of the clause. In (602), both arguments are omitted and the clause is again non-reflexive, like (600) with two overt arguments.

(600) *owa*   *awa*   *[ka*   *o-na-ni]*
       1SG   tree   cut   1SG-AUX-DECL.f
       A   O   V
       'I cut a tree.'

(601) *owa*   *[ka*   *o-na-ni]*
       1SG   cut   1SG-AUX-DECL.f
       O/*A   V
       'I cut myself' / *'I cut it.'

(602) *ka   o-na-ni*
      cut   1SG-AUX-DECL.f
      'I cut it.'

11.6 Split constituents

It is possible to focus only a part of a noun phrase, either its head or one of the dependents. In this case, the noun phrase can be split, with the focal part occurring before and the non-focal part after the predicate.

    If the question "What did the dog do?" is answered with "It bit a white chicken dead." the attribute 'white' is likely to be an additional piece of information and not treated as a part of the focus. It can therefore come after the predicate and a possible answer would be as follows.

(603) Ø   *[takara   kha   i-na-i]$_{FOC}$ pako-w-i*
      3   chicken   bite.dead   3-AUX-DECL.m   white-EPENTH-m
      'It bit a white chicken dead.'

If "It bit the white chicken dead." is the answer to "Which chicken did the dog bite dead?" 'white' is in the focus and must precede the predicate, while 'chicken' is non-focal and can follow the predicate.

(604) Ø   *pako-w-i$_{FOC}$ kha   i-na-i   takara*
      3   white-EPENTH-m   bite.dead   3-AUX-DECL.m   chicken
      'It bit the white chicken dead.'

It is also possible for a part of a noun phrase to be the topic of a clause while the rest of it is in the focus. In this case, the topicalised part of the NP is fronted while the focal one occurs closer to the predicate.

    The following example is the first sentence of a description of the production of red paint from annato fruits.

(605) *taide=pa   hidepe=pa   [amonehe-deni   bono   pore   Ø-na-hari[44]]$_{FOC}$*
      first=TOP.m   annato=TOP.m   woman-NSG   fruit   pick   3-AUX-NAR.m
      'First, the women pick the annato fruits.'

---

44 As the non-singular marker *deni* indicates, the subject of the sentence is non-singular. The auxiliary should therefore have the form *kenahari*, with the subject non-singular prefix *ke-*, which the speaker omitted. (If the subject was singular, the auxiliary would have to have the form *inahari*.) Speakers judge the sentence as it is given here, with the prefixless auxiliary *nahari*, to be ungrammatical, but this is how it was uttered.

Bono 'fruit' is an inalienably possessed noun and the object noun phrase of (605) is *hidepe bono* 'annato fruit'. But only *hidepe* is the topic since the speaker was asked to describe its production. (*Hidepe* is the Kulina name of the annato plant as well as the paint produced from its fruit.) The topic is fronted and followed by the topic marker *pa*. Everything that follows *pa* is in the focus. The focal part of the sentence is thus a full clause with the unmarked AOV constituent order, including *bono* '(its) fruits', which is separated from the topical part of the object noun phrase by the subject of the clause.

11.7 Stative verbs

The syntactic and pragmatic rules described above also apply to clauses with a stative verb as predicate head. Stative verbs don't have direct or indirect objects, but some of them take complements (section 5.6). The unmarked position of the complement of a stative verb is the same as that of the direct object of a dynamic verb, i.e. immediately before the predicate. The basic or unmarked constituent order of a stative verbal main clause is thus as follows.

conjunct
time adjuncts
subject
other adjuncts
complement
predicate

12 Clause embedding and coordination

12.1 Relative clauses

A relative clause is a subordinate clause which modifies the head of a noun phrase and in which the modified head is a participant. In other words, the head noun is the shared participant of the main clause and the relative clause. There is no relative pronoun or relativiser. The verb in the relative clause takes the relative suffix *-a/-e* in the TAM-slot. Otherwise, the morphology of the verb is the same as in main clauses. Relative clauses are only attested with the shared participant in S function (example [607]) or O function (example [606]) in the subordinate clause.

A relative clause always follows the head noun, taking the same position as the participle (section 4.7), which also has the noun phrase head as its S or O argument. The difference between the relative form and the participle is that the former is the fully inflected predicate of a subordinate clause whereas the latter is not a fully inflected verb form. The participle cannot be inflected for person and is not the predicate of a clause.

(606) *awi*   *shite*   *onee*   *watiapa*
      awi   [shite   o-na-e]$_{REL.CL}$ Ø-watia-pa
      tapir   shoot.with.arrow   1sg-AUX-REL.f   3-die-HPAST
      'The tapir I've shot has died.'

First and second person constituents of a main clause can also be modified by a relative clause, without the need of a personal pronoun in the matrix clause.

(607)   *okathoma*   *nee*   *okashiahani*
      Ø$_S$ [o-kathoma   na-e]$_{REL.CL}$ o-kashiaha-ni
      1SG   1SG-watch   AUX-REL.f   1SG-stay.awake.all.night-DECL.f
      'I, who was watching, stayed awake all night. '

The quantifying dynamic verbs *ohari-* 'be one' and *pama-* 'be two' usually occur in the relative form when they are used as noun phrase modifiers. See section 4.8 for examples. Stative verbs can form relative clauses, as well. In this case, the subject of the relative clause is the shared participant.

(608) *siba*   *khanaha*   *tee*   *obakhoza*   *zoho* *onani*
      siba   [khanaha   to-na-e]$_{REL.CL}$ o-bakho=za   zoho   o-na-ni
      stone   heavy   3-AUX-REL.f   1SG-chest=LOC   carry 1SG-AUX-DECL.f
      'I'm carrying a stone which is heavy in front of my chest.'

(609) *owapi*   *takara*   *bazira*   *tee*   *okahini*
owa=pi   takara   [bazi-ra   to-na-e]$_{REL.CL}$ o-kahi-ni
1SG=TOP.f   chicken   many-NEG   3-AUX-REL.f   1SG-have-DECL.f
'I have few chickens.'

12.2 Associative clauses

As mentioned in section 12.1, a relative clause can only be used if the main clause and the subordinate clause share a participant. If the noun which is to be modified does not play a part in the modifying clause, the associative particle *kha* (section 7.10) is required. *Kha* is cliticised to the last element of the modifying constituent, which can be a clause and will then be called an associative clause. Associative clauses can be finite, i.e. the verb can occur with one of the main clause TAM-suffixes (example [610]). There is also a special non-finite form for associative clauses, in which the verb stem is reduplicated and occurs without any (main or subordinate) TAM-suffix and (in the case of non-inflecting verbs) also without an auxiliary (examples [611] and [612]).

(610) *hidapana*   *wati*   *o-na-na*   *[Naoza*   *to-kha-ni-i*
now   tell   1SG-AUX-IFUT   NAME   3.AWAY-move.SG-HOME-DECL.m

hini=kha]$_{ASS}$ *ima*
NFUT=ASS   story

'Now I'm going to tell a story on the occasion of Naoza's going home.'
Lit. 'Now I'm going to tell a Naoza-is-going-to-go-home story.'

(611) *[[maithakhazama*   *ini-deni*   *makaari*   *kahi-kahi=kha]*$_{ASS}$ *ima]*$_O$
long.ago   grandmother-NSG   squirrel   marry-REDUP=ASS   story

[bazi-ra   *te-e]*   *naato*   *o-na-haro]*
much-NEG   3.AUX-REL.f   know   1SG-AUX-NAR.f

'I know a bit of the story about the ancestors who married squirrels a long time ago.'

An associative clause can also be used without an overt head, as in the following example, where the head noun *ima* 'story' is omitted. The sentence refers to one of the Kulina clans, which are named after animals, in this case a fish species, the golden trahira.

(612) *hidapana*   *wati*   *o-Ø-ma-na*   *[khorobo*   *madiha*
now   tell   1SG-AUX-BELOW-IFUT   golden.trahira   people

*hika-hika=kha]*_O
die.PL-REDUP=ASS

'Now I'm going to record the one about how the Khorobo Madiha (the golden trahira people) died.'

12.3 Infinitival constructions

The infinitive of verbs is formed with the suffix *-de* (section 4.6). It is used in three constructions: complement clauses, purposive linking and progressive aspect.

12.3.1 Complement clauses

A number of stative verbs can take a complement (section 5.6). The complement of the stative verbs *hipa* 'want, like', *dishera* 'like', *naato* 'know' and *shamo* 'not know' can either be a noun phrase or a subordinate clause. The subordinate clause and the main clause have the same subject, which cannot be overtly present in the subordinate clause (and needn't be in the main clause). The verb of the subordinate clause occurs in the infinitive. The basic constituent order of the main clause is (subject NP) – complement – stative verb.

(613) *tikha*   *asi*   *towakhanide*   *hipa*   *tinaki?*
[ti-kha   asi   to-ka-kha-ni-de]   hipa   ti-na=ki?
2-ASS   older.sister   AWAY-APPL-move.SG-BACK-INF   want   2-AUX=Q.f
'Do you want to take your older sister back?'

(614) *amonehe*   *[po-ni*   *tasha-ni*   *izo-ni*   *pata-de]*   *naato*   *ta-ni*
woman   3-f   companion-f   belly-f   turn-INF   know   3.AUX-DECL.f
'The woman knows how to turn (the foetus in) her companion's belly.'

(615) *zodo-de*   *shamo*   *o-na-ni*
write-INF   not.know   1SG-AUX-DECL.f
'I can't write.' Lit. 'I don't know to write.'

12.3.2 Purposive linking

Purposive linking is very frequently used with the verb *kha-* 'move' as the verb which expresses an action that is carried out in order to do something else.

The fact that a person or animal goes somewhere for a certain purpose is expressed in a sentence in which the verb *kha-* is inflected while the verb that denotes the intended activity occurs in the infinitive and precedes *kha-*.

(616) *[bora   pha-de]   o-kha-ni   hini*
      ball   hit-INF   1SG-move.SG-DECL.f   NFUT
      'I'll go and play soccer.'

(617) *hidakhazama   [homo   shite-de]   o-kha-na*
      early.in.the.morning spider.monkey shoot.with.arrow-INF 1SG-move.SG-IFUT
      'I'll go and hunt spider monkeys early in the morning.'

The only other verbs with which this construction is attested are *witha-* 'sit' and *wa-* 'stand'. These stance verbs are used in this way much more rarely and the meaning is not as clearly purposive as with *kha-*. The construction may here simply express simultaneity of the events of the main clause and the subordinate clause.

(618) *kothaha-de   o-witha-na*
      wait-INF   1SG-sit.SG-IFUT
      'I'm going to sit and wait.'

(619) *makhidehe   katha-de   Ø-wa-bakosha-i*
      man   watch-INF   3-stand.SG-ON.RIVER.BANK-DECL.m
      'The man is standing on the bank of the river and watching.'

12.3.3 Progressive aspect

The complex sentence type treated in this section is different from the previous ones in that it is not a case of clause linking, in which two or more clauses which refer to different states of affairs are combined, but a syntactically complex construction which is used to express a single state of affairs and which has only one predicate.

The progressive aspect is used for actions that are going on (or not going on) at the moment of speaking or at some other temporal point of reference. Its predicate consists of the main verb in the infinitive followed by the inflected copula *ha-*. The copula always agrees in gender with the clause subject (section 10.1.2). This is also true when it is used in the progressive construction. In this respect, the progressive form differs from simple forms of transitive verbs, in which the main verb or its lexical

auxiliary is inflected and in most cases agrees in gender with the direct object (section 3.5.1.2).

(620) *poroko*_{CS}   *zori-de*_{CC}   *to-ha-ni*
       pig   root-INF   3-COP-DECL.f
       'The pig is rooting.'

(621) *amonehe*   *etero*   *shawade*   *toheherani*
       amonehe_{CS}   [etero   shawa-de]_{CC}   to-ha-↑hera-ni
       woman   clothes   wash-INF   3-COP-NEG-DECL.f
       'The woman isn't washing clothes.'

Directional suffixes of inflecting verbs are attached to the verbal root, before the suffix *-de* (example [622]). Directional suffixes of non-inflecting verbs are attached to the copula (example [623]).

(622) *[o-kha*   *zo-zodo*   *iba-ri-de]*_{CC}   *o-ha-ni*
       1SG-ASS   INSTR-write   put-RAISED.SURFACE-INF   1SG-COP-DECL.f
       'I'm putting my pen on top (of the table).'

(623) *khi-de*_{CC}   *to-ha-riza-mana-ni*
       see-INF   3-COP-AROUND-NSG.A-DECL.f
       'They are looking for it.'

12.3.4 Comparison of complement clauses, purposive linking and progressive aspect

Complement clauses, purposive linking and progressive aspect as the three constructions which use the infinitive follow the same general pattern, although the progressive is monoclausal while the two other constructions are biclausal.

complement clause:
(624) *zowato*   *[poo*   *[pha-de]*_{PRED}]_{CMPL.CL}   *[shamo*   *ta-ni]*_{PRED}
       girl   sweet.manioc   plant-INF   not.know   3.AUX-DECL.f
       'The girl doesn't know how to plant sweet manioc.'

purposive linking:
(625) *zowato*   *[poo*   *[pha-de]*_{PRED}]_{PURP.CL}   *[to-kha-ni]*_{PRED}
       girl   sweet.manioc   plant-INF   3.AWAY-move-DECL.f
       'The girl is going somewhere to plant sweet manioc.'

progressive aspect:

(626) *zowato*   *poo*   *[pha-de*   *to-ha-ni]*_{PRED}
      girl   sweet.manioc   plant-INF   3-AUX-DECL.f
      'The girl is planting sweet manioc.'

In all three cases, the infinitive is used together with another verb which is not transitive. In the case of the complement clause, the other verb is a stative verb as the main clause predicate. In purposive linking, the second verb is an intransitive dynamic verb, mostly *kha-* 'move', also as the predicate of the main clause. In the progressive construction, the second verb is the copula *ha-* as the inflected part of a single complex predicate.

12.4 Clause coordination

Two or more clauses referring to a sequence of events can be coordinated in a single sentence. There is no overt marker of coordination. It is, instead, the absence of certain morphemes which marks coordinated clauses. Only the first of the coordinated clauses can begin with a clause-linker such as *naza* 'then' or *nazama* 'then'. Only the last of the coordinated clauses takes a TAM-suffix. An overt subject NP can only occur in the first of the coordinated clauses.

In the following example, the coordinated clauses of the first sentence share only O, while those of the second sentence share both A and O.

(627) *nazama*   *Narina*   *omathoza*   *hizama*
      nazama   Narina   o-matho=za   hizama
      then   NAME   1SG-neck=LOC   white.lipped.peccary

      ibari,   *zoho*   *onanide.*   *nazama*
      i-iba-ri,   zoho   o-na-ni-de.   nazama
      3-put-RAISED.SURFACE   carry   1SG-AUX-HOME-PAST   then

      Kairarakha   *idima,*   *zoho*   *inanide.*
      Kairara=kha   i-idi-ma,   zoho   i-na-ni-de.
      NAME=ASS   3-take-up,   carry   3-AUX-HOME-PAST

      'Then Narina put a white-lipped peccary on my neck and I carried it home. Then he took Kairara's (peccary) and carried it home.'

12.5 Direct speech

Direct speech is reported with the verb *na-* (which is also the most important auxiliary of the language, section 4.1.1.) *Na-* immediately follows the quotation.

(628) *naza=pa*   *"hina,   i-kada-na"*   *Ø-na-hari*
then=TOP.m   come.on   1NSG-move.DL-IFUT   3-say-NAR.m
'Then he said "Come on, let's go!"'

The author of the original speech act is the subject of the verb, which can precede the quotation (example [629]) or follow *na-* (example [630]). *Na-* is intransitive in the speech report construction, always agreeing in gender with the (overt or covert) subject.

(629) *Passabem   "ahaza   batanomakha Ø-witha-i"*   *Ø-na-de*
NAME(m)   here.m   bushmaster   3-sit.SG-DECL.m   3-say-PAST
'Passabem said "There is a bushmaster."'

(630) *nazapa   "hina   zamatapa   towi   hai   Ø-ha-na"*
then.m   come.on food   GOAL   move.PL   1NSG-AUX-IFUT

Ø-na-haro   imeni
3-say-NAR.f his.mother

'Then his mother said "Come on, let's fetch food."'

Alternatively, the author's voice can be the subject. The noun for 'voice' is inalienably possessed and has the masculine form *athi* and the feminine form *athi-ni*.

(631) *"hee" Ø-na-hari   [biridi-deni   athi]*$_S$
yes   3-say-NAR.m   3POSS.grandfather-NSG.POSS   voice.m
'"Yes" said their grandfather.', lit. '...their grandfather's voice.'

The addressee of the original speech act is marked by the enclitic postposition *za* and can occur before the direct speech (example[632]) or after *na-* (example [633]).

(632) *[madiha owaa=pa]*$_S$ *owa=za   "hina"   Ø-ke-na-i   hini*
people   other.m=TOP.m   1SG=LOC   Let's.go   3-NSG-say-DECL.m   NFUT
'The other people are going to say "Let's go!" to me.'

(633) *"zamatapa   o-na-na-i   hine"   Ø-na-haro   makhi=za*
food   1SG-CAUS-be-DECL.m   NFUT   3-say-NAR.f   man=LOC
'She said "I'll cook food" to her husband.'

Na- is also used to quote onomatopoeia (example [634]).

(634) [ethe-deni]*ₛ*   *"háo háo"*   *Ø-ke-na-de*
       dog-NSG   "bow wow"   3-NSG-say-PAST
       'The dogs were barking.'

In narratives, two instances of the verb *na-* are often used, the first in the declarative form and the second in the past.

(635) *"zomahi   kha   i-na-pa"   Ø-na-ni   na-de*
       jaguar   bite.dead   3-AUX-HPAST   3-say-DECL.f   say-PAST
       'She said "The jaguar killed her."'

If the people quoted are third person non-singular, only the first instance of *na-* gets the non-singular marker *ke-*.

(636) *"ahaza   zanikowa   kahi   ta-de"   Ø-ke-na-i   na-de*
       here.m   tortoise   numerous   3.AUX-PAST   3-NSG-say-DECL.m   say-PAST
       'They said "There used to be many tortoises here."'

13 Adverbial clauses

An adverbial clause modifies a main clause without being a constituent of it (Genetti 2005: 63), i.e. it is a non-embedded subordinate clause.

13.1 Marking of adverbial clauses

In Kulina, an adverbial clause is marked as such by a verb suffix. With one exception[45], the TAM-suffixes found on verbs in main clauses are not used in adverbial clauses. There is, instead, a set of subordinate suffixes which occur in the same position as main clause TAM-suffixes. The choice of the subordinate suffix depends on the function of the subordinate clause.

13.2 Position of the adverbial clause in the sentence

The unmarked position of an adverbial clause is before the main clause, but it can also follow the main clause as an added explanation or clarification.

13.3 Forms and functions

The predicate of an adverbial clause can take the following suffixes.

-za	temporal, causal
-zama	temporal, causal
-naha / -nehe	concurrence
-raa, -↑raa	contrastive
-i hini / -ni hini	purpose

13.3.1 Suffix *-za*

Adverbial clauses with the verb suffix *-za* are by far the most common ones. The suffix is used in the formation of the following three types of adverbial clauses:
– temporal: simultaneity or sequence
– causal
– conditional: prediction

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45 The only verb form which can occur in both main clauses and adverbial clauses is *-i hini / -ni hini*, which marks near future in main clauses and purpose in adverbial clauses.

13.3.1.1 Temporal clauses

A *za*-clause is used for an event which
a)   happens simultaneously with the event of the main clause or
b)   immediately precedes it.

It is also used for a state that pertains
a)   while the event of the main clause occurs or
b)   simultaneously with the state of the main clause.

The sentence may have past, present or future reference and the verb of the main clause may take any main clause form.

(637)   *naza=pa*   *[na-hari   karia   bakho   Ø-na-hona-za]   "Niha*
          then=TOP.m   DEM-m   white.person   arrive   3-AUX-HITHER-TC   hello

          ti-bika=ki?"
          2-good=Q.f

          'Then, when that white man arrived, (he asked) "Are you well again?"'

(638)   *"ka   ophiza,   okha   ehedeni   hero*
          "[ka   o-na-⁽ᵒ⁾phi-za]   o-kha   ehedeni   hero
          cut   1SG-AUX-ACROSS-TC   1SG-ASS   child   eat.juicy.fruit

          nani   hini"   nahari
          Ø-na-ni   hini"   Ø-na-hari
          3-AUX-DECL.f   NFUT   3-say-NAR.m

          'He said "When I've lopped off (the branches of the tree), my daughter will eat (the) fruits (which are growing on it)"'

Sentences with a *za*-clause can also have a habitual meaning.

(639)   *o-kha   ehedeni   Ø-kha-riza-za=pi*   *ohi-ohi   ohi-ohi*
          1SG-ASS   child   3-move.SG-AROUND-TC=TOP.f   cry-REDUP   cry-REDUP

          o-na-haro
          1SG-AUX-NAR.f

          'Whenever my child is moving around (drinking and quarrelling), I cry a lot.'

(640) *zaro   Ø-hipa-haro, rasho   Ø-hipa-haro, [sosomiki hada-za]*_{ADV.CL}
jaracatiá 3-eat-NAR.f, jerimunzinho 3-eat-NAR.f, cajuzinho be.ripe-TC

Ø-hipa-haro
3-eat-NAR.f

'(The deer) eats jaracatiá, (it) eats jerimunzinho (and it) eats cajuzinho when it is ripe.' (These are different kinds of fruit.)

Negated *za*-form

The meaning of the combination of the negation suffix *-hara/-↑hera* and *-za* is 'without', which can be semantically decomposed into 'while not' and is thus a mere addition of the meanings of the two suffixes.

(641) *khi   o-na-hara-za   dama   o-na-i   aba*
look 1SG-AUX-NEG.m-TC grab   1SG-AUX-DECL.m fish(m)
'I grabbed the fish without looking.'

13.3.1.2 Causal clauses

The second use of *za*-clauses is to express a cause or reason for the state of affairs of the main clause.

(642) *Naoza   "wati-wati   ti-na-hi"   Ø-na-za   wati-wati   o-na-ni*
NAME   tell-REDUP   2-AUX-IMP.f   3-say-TC   tell-REDUP   1SG-AUX-DECL.f

hine
NFUT

'Since Naoza said "Tell (a story)!", I'm going to tell (one).'

(643) *zanikowa   i-hipa-za   i-tabakhora-ni*
tortoise   1NSG-eat-TC   1NSG-bad-DECL.f
'We are ill because we have eaten the tortoise.'

13.3.1.3 Conditional clauses

The *za*-form of the verb is also used in conditional clauses. The attested examples are of the conditional clause type called "predictive" by Thompson and Longacre (1985: 193–194), i.e. they express a condition that is not fulfilled at the time of speaking but that may be fulfilled in the future.

(644) *hamohamo*   *khahonazapi*   *owaza*   *béobéo*
       hamohamo   Ø-kha-hona-za=pi   owa=za   béo-béo
       monster   3-move.SG-HITHER-TC=TOP.f   1SG=IO   bang.metal-REDUP

       tana,   *okharonani*   *hini*
       ti-na-na   o-kha-rona-ni   hini
       2-AUX-IFUT   1SG-move.SG-DOWN-DECL.f   PURP

       'If the monster comes, you will bang metal on metal to (waken) me so that I'll come down (from the tree).'

(645) *owa*   *hore*   *tinanizapi,*   *owa*   *tihipazapi,*
       owa   hore   ti-na-ni-za=pi,   owa   ti-hipa-za=pi
       1SG   carry.on.back   2-AUX-HOME-TC=TOP.f   1SG   2-eat-TC=TOP.f

       mimihi   *tiaza*   *khara*   *tani*   *towi*
       mimihi   tia=za   khara   to-na-ni   towi
       diarrhoea   2=IO   hard   3-AUX-DECL.f   FUT

       'If you carry me home and eat me, you will get bad diarrhoea.' (The tortoise of example [643] speaking.)

13.3.1.4 Relation between causal and conditional

The last two functions of the *za*-clause described above, causal and conditional, can be described as a single one. A condition, at least one in a predictive conditional clause, is a cause which has not yet been realised at the time of speaking and whose future realisation is not considered to be certain by the speaker, as in the third of the following three English examples.

(646) *Since I've lopped off the branches, my daughter can eat the fruits.*

(647) *Since I'm going to lop off the branches, my daughter will be able to eat the fruits.*

(648) *If I lop off the branches, my daughter can eat the fruits.*

In example (646), the action of the adverbial clause has already been realised. In example (647), it has not been realised, but its future realisation is considered certain by the speaker. Both examples contain causal adverbial clauses with the conjunction *since*. In (648) the action of the adverbial clause has neither been realised nor is it certain that it will be realised. The adverbial clause is therefore marked as a conditional one by the conjunction *if*. The difference between (646) and (647) on the one hand and (648) on the other hand is realis versus irrealis, while the cause-effect relationship between adverbial clause and main clause is the same in all three examples.

An English causal clause can thus be described as encoding cause and realis while a predictive conditional clause encodes cause and irrealis. Since there is only one corresponding clause type in Kulina, the *za*-clause, the latter can be said to simply express a causal relationship, without saying anything about realis/irrealis. The *za*-form can therefore be described as having only the following two functions:

- temporal: simultaneity or sequence
- causal (realis or irrealis)

13.3.1.5 Further links

According to Thompson and Longacre (1985: 181), it is not unusual for a language to have a single adverbial clause type for causal clauses as well as clauses for simultaneity or temporal adjacency. They further state that some languages have only one form for 'if'-clauses and 'when'-clauses (p.193). Both observations apply to Kulina, in which 'if'-clauses as well as 'because'-clauses have the same form as 'when'-clauses.

Thompson and Longacre also mention that many languages have the same form for purpose clauses and reason clauses (p. 183) and that some languages use a dative, benefactive and/or allative marking for purpose clauses (p.184).

If a) there is some similarity between purpose and reason clauses and b) the allative case is used to mark purpose clauses in certain languages, one might expect to find reason clauses to be marked by the ablative case in some languages, which is indeed the case in Turkish.

Kulina does not distinguish locative, allative and ablative. They all get the same markings, =*za* for proximate and *wahi* for distal (section 7.2.3). The enclitic =*za* is the older of the two forms (section 7.2.4.2) and also used to mark the indirect object (which could be called dative). The parallels found in other languages indicate that it is not a mere coincidence that this enclitic case marker is homonymous with the verb suffix -*za* of causal adverbial clauses.

13.3.2 Suffix -*zama*

The suffix -*zama* shares two of the functions of -*za*. It is used in temporal clauses of simultaneity or sequence and in causal clauses. But unlike *za*-clauses, temporal clauses with -*zama* cannot be used with a future meaning. It is thus a marker of non-future temporal or causal subordinate clauses.

In the following example, there is a cause-effect relation as well as temporal correlation between the subordinate clause and the main clause, which is often the case and explains why in many languages temporal and causal clauses are marked in the same way.

(649) *i-tapari*   *Ø-hika-zama*   *hawi*   *Ø-ha-ni-de*
       1NSG-food   3-end-NFTC   move.PL   1NSG-AUX-BACK-PAST
       'When we ran out of food, we returned.'

13.3.3 Suffix *-naha/-nehe*

The verb suffix with the masculine form *-naha* and the feminine form *-nehe* indicates simultaneity between the states of affairs of the subordinate clause and the main clause. Unlike *-za* and *-zama*, *-naha/-nehe* cannot be used to express a causal relationship between the clauses.

(650) *o-witha-nehe*   *Nerino-deni*   *Sakeo*   *tezehe*   *"zama*
       1SG-sit.SG-CONC.f   NAME-NSG   NAME   together.m   forest

       i-kada-na"   *Ø-ke-na-de*
       1NSG-move.DL-IFUT   3-NSG-AUX-PAST

       'While I was sitting (at home), Nerino and Sakeo said "We are going to the forest".'

13.3.4 Contrastive clauses

The suffix discussed in this section occurs in the forms *-raa* and *-↑raa*. This is to say that if the vowel immediately preceding the suffix is /a/, it may or may not be raised to /e/. According to Tiss (2004: 312), the raising occurs in the Juruá dialect if the subject of the subordinate clause is feminine but not if the subject is masculine, although his own examples (p. 315–316) do not confirm this analysis. If the raising of /a/ in the Juruá dialect does indeed depend on gender, it is presumably usually governed by the gender of the direct object, rather than the subject, in the case of transitive verbs. This probably used to be the case on the Purus as well, but currently there seems to be free variation between raising and omission of raising in Santa Júlia.

    The suffix *-raa* (or *-↑raa*) is used when there is a semantic conflict between the contents of the main clause and the subordinate clause. This includes the case of concessive clauses. A concessive clause creates a certain expectation for something to happen or not to happen while the main clause expresses that contrary to expectations, the state of affairs in question did, does or will in fact materialise or fail to materialise.

(651) *ze* *onaraa* *obikeherani*
 ze o-na-raa o-bika-↑hera-ni
 drink 1SG-AUX-CONTR 1SG-good-NEG-DECL.f
 'Although I drank (the medicine), I didn't get well.'

(652) *opito* *koma* *teraa,* *mokawa* *towi* *hopha*
 o-pito koma to-na-↑raa mokawa towi hopha
 1SG-knee.m hurt 3-AUX-CONTR shotgun GOAL run

 onaniharo
 o-na-ni-haro
 1SG-AUX-HOME-NAR.f

 'Although my knee was hurting, I ran home for my shotgun.'

(653) *bedimeni* *Ø-pama-raa* *bedi* *nowe* *Ø-ra-i*
 his.wife 3-be.two-CONTR his.son exist 3-NEG-DECL.m
 'Although he had two wives, he didn't have children.'

The semantic conflict between the subordinate clause and the main clause is not necessarily one of counter-expectancy, as in concessive clauses. The term *adversative clause* is sometimes used for clauses which express a contrast without counter-expectancy. The most common way of forming such clauses in English is with the conjunction *but*. However, the adversative clause in English corresponds to the main clause in Kulina, not the *raa*-clause.

(654) *khi* *Ø-ke-na-raa* *nowe* *Ø-ra-i*
 look.for 3-NSG.A-AUX-AVRS exist 3-NEG-DECL.m
 'They were looking for him, but he wasn't there.'

(655) *Kaibo* *shite* *inaraa* *zori* *tahari*
 Kaibo shite i-na-raa zori to-na-hari
 NAME shoot.with.arrow 3-AUX-AVRS miss 3-AUX-NAR.m
 'Kaibo shot, but he missed.'

The suffix *-raa* is also used instead of *-za* in the case of a sequence of events when the event of the main clause has some adverse effect. In this case, one could also speak of an adversative construction, although it is the main clause which expresses the adverse event.

(656)   *nazapi*   *aba*   *korokoro*   *ozipheraa*   *ata*
             naza=pi   [aba   koro-koro   o-na-$^{\theta}$za-↑pha-↑raa   ata
             then=TOP.f fish   hook-REDUP 1SG-AUX-IN-WATER-AVRS mud

             haroroniza   *akomi*   *owa*   *kha*   *tozaharo*
             haroro-ni=za]   akomi   owa   kha   to-na-$^{\theta}$za-haro
             muddy-f=LOC   piranha 1SG   bite   3-AUX-IN-NAR.f

             'Then, when I was standing in the water hooking fish in the mud, a piranha bit me'

13.3.5 Purpose clauses

In Santa Júlia, the predicate of a purpose clause takes the complex marker *-i hini/ -ni hini*, the second element of which is clearly related to and shows the same dialectal variation as the morpheme which marks purpose on noun phrases. In Santa Júlia, *hini* is an inflecting postposition which marks noun phrases of cause as well as purpose. This is due to the conflation of the two grammatical morphemes *hine/ hini* and *wahine* in the Purus dialect. Table 29 compares the forms used in Santa Júlia to those found on the Juruá river. On the Juruá, *hine/hini* is a noun phrase marker of cause with masculine and feminine forms (Tiss 2004: 85) while *wahine* is a marker of purpose on noun phrases as well as predicates (Tiss 2004: 94, 254–255). On the Purus, gender marking of *hine/hini* has been lost, the two forms are now only dialectal variants (section 7.2.2.1). Moreover, *hini* (or *hine*) has taken over the function of *wahine* as a purpose marker on both noun phrases and predicates.

    The form *-i hini / -ni hini* also marks the near future in main clauses in Santa Júlia. It is not clear if a corresponding form exists in the Juruá dialect.

Table 29. *Hini* in Santa Júlia and corresponding forms in the Juruá dialect.

	Santa Júlia	Juruá
NP-marker of cause	*hini*	*hine / hini*
NP-marker of purpose	*hini*	*wahine*
predicate marker of purpose	*-i hini / -ni hini*	*-wi wahine / -ni wahine*
predicate marker of near future	*-i hini / -ni hini*	?

Juruá data are from Tiss (2004: 85, 94, 254–255).

(657)   *niki*   *tikanaho,*   *shiaha*   *tani*   *hini*
             niki   ti-ka-na-ho,   shiaha   to-na-ni   hini
             press   2-NCL-AUX-IMP.f,   light   3-AUX-DECL.f   PURP
             'Press (the switch) so that it gets light!' ('Switch the light on!')

(658) *o-kha   ethe doshe o-na-hari,   zomahi khizo i-na-i   hini*
       1SG-ASS dog send 1SG-AUX-NAR.m jaguar follow 3-AUX-DECL.m PURP
       'I sent my dog to chase a jaguar.'

(659) *pasho tia da   okanana,   ze   tani   hini*
       pasho tia da   o-ka-na-na   ze   ti-na-ni   hini
       water 2   give 1SG-APPL-AUX-IFUT   drink 2-AUX-DECL.f   PURP
       'I'm going to give you water (for you) to drink.'

13.4 Shared participants

The main clause and the adverbial clause can, but need not share a participant. There are no restrictions as to which participant can be shared. The shared participant can have the same or different syntactic functions in the main and the adverbial clause. If a shared participant is overtly present as a noun phrase in the sentence, it occurs in the first clause, i.e. usually the subordinate clause.

No shared participant:
(660) *nazapi   ["hee, aba   zoho   zoho   imorakhana"*
       naza=pi   "hee, aba   zoho   zoho   i-na-ᵠmora-kha-na"
       then=TOP.f   yes   fish carry carry 1NSG-AUX-UPHILL-FIRST-IFUT

       kenaza]ₐDV.CL   owithizaharo
       Ø-ke-na-za   o-witha-↑za-haro
       3-NSG-AUX-TC   1SG-sit.SG-IN-NAR.f

       'Then, while they said "ok, let's carry the fish up the slope", I kept sitting inside (the canoe).'

Same A and same O in subordinate clause and main clause:
(661) *bowi   tinaithaza   shoke tizanaho*
       [bowi   ti-na-witha-za]ₐDV.CL shoke ti-na-ᵠzana-ho
       head.of.cattle 2-CAUS-sit.SG-TC   tie   2-AUX-ENGULFING-IMP.m
       'Catch the bull and tie it.'

Subject of quotation verb in subordinate clause = O of main clause:

(662)   *"kobetaza*   *owa*   *hore*   *takhimanahi"*   *onaza*
         ["kobeta=za   owa   hore   ti-na-khi-mana-hi"   o-na-za]$_{ADV.CL}$
         blanket=INSTR   1SG   wrap   2-AUX-ITE-NSG.A-IMP.f   1SG-say-TC

         kobetaza   *owa*   *hore*   *inakhimanaharo*
         kobeta=za   owa   hore   i-na-khi-mana-haro
         blanket=INSTR   1SG   wrap   3-AUX-ITE-NSG.A-NAR.f

         'When I said "Wrap me in a blanket!", they wrapped me in a blanket.'

13.5 Adverbial clauses with stative verbal predicates

A clause with a stative verb as its predicate can also function as an adverbial clause.

(663)   *o-kha*   *boroni*   *khema-ni,*   *be-ra-ni,*   *[hinede*   *wahi*   *o-na-za]*$_{ADV.CL}$
         1sg-ASS   patio   grow.over-f,   weed-NEG-f,   owner   far   1SG-AUX-TC
         'My patio is overgrown, not weeded, since I, the owner, am far away.'

(664)   *aharo*   *amonehepi*   *bazira*   *taza*
         [a-haro   amonehe=pi   bazi-ra   to-na-za]$_{ADV.CL}$
         DEM-f   woman=TOP.f   big-NEG   3-AUX-TC

         owakiboharode
         o-ka-k-ibo-haro-de
         1SG-CAUS-EPENTH-stay-NAR.f-PAST

         'When this woman was (a) small (child), I left her (here).'

13.6 Combination of adverbial clauses

A sentence can contain two or more adverbial clauses with the same or different subordinate verb suffixes. The subordinate clauses can be cosubordinated (i.e. they are all directly subordinated to the main clause) or the first subordinate clause can be subordinated to the second subordinate clause, as in the following example.

(665)   *hoho*   *o-na-raa,*   *madiha=ma*   *Ø-ra-zama,*   *ori*
         whistle   1SG-AUX-AVRS   person=with   3-NEG-NFTC   paddle

         o-na-ni-haro
         1SG-AUX-BACK-NAR.f

         'After I had whistled in vain as there wasn't anybody there, I paddled back.'

14 Word formation

Several cases of word formation have already been mentioned earlier, e.g. the derivation of inalienably possessed nouns in section 3.3.2, the derivation of causatives and applicatives in section 4.2.6 and the formation of nouns with the associative particle in section 7.10.5. This chapter describes some further noun formation processes: the derivation of abstract, instrumental, locational and agent nouns and noun compounding.

14.1 Derivation of nouns

Abstract, instrumental, locational and agent nouns can be derived from dynamic verbs. Agent nouns can also be derived from onomatopoeic words.

14.1.1 Abstract nouns

Abstract nouns are formed with the suffix *-e*, which can be attached to inflecting and non-inflecting verbs. The resulting noun is feminine. A preceding /a/ is assimilated to *-e*.

doshe	'send'	*doshee*	'a cultural event' (see explanation below)
kha-riza-	'move-around'	*kharizee*	'trip'
watize-	'have fun'	*watizee*	'party'

Abstract nouns can be lexicalised, with a meaning that is not fully predictable from the meaning of the verb, which is not unexpected (Comrie and Thompson 1985: 357). *Doshee* is the name of an important cultural event which begins with the women of a village going from house to house to call upon the men to go hunting or fishing, followed by a hunting or fishing trip and the celebration upon the return of the hunters or fishers.

An abstract noun can include a directional, as in *kharizee* 'trip', which contains the directional suffix *-riza* 'in different directions', attached to the verb *kha-* 'move'.

14.1.2 Instrumental and locational nouns

The name of an instrument can be formed by reduplicating the first syllable of a dynamic verb. This derivation is fully productive and applies in the same manner to inflecting and non-inflecting verbs.

verbs		nouns	
beri	'cut with scissors'	*be-beri*	'scissors'
do	'squash'	*do-do*	'pestle'
hapho	'blow'	*ha-hapho*	'tube for blowing tobacco into nose'
heki	'grate'	*he-heki*	'grater'
howe	'sweep'	*ho-howe*	'broom'
hozi	'walk with a crutch'	*ho-hozi*	'crutch'
kha-maro-	'go up (sg)'	*kha-kha-maro*	'ladder, stairs'
koba	'hammer'	*ko-koba*	'cudgel'
koro	'throw; hook fish'	*ko-koro*	'fishhook'
koshi	'whip'	*ko-koshi*	'whip'
ori	'paddle'	*o-ori*	'paddle'
phe	'cook'	*phe-phe*	'fan (for fire)'
piko	'turn'	*pi-piko*	'screw; key'
piri	'shine light on'	*pi-piri*	'flashlight'
saka	'pierce'	*sa-saka*	'(kind of) harpoon'
shite	'shoot with a bow'	*shi-shite*	'bow'
shoke	'tie'	*sho-shoke*	'belt'
tomi	'suck'	*to-tomi*	'dummy, pacifier; pipe'
wishi	'cut off/through'	*wi-wishi*	'saw'
zo	'punt'	*zo-zo*	'punting pole'
zodo	'write'	*zo-zodo*	'pen, pencil'

The same derivation is also used for locations which serve a certain purpose.

hapi	'have a bath'	*ha-hapi*	'bathroom'

The formation of instrumental and locational nouns are just different aspects of one comprehensive function of this derivation and in some cases, including the following, it may be difficult to decide if the derived noun is an instrument or a location.

witha-ri-	'sit above the ground (sg)'	*wi-witha-ri*	'bench'

This lack of a formal distinction between instruments and locations is reflected in the syntax of Kulina. The postposition *za* is used to mark both the instrumental case and the proximate locative case, e.g. *hohowe=za* 'with the broom' and *hahapi=za* 'in the bathroom'. *Khakhamaro=za* can mean 'with the ladder' or 'on the ladder'. As was explained in section 7.2.4.2, the distal locative *wahi* is likely to be an innovation. Thus at an earlier stage there was probably a single locative-instrumental case in Kulina, corresponding to the (locative-)instrumental deverbal derivation of nouns.

Nouns without an instrumental or locational meaning

The following two nouns formed with the derivational process described above have a meaning which is neither instrumental nor locational.

verbs		nouns	
hipa	'eat'	*hi-hipa*	'food'
mihi	'defecate'	*mi-mihi*	'diarrhoea'

Mimihi can alternatively have a locational meaning. In this case, it refers to a place for defecation, such as a latrine. In the Juruá dialect, it is only used in this sense, as a different word, *saido*, is used for diarrhoea.

14.1.3 Agent nouns

Agent nouns can be derived from verbs by reduplicating the first syllable and suffixing *-de*.

verbs		nouns	
ho	'blow (wind)'	*ho-ho-de*	'wind'
maiza	'lie'	*ma-maiza-de*	'liar'
tomi	'suck'	*to-tomi-de*	'parasitic catfish' (sucks blood of other fish)

Many agent nouns are animal names derived from onomatopoeic words. Thus, the name indicates which sound the animal makes. Like onomatopes, the derived nouns can have a phonological form which violates phonological rules of the language (section 2.10.1).

When the onomatopoetic base of the word is disyllabic, either only the first or both the first and second syllable may be reduplicated (the reduplicated syllables occurring before and after the base, respectively). But each lexeme derived in this way has a fixed form. There is no variation between reduplication of only the first syllable and of first and second syllable.

monosyllabic base
ho-ho-de	'frog species'
ié-ié-de	'frog species'
phái-phái-de	'frog species'
re-re-de	'praying mantis'

disyllabic base with reduplication of first syllable
ti-tiri-de	'bird species'

disyllabic base with reduplication of first and second syllable

sha-shako-ko-de	'limpkin (a bird)'
zo-zori-ri-de	'Brazilian tinamou *(Crypturellus strigulosus)* (a bird)'

14.1.4 Instrumental and agent compounds

A noun which can function as the direct object of a transitive verb (example [666]) can form a compound with an instrumental noun derived from that verb (example [667]).

(666) *bani*   *o-tabishe-na*
 meat   1SG-roast-IFUT
 'I'm going to roast meat.'

(667) *bani*   *ta-tabishe*
 meat   INSTR-roast
 'meat grill (metal frame)'

The same applies to agent nouns, e.g. the word for 'teacher', which literally means 'the one who reads books aloud'.

(668) *papéo*   *wa-wa-de*
 book   AGENT-read.aloud-AGENT
 'teacher'

The surface form of these compounds is the same as that of inalienably possessed nouns with a nominal possessor, such as the following example.

(669) *makhidehe*   *tati*
 man   his.head
 'the man's head'

But instrumental and agent nouns are free nouns and the first element of compounds such as *bani tatabishe* 'meat grill' is not a possessor. The possessor of an instrumental or agent noun has to be marked by the associative particle *kha*, as is the case with the possessors of all free nouns.

(670) *makhidehe=kha*   *ta-tabishe*
 man=ASS   INSTR-roast
 'the man's grill'

14.2 Other compounds

Nominal compounds can be formed from a free noun and a possessed noun. Grammatically, these compounds do not differ from the inalienable possessive construction (section 8.1.3), but unlike the latter, they are semantically non-compositional, i.e. their meaning is not predictable from the meaning of their elements. Their elements are separate grammatical and phonological words.

14.2.1 Body part compounds

Body parts of animals and parts of plants can be used as a descriptive type of compound. The object named in this way usually reminds the speakers of the body part after which it was named because of how it looks or due to some other characteristic.

abariza   *apha-ni*   'cat's claw *(Uncaria tomentosa)*, a medicinal plant'
vulture   feather-f

biha   *apha-ni*   'fish species'
yam   leaf-f

pishi   *ino*   'fish spec. of the family *Characidae*, Port. *peixe-cachorro*'
squirrel.monkey   tooth.m

In some cases one of the elements of the compound has otherwise disappeared from the language, as in the following two examples.

awi   *khobori*   'medicinal plant with large, heart-shaped leaves'
tapir   knee.m

On the Brazilian Purus, *khobori* 'knee' is only attested from one old speaker and nobody else could be found who would understand this word, though it occurs in a paper by Adams Liclan and Marlett (1990: 116) on Peruvian Kulina. Although the noun *awi* 'tapir' is feminine, *awi khobori* contains the masculine form of the word for 'knee', thereby indicating the sex of the tapir, so that the literal meaning of the compound is 'male tapir's knee'.

zawa   *zapa-ni*   'a tree with a sweet, red fruit'
?   hand-f

The word *zawa* only occurs in this compound so that it is not possible to tell what it used to mean as a simple lexeme.

This form of compounding is productive and can be used to refer to modern artefacts.

mori   *ephe*   'umbrella' (Boyer and Boyer 2000: 25)
bat   wing.m

zao   *zepe*   'padlock'
sloth   paw.m

A body part compound can also be used as a modifier.

sowe   *[awi*   *denephe]*   'small yellow passion fruit' lit. 'tapir testicle
passion.fruit   tapir   testicles.m   passion fruit'

14.2.2 *Korime*

Like body part nouns, *korime* 'shadow, reflection, image, sculpture, model' is an inalienably possessed noun. *Korime* is the masculine form, the feminine is *korima-ni*. Compounds with *korime* are formed in the same way as body part compounds. As the five translations for *korime* given here indicate, the word can be used to refer to something that somehow resembles something else, a kind of look-alike. In compounds, *korime* is used in the same way, e.g. a pillbug is called *warikoze korima-ni* 'armadillo image' because it does not only look a bit like an armadillo, but just like an armadillo rolls itself into a greyish ball when feeling threatened. *Korime*-compounds can therefore be charaterised as similes, while body part compounds, which lack an element meaning '(the named object) is like (the one it is named after)', are metaphors.

botani   *korima-ni*   'a fish species'
stingray   image-f

ethe   *korime*   'bushdog *(Speothos venaticus)*'
dog   image.m

hawi   *korima-ni*   'rainbow'
path   image-f

mahi   *korime*   'watch'
sun   image.m

mashito   *korime*   'fish spec. of the family *Characidae,* Port. *peixe-cachorro*'
machete   image.m

warikoze	*korima-ni*	'pillbug, woodlouse (order *Isopoda*)'
armadillo	image-f	

14.2.3 *Makha*

Makha is a free noun meaning 'snake', but in compounds it takes the forms of an inalienably possessed noun, masculine *mekhe-ne*, feminine *makha-ni*. Most of the compounds with *makha* denote snake species or other animals without legs. The grammatical structure of the compound is that of an inalienable possessive construction with the first element as the possessor and *mekhe-ne/makha-ni* as the possessed. Whether the masculine or the feminine form of *mekhe-ne/makha-ni* is used depends on the grammatical gender of the possessor. In some cases, the possessor is obviously the location where the denoted animal is typically found. In the other cases, it is presumably a location which the Kulina associate or used to associate with the animal in question, which may or may not be due to actual patterns of behaviour of the species.

compound	meaning	first element	meaning
awa makha-ni	'poisonous hairy caterpillar'	*awa*	'tree'
bani mekhe-ne	'maggots found on meat'	*bani*	'meat'
mahonana makha-ni	'grub found in sugar cane'	*mahonana*	'sugar cane'
warokaa mekhe-ne	'Aztec ant'[46]	*warokaa*	'trumpet tree'
ziki mekhe-ne	'common lancehead (a snake)'	*ziki*	'ivory palm'
zero makha-ni	'snake species'	*zero*	'grass'

14.2.4 *Taapi*

Like *makha*, *taapi* is used to form the names of certain animal species. It is a morphologically regular inalienably possessed noun and speakers find it acceptable to use it with a first or second person possessor, i.e. *o-taapi* and *ti-taapi*, but it has not been possible to ascertain its meaning. *Taapi* usually occurs as the second element of compounds. Most of the lexemes formed with *taapi* designate small birds. The first element of the compound is mostly an animal name. The second element has the form *taapi-ni* if the first element is feminine.

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46 Aztec ants live in trumpet trees.

compound	meaning	first element	meaning
botani taapi-ni	'bird species'	*botani*	'stingray'
hizama taapi	'bird species'	*hizama*	'white-lipped peccary'
koriza taapi-ni	'bird species'	*koriza*	'lake'
mei taapi	'bird species'	*mei*	'ant species'
pishi taapi	'pygmy marmoset'	*pishi*	'squirrel monkey; tamarin'
saporo taapi	'bird species'	*saporo*	'fish species'
wama taapi	'bird species'	*wama*	'caiman'
zero taapi-ni	'bird species'	*zero*	'grass'

15 Lexicon

This chapter discusses a number of issues concerning the Kulina lexicon. The first three sections deal with some semantically defined categories of words – colour terms, generic nouns for plants and animals, and vocatives for pets. Section four describes the structure of a common type of idiom. Section five explores a historical topic: the origins of loanwords.

15.1 Colour terms

In the Purus dialect, four colours are distinguished. The names of the colours are stative verbs. There are two synonymous words each for 'red' and 'white'.

makho	'red'
maphara	'red' *(rare)*
mopo	'white'
pako	'white'
sowe	'black, dark'
weshe	'yellow, white, light'

The Juruá dialect has a second word for 'black, dark', in addition to *sowe*, and distinguishes a further colour 'blue'.

mawa	'black, dark' *(Juruá dialect)*
napana	'blue' *(Juruá dialect)*

Weshe refers to the colour yellow, but when the word occurs in stories, it is usually translated by the speakers as 'white'. There is some evidence that *weshe* is an older word for 'white, light' than *mopo* and *pako* and that it had an antonym *kiri* 'black, dark'. *Kiri* means 'black' in Deni and Western Jamamadi. In Kulina, a cognate morpheme is only attested as an element of the following two complex nouns:

onowana kiri	'vulture species with black feathers'[47]
wama kiri	'caiman species'[48]

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47 *Onowana* is the name of the king-vulture *(Sarcoramphus papa)*, which is partly white. *Onowana kiri* refers to a bird whose body is all black, probably the Greater Yellow-headed Vulture *(Cathartes melambrotus)* and/or the Lesser Yellow-headed Vulture *(Cathartes burrovianus)*.
48 *Wama* without a modifier is used as a generic term for the spectacled caiman *(Caiman crocodilus),* Cuvier's dwarf caiman *(Paleosuchus palpebrosus)* and the smooth-fronted caiman *(Paleosuchus*

What is remarkable about the use of *kiri* as a modifier is that it is used as a bare stem. The same use is also attested for *weshe* in a few lexemes.

aba weshe	'fish species' (Portuguese: *filhote*)
pishi weshe	'squirrel monkey'
shiki weshe	'sand'
wama weshe	'caiman species'[49]

As described in section 3.6.2, colour verbs usually either take the suffix *-i/-ni* or reduplicate the last syllable when they modify a noun. A likely explanation for the exceptions with *kiri* and *weshe* listed above is that they are old complex nouns which were lexicalised before the modern morphology developed or became obligatory. *Kiri* survives as a constituent of a couple of complex lexemes while it has otherwise disappeared from the language.

The lexemes translated as 'light' or 'dark' above are only used to describe hues. There are different words referring to the presence or absence of light, *shiaha* 'light' and *zizi* 'dark'.

15.2 Generic nouns for plants and animals

Kulina has a small number of generic nouns. The meaning of such a noun covers a number of similar kinds of beings for which there are also various other, more specific names. The words in this category are cognate with the generic nouns of Jarawara (Dixon 2004a: 539–540), though some have a slightly different meaning.

<u>*aba*</u>
Aba means 'fish', but not all speakers consider fishes whose shape is very different from the prototype, i.e. stingrays and electric eels, to be members of this category.

<u>*awa*</u>
Awa is the generic word for trees excluding palm trees.

<u>*bani*</u>
Besides meaning 'meat', *bani* refers to all animals which are eaten by the Kulina, including mammals, birds, fishes, reptiles and frogs (which are apparently not eaten any longer). An animal which is not eaten by the Kulina, but by other people can be

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trigonatus). It is not clear which of these species the more specific terms *wama kiri* and *wama weshe* refer to.
49 See previous footnote.

referred to as *bani* if it is specified whose *bani* it is. Example (671) expresses that the Kashinawa eat sloths and implies that the Kulina don't.

(671) *zao*   *osonaa=kha*   *bani*
       sloth   Kashinawa=ASS   edible.animal
       'Sloths are edible animals for the Kashinawa.'

bani siri
Bani siri is the cover term for all animals which the Kulina do not eat. The lexeme consists of the noun *bani* 'meat, edible animal' and the adjective *siri* 'improper, faulty, damaged'.

makha
Makha means 'snake'. It is also the stem of a possessed noun used to form compounds referring to snake species and other animals (section 14.2.3).

15.3 Pet vocatives

The Kulina often catch young wild animals and keep them as pets. Nowadays, this is commonly done only with monkeys, parrots and turtles, but at least in the past, other species were also kept in the villages. All adult speakers know a number of special words which are used as vocatives for calling pets of different species. But these words are no longer commonly used and are unknown to the children in Santa Júlia. Some words are known to all adults, but when it comes to animals that were never common as pets only some speakers can think of a word and their answers often differ. There are also words of this type for young domesticated animals. In some cases, the word for a young animal is used for more than one species, as can be seen in the table.

Pet vocatives are discussed in detail in Dienst and Fleck (2009), which also contains pet vocatives from the Juruá dialect of Kulina.

The origin of most of the words of this group is obscure. Relatively many contain the phoneme /s/ and the two forms for 'pet titi monkey', *rohi* and *romi*, begin with /r/, which indicates that these words are borrowings (sections 2.2.2 and 2.2.3). The word *hise* 'pet collared peccary' probably comes from Kanamari *hicaŋ* 'collared peccary'. Kulina *some* 'pet deer' may be related to Suruwahá *zumi* 'deer' (Suzuki 2002: 66).

Table 30. Pet vocatives

pet vocative	referential noun	English name
aisa	*zazio*	'howler monkey'
bohi	*mowi*	'night monkey'
hoto	*homo*	'spider monkey'
konono	*tamakori*	'saki monkey'
rohi, romi	*orowa*	'titi monkey'
sharo	*mano*	'white-fronted capuchin monkey'
shepi	*zowihi*	'brown capuchin monkey'
sine	*pishi*	'squirrel monkey and various tamarin sp.'
himama	*ethe*	'dog'
mimi	*zomahi*	'jaguar'
opi	*zotomi*	'coatimundi'
seraha	*awi*	'tapir'
hise	*anobeze*	'collared peccary'
hise	*hizama*	'white-lipped peccary'
some	*bado*	'deer'
howara	*khamanowi*	'paca'
howara	*hakowaro*	'capybara'
sio	*shinama*	'agouti'
hiro	*hisopi*	'nine-banded armadillo'
hiro	*warikoze*	'great long-nosed armadillo'
baishi	*zanikowa*	'tortoise'
ishi	*toshipa*	'pale-winged trumpeter'
kowi	*dapo*	'Spix's guan'
kowi	*koshowi*	'blue-throated piping-guan'
kowi	*idiko*	'curassow'
kowi	*warakaiza*	'chachalaca'
etene	*kizowi*	'small parrot sp.'
kowe	*kowero*	'parrot sp.'
kowe	*waha*	'scarlet macaw'
neke	*kaikai*	'green parakeet sp.'
mii	*mizori*	'dove sp.'
khira	*zakhi*	'toucan'
aphái	*pato* (Port.)	'duck'
sado	*takara*	'chicken'

15.4 Idioms

Kulina has an idiomatic pattern in which an inalienably possessed noun and a stative verb are used to express properties and states; e.g. to say that somebody's head is heavy means that the person is stupid, as in example (672).

(672) *tati*   *siba*   *bote*
      head.m   heavy   very
      'He is stupid.' lit. 'His head is very heavy'

(673) *zoto*   *oki*   *tai*
      zoto   oki   to-na-i
      anus.m   greasy   3-AUX-DECL.m
      'He is scared.' lit. 'His anus is greasy.'

These idioms are grammatically completely regular. The stative verb can be followed either by *bote* 'very' or by the auxiliary *na-* (which fuses with the prefix *to-* to *ta-* in the third person singular).

    Not a stative but a dynamic verb is used in the idiom meaning 'to be thirsty'. This verb, *zari-*, is only attested in this particular expression, so that its individual meaning is unclear.

(674) *o-bakho*   *Ø-zari-ni*
      1SG-breast   3-?-DECL.f
      'I'm thirsty.'

The verb *pasho* means 'to be hungry for meat'. It is used with two body part nouns in idioms which express sexual desire. When referring to a male, *pasho* takes the subject *doro* 'groin' and when referring to a female, it occurs with *zoto(ni)* 'anus'.

(675) *odoro*   *pasho*   *tani*
      o-doro   pasho   to-na-ni
      1SG-groin   hungry.for.flesh   3-AUX-DECL.f
      'I feel like having sex.' (male speaker)

(676) *ozoto*   *pasho*   *tani*
      o-zoto   pasho   to-na-ni
      1SG-anus   hungry.for.flesh   3-AUX-DECL.f
      'I feel like having sex.' (female speaker)

15.5 Lexical borrowings

Loans from a variety of languages and language families are found in Kulina. Portuguese words can be freely borrowed into the dialects spoken in Brazil and the same is presumably the case with Spanish loans in the Peruvian dialect. Words from other sources are nowadays very unlikely to enter the language and those loans which

can be found are traces of older contacts. (The phonology of loans was discussed in section 2.10.2.)

15.5.1 Spanish

Only two Spanish loans are attested in the Brazilian dialects of Kulina[50], *koshiro* 'knife' from *cuchillo* and *mashito* 'machete' from *machete*. These metal tools are the Western products which have had the deepest impact on the daily lives of the Kulina and they must have been among the first they obtained. That just their names are of Spanish origin indicates that the first Western influence came from the Peruvian/ Bolivian side but lasted only a short time before Brazilian influence became dominant. (The present Brazilian state of Acre was a part of Bolivia until 1903.)

15.5.2 Nheengatu

Kulina contains a number of loans from Nheengatu or Língua Geral Amazônica, the Tupi-Guarani language used by Brazilians in contacts with indigenous people in Amazonia until the beginning of the 20th century. Some words are only found in the Purus dialect, indicating that the Kulina groups on the Purus and the Juruá had already separated when the words were borrowed, probably in the 19th century. Nheengatu words found only on the Purus are *nana* 'pineapple' from *naná*, *modobi* 'peanut' from *mandubí* and *warowa* 'mirror' from *uaruá*. Pineapples are local fruit and the word used on the Juruá, *shami*, is of Proto-Arawan origin (cf. Dixon 2004b: 69). Peanuts, which are popular among the Kashinawa, neighbours of the Kulina on the Purus, appear to be unknown on the Juruá, even to the non-indigenous population. The word for 'mirror' in Juruá-Kulina is *shonoba*. There is no indication that this is a loan. Words of Nheengatu origin found in both the Purus dialect and the middle Juruá dialect are *kariwa* (Juruá form) ~ *karia* (Purus form) 'non-indigenous person' from *caryua* and *mokawa* 'shotgun' from *mucáua*.

15.5.3 Arawakan family

Speakers of Arawan languages have probably been in contact with Arawakan speakers for a long period of time and can therefore be expected to have borrowed a number

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50 One speaker from the village Nazaré on the Purus in Brazil gave the word *aroso* from Spanish *arroz* [a'ros] for 'rice' and claimed that this was commonly used among the Kulina in Brazil. But other speakers only used the word *ahói* from Portuguese *arroz* [a'χoi̯s]. *Aroso* is used in Peru (Boyer and Boyer 2000: 2).

of words from neighbouring Arawakan languages. In a long-time contact situation, one can also expect to find different layers of borrowings, each having a different time depth. In the case of Arawakan loans in Kulina, three categories can currently be distinguished, but the difference between two of them is not one of time depth. The first are words which were borrowed relatively recently from an Arawakan language of the region into Kulina or Proto-Madihá, the immediate ancestor language. The second category consists of words which appear not to be old loans, either. They are clearly of Arawakan origin, but were borrowed from a language which is not closely related to the Arawakan languages spoken in the vicinity of Kulina.

So far, only one word belonging to the third category of Arawakan loans has been found. This is a loan which must be much older and have come through to Kulina from a proto-language which borrowed it.

A word of the first category, which was borrowed into Kulina from a neighbouring language in a not very remote past, is *weni* 'river', cf. *weni* 'river' in Apurinã (Facundes 2000: 653) and Yine (Nies 1986: 548) and the entry *<weny>* 'river' in a wordlist of Canamirim collected by Johann Baptist Spix "to the west of the mouth of the Juruá" and published in Martius (1867: 235–236). (Canamirim is an extinct Arawakan language not to be confused with Kanamari, which is discussed in section 15.5.4.)

Other words in this category include *toriza* (Purus dialect) 'pumpkin', cf. Iñapari *turia* 'pumpkin, squash' (Parker 1999: 12), *zowero* 'cacao', cf. Marawa *yueru* 'cacao' (Martius 1867: 225), *sarapi* 'three-pronged harpoon', cf. Apurinã *serepi* 'arrow of' (Facundes 2000: 644), and *sibore* (turtle of the genus *Podocnemis*), cf. Yine *sépare*, Kuniba *sopörö* and Canamirim *sepüery*, all of which designate the turtle species *Podocnemis expansa* (Rivet and Tastevin 1921/1922: 827).

The Kulina cultivate a plant whose root they use for producing fish poison and which they call *barbasco* in Portuguese and *maripe* in their own language (with the variant form *waripe* in the Envira dialect). The Kulina word corresponds to Yine *malipe*, which has the Spanish translation '*barbasco silvestre*' ('wild *barbasco*') in Nies (1986: 143). In Spanish *barbasco* is a generic name for both wild and cultivated plants that are used as fish poisons.

Although similar forms are found in other languages of the Arawan family (Dixon 2004b: 73), Kulina *wepe* 'cotton' is probably also a loan from an Arawakan language, cf. Yine *waphi̵* 'cotton' (Nies 1986: 360). The other Arawan forms actually confirm this hypothesis since Jarawara and Banawá have *wafe*, with /a/ in the first syllable, and Suruwahá has *wabi̵ ,* in which both vowels have the same quality as in Yine. Borrowing in the other direction is unlikely, given the phonologically more complex form in Yine.

Besides the Nheengatu loan *modobi* (section 15.5.2), the Purus dialect of Kulina has a second word for 'peanut', *kakowari*, which corresponds to Yine *kakwali̵* (Nies 1986: 495). The etymon may ultimately come from further afield, but was probably borrowed from an Arawakan language since the words for 'peanut' found in Panoan languages are unrelated and no word for 'peanut' is attested in any other Arawan

language (except for the Nheengatu loan *modobi* in Western Jamamadi) or even in the Juruá dialect of Kulina.

For four of the five lexemes found to belong to the second category of Arawakan loans, Proto-Arawakan forms have been reconstructed by Payne (1991), so that the Arawakan origin of these can be considered to be well established. The Kulina forms of these etyma cannot be related to any modern Arawakan language of the Juruá-Purus region. They most closely resemble words in Lokono (which is also known under the name Arawak and after which the Arawakan language family was named). Lokono is spoken in Guyana and Suriname, more than a thousand kilometres away from the main Kulina groups. The following words belonging to this group have been found.

Kulina	Lokono		
harishi	*haliči*	(Adelaar 2004: 117)	'sweet potato'
honore	*honoli*	(van Baarle et al. 1989: 194)	'heron species'
koriza	*kulisa*	(de Goeje 1928: 28)	Kul.: 'lake'; Lok.: 'pool of water'
robo	*lobu*	(de Goeje 1928: 31)	'lizard species'
siba	*siba*	(de Goeje 1928: 39)	'stone'

In Kulina, word-initial /r/, as in *robo*, and the phoneme /s/, which occurs in *siba*, are only found in loans. The phoneme /s/ is an innovation of the Madihá-branch of Arawan (Dienst 2005a). This and the striking similarity between the Kulina and Lokono words indicate that the loans are not very old and that the words were borrowed into Kulina or at the most into Proto-Madihá, not into an older proto-language. It is an open question how those words entered Kulina, apparently coming from a geographically distant language.

The only word currently considered to be in the third category, the one of older borrowings from Arawakan, is *anobeze* 'collared peccary', or at least the part /obeze/ of this monomorphemic word. The following correspondence set can be established for the Arawan languages.

'collared peccary'

n-ubasá	Arawá (Chandless 1869: 311)
an-obeze	Kulina
an-obeza	Deni, Western Jamamadi
k-obaja	Jarawara (Dixon 2004a: 623), Banawá (Buller & Buller 1992: 19)
jandumuri kur-ubasa	Suruwahá (Suzuki 2002: 34)

The hyphens in the lexemes of the correspondence set do not indicate morpheme boundaries. They separate the five phonemes which correspond in the different languages from the initial part of the words. From the second, third and fourth words of the set, the form *-obeja* can be reconstructed for Proto-Madi-Madihá. In Kulina, the

vowel sequence /e-a/ has been assimilated to /e-e/ and in Jarawara and Banawá it has been assimilated to /a-a/. /z/ is the reflex of *j in Kulina, Deni and Western Jamamadi (Dixon 2004b: 12, 29).

Suruwahá and apparently Arawá have a voiceless /s/ corresponding to the voiced obstruents /z/ and /j/ in the other languages, which could be due to independent borrowing. If the submorphemic element came into the modern languages from Proto-Arawan, the original form could have been *-obeja or *-obesa. The reconstructed Proto-Arawakan word for peccary is *ahbɨya (Payne 1991: 416). If this word had been borrowed into Proto-Arawan, the expected form would be **abeja. This form is similar enough to *-obeja, reconstructed here for Proto-Madi-Madihá and as a less certain possibility for Proto-Arawan, to let a borrowing from Arawakan to Arawan appear probable. Of the modern reflexes of *ahbɨya used by Payne in his reconstruction, it is again the Lokono form aboya which is closest to the reconstructed Proto-Madi-Madihá form *-obeja, although the similarity is not as close as that between the Kulina and Lokono lexemes listed above, nor is it closer than between the two proto-forms *ahbɨya and *-obeja.

15.5.4 Kanamari

The Kanamari are speakers of one of only two known languages of the Katukinan family. Like the Arawan languages, the Katukinan languages are found in and around the Juruá-Purus river basin[51]. The Kanamari speak the same language as the Katukina of the Biá River and probably also as the recently contacted Tsohom Djapa. The other language of the family, Katawishi, is only known from wordlists. A group of uncontacted Katawishi is believed to survive near the right bank of the Purus river. The other Katawishi have apparently blended into the non-indigenous population and their language has disappeared. Since the language family is so small and poorly documented, it is often difficult to tell if a certain word in Kanamari is a loan or not.

The lexical similarities between Kanamari and Kulina are considerable, but there is reason to believe that they are mainly due to a common outside influence, rather than borrowing from each other (though it is possible that loans were passed on from one language to the other). The outside source is obvious in the case of a few shared words of Nheengatu origin and the only Spanish loan in Kanamari, kociro 'knife', from cuchillo, which is also one of the two Spanish loans in Kulina (section 15.5.1). In the case of shared words of local origin, a possible source is one of the extinct Arawakan languages of the region, but this question requires further investigation.

The table below shows corresponding lexical items in Kulina and Kanamari without saying anything about their origin. They are names of artefacts, animals,

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51 A small group of Kanamari lives outside this area. In the 20th century, they migrated from the Juruá river to the Japurá river, north of the Amazon.

and plants with edible fruit, words that are easily borrowed. Several of the words have four syllables without being segmentable in either Kulina or Kanamari, which is uncommon for both languages and a hint that they are likely to be loans from a third language.

Table 31. Lexical correspondences between Kulina and Kanamari

Kulina	Kanamari	
amaina	*amɨna*	'uacari monkey'
bama	*bamak*	'pacu, a fish'
bari (Peru), *bare* (Brazil)	*ba:ri*	'banana, plantain'
hise	*hicaŋ*	'vocative for peccary' (Kulina); 'collared peccary' (Kanamari)
kahawiri	*kawahiri*	'ocelot'
kapaizo	*kapayo*	'papaya'
kipi	*kihpi*	'matamata, a turtle species'
kirinono	*kiriwino*	'gourd mask'
koiza	*koyah*	'a traditional beverage'
mapikara	*mapikarɨ*	'pink dolphin' (Kulina); '(any) dolphin' (Kanamari)
makaari (Purus dialect), *makawari* (Juruá dialect)	*makawari*	'squirrel sp.'
siwiro (Juruá dialect)	*cowiwiro*	'fish-hook'
tawe (Purus dialect)	*tawi*	'guava'

A Kulina word that is likely to be a loan from Kanamari is *pasini*, the name of a traditional beverage which the Kulina call *caiçuma azeda* ('sour caiçuma') in Portuguese. *Caiçuma* is a generic Portuguese term for traditional indigenous beverages. *Pasini* appears to be a loan from Kanamari *pahciniŋ* 'sour'. The beverage is called *koyah pahciniŋ* in Kanamari. As shown in the table, *koyah* by itself is the name of a traditional beverage, so that the Kanamari term *koyah pahciniŋ* corresponds to *caiçuma azeda* in Portuguese.

15.5.5 Panoan family

Most languages of the Peru-Brazil border region belong to the Panoan family. Kulina's relatives in the Arawan family are spoken between the middle Juruá and the middle Purus, several hundred kilometres away from the nearest Panoan speakers. Kulina is the only Arawan language whose area of distribution overlaps with that of Panoan languages. The influence of Panoan on Kulina seems to have been quite modest, but Panoan speakers certainly played a role in the transmission of cultural practices which must have reached the Kulina from Peru. One such practice is the consumption

of ayahuasca, a hallucinogenic beverage produced from a vine which is also called ayahuasca. The Kulina word for ayahuasca (both the vine and the drink), *rami,* is also found in Sharanawa (Rivier and Lindgren 1972: 103), a Panoan language spoken in the vicinity of the Kulina villages in Peru. As explained in section 2.2.3, initial /r/ is highly unusual in Kulina, indicating that the word is a loan. It is likely that the Kulina adopted the practice of consuming ayahuasca together with its name from the Sharanawa or some other Panoan neighbours.

Koop and Koop's (1985: 130) dictionary of Deni describes *rami* as "a kind of vine which the Kulina use to produce their own liquor", which indicates that this practice does not exist amongst the Deni, who are among the Kulina's closest relatives, and that it has come into Kulina culture only relatively recently, after the separation from the Deni.

The word for 'axe' in the Purus dialect of Kulina, *zami*, is of Panoan origin (cf. Amawaka *yamí* 'metal axe' [Hyde 1980: 104], Shipibo *yámi* 'axe; metal' [Loriot, Lauriault, and Day 1993: 423]). In the Juruá dialect, a common Arawan word, *bari*, is used (cf. Dixon 2004b: 50). The meaning of *bari* was probably extended from stone or bone tools to metal axes in the Juruá dialect and the other Arawan languages while the Purus-Kulina introduced a borrowed word together with the new tool. Like the Spanish words for 'knife' and 'machete' (section 15.5.1), the Panoan word for 'axe' in the Purus dialect indicates that metal tools first reached the Kulina from Peru (or Bolivia).

That the Kulina name for the manatee, *sopaina* in the Purus dialect and *sopena* in the Juruá dialect, is not of Arawan origin can be gleaned from the fact that it contains the phoneme /s/, which is characteristic of loans (Dienst 2005a). The word closely resembles Kanamari *copɨna* 'manatee'. Both the Kulina lexeme and the Kanamari lexeme are most likely of Panoan origin. The word for 'manatee' in most Panoan languages spoken in the vicinity of Kulina and Kanamari is not known, but similar words are attested in two Panoan languages of Peru. Both Shipibo (Loriot, Lauriault, and Day 1993: 378) and Kapanawa (Loos and Loos 1998: 420) have *sapẽ* 'manatee'. Neither of these languages is known to have been in contact with Kulina or Kanamari. The words found in these languages presumably represent a common Panoan etymon which was borrowed into Kulina and Kanamari from some other language of the Panoan family.

The Deni word for 'manatee' is *aphina*, which has the cognate *afina* in Arawá (Chandless 1869: 311). Kulina *sopaina ~ sopena* and Deni *aphina* are quite similar in form, but they do not show any regular sound correspondence in the first two syllables. The /s/ in the Kulina lexeme indicates that it is a loan while the Deni word contains the phoneme /ph/, which is not attested in any loan. The lexemes share the final syllable /na/, though.

Based on the form *sapẽ* in Shipibo and Kapanawa, it is difficult to account for the third syllable of the Kulina lexeme. In loans from Portuguese, Kulina ignores the nasalisation of vowels and it is not very plausible that the nasalisation of the final /e/ in *sapẽ* should have been rendered as an /n/ in Kulina, that an epenthetic vowel

was added for phonotactic reasons and that that vowel happened to be /a/, so that the final syllable coincidentally matched with that of Deni *aphina*. A more plausible explanation for the Kulina forms *sopaina ~ sopena*, which resemble both Panoan and Deni, is that they are a blend due to a chance resemblance between a Panoan form **sapẽ* and an Arawan form **aphina*. (There is no explanation why Kulina has /o/ rather than /a/ in the first syllable. Note that this is also the case with the Arawakan loan **-obeja* 'collared peccary' above.)

15.5.6 Quechua

Kulina has almost certainly never been in contact with Quechua. The very few Quechua words found in Kulina were probably transmitted through other indigenous languages.

In the preparation of the ayahuasca drink, the Kulina mix the ayahuasca vine with the leaves of a certain shrub *(Psychotria viridis)*, which they call *sakarona*.

In Peruvian Spanish, this shrub is known as *chacruna*. While there is a large number of sources explaining the etymology of *ayahuasca* (which is said to mean 'vine of the souls' in Quechua), it was not possible to find any which says anything about the origin of *chacruna*. Lira's (1945) Quechua-Spanish dictionary contains an entry *chakkhrúna*, which has the gloss 'Said of various objects or substances for mixing or intermingling'. Since the admixture of a second plant is necessary in the preparation of ayahuasca and chacruna is the most widely used plant for this purpose, a Quechua word meaning 'admixture' is a likely origin of the Spanish plant name.

Kulina *sakarona* must have the same ultimate origin as Spanish *chacruna*, but the Kulina word is unlikely to have been borrowed from Spanish for two reasons. Firstly, the two words of Spanish origin in Brazilian Kulina, *koshiro* from *cuchillo* and *mashito* from *machete*, have /sh/ for Spanish /tʃ/. If *sakarona* had been borrowed from Spanish, it would probably have initial /sh/, rather than /s/. Secondly, the Kulina presumably learnt the use of ayahuasca from another indigenous group and Spanish was not involved in that contact situation.

Another word of Quechua origin is *poroto*, a type of bean. This word is used in Peruvian Spanish as well as a number of lowland indigenous languages of Peru. It is not known from where it got into Kulina.

15.5.7 Unknown origin

In the case of some etyma which are found in Kulina and unrelated neighbouring languages, it is currently not possible to say from which source they come. Some of them may actually belong to the inherited vocabulary of Kulina. Several words of this kind shared by Kulina and Kanamari were mentioned in section 15.5.4.

The word for chicken is onomatopoeic, but it is still noteworthy that the Kulina form, *takara*, is the same as in the neighbouring languages Sharanawa (Panoan) (Ministerio de Educación 1999: 5), Kashinawa[52] (Panoan) and Kanamari (Katukinan), while somewhat different forms are used in Western Jamamadi (*katarapa*) and Deni *(katarapa ~ katara'a)*.

15.5.8 Conclusion

Kulina shows direct lexical influences from three other indigenous language families of the Juruá-Purus basin, Arawakan, Katukinan and Panoan, as well as from Spanish, Nheengatu and, most recently, Portuguese. Since the Arawakan languages of the area, as well as most Panoan languages, are closely related to one another, no attempt has been made to determine which individual language Arawakan and Panoan loans come from. Some Arawakan loans cannot be linked to regional languages. The slight Quechua influence on Kulina was indirect, through the transmission of other languages.

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52 In Kashinawa the phoneme /d/ is pronounced as a flap intervocalically. The phonological representation of the word for 'chicken' in this language is /takada/. The pronunciation is [takara].

Text 1

This text is from Dário, the teacher of Santa Júlia, recorded on 15 January 2003. I asked him to tell how black paint is produced from the fruit of the genipap tree, which is what he begins with, before drawing an overly dark picture of the decline of Kulina traditions, mentioning two types of festivities, *koiza* and *ehete*.

(1.1)   *Hee ahama naza orapa hahada nahari.*
hee   aha=ma   na-za   ora=pa   Ø-ha-hada   na-hari
yes   DEIC.m=UCOM AUX-TC   genipap=TOP.m 3-REDUP-ripen   AUX-NAR.m
'Well, so the genipap would get ripe.'

(1.2)   *Ora hadahari.*
ora   Ø-hada-hari
genipap   3-ripen-NAR.m
'The genipap would get ripe.'

(1.3)   *Naza kasado tokhahari.*
naza   kasado   to-kha-hari
then   hunter   3.AWAY-move.SG-NAR.m
'Then the hunter would go (in the forest).'

(1.4)   *Ora mahowi khi tahari.*
ora   maho-w-i   khi   to-na-hari
genipap   fall-EPENTH-PTCP.m see   3-AUX-NAR.m
'He'd see the fallen genipap fruit.'

(1.5)   *Naza shapoto ikowaharo.*
naza   shapoto   i-kowa-haro
then   basket(f) 3-weave-NAR.f
'Then he'd weave a basket.'

(1.6)   *Wa izahari.*
wa   i-na-ᵒza-hari
put.PL   3-AUX-IN-NAR.m
'He'd put (the fruit) in (the basket).'

(1.7)   *Ekhanihari.*
i-ka-kha-ni-hari
3-APPL-move.SG-HOME-NAR.m
'He'd bring them home.'

(1.8)   *Bedenideniza idoshehari.*
        bedeni-deni=za   i-doshe-hari
        daughter-NSG=IO   3-command-NAR.m
        'He'd tell his daughters to take care of them.'

(1.9)   *Etero sha kenahari. Hika.*
        etero   sha   Ø-ke-na-hari   hika
        skin.m   peel   3-NSG.A-AUX-NAR.m   end
        'They'd peel them. Completely.'

(1.10) *Zotodepa hehekiza heki kenahari.*
        zotode=pa   he-heki=za   heki   Ø-ke-na-hari
        thereafter=TOP.m   INSTR-grate=INSTR   grate   3-NSG.A-AUX-NAR.m
        'Thereafter, they'd grate them with a grater.'

(1.11) *Heki kenaa hika.*
        heki   Ø-ke-na-a   hika
        grate   3-NSG.A-AUX-NFIN   end
        'They'd grate them completely.'

(1.12) *Zotodepa, tephe, ibanamanahari.*
        zotode=pa   tephe   i-ibana-mana-hari
        thereafter   wrap.in.leaves   3-roast-NSG.A-NAR.m
        'Thereafter, they'd wrap them in leaves and roast them.'

(1.13) *Naza koripiza shipo izamanahari.*
        naza   koripi=za   shipo   i-na-$^{\emptyset}$za-mana-hari
        then   bowl=LOC   squeeze   3-AUX-IN-NSG.A-NAR.m
        'Then they'd squeeze them into a bowl.'

(1.14) *Nazapa hoho bediza ihinideni sho tozaza eebezomana nahari.*
        naza=pa   hoho   bedi=za   ihini-deni   sho
        then=TOP.m   bottle(m)   small.m=LOC   content-NSG   pour
        to-na-$^{\emptyset}$za-za   Ø-e-ebezo-mana   na-hari
        3-AUX-IN-TC   3-REDUP-NSG.A   AUX-NAR.m
        'Then they'd pour the liquid into a small bottle and paint themselves.'

(1.15) *Maithakhazama.*
        maithakhazama
        a.long.time.ago
        '(That's how it was) a long time ago.'

(1.16)   *Neraa hidapapa ora nama naharai.*
     neraa   hidapa=pa   ora   nama   na-hara-i
     but   now=TOP.m   genipap   like.that.m   AUX-NEG.m-DECL.m
     'But today, genipap (paint) isn't (made) like that.'

(1.17)   *Ebezo-w-e hini tohaharai.*
     ebezo-w-e   hini   to-ha-hara-i
     paint.face-EPENTH-NMLZ   PURP   3-COP-NEG.m-DECL.m
     'It's not (used) for painting the face.'

(1.18)   *Naza, naza ebezomanai hini nako ihinideni nahora ani.*
     naza   naza   ebezo-mana-i   hini   nako   i-hini-deni
     then   then   paint.face-NSG.A-DECL.m   PURP   also.m   3-because.of-NSG
     nahora   ani
     prepare   put
     'Then they'd prepare and put (the paint in the bottles) for painting their faces, too.'

(1.19)   *Naza koiza wahi iakhamanahari, ora phehenekha shipo tozai, hidepe.*
     naza   koiza   wahi   i-ka-kha-mana-hari,   ora
     then   *koiza*   DST.LOC   3-APPL-move-NSG.A-NAR.m   genipap
     phaha-ne=kha   shipo   to-na-ᵒza-i   hidepe
     liquid-NMLZ=ASS   squeeze   3.AWAY-AUX-IN-DECL.m   annato
     'Then they'd take it to the *koiza* celebration, the squeezed genipap liquid (and) annato.'

(1.20)   *Naza ehete hini totoha nahari, maithakhazamapa.*
     naza   ehete   hini   to-to-ha   na-hari   maithakhazama=pa
     then   *ehete*   PURP   REDUP-3-COP   AUX-NAR.m   a.long.time.ago=TOP.m
     'Then they'd get ready for the *ehete* celebration, in the old days.'

(1.21)   *Nowe rai hidapapa.*
     nowe   Ø-hira-i   hidapa=pa
     not.exist   3-AUX-DECL.m   now=TOP.m
     'Nowadays, there's none of that.'

(1.22)   *Nowe rai ehete.*
     nowe   Ø-hira-i   ehete
     not.exist   3-AUX-DECL.m   *ehete*
     'There is no *ehete*.'

(1.23)   *Nowe rani koiza.*
       nowe   Ø-hira-ni   koiza
       not.exist   3-AUX-DECL.f   *koiza*
       'There is no *koiza*.'

(1.24)   *Nowe rai wapima.*
       nowe   Ø-hira-i   wapima
       not.exist   3-AUX-DECL.m   all
       'There's none of this.'

(1.25)   *Hidapana, ahari wahano* dois mil e três *ididenikha ehete hikani.*
       hidapa=na a-hari   wahano dois   mil   e   três
       now=NFC   DEM-m   year   two   thousand and three
       idi-deni=kha   ehete   Ø-hika-ni
       ancestor-NSG=ASS   *ehete*   3-end-DECL.m
       'Now, in this year 2003, the festivities of the ancestors have come to an end.'

(1.26)   *Iaza ima hadani naki nowe rani.*
       ia=za   ima   hada-ni naki   nowe   Ø-hira-ni
       1NSG=LOC story(f) old-f   also.f not.exist 3-AUX-DECL.f
       'We don't have old stories, either.'

(1.27)   *Ima hadani wati tokhimade madiha shamokhiri nai.*
       ima   hada-ni wati to-na-ᵠkhima-de madiha shamo-khiri Ø-na-i
       story old-f   tell 3-AUX-DIR-INF people not.know-PL 3-AUX-DECL.m
       'The people don't know how to tell old stories.'

(1.28)   *Maithakhazamakha madiha hikamanahari.*
       maithakhazama=kha   madiha Ø-hika-mana-hari
       a.long.time.ago=ASS Kulina   3-die.PL-NSG.A-NAR.m
       'The Kulina of the old days are all dead.'

(1.29)   *Iapi hidapana mothapi ididenikha ima wati ikhimaherani onaharo.*
       ia=pi   hidapa=na motha=pi   idi-deni=kha   ima   wati
       1NSG=TOP.f now=NFC   alone=TOP.f ancestor-NSG=ASS story tell
       i-na-ᵠkhima-hera-ni   o-na-haro
       1NSG-AUX-DIR-NEG.f-DECL.f   1SG-AUX-NAR.f
       'What I'm saying is that we, now, by ourselves, don't tell the stories of our ancestors.'

(1.30) *Epehi.*
  epehi
  end
  'That's it.'

Text 2

This text is from Kaino, a young man from the village Ipiranga, recorded on 16 March 2003. He tells how he killed a bushmaster, a very dangerous snake, while looking for tortoises.

(2.1)   *Hee zanikowa khide okhaza makha idade iapa.*
   hee   zanikowa   khi-de   o-kha-za   makha
   yes   tortoise   look.for-INF 1SG-move.SG-TC snake(m)
   i-ida-de   ia=pa
   1NSG-beat.dead-PAST   1NSG-TOP.m
   'Yeah, when I went looking for tortoises, we killed a snake.'

(2.2)   *Komizi. Komizi, owa, Daora inaza zanikowa khide hawi hanehe, bihiniza hawi heziphaharo.*
   Komizi Komizi owa Daora i-na-za   zanikowa khi-de   hawi
   NAME   NAME   1SG NAME 1NSG-AUX-TC   tortoise look.for-INF move.PL
   Ø-ha-nehe   bihini=za   hawi   Ø-ha-↑za-↑pha-haro
   1NSG-AUX-CONC.f   stream=LOC   move.PL 1NSG-AUX-IN-WATER-NAR.f
   'Komizi...Komizi, me and Daora, when we were walking, looking for tortoises, we went down to a stream.'

(2.3)   *Pasho dope hashi inaharo.*
   pasho   dope   hashi   i-na-haro
   rain   below   rest   1NSG-AUX-NAR.f
   'When it was raining, we took a rest.'

(2.4)   *Pasho tohoko hawi ha denima.*
   pasho   to-hoko   hawi   Ø-ha   denima
   rain   CoS-dry   move.PL   1NSG-AUX   more
   'When the rain stopped, we walked on.'

(2.5)   *Hawi heziphapha zanikowa khi onahari.*
   hawi   Ø-ha-↑za-↑pha-pha   zanikowa khi   o-na-hari
   move.PL   1NSG-AUX-IN-WATER-REDUP   tortoise see   1SG-AUX-NAR.m
   'While we were walking along the stream, I saw a tortoise.'

(2.6)   *Nazapa Passabem aha tokha, owa okha, Daora shono tokha nanaha, Passabem*
"ahaza batanomakha withai" nade.

naza=pa   Passabem   aha   to-kha   owa   o-kha
then=TOP.m   NAME   DEIC.m   3.AWAY-move.SG   1SG   1SG-move.SG
Daora   shono   to-kha   na-naha   Passabem
NAME   high.ground   3.AWAY-move.SG   AUX-CONC.m   NAME
"aha=za   batanomakha   Ø-witha-i"   Ø-na-de
DEIC.m=LOC   bushmaster(m)   3-sit-DECL.m   3-say-PAST

'Then, when Passabem was walking that way, I was walking and Daora was
walking on high ground, Passabem said "There's a bushmaster."'

(2.7)   *Naza okhaharo nanehe, owa bazira tako onanehe, witha kanade nanehe, "Hari,*
idana!" onade.

naza   o-kha-haro   na-nehe   owa   "bazira to-na=ko"
then   1SG-move.SG-NAR.f   AUX-CONC.f   1SG   small   3-AUX=Q.m
o-na-nehe,   witha   ka-na-de   na-nehe,   "hari,
1SG-think-CONC.f   sit   ?-AUX-PAST   AUX-CONC.f   come.on
i-ida-na"   o-na-de
1NSG-beat.dead-HORT   1SG-say-PAST

'Then, when I was going there, thinking "Is it small?", and it was lying there,
I said "Come on, let's beat it dead."'

(2.8)   *Komizi ziki, ziki khowe inakoshaa wema naza, owa "hina khide!".*

Komizi   ziki   ziki   khowe   i-na-kosha-a   wema
NAME   ivory.palm   ivory.palm   sharpen   3-AUX-ACROSS-NFIN   be.many
na-za   owa   "hina   khi-de"
AUX-TC   1SG   come.on   look-INF

'When Komizi had made a lot of poles from an ivory palm, I (said) "Come on,
let's have a look."'

(2.9)   *Iapi ikha ehedeni nophineni ikaphinani kenazama, owa owahinakhiriza, owa*
ka onamarohari hika nade.

ia=pi   i-kha   ehedeni   nophine-ni   i-kaphina-ni
1NSG=TOP.f   1NSG-ASS   child   fear-f   1NSG-be.afraid-DECL.f
ke-na-zama   owa   o-wahina-khi-riza   owa   ka
NSG.A-AUX-NFTC   1SG   1SG-spear-REP-AROUND   1SG   cut
o-na-maro-hari   hika   na-de
1SG-AUX-UP-NAR.m   complete   AUX-PAST

'Since we were afraid for our children, I speared (the snake) all over and cut
it up completely.'

(2.10)   *Nazapi, nazapa odahari.*
      naza=pi   naza=pa   o-ida-hari
      then=TOP.f   then=TOP.m   1SG-beat.dead-NAR.m
      'Then...Then I beat it dead.'

(2.11)   *Awa kasharaniniza owenahari hika.*
      awa   kasharanini=za   o-wena-hari   hika
      tree   forked.branch=LOC   1SG-hang.up.SG.O   complete
      'I hung it up on a forked branch of a tree and it was over.'

(2.12)   *Zopori, zoporizama ka onamarohari.*
      zopori   zopori=za=ma   ka   o-na-maro-hari
      tail.m   tail.m=LOC=UCOM   cut   1SG-AUX-UP-NAR.m
      'I cut it into pieces, moving up from the tail.'

(2.13)   *Tati ka onamarohari.*
      tati   ka   o-na-maro-hari
      head.m   cut   1sg-AUX-UP-NAR.m
      'I cut off its head, moving up (from the body).'

(2.14)   *Tati ka ohizahari nade.*
      tati   ka   o-na-^øhiza-hari   na-de
      head.m   cut   1SG-AUX-ACROSS-NAR.m   AUX-PAST
      'I chopped off its head.'

(2.15)   *Ino khi onanaha, ino biri torai nade.*
      ino   khi   o-na-naha   ino   biri   to-ra-i   na-de
      fang.m   see   1SG-AUX-CONC.m   fang.m   big   3-AUX-DECL.m   AUX-PAST
      'When I saw the fangs, the fangs were big.'

(2.16)   *Nazapa, nazapa zopori ka ohizaza piko piko piko naza daphi onade.*
      naza=pa   naza=pa   zopori ka   o-na-^øhiza-za   piko piko
      then=TOP.m   then=TOP.m   tail.m cut   1SG-AUX-ACROSS-TC   rub rub
      piko   na-za   daphi   o-na-de
      rub   AUX-TC   swallow   1SG-AUX-PAST
      'Then, when I had chopped off the tail, I rubbed it in my hands and swallowed it.'

(2.17)   *Daphi onahari.*
      daphi   o-na-hari
      swallow   1SG-AUX-NAR.m
      'I swallowed it.'

(2.18) *Nazapa hikade.*
naza=pa   Ø-hika-de
then=TOP.m   3-end-PAST
'Then it was over.'

(2.19) *Nazapi hawi hawahaniharo.*
naza=pi   hawi   Ø-ha-waha-ni-haro
then=TOP.f   move.PL   1NSG-AUX-IN.SEMICIRCLE-BACK-NAR.m
'Then we made a turn back.'

(2.20) *Zanikowa khi inahari.*
zanikowa   khi   i-na-hari
tortoise   look.for   1NSG-AUX-NAR.m
'We looked for tortoises.'

(2.21) *Pasho khapomazapi, hawi hani, bakho, oza bakho inaniharo.*
pasho   Ø-kha-poma-za=pi   hawi   Ø-ha-ni   bakho
rain   3-move-AGAIN-TC=TOP.f   move.PL   1NSG-AUX-DECL.f   reach
oza   bakho   i-na-ni-haro
house   reach   1NSG-AUX-BACK-NAR.f
'We walked while it was raining again and we got back, we got back to a house.'

(2.22) *Itapari hikazama hawi hanide.*
i-tapari   Ø-hika-zama   hawi   Ø-ha-ni-de
1NSG-food.m   3-end-NFTC   move.PL   1NSG-AUX-BACK-PAST
'When we ran out of food, we went back.'

(2.23) *Hawi haniharopi.*
hawi   Ø-ha-ni-haro=pi
move.PL   1NSG-AUX-BACK-NAR.f=TOP.f
'We went back.'

(2.24) *Bakho inanide, Simekha oza.*
bakho   i-na-ni-de   Sime=kha   oza
reach   3-AUX-BACK-PAST   NAME=ASS   house(f)
'We got back to Sime's house.'

(2.25) *Epehia.*
Ø-epehi-a
3-end-EXCL
'It's over!'

(2.26)   *Epehini okha ima.*

Ø-epehi-ni   o-kha   ima
3-end-DECL.f   1SG-ASS   story(f)

'My story is over.'

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