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A GRAMMAR OF AKUNTSÚ, A TUPÍAN LANGUAGE

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This work is dedicated to Akuntsú people

babaoɾo oanoa pi jã ete!

Thank you!

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ABSTRACT

This dissertation presents a description of the main aspects of Akuntsú grammar, as spoken by five monolingual people who live in the Southeast region of Rondônia state, Brazil. Akuntsú people have until recently been an isolated indigenous group, now the only survivors of genocide. Akuntsú is a critically endangered language.

This study presents an analysis of the phonology and morphosyntax of the language. It takes a functional approach to describing the structures of the language and the function that each grammatical component serves. This study is based on fieldwork research carried out since 2004, where the analyses were grounded on several texts. This dissertation introduces aspects of the Akuntsú people and culture (chapter 1); in chapter 2, I describe Akuntsú phonology and relevant properties of morphophonology; grammatical categories and word-structures are introduced in chapter 3; nouns, verbs, adjectives and adverbs, ideophones, particles and interjections are discussed in chapter 4, 5, 6 and 7 respectively; and simple clause types in chapter 8.

Typologically, Akuntsú has been revealed interesting phonological and morphological characteristics. The stop consonants in Akuntsú have different surface representations, such as a voiceless-voiced consonant cluster, which alternates intervocalically and under stress assignment. Another unique feature relates to its morphology. The morpheme used in the related Makuráp, Tuparí and Mekéns languages (members of the Tuparían subfamily) identified as a genitive classifier to signal possession of animals is, in Akuntsú, replaced by kinship terms, as though possessed animals were now treated as sons or daughters. It shows that the drastic social changes

they have suffered in being reduced to five members is indeed reflected in a particular linguistic construction. Aside from these linguistic traits, languages spoken in Rondônia state in Brazil, such as Akuntsú, have an important value, both by their linguistic diversity and by their location in a region which is claimed to be the main area of the Tupían homeland. By describing Akuntsú, it is possible to further contribute to linguistic science, especially to the study of historical linguistics in the area.

Enhancing the accessibility of information on this language will be valuable for scholars with various interests, but is especially of value to those interested in grammatical properties of languages generally, and in what Akuntsú grammar specifically can contribute to the understanding of typology and our knowledge of the extent of what is possible in human languages.

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LIST OF ABBREVIATIONS AND SYMBOLS

-	morpheme boundaries, reduplication
.	syllable division
'	primary stress
[ ]	phonetic representation
//	phonological representation
##	word boundary
+	compounds
=	clitic
$	syllable boundary
1	First person
2	Second person
3	Third person
ABL	ablative
AG	agent
ALL	allative
CAUS	causative
CERT	certainty
COR	coreferential
DAT	dative
DET	determinative
DEM	demonstrative
DIFF	diffuse
DIM	diminutive
EM	emphatic
ESS	essive
EXCL	exclusive
FOC	focus
HAB	habitual
HYP	hypothetic
IDEO	ideophone
INCL	inclusive
INS	instrumental
INT	intensive
INTERJ	interjection
ITER	iterative
LOC	locative
MID	middle voice
NEG	negation, negative

NMLZ	nominalizer
OBJ	object
OBL	oblique
PL	plural/pluralizer
PROJ	projective
R	relational
RED	reduplication
REL	relative
RPT	reportative
S	singular
THV	thematic vowel
TR	transitivizer
TRANSL	translative
UNC	uncertainty
VBLZ	verbalizer

CHAPTER 1

INTRODUCTION

1.1 Background information

Akuntsú is a Tupían language highly endangered both because of its small number of speakers — five monolingual speakers — and because the speakers cannot pass their language on to another generation, mainly due to kinship taboos and the refusal to allow men from other groups to marry the youngest speaker. The youngest survivor is a woman in her 30s, with four other Akuntsú over forty, with no children and no prospects for increasing their group. In short, assuming these circumstances do not change in the future, this language is doomed to disappear.

There are currently seventy references[1] of Isolated Indigenous group, those not in contact with mainstream Brazilian society and whose languages are not known and have not yet been studied, and 15 references of Indians of recent contact (Vaz 2013)[2], of which Akuntsú is one.

1.1.1 History of contact and the current situation

In 1984, the men who worked for the Yvipitã farm (a farm currently located near

[1] For the National Indian Foundation, the term reference is related to the information on Indigenous tribes that are officially registered by the Coordination of Isolated Indians and Indian of recent contact.
[2] Vaz, Antenor, 2013. Povos Indígenas Isolados e de Recente Contato no Brasil – Políticas, direitos e problemáticas.

Akuntsú territory) communicated to the National Indian Foundation (FUNAI) their first contact with Indians in the nearby rainforest: Indians who had thrown arrows in their direction, for which reason the men asked for FUNAI's protection to keep doing their work safely. However, news of Isolated Indians was not a new phenomenon; in 1976, Nambiquara Indians had already confirmed the presence of uncontacted Indians in the left bank of Corumbiara River[3]. In 1985, Marcelo dos Santos started the first expedition to search for clues of Indians in the location previously mentioned by the men who worked for the Yvipitã farm. By the time of the expedition, Marcelo and his team had encountered villages and gardens destroyed by farm tractors in Yvipitã's neighbor farm, who kept their men armed with guns to avoid the presence of Indians[4]. Soon after, FUNAI requested an official intervention in the farm area by the Ministry of Justice in Brazil, due to clues of Indians' presence. However, in April 1986, the government enacted an official intervention of the area, but in December 1986 the Government canceled the intervention and gave a preliminary injunction in favor of the farmers. However, Marcelo dos Santos and his team, including Altair Algayer, kept the investigation secret in order to confirm the presence of Isolated Indians in this area—the investigation was conducted with no support from the Brazilian Government. In 1995, in another expedition to the same area, and now working together with journalist for *O Estado de São Paulo* and Indigenist cinematographer, Vincent Carelli, they finally made contact with the first Indigenous group who had lived in that area, the Kanoê group, a group with only four survivors at that time[5]. By that time, the farmers had

[3] Leão, Maria Auxiliadorta Cruz Sá. 1995. Parecer No 149 DID/DAF.

[4] Santos, Marcelo. 1985. Relatório Referente a Levantamento Efetuado na Área "Vale do Corumbiara", FUNAI.

[5] Algayer, Altair and Marcelo dos Santos.1995. Relatório No VI - Índios Isolados so Vale do Corumbiara/O Contato

destroyed most of the rainforest. A small part of the report describing the first contact with the Kanoê group is reproduced below:

> *...Nossa equipe multidiciplinar andou quatro dias pela mata e três na Toyota. Apesar de curta, sem dúvida essa foi a mais importante expedição realizada pela F.C.Guaporé neste ano de 1995, pois no dia 03/09/95 fizemos contato com o grupo indígena que procurávamos. Encontramos dois índios na maloca, um homem de aproximadamente 20 anos e uma mulher de 25... Foram muito corajosos em nos convidar a entrar na aldeia. Concluimos que mais pessoas residiam na maloca, pois ouvimos barulho na mata...os dois índios falavam apenas sua própria língua...*
>
> [...Our multidisciplinary team walked for four days through the forest and three days by car (Toyota's car). Eventhough it was a short expedition, it was, without doubt, the most important expedition realized by the Guaporé team in this current year of 1995, because on September 3rd of 1995 we made contact with the Indian group that we were looking for. We found two Indians inside their hut, a man approximately 20 years old and a woman of 25... They were very courageous by inviting us to come in. We concluded that more people lived in the hut, since we heard noises coming from the forest... the two Indians spoke only their language...] (Algayer and Santos' report - September, 1995 - original report written in Brazilian Portuguese).

The Kanoê group (with four monolingual Kanoê speakers by the time of the contact — now reduced to Txiramanty, Purá [Txiramanty's brother] and Buquá [Txiramanty's son])[6] helped FUNAI contact another group located in the same region (the Akuntsú people), where both tribes are survivors of the genocide committed by the colonizers and settlers of the southeastern region of Rondônia during the last three decades of the 20th century[7]. This second group, with seven survivors, which the Kanoê called *akutsu* — as the Kanoê have referred to the Tupían groups of the Omerê since the beginning of the contact — was contacted one month after FUNAI had contacted the Kanoê of the Omerê. The name is a

[6] There are more Kanoê who lives close to the tributaries of Guaporé River; however, the Kanoê of the Omerê are the only ones who are still monolingual speakers. In 2004, there were only three Kanoê of the Guaporé who "maintain the language alive in their memories" (...que mantêm a língua viva na memória.) (Bacelar 2004:33).

[7]Valadão, Virgínia. 1996. Os índios ilhados do igarapé Omerê. In: Carlos Alberto Ricardo (org.), *Povos Indígenas no Brasil* 1991-1995. São Paulo: Instituto Socioambiental.

Kwazá word, *akucũ*, meaning "outsider Indians" (Bacelar 2004:298). By the time the Akuntsú were contacted by FUNAI, there were a total of only seven people out of a larger population in the past (as related by the Akuntsú). In 1999, one of the children passed away, victim of a tree that fell down on their huts where they were sleeping during a terrible day of storms; these storms also caused a serious injury to Konibú's leg, who had to be taken out of the rainforest for the first time in order to have an emergency surgery. The accident affected his leg movements, where a platinum disk had to be inserted. In 2009, the oldest woman in her 80s, called Ururu, passed away due to a heavy cold. Colds are very serious diseases for them; they have only been building resistance to this kind of illness during the years of contact.

Currently, Akuntsú is spoken by only five monolingual speakers (the entire population). There are three women, two men, and no children. Among the women, there are Pugapía (or Aramira) who is in her 60s, and her two daughters, Aíga (also named as Txarúj or Nanoj) in her 40s and Enotéj (or Kani) in her 30s. Pupák and Konibú (or Kwatin atʃo) are then the only male survivors. Konibú is the oldest Akuntsú in his 80s and Pupák is in his 40s. They are all part of the same consanguineal family, in which Pugapía is Pupák's sister and Konibú is uncle of both Pugapía and Pupák. After the massacre, Konibú explains that he had to take Pugapía as his wife, because he didn't have a woman anymore, and even though they knew it would be taboo (in their patrilineal kinship system), they both had no choice; especially Pugapía, who urgently needed a man to hunt for her and her daughters.

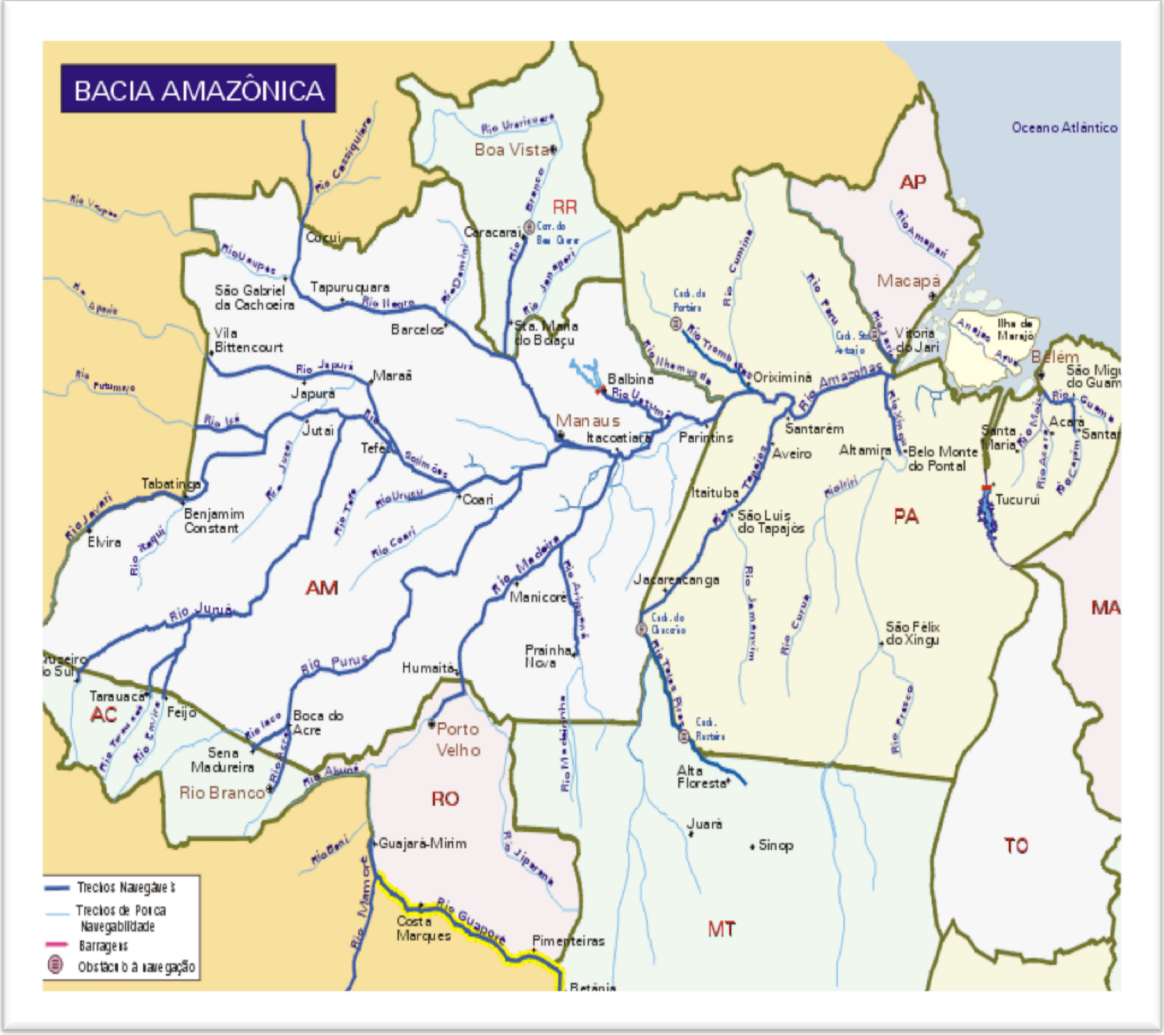
Akuntsú and Kanoê people have been sharing the same territorial area for a while. The Akuntsú relate that they have known the Kanoê tribe since the time they moved to the Omerê River; according to Konibú, one of the most important things about this meeting was

to know Txiramanty, whose shamanic power was/is very precious for the Akuntsú people. The only thing that both tribes have in common is that fact that they have shared the same territorial area for years. Their language and culture are totally unrelated and their social relations are nowadays pacific, though they had had difficult moments in the past. According to previous reports, after the contact, the staff have reported instances of situations where the Kanoê people want to control the Akuntsú people, especially the Kanoê woman, Waymoró. However, despite their differences, there were moments where the Kanoê and Akuntsú people have been in harmony, and there were even promises of future inter-marriage; unfortunately, all the attempts were always frustrated. All these differences resulted in Waymoró's death; in 1997 the Akuntsú people killed her. After that, their already unstable friendship was totally broken.

Txiramanty (Kanoê woman and shaman of the group) got pregnant (her second pregnancy — her first son, Operá, died in 2003). Her son, Buquá, is also Konibú's son (according to Konibú). The boy has been learning Portuguese and Akuntsú, though his primary language is Kanoê. Txiramanty raised him alone in her village, and they had limited contact with the Akuntsú people during that time. Buquá's Akuntsú language knowledge has been improving over approximately the last four years; nowadays he has a good level of understanding in practical situations and he has been developing his level of speech.

1.1.2 Current and traditional geographic location

Rondônia is a state located in the north part of Brazil, surrounded by the Alto Madeira river basin (South Amazonas State) to the north, by Mato Grosso state to the east, and Bolivian lowlands to the south and west (see map 1.1 below).



Map 1.1 Map of states and rivers located in the north side of Brazil. RO is the abbreviation of Rondônia (http://www2.transportes.gov.br/bit/04-hidro/3-rios-terminais/rios/00-Figuras/Iguapore.htm, 10-2012).

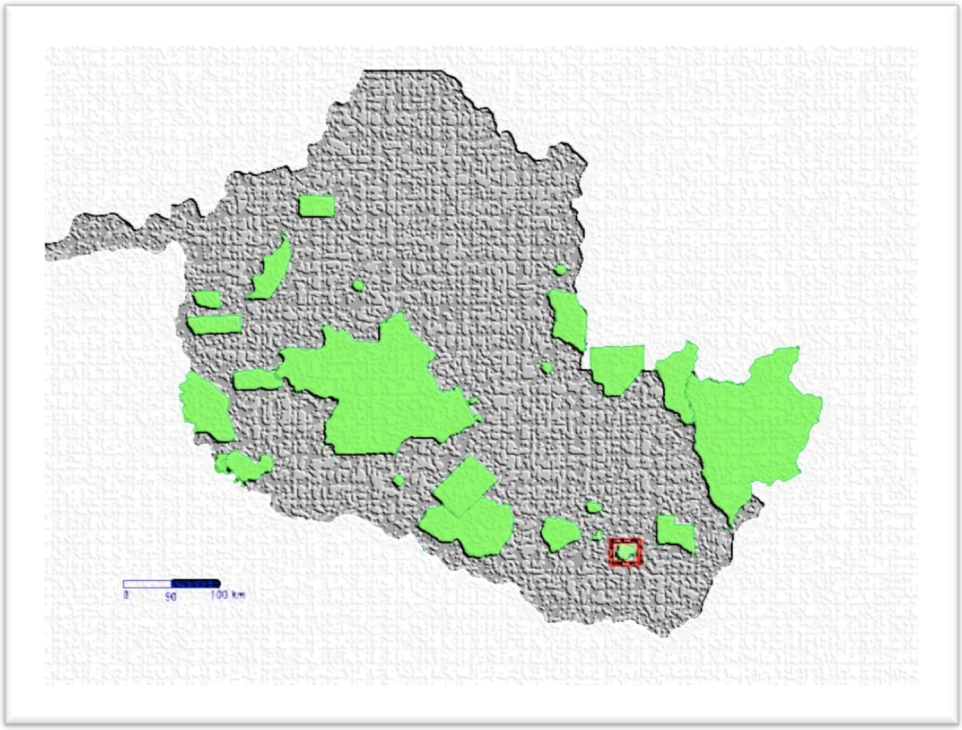
Rondônia state is considered the region with the highest concentration of Tupían linguistic subfamilies and with great cultural diversity, probably the most diverse region within South America. The languages of the Tupían family have a very peculiar geographic distribution (Rodrigues 2007a): five of these linguistic subfamilies — Puruborá, Ramaráma, Mondé, Tuparí and Arikém — are concentrated in the state of Rondônia. For the Tupí-Guaranían family, only three Tupí-Guaranían languages are found in this state. Besides the

presence of Tupían language and society in Rondônia and adjacent areas, there are also isolate languages, those which are not affiliated with any other known language; and there are isolated societies, those not in contact with the Brazilian society who, due to their own decisions, remain uncontacted until today. Therefore, all these characteristics make the area of Rondônia and its adjacent regions in need of much future research to shed light on the prehistory of early Tupían groups.

Regarding to the river location, the largest concentration of the Tupían linguistic subfamilies is close to the tributaries of the Guaporé-Madeira and Aripuanã Rivers (Rodrigues 2007a). Only the Arikém subfamily is situated outside of this area, on the tributaries of the Madeira River basin. Due to the high concentration of Tupían speakers in that area, Rodrigues (1958) and Urban (1998 [1992]) proposed that somewhere between Guaporé-Madeira and Aripuanã River would be the homeland of early Tupían speakers; and according to linguistic (Rodrigues 1958; Urban 1998 [1992]) and archaeological (Noelli 1996, 1998) studies, their dispersion may have begun (about) 5000 years BP.

As described earlier, the Akuntsú had been attempting to escape the intense deforestation of their ancestral lands at the hands of farmers and colonizers. They were until recently an isolated indigenous group, now the only survivors of a recent genocidal massacre. The few surviving Akuntsú took refuge near the Omerê River, where they were contacted. Akuntsú have been living on one side of the bank of the Omerê River, while the Kanoê people have been living on the other side of the bank. In the area between these two groups, in an effort to help to protect the few survivors from outside influences, FUNAI built a house on Akuntsú lands, and prohibited unauthorized people from going there without official

permission. Map 1.2 below indicates the current location of Akuntsú people, and the other green areas represent the other Indigenous areas located in Rondônia state.



Map 1.2 Map of the state of Rondônia, Brazil, showing the Indigenous area found in this state. Akuntsú area is indicated by the square located in the lower part of the map (courtesy of FUNAI, CGIIRC, *Frente de Contato Etno-Ambiental Guaporé*).

Akuntsú tell stories about their origin, where they came from and what happened to them before finally taking refuge in the highlands of the Omerê River (their actual location). It is quite tricky to connect the descriptions given by the Akuntsú with current data of the hydrography of the region, mostly because the directions that the Indians refer to are always connected to the environment. For example, they say that to get to the river *ɨkɨtʃaro* one must head northwest of the village, and walk until one finds many Brazil nut trees.

In 1996, during the first meeting with Passaká (Mekéns ethnicity), Konibú explained how he and his family survived outsider attacks, and how their tribe was killed and some of

the bodies have disappeared. Passaká translated that it was in the region of *ɨkɨtʃaro* that "Konibú began to hear the overthrow" and then "they moved to their other village near by *ɨkɨtaren* river[8]". Based on Konibú's later stories, it is possible to infer that *ɨkɨtaren*[9] and *ɨkɨtʃaro* are confluent; the river mouth of the *ɨkɨtʃaro* flows into the Corumbiara River (called *betɨa* by them). Besides these two rivers, the Akuntsú give the direction of their traditional location by describing, river by river, up to the *ɨkɨtaren* and *ɨkɨtʃaro*, which has allowed the re-creation of their journey from their traditional location up to their current location in the Omerê River. The most important rivers mentioned by them are *moẽ*, *kawra kɨ*, *k^{w}ato kɨ*, *k^{w}itap kɨ*, *tʃarap kɨ*, and *k^{w}ai kɨ*. Based on the tentative reconstruction, Algayer and I have mapped their possible traditional location.

According to Konibú's oral narratives, Akuntsú people lived for a long time in the area on the banks of *ɨkɨtaren* and *ɨkɨtʃaro*. Between these two rivers, they built longhouses and they had wide gardens, with many crops. The plantation was vast, with plenty of maize, banana, peanuts, manioc, papaya, and sweet potatoes. However, it all ended after the attacks—they lost most of the seeds, and after that weren't able to cultivate enough crops, as they did before. There are indications that the attacks came first from the *ɨkɨtʃaro* River, which marked the beginning of their expansion close to the shores of the Corumbiara River, and finally to the shores of Omerê River (actual location of the group). He states that it was when they lived near those rivers that they were shot (each man has scars from gunshots). The Akuntsú report that there were a great number of white people all over the land, and that

[8] These stories are also confirmed in other recordings in which I talk to them about the rivers and their tributaries; this conversation was also recorded by Vicent Carelli.

[9] According to oral histories from Mr. Pedro Kampé, member of an ethnic group linguistically related to Akuntsú, the river *ɨkɨtaren* is also the name they call the head of the Tanaru river. Thus the river *ɨkɨtaren* mentioned by the Akuntsú is probably the same Tanaru river referred to by other related tribes.

they could also see that near the shores of the Corumbiara the white people had built an airplane landing strip.

Once they took refuge on the Omerê tributaries (in the highlands), they began to live with Kanoê people. About the meeting with the Kanoê, Konibú always mentions the strength of the woman shaman who has great power. He also talks about the youngest Akuntsú birth, Enotéj, who was born next to the headwaters of the *ɨkɨpiton* (tributary of the Omerê).

A question worth answering is this: how does the story of the Akuntsú and their traditional territory fit into the general findings about the original location of Tuparían Indians? Based on the facts described above, it is possible to attempt to draw the trajectory of the Akuntsú, and propose that they traditionally came from the perimeter situated near the lower headwaters of the river Tanaru up to the Corumbiara River. Thus, the region near the lower headwaters of the river Tanaru, up to the riverbank of Corumbiara, are the known territories and exploited areas of the Akuntsú in the past.

The homeland of the early Tuparían speakers is assumed to be the central area of the Pimenta Bueno River (Miller 2009). According to archaeological indications, the Proto-Tuparí began to spread southward from their homeland by approximately 2900 years ago, while the Proto-Tupí-Guaranían began their dispersion early on, about 2000 years BP. Two of the Tuparían groups were earlier described near the Pimenta Bueno River, namely the Kepikiriwát and Tuparí—the literature reports that they were there between 1934 and 1948. Makuráp, Wayoró (Ajurú) and Mekéns were located a little further away from this region. Historical data show that during the first cycle of rubber extraction, the Makuráp were concentrated between the headwaters of Rio Branco River and on both banks of the high

level of the Colorado River. The Wayoró were also along the upper reaches of the Colorado River, closer to its headwaters. As for the Mekéns, historical data of their location report that they traditionally lived near the Guaporé River and its tributaries.

1.1.3 Material culture

In their village, there are two huts; Konibu and the three women live in one of these huts, and in the other one lived Ururu (who passed away) and her son Pupák. Now, Pupák lives alone in his hut; his sister, Pugapía, helps him with cooking and with other activities designated as pertaining to women, such as preparing *chicha* (fermented drink) and gathering.

Their huts are built of wood poles and covered with *paxiúba* leaves. The men's main activity is hunting and fishing. They have three types of arrow points made of wood, where each one is used to kill different types of animals (see one of the arrow types and other illustrations related to Akuntsú material culture in Appendix C). Bone points are not common. The other extreme of the arrow is ornamented with feathers tied with black or red lines made of tucum fiber (nowadays they like to use cotton strings). Nowadays, fishing is done with lines and hooks; however, in the dry season, the women tend to prefer the practice of traditional fishing, which consists of grabbing the fishes with a piece of wood (usually done in a shallow stream) to a dry area where they kill them with their hands or machetes.

In the dry season, they are also responsible for the preparation of their planting fields. All the Akuntsú, including the women, clear and plant their fields. The field needs to be big enough to provide food for the entire year, which means that dry season is synonymous with hard and difficult work for the Akuntsú.

In their garden, they mainly cultivate manioc, potatoes, bananas, papayas, corn, peanuts and yams. The Akuntsú also like to gather grubs; they usually eat them toasted, and they also feed their pets with raw grubs. Among their other activities, there is also the manufacture of *maricos* (traditional baskets made with tucum fibers), the preparation of fermented drinks, and the preparation of tobacco for shamanism purposes.

Regarding their material culture, the Akuntsú make necklaces from seeds and river shells. All of them wear necklaces; the men also like to wear their necklace draped diagonally across the body. The more necklaces they wear, the more they feel protected against evil spirits. The Akuntsú people have the upper and lower lip pierced, where they wear a small wooden labret, with the exception of Aíga (Txarúj) and Pupák, who have only the lower lip pierced. In addition to their pierced lips, all them have pierced the nasal septum, where they also wear a small wooden labret through it. They also wear bracelets and anklets made of cotton. Sometimes, they hang on their bracelets bones from different animals.

Akuntsú also cultivate annatto and tobacco. As described in detail in Aragon (2008:17-18), the process of annatto preparation is usually done in the dry season, and consists of several steps before getting the right consistency to be used in their hair. Additionally, they also use genipap juice to paint their bodies. However, it has rarely been produced by the Akuntsú people; it has been only documented a few times after contact.

Shamanism has a symbolic significance in their cultures. They believe that it is through shamanism that they talk to the spirits, and ask them for protection and cures for themselves from unexpected diseases.

1.1.4 Language situation

After 1995, the Kanoê people (Indians who share the same Indigenous Area with the Akuntsú) were the ones who had more daily contact with the FUNAI members. As a consequence, FUNAI staff learned some Kanoê words. The Akuntsú, then, began to learn and use the Kanoê and Portuguese words to request some essential material needs, as soon as they realized that they could be understood in that way. However, the knowledge that both FUNAI and the Akuntsú have of Kanoê is restricted to words for some animals (pig, some species of birds and monkeys), for 'sun,' 'moon' and the verb 'to sleep,' 'to see' and 'to hunt' (without the use of verbal inflection or any other type of verbal morphology that is obligatory in Kanoê verbs). The Akuntsú people's knowledge of Portuguese words is limited to: 'manioc,' 'machete,' 'stick,' 'cold,' 'rice' and other terms related to agricultural tools. This means that Akuntsú are not able to build any kind of sentence either in Kanoê or in Portuguese; thus communication, when it occurs, is very restricted and limited to gestures mixed with ideophones and onomatopoeias.

1.2 Genetic affiliation and grammatical overview

This section introduces a brief discussion on the genetic affiliation of Akuntsú and provides a survey of the main typological features found in this language.

1.2.1 Akuntsú in the Tuparían subfamily

The term Tupían "stock" (family) was first used by Rodrigues (1955) to refer to a linguistic family which included the Tupí-Guaraní subfamily and other smaller and lesser-known subfamilies. In 1986, Rodrigues revised the Tupían stock, including nine subfamilies:

Awetí, Mawé, Jurúna, Mundurukú, Arikém, Tuparí, Mondé, Ramaráma, and Puruborá. The recently revised Tupían family is divided into two main branches: Western and Eastern (Cabral and Rodrigues 2001, Dietrich 2010a, Rodrigues and Cabral 2012), where Akuntsú belongs to the Eastern branch.

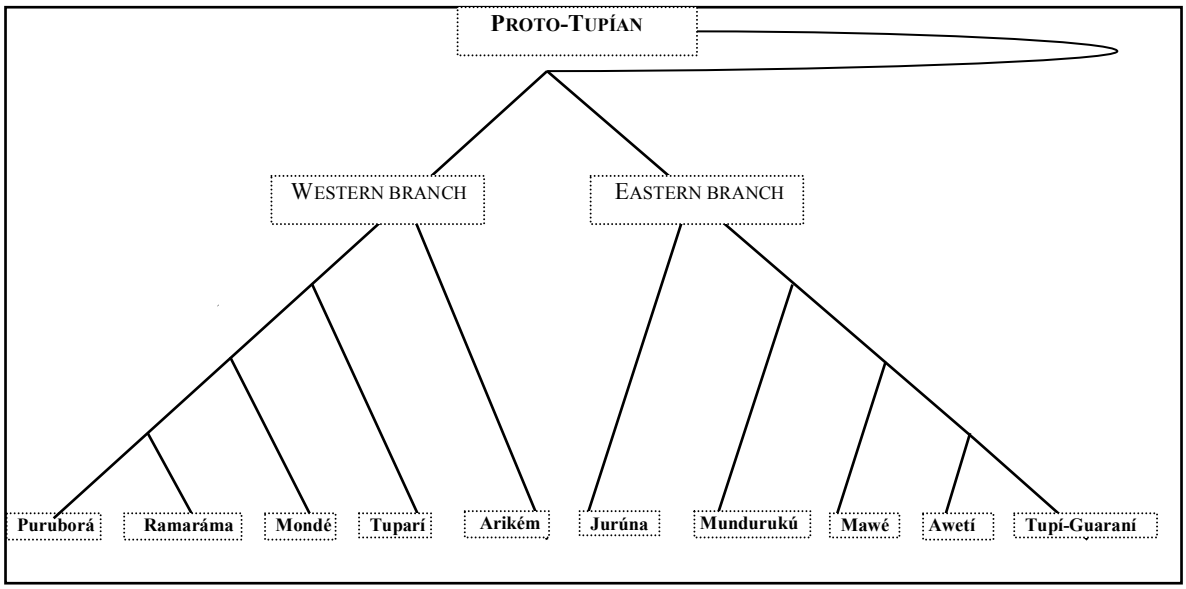


Figure 1.1 The revised Tupían branch divided into two main branches (adapated from Aragon 2008 *apud* Cabral and Rodrigues 2001).

With respect to the genetic classification of Akuntsú, this language is classified as a Tupían language, member of the Tuparían subfamily (Gabas 1995, 2005 and Cabral and Aragon 2004a, 2005). Besides Akuntsú, six other languages (based on the table proposed in Rodrigues and Cabral (2012)) are classified as members of the Tuparían subfamily of the Tupían family: Tuparí, Makuráp, Mekéns (Sakɨrabiat), Wajoró (Ajurú), Kepikiriwat (extinct) and Waratégaya (Amniapé, also extinct).

TUPARÍ SUBFAMILY
1.1 Tuparí, BR-Ro
1.2 †Kepkiriwát (Quepiquiriuate), BR, Ro
1.3 Makuráp (Macurap, Macurape), BR, Ro
1.4 Mekéns (Mekém, Sakurabiat, Sakyrabiat), BR-Ro
1.5 Akuntsú (Akunsú) – BR, Ro
1.6 †Waratégaya (Amniapé), BR-Ro
1.7 Wayoró (Wayurú, Ayurú, Ajurú), BR-Ro

Table 1.1 Tuparí subfamily, adapted from Rodrigues and Cabral (2012:497).

In a recent comparative study[10], it was posited that, based on lexicostatistic comparison, "Akuntsú and Mekéns are closer to each other than any of the other languages, sharing a cognate rate of 79%," whereas Akuntsú shares a rate of 71% with Wayoró, a rate of 66% with Tuparí and 51% with Makuráp (Nogueira and Galucio (2011:9)).

1.2.2 A survey of Akuntsú typological features

Phonologically, Akuntsú has the syllable structure pattern of ((C)V(C)). Non-initial syllables must begin with a consonant. In its consonantal inventory there is the underlying form /tʃ/, but not /s/ and /h/. Among the consonants, /ŋ/ cannot occur syllable-initially, while only nasals, glottal, and unreleased stops can occur finally. There are 5 underlying oral vowels and 5 underlying nasal vowels[11].

Morphologically, Akuntsú is an agglutinative language (although not highly), with some degree of synthesis. It is mostly a suffixing language. Akuntsú has two major open

[10] For a comparative study of the Tuparí subfamily, see also Moore and Galucio's (1994) study.

[11] See appendix A for a brief survey of phonological similarities and differences found among Tuparían languages.

word classes: nouns and verbs. Adjectives and adverbs are considered a small set of open word classes, and their status is subject to interpretation and requires careful attention. There are also closed word classes of quantifiers/numerals, demonstratives/deictics, particles and interjections. Nouns can bear derivational and inflectional morphology. The morphemes that code lexical information on nouns include: (i) locatives, (ii) datives, (iii) translatives, (v) instrumentals and (iv) inessives. The derivational morphology includes, but is not limited to, morphemes that signal the diminutive and augmentative. Word formation also includes compounding and reduplication. Verbs are divided into two main classes: intransitive and transitive. There are no overt copulas. Derivational verbal morphemes include, among others, valence-changing morphemes signaling: (i) antipassives, and (ii) causatives. Core arguments of the verbs are coded either by nouns or personal pronominal clitics. There is also a sub-class of auxiliary verbs and directional morphemes. Negation is either expressed by particle or/and by suffix. The negative suffix occurs both in nominal and verbal roots.

Akuntsú is predominantly head-final. Objects precede verbs. The most frequent word order is SOV. The basic clausal constituents may be described basically as [PRONOMINAL CLITICS + NOUNS, POSSESSED + NOMINAL MORPHOLOGY + OBJECT + VERBAL MORPHOLOGY + VERB + VERBAL MORPHOLOGY + AUXILIARY]. Clause combining involves coordination, subordination, and complementation. Coordination is done by the simple juxtaposition of clauses; complementation is usually in the form of nominalizations.

1.3 Previous historical literature

For historical documents on the Tuparían groups, Caspar (1957, 1958, 1975), Snethlage (1937, 1939), Levi-Strauss (1948, 1955 [2004]), Curt Nimuendajú (1925), and

Rondon and Farias (1948) provided the first information on the Tuparían subfamily, regarding their geographic, linguistic and anthropological identification.

In roughly 1934, Franz Caspar registered the location of some indigenous peoples of this area on a map, with a detailed study of the Tuparí people. In 1949, Hanke gathered data from Mekéns located on a tributary of the Guaporé River. These data were analyzed in cooperation with Swadesh and Rodrigues, and it served as the basis for the first comparative study that sought to classify Mekéns (Hanke, Swadesh, and Rodrigues 1958). In 1934, Snethlage, after his trip to the Makuráp area, continued to travel on to other indigenous areas, such as the Sierra Allianza, rising to the Rio Branco. During his journey, he met with Wayoró (Ajurú) people, reporting that they were reduced to a small group who had already been absorbed into the Makuráp culture. According to Snethlage, the Wayoró language was a mixture of Makuráp with other Tupían languages. In 1913, General Cândido Rondon recorded a list of 117 words collected among the Kepkiriwat people (extinct) on the Baron Melgaço or Maquêpiaquê River. In 1927, the ethnographer João Barbosa de Faria collected another Kepkiriwat vocabulary with a larger number of words (Rondon and Faria 1948).

Lévi-Strauss (1948) was the first who mentioned the cultural similarities among the Indians in Rondônia, especially the Indians located close to the Guaporé River. He divides the Guaporé cultural complex into two parts: the Chapacura area, to the west of the Rio Branco, and the Tupían area, in the eastern part. The Guaporé region together with the Mamoré region is considered one of the most diverse linguistic regions, which includes different linguistic features not only related to Tupían languages but also to language isolates (Crevels and van der Voort 2008).

Regarding the material culture of the community located on the right bank of the Guaporé River (the earlier location of the Akuntsú people), Maldi (1991) reported that many cultural elements of these communities are similar, while others are identical. The preparation of a kind of basket called *marico*, baskets of various sizes from tucum-fiber, is one of the elements common among the people of this region. Other items are also similar, such as manioc cultivation, the construction of round houses, and the consumption of *chicha* daily or on ceremonial occasions. These characteristics led Maldi to call this area "the *Marico* Complex," including not only speakers of the Tupían languages there, but also speakers of isolated languages as well.

However, regarding Akuntsú itself, the first information officially appeared only in 1995, when the first contact with the Omerê groups was done by FUNAI[12].

1.4 Methodology and presentation

This section provides notes on the monolingual situation, a brief discussion on the methodology employed in the fieldwork, as well as discussion of both documentation and description, focused on: (a) the main points related to the best-practices recommendations for language documentation; (b) the different approaches related to language documentation and language description, showing the methodologies that are more effective in the Akuntsú case, and explaining the reasons that some of them can be applied in a monolingual setting and others not. The discussion of the methodology applied in the fieldwork is based on previous

[12] See reports written by Algayer and Santos (FUNAI's archive); and Valadão, Virgínia. 1996. Os índios ilhados do igarapé Omerê. In: Carlos Alberto Ricardo (org.), *Povos Indígenas no Brasil* 1991-1995. São Paulo: Instituto Socioambiental.

literature regarding general fieldwork settings and fieldwork in a monolingual setting, citing especially Everett (2001, 2004), Everett and sakel (2012) and Bowern (2008).

The last subsection provides a presentation of this study and its goals.

1.4.1 Notes on fieldwork with monolinguals

According to the best-practice recommendations for documenting languages, there are some central topics that must be focused on when one is dealing with language documentation (Himmelmann (2006:15). As these topics are relevant to the case of documenting Akuntsú (some more than others), I will detail and present each point based on both Himmelmann's point of view and other authors' views, as follows:

(1) FOCUS ON PRIMARY DATA: primary data is the main subject of documentary linguistics; it means a "corpus of recordings of observable linguistic behavior and metalinguistic knowledge" (Himmelmann 2006:10). According to Lehman (2001:5), "the primary purpose of language documentation is to represent the language for those who do not have direct access to the language itself," and the first step to achieve it is through the collection of primary data. One issue surrounding primary data is whether “primary data” means a corpus of natural discourse (only), or to whether it should also consist of elicited data. For Himmelmman (2012:202) "elicitation (broadly understood) is necessarily a part of any documentation project (...)", and, as such, there is no reason to not use elicitation corpora as part of primary data. Note that elicitation is extremely hard to do in a monolingual setting, and depending on the subject that the linguist wants to investigate, I would say that elicitation is not possible at all. However, note that for some morphosyntactic topics, elicitation is not the most effective approach for gathering quality data among monolingual speakers: in most

cases, the speakers will not agree with possible answers or will not understand some questions, mainly because they are not experiencing the relevant situation at the moment of the elicitation.

(2) EXPLICIT CONCERN FOR ACCOUNTABILITY: primary data needs to be clearly identified with metadata (details of the recording context), to make further analysis possible. The techniques of metadata have been described in much literature including Good (2002), Aristar-Dry (2004), Nathan and Austin (2004), among others. Nathan and Austin (2004) discuss techniques for aligning metadata in language documentation materials, especially in digital audio and video. They explain that "the collection of recordings of authentic linguistic events" needs to be accompanied by "thick metadata"[13] which includes the creation of "transcriptions, annotations, and other commentary and analysis" in order to maintain the accessibility and the use of digital electronic archives (Nathan and Austin 2004:184). Woodbury (2010:13) explains that "material needs to be transparent, preservable, ethical and portable," which means that for the purpose of transparency, primary data needs to be accompanied by careful annotation.

In a monolingual context, documentation covers recording primary data in a way that involves not only the primary data collection, but also a careful metadata description, which needs to be done immediately after the recording of the speech event in order to accurately describe the details, including gestures used, position of speaker, etc. In addition, the transcriptions also need to be followed by a careful linguistic analysis, which helps the researcher to come up with the best gloss. It is important to do transcriptions at the end of the

[13] The idea of 'thick' descriptions appears in Clifford Geertz (1973) when he talks about 'thick' versus 'thin' descriptions of cultures.

day while things are fresh in the mind. Moreover, it will be extremely relevant to decide on what still needs to be documented in terms of linguistic structure and primary data while one is undertaking the fieldwork.

(3) CONCERN FOR LONG-TERM STORAGE AND PRESERVATION OF PRIMARY DATA: primary data needs to be archived to ensure the longevity of the material. Nowadays, it is possible to identify a large number of archives concerned with maintaining as well as possible the longevity of data.

(4) WORK IN INTERDISCIPLINARY TEAMS: it is important to have multidisciplinary researchers working on language documentation. In this way, it is possible to access different perspectives from different disciplines, which may include (but not limited to) anthropology, biology and archaeology. The different backgrounds of different researchers can be a good strategy for linguists to improve the outcomes of their linguistic documentation projects. The Akuntsú documentation project has been organized with interdisciplinary contributions, which it seeks to develop more deeply in the future.

(5) CLOSE COOPERATION WITH AND DIRECT INVOLVEMENT OF THE SPEECH COMMUNITY: it is important to have the involvement of the community. This involvement may take two forms: (a) helping the linguist with the language documentation project (as co-researcher), or (b) being responsible for documenting his/her own culture and language—in this case the linguist is encouraged to train the speakers to produce quality materials. In a monolingual setting with only five people, it is extremely necessary to have their cooperation to document their language, and their direct involvement is considered more than relevant. However, it is not precisely direct involvement in the sense cited above, i.e. being responsible for

documenting their own language. The direct involvement takes the form of their cooperation and awareness that teaching someone else their language and culture is worth doing for the preservation of their culture and language — in the sense that their language and culture will be known and documented.

Another relevant topic to highlight is the discussion of whether or not language documentation needs to take place in connection with language description. According to some scholars, documentary linguistics is primarily concerned with recording as much audio and video as possible from the speakers of the target language and adequately archiving data for future analysis, leaving analyses to be carried out later on. Other scholars, on the other hand, suggest that documentary linguists need to be concerned with gathering primary data, translating them and providing an adequate linguistic analysis of the structures of the language. The fact is that, without a doubt, "the dividing line between documentation and description is not sharp" (Lehmann 2001:8). Himmelmann (2012) provides the following definition for language documentation and language description: (a) *language documentation* is concerned with "primary data and their interrelationships, including issues such as the best ways for capturing and archiving raw data, transcription, native speaker translation, etc.," and (b) *language description* deals "with the question of how valid descriptive generalizations can be derived from a set of primary data" (Himmelmann 2012:199). Even though documentary and descriptive linguistics are defined differently, Himmelmann emphasizes that this separation is mainly theoretical, and that in practice it is hard to split them, especially because documentation and description are connected in such a way that they complement each other. It is even harder to separate language documentation from description when language documentation involves monolingual speakers.

Another point of discussion raised in the field of documentary linguistics regards the quality and quantity of the data and metadata, i.e., the documentary corpus. The question then raised is: when should language documentation be considered complete? Is it complete when one has enough quality materials, or when one has collected a sufficient quantity of corpus materials? According to Austin (2006), the materials behind an "adequate documentation" should contain: all the basic phonology, morphology, and syntactic construction, a lexicon that covers all basic vocabulary and different texts in a variety range of genres and registers; or document a language until nothing new is coming up. From the point of view of a monolingual situation, in order to have a good quality of documented materials that contain instances of different structural aspects of the language and a variety of cultural manifestations, the researcher necessarily needs to wait for the occurrence of spontaneous data which expresses not only the linguistic structure of the language, but narratives of their beliefs and life reality. It is essential to spend as much time as possible among the speakers, participating in their main activities, because in that way, spontaneous data is much likely to occur than in hours of elicitation (when it is possible). For example, the best change in documenting Akuntsú was in 2006 when they began to invite me to go to the jungle with them, to help the women to grab food from an old garden far away from their villages, and to look for special seasonal fruits in the jungle. In that way, the morphology and syntax of the language started to come up more frequently than before, i.e., I began to learn and record utterances on specific topics from natural events. I have finally started to get a good grasp on the subject of recordings, and to get more familiar with both language and culture.

In terms of QUANTITY of data in a monolingual situation, it is extremely easy to gather natural narratives and conversations (high quantity of primary data). However, the subject of the recordings needs to be monitored by the researcher, which is not always an easy task—i.e., if the researcher starts to randomly record natural discourse, it will be very hard to keep track of the content of the data; consequentially, its metadata will be lost, and there will be no chance for the linguist to create a detailed transcription of the gathered corpus afterwards. With regard to some methods used in the Akuntsú case, to avoid losing the quality of the data (in terms of metadata and linguistic description), most of the audio and video are concentrated on the moment of their activity, recording explanations and themes related to some of their cultural activities, for example step-by-step recordings of the preparation of their fermented drink, manufacture of traditional baskets made with tucum fibers, and descriptions of daily and common activities, such as tending their garden, preparation of their tobacco and shamanism, preparation of traditional food, and extraction of nut oil. This has been a good strategy to get both quantity and quality in the documentation, mostly because the context helps to control the data collected; after doing careful transcriptions, it will be possible to test the data (the gloss and analyses) the next time that they do the same activity (which occurs more than two times a week, depending on the season and type of activity).

In addition, it is important to point out that the literal and complete translations of conversations and texts are very challenging when previously non-encountered topics with many new lexemes are the main subject matter of the recordings. In a monolingual situation, the annotation of data (including morpheme-by-morpheme analysis) is a slow process, mostly because of the difficulty of achieving it without the input of native speakers of the language. For this reason, the task of providing glosses for the grammatical meaning of each

morpheme requires careful reflection. Note that building up a lexical database (future project) in monolingual research means that some lexical items in these texts have just not come up before, and determining their meaning without the help of native speakers needs time and dedication.

Another issue in documenting an endangered language, on one hand, and documenting a language spoken by monolingual speakers, on the other, is the changes which occur over time. From the first fieldwork undertaken in 2004 until now there have been a lot of changes, including the fact that the speakers are getting old, and not as 'isolated' as before. Since 2008, the Akuntsú have begun to get colds often. Colds affect the Akuntsú not only physically but also psychologically; they stop their normal cultural activities when they get colds (even the weaker colds), e.g. the urucu extraction, fermented drink preparation, and shamanism practice; they do only the necessary things. In October 2009, the oldest woman in her 80s, called Ururu or ‘cotton,’ passed away. After this episode, the five remaining Akuntsú were affected by their loss for months, especially Ururu’s son, Pupák, who was still in mourning by the time that I met them. After that, all of them built a house near FUNAI's house in order to recover from a terrible cold that they got, especially Konibú, who became very gravely ill with a serious pulmonary infection (pneumonia). In addition, people change as they age, and the Akuntsú do not have the same energy to do their regular ceremonies as before.

Each monolingual community differs in many aspects (culturally and socially speaking), which will play an important role in choosing the appropriate methodology to be applied within the monolingual community. Some noteworthy points to be made here for monolingual settings in general is that one needs to be conscious that unplanned spontaneous

speech will occur all the time, and if one knows how to control the quality of this material, through careful notes and detailed description of the context, it might be considered a good quality linguistic corpus. There is also the necessity to observe the language, as well as to apply methods to promote situations that one will be able to learn from — for example, asking some of the speakers to help them in some activities and then learning from daily contact; or just being aware that any gesture or any unexpected situation will be excellent to connect documentation and language analysis. For instance, the sound of a jaguar near the village may be a good situation for collecting stories and myths.

1.4.2 Methodology and documentation design

Because the Akuntsú are all monolinguals, data collection takes place through daily contact and constant interaction while I am with the group, learning more of their language through interaction and participant observation in the cultural context. The methodology is mostly based on "sampling, reliability and naturalness documentation" (Himmelmann 1998). For Akuntsú documentation, it is essential to observe, ask questions related to their current or recent activities, and record while in the context. The methods employed here are descriptive and functionalist, focusing on interpreting the morphosyntax of the language through an inductive approach.

The use of stimuli, such as video, photos and questionnaires, was also employed in the field and has proven valuable for some aspects of the research, though not sufficiently useful to gather specific language structures. For those situations, the best method found so far is participating in daily activities (such as gardening, gathering firewood, etc.) or trying to act out the situation with speakers. All of them want to contribute cultural knowledge and

personal stories. In addition to trying to help me understand the definitions of words, they often want to tell me stories about specific daily situations and unusual events.

The linguistic analyses have consisted of four main parts: (a) phonological, (b) morphological, (c) syntactic, and (d) semantic analysis. While in the field, I analyze the data and try to come up with hypotheses, in order to test them with the speakers. Data has been transcribed morpheme-by-morpheme using the ELAN program and translated interlineally, translated freely into English and Portuguese. Some parts of the data are also organized into a Microsoft Word document and then exported into FLEx, where I have been building the database for the dictionary, as well as some of the morphological analysis. Other parts of the data, which mostly include transcriptions of conversations, are still handwritten. Comments and notes are taken on matters related to Akuntsú activities and stories in order to help understand the data. Annotation mainly includes place, consultant's information, date, general description of the situation involved, individuals that were involved into the conversation, and main gestures used during the talking. All these metadata have been extremely helpful to the current analyses.

Recording sessions involve audio and video recording. Audio recordings have been recorded in digital format (WAV) with mainly a Zoom H4 recorder and with a Shure SM58SLC cardioids dynamic microphone and a Sony ECM-MS957. The data is archived in WAV and MPEG format.

The Akuntsú have no children, and they understand what will be lost when they are gone. The ethical issues include respecting the wishes and decisions of the Akuntsú people, and following the dictates of FUNAI, which is legally responsible for the Akuntsú, for all the activities related to them, and for their protection.

There are problems encountered in documenting a monolingual language, such as Akuntsú, and some of them are briefly mentioned here. The most common problem seen during the first months of fieldwork among monolinguals is how to gather the first corpus. In order to start up getting the first lexical items, the method used is to point to things (cultural elements, parts of the body, etc.) and to act out different movements to gather verbs, such as 'to sleep,' 'to jump,' 'to cut,' etc. In addition, another strategy used in gathering lexical items is to show the speakers pictures; however, the pictures, especially the ones with small animals, confused them, since they were not used to seeing animals from that perspective.

When we are transcribing without help from native speakers, the task can be very difficult, but when we talk about transcribing speech styles other than the 'normal' one without the help of native speakers, this can be even more problematic. There are aspects of Akuntsú speech style that are worth mentioning: for example, as I got to know the Akuntsú, I became impressed with their way of telling me some stories (especially the most important events that happened in their lives), because all of them spoke simultaneously (literally), and I didn't know whom I should pay attention to, and I especially didn't know to whom I should direct the microphone. Of course, the transcription of these recordings was and still is a very slow process, since the speech is extremely rapid. Another speech style that I have seen is one wherein they thicken their voices, talking louder than the usual, in such a way that the difference in pitch between women and men is almost imperceptible. Those speech styles are mostly used to camouflage what they are saying; they are used in different cultural contexts.

In addition to the monolingual setting, there is the issue of the number of speakers. This means that there are limitations on the speakers available for daily work. At the time that I first undertook fieldwork, the Akuntsú were the ones who chose my 'instructor' (not the

opposite, as usually occurs), the person who would be in charge of teaching me the language. Audio recording is not always possible, because sometimes all of the speakers are busy with their daily activities, e.g. cooking, looking for seasonal fruit in the jungle, feeding their pets, etc. So, in the meantime, what is possible is to take notes on cultural aspects or on any structural aspects of the language that I can hear[14]. In situations where audio recording is not possible, video recording may be a good option to gather a documentary corpus. The camera does not bother the Akuntsú, and they do not change their behavior towards the camera at all. However, my concern with video was/is always about how to deal with audio quality, which tends to lose its definition in video recordings, mostly because of the environment, which is always outdoors; indoors is problematic because of the darkness of their huts and because of the noise of their pets (birds of various species) that they usually keep inside of their huts; and because of the fact that Akuntsú are always moving around, doing their daily activities, which makes it a challenging task to handle the camera properly[15].

Ethical practices involving recently-contacted Indians are key to maintaining their vitality and ensuring that their identity (culture and language) will not be lost after contact with outsiders. It is very important to follow FUNAI's positive policies and rules in order to help them preserve the Indians' rights.

[14] I also carry a fieldwork notebook (a journal). The notebook was important to annotate data, especially in cases when audio recording was not possible. The notes are valuable, for example (but not limited to) further matching with previous data and/or hypotheses, and also to annotate the speaker context at the moment that the data is being recorded.

[15] Besides this, of course, there is the issue of the process of inputting information (interlinear analysis, gloss and storage space) of video recordings into ELAN.

1.4.3 The goal and presentation of this dissertation

The direct goal of this dissertation is to describe the main aspects of Akuntsú grammar, which in turn will provide useful material in the production of a grammar itself. Nevertheless, the most relevant goal of this study is to avoid the loss of an otherwise undescribed language with its unique grammatical structure, associated culture and knowledge systems that can never be replaced, keys to a whole group's identity.

Some of the texts used in the preparation of this dissertation include Akuntsú traditional oral stories and descriptions of primary cultural activities, such as (1) the preparation of the fermented drink, and manufacture of traditional baskets made with tucum fibers; (2) description of daily or common activities, such as tending their garden, preparation of tobacco and shamanism, preparation of traditional foods (for example, corn and manioc flour), extraction of nut oil, fishing, hunting, and honey collection. As for the data available in this dissertation, almost all of the examples presented here were tested and checked in the field while I was at the point of writing the dissertation or when some of the chapters were already in draft form.

As for the organization of this study, this dissertation includes 9 chapters. CHAPTER 2, "Phonology," discusses the main phonological aspects of the Akuntsú system; the inventory of consonants and vowels are presented in tables and discussed in prose. Their phonetic realizations are addressed based on the environments that trigger the appearance of allophones. The main morphophonological aspects of the language are described, followed by the investigation of the syllabic pattern of the language and the constraints involved in the syllabic structure, and soon after the stress pattern of this language is proposed. CHAPTER 3, "Word-structure and grammatical category," presents the terminology and definitions used in

this dissertation, presenting also a brief overview of the word-classes found in Akuntsú and their definitions based on semantic and morphosyntactic criteria. In CHAPTER 4, "Nominal morphology," the main morphological aspects of nouns are described, including the types of nouns, nominal morphemes, derivation, composition and reduplication processes with respect to nouns and the pro-forms (pronouns and demonstratives). Finally, the chapter concludes with the numeral quantifiers and a discussion on genitive constructions and nominal phrases. In CHAPTER 5, "Verbal morphology," I mainly present the types of verbs, as well as verbal morphemes such as transitivizers, directional morphemes and auxiliaries, and verbal aspects. In CHAPTER 6, "Adjectives and adverbs," these two word classes are discussed, focusing on the differences and similarities that they share with other parts of speech. In CHAPTER 7, "Particles, ideophones and interjections," there is a description of the main particles, ideophones and interjections found in the language, frequently found in texts. In CHAPTER 8, "Simple clause types," the goal is to investigate the main non-verbal clauses in this language, and to provide a brief description of the sentence types, mainly focusing on negative and interrogative clauses.

The present description is an on-going project, part of a larger documentation project that aims to document and describe the Akuntsú language with the following goals:

(1) To contribute to FUNAI's work of providing protection and promotion of Recently Contacted Indians, securing their human rights;
(2) To provide a reference grammar of Akuntsú;
(3) To create a dictionary;
(4) To expand the linguistic and ethnographic documentation by expanding the database of texts on Akuntsú history and culture.

Although the main traits of the language are described in this dissertation, some of the areas not presented in this study and others that merit detailed description will be set aside for the future grammar, which includes (but is not limited to): coordinated and subordinate clauses (focalization and topicalization in combining clauses); word-order of the language; discursive and lexicography analysis; intonation level in focus constructions (with focus on predicates and on constituents); and the nature of intransitive predicates.

CHAPTER 2

PHONOLOGY

2.1 Introduction

This chapter presents the basic phonological structure and prosodic analysis of Akuntsú; this chapter is an extended version of the analysis in Aragon (2008). I use feature geometry (Clements 1985, Sagey 1986, Clements and Hume 1995), as well as segmental phonology, to account for the distribution of the phonemes and their allophones in different syllable positions. Features are used to identify and group similar classes of sounds. Throughout this chapter, spectrograms and/or waveforms will be presented along with brief acoustic analyses when relevant for the discussion and visualization of the subject matter.

Compared to the other four Tuparían languages, Akuntsú and two other related languages — Wayoró and Makuráp — are the only ones that have /tʃ/ in their consonantal inventory but lack /s/ and /h/. Furthermore, the discussion of vowel length provides arguments that, despite the fact that long vowels are contrastive in most of the Tuparían languages, in Akuntsú vowel length is phonetically motivated, so that vowels do not contrast in length.

The stress pattern of disyllabic words may suggest a possible lexical stress in the language, and as such it will be only phonologically marked in words when necessary for the analysis. Below, it is summarized the symbols used in this chapter, as following:

//	Phonological representation
-	Morpheme boundaries or Reduplication
##	Word boundary
$	Syllable boundary
=	Clitics
[ ]	Phonetic representation
.	Syllable division
' as in [CV.'CV]	Primary stress
/Ṽ/	Nasalization
/V̰/	Laryngealized vowel
+	Compounds

In this chapter, segmental phonology (§2.2) is presented, including a description of the vowels (§2.2.1) and the distribution of consonants (§2.2.2). In addition, there is a discussion of the main topics concerning the phonotactics of the language (§2.3), followed by a presentation of processes involved in the morphophonology of the language (§2.4) and a presentation on the prosody pattern, including a first description of Akuntsu rhythmic patterns (§2.5). Finally, a summary of the section is presented (§2.6).

2.2 Segmental Phonology

Given the phonological model adopted in this study, in Akuntsú there are 14 underlying consonants. Phonetically, 14 of the consonants can occur syllable initially in a CV(C), including [p], [b], [t], [d], [tʃ], [dʒ], [k], [g], [m], [n], [j], [w], [k^w] and [g^w]. Only 8 of the surface consonants can occur finally including [pˀ], [tˀ], [kˀ], [ŋ], [mˀ], [nˀ], [j], and [w], while [ɾ] occurs only intervocalically (see details in §2.1 below). There are 5 underlying oral vowels and 5 nasal vowels. Later in this chapter, the reasons for adopting the following as the underlying representation of vowels and consonants are explained. Table 2.1 below is divided into natural classes according to place of articulation features and manner of

articulation features. The major class features found in Akuntsú are presented in table 2.2. Note that in the sections on vowels and consonants, detailed tables of consonants and vowels are presented with arguments and discussion of the natural classes identified.

			[labial]	[coronal]	[dorsal]	[labial, dorsal]	
[- vocalic]	[- continuant]		p b	t d	k g	k^w	[-voice] [+ voice]
		[delayed release]		tʃ			[-voice]
		[+nasal]	m	n	ŋ		
	[+ continuant][16]	[- nasal]		j		w	
				ɾ			
[+ vocalic]			o	i	ɨ		
		[+ nasal]		e	a		
			õ	ĩ	ɨ̃		
				ẽ	ã		

Table 2.1 - Phonemes in Akuntsú.

[16] Note that the features [+ continuant] and [+ voice] are redudant for vowels.

The affricate is the only non-continuant that has [delayed release] as a feature that represents its manner of articulation. Unlike the alveolar [+coronal] [-anterior] [-strident], the affricates are [+coronal], [+anterior] [+strident]. In addition, the alveolar differs from the palatal /j/ in their manner of articulation: the alveolars are [+continuant] and the palatal [-continuant], whereas both have [+coronal] [-anterior] features.

As for the feature [voice], [+continuant] and [+nasal] sounds are by default [+voice]. For the [-continuant], [-delayed released] and [-labial, -dorsal] consonants, there is a binary opposition where the contrast is made between the feature [±voice]. Below, table 2.2 describes the major class that represents the phonemes in the language.

	[vocalic]	[sonorant]
Oral consonants	-	-
Nasal consonants and glides	-	+
Vowels	+	+

Table 2.2 - Major class features

A feature [vocalic] has been used in the literature instead of [consonantal] and [syllabic] (Clements 1990). The [vocalic] feature is defined according to the articulatory and acoustic properties (inherent phonological properties) that segments have, not according to syllable position as the [syllabic] feature does.

According to previous literature, and based on the Akuntsú data, the [vocalic] feature was the one chosen here to better distinguish approximants from vowels (see §2.2.1.5 for glide discussion). The [consonantal] feature is also not needed to provide the difference between glides and vowels (since glides are [+consonantal]).

2.2.1 Vowels

The Akuntsú vocalic inventory is composed of five underlying oral segments: close-front /i/, close-mid-front /e/, close-mid-central /ɨ/, close-mid-back /o/, and open-central /a/, represented in the table 2.3, as follows:

	Coronal	Dorsal	Labial (labial-dorsal)
-low +high	i	ɨ	
-low -high	e(ɛ)		o(u)
+low -high		a	

Table 2.3 - Oral vocalic phonemes (major allophones in parentheses).

To summarize, the features that identify the vowels according to the degree of opening of the vocal cavity and the position of the tongue in terms of backness or frontness are [coronal] and [dorsal]. Depending on the roundness of the lips, the vowels are characterized as labial or non-labial. In addition to these features, vowels also carry features associated with height: [-/+low] and [-/+high]. Coronal spreads from front vowels and dorsal spreads from non-front vowels (Clements and Hume 1995), and thus, in Akuntsú [dorsal] is used to represent central vowels: /ɨ/ and /a/, and /o/ that as a back rounded vowel is represented by [labial] and [dorsal] features. In addition, [labial] is the only feature that differentiates /o/ from the other vocalic phonemes.

The phoneme /a/ is the only one specified with the feature [+low] which is essential to differentiating this phoneme from the other vowels. The difference between the two coronal vowels /i/ and /e/ is that /e/ is [-low, -high] while /i/ is [+high, -low]. Note that, in figure 2.1 below, /e/ tends to be lower than /o/, with /e/ more closely related to the position of

open-mid vowels. One might argue that this vowel could be represented as /ɛ/ due to its lower position in the vocalic space; however, I will continue to represent it as /e/ to be consistent with the phonemes proposed for most of the Tuparían languages.

Aragon (2008) classified /i/, /ɨ/ and /o/ as high vowels. However, after more acoustic analysis, we have determined that those vowels do not have identical height. Carvalho and Aragon (2009) presented a preliminary vowel table for Akuntsú over the mean Z values of the data sample, which already displayed a difference of height among the three vowels in question in that study. Table 2.3 above shows an adapted based-feature analysis of the underlying vowels in which /ɨ/ is not of the same height as /i/ (though /ɨ/ is still considered a [+high] vowel), with an articulatory height (F1) closer to the mid-vowel /o/ rather than to the high-vowel /i/. Figure 2.1 below is presented in order to help the visualization of vowel height in Akuntsú.

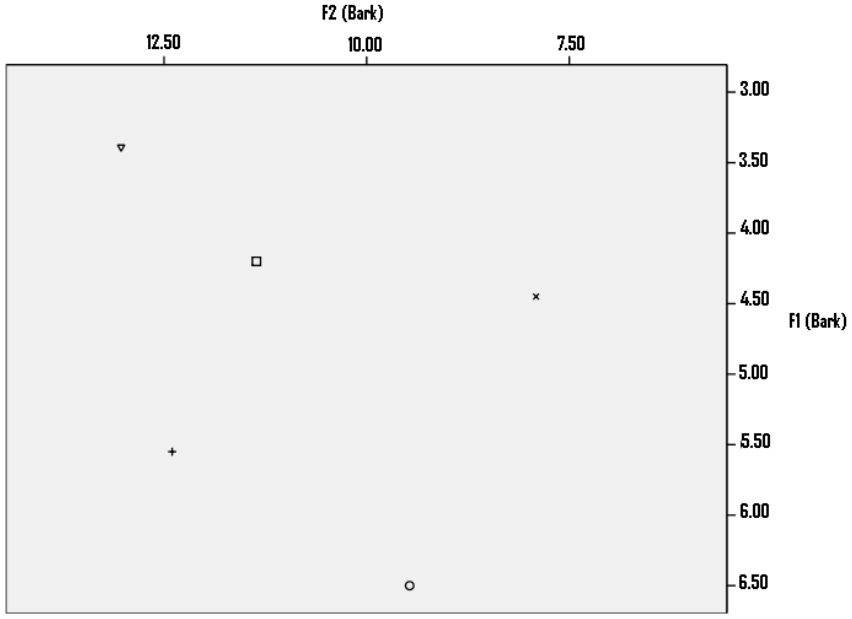


Figure 2.1 - Vowel space of Akuntsú with average values for each vowel category over F1 (Bark) and F2 (Bark) dimensions. Legend (from bottom to top): ○ /a/, + /e/, x /o/, □ /ɨ/, and ▽/i/. (Adapted from Carvalho and Aragon 2009).

In Akuntsú, there are inherently nasal vowels, but also phonetically nasalized vowels. The nasalized vowels (rather than underlyingly nasal) occur by assimilation from nasal consonants. Inherently nasal vowels differ from oral vowels because of their [+ nasal] feature, as follows:

	Coronal	Dorsal	Labial (labial-dorsal)	
-low +high	ĩ	ɨ̃		[+ nasal]
-low -high	ẽ		õ	
+low -high		ã		

Table 2.4 - Nasal vocalic phonemes.

2.2.1.1 Vocalic description and contrast

As represented in tables 4 and 5, there are five underlying oral vowels and five nasal vowels in the language. Each phoneme has a set of surface variants. Among the oral vowels, for the high coronal vowel /i/ we find [i, ɪ, ĩ, ɪ̃], while for the mid coronal vowel /e/ we identify [e, ɛ, æ, ẽ, ɛ̃]; for the high dorsal vowel /ɨ/ the variants [ɨ, ɯ, ə, ə̃, ɨ̃] are found, for the mid labial /o/ there are [o, u, ɔ, ʌ, õ, ʊ̃, ɔ̃, ʌ̃], and finally, for the low central vowel /a/ the surface forms are [a, ɑ, ɔ, ʌ, ɐ̃, ɔ̃, ʌ̃]. These surface forms can be laryngealized [+constricted glottis][17] when adjacent to glottal segment or depending on prosodic variables (more on creaky voice in §2.2.1.3). Vowels can also be phonetically long. Lengthening is mostly motivated by stress, phonotactics and speech rate (see details in §2.2.1.4). There are no underlying diphthongs in the language (more in §2.2.1.6).

[17] Vowels produced with audible creaky voice are characterized as [constricted glottis] (Clements & Hume 1995:292).

The contrasts distinguishing the vowels in oral and nasal contexts are illustrated by the set of minimal pairs presented below:

ORAL VOWELS:

/i/ vs. /ɨ/

(2.1) a. /pi/
[ˈpi]
'foot'

b. /pɨ/
[ˈpɨ]
'to shoot'

/i/ vs. /a/

(2.2) a. /ita/
[ˈita]
'to arrive'

b. /iti/
[iˈti]
i=ø-ti
3S=R-mother
'his/her mother'

/e/ vs. /a/

(2.3) a. /itek/
[iˈtɛkˀ]
i=t-ek
3S=R-house
'his/her house'

b. /itak/
[iˈtakˀ]
i=ø-tak
3S=R-daughter.of.man
'his daughter'

/e/ vs. /ɨ/

(2.4) a. /kete/
[kʲɛˈtɛ]
'there'

b. /kɨte/
[ˈgɨtɛ]
'one/alone'

/e/ vs. /i/

(2.5) a. /ke/
[ˈkʲɛ]
'DEM'

b. /ki=/
[ki][18]
'1PL.INCL'

/ɨ/ vs. /a/

(2.6) a. /tɨɾɨ/
[ˈtɨɾɨ]
'two'

b. /taɾa/
[ˈtaɾa]
'question word'

[18] Personal pronouns are considered clitics and as such they do not bear stress. More on clitics in section 3.2.2.

/o/ vs. /i/

(2.7) a. /opo ape/
[oˈpo aˈpɛ]
o=ø-po + ape
1s=R-hand + skin
‘my hand's nail’

b. /opi ape/
[oˈpi aˈpɛ]
o=ø-pi + ape
1s=R-foot + skin
‘my foot's nail’

/o/ vs. /e/

(2.8) a. /okoɾo/
[oˈkoɾo]
o=ø-koɾo
1s=R-bowl
‘my bowl’

b. /ekeɾe/
[ɛˈkɨɛɾe]
e=ø-keɾe
2s=R-ribs
‘your ribs’

/o/ vs. /ɨ/

(2.9) a. /kop/
[ˈkopˀ]
‘red’

b. /kɨp/
[ˈkɨpˀ]
‘leg/wood/louse’

/o/ vs. /a/

(2.10) a. /kapa/
[kaˈpa]
‘to roll’

b. /kobo/
[koˈbo]
‘beans(sp.)’

NASAL VOWELS:

/ĩ/ vs. /i/

(2.11) a. /ĩka/
[ĩˈka]
ĩ-ka
smell-TR
‘to smell’

b. /ika/
[iˈka]
i=ko-a
3s=ingest-THV
‘(He/she) eats it’

/ĩ/ vs. /ɨ/

(2.12) a. /ĩka/
[ĩˈka]
ĩ-ka
smell-TR

b. /ɨka/
[ɨˈka]
ɨ-ka
genipap-TR

‘to smell’ ‘to genipap (to paint with genipap[19] liquid)’

/ĩ/ vs. /e/

(2.13) a. /otʃĩk^{w}a/
[oˈtʃĩk^{w}a]
o=tʃĩk^{w}a
1s=kiss
‘(He/she) kisses me’

b. /otʃe/
[oˈtʃɛ]
‘1PL.EXCL’

/ẽ/ vs. /e/

(2.14) a. /k^{w}ẽk^{w}ẽ/
[k^{w}ẽˈk^{w}ẽ]
‘scissors’

b. /k^{w}e/
[ˈk^{w}ɛ]
‘game meat’

/ẽ/ vs. /ã/

(2.15) a. /jẽ/
[ˈɲẽ]
‘mouth’

b. /jã/
[ˈɲã]
‘to sit/stay, sitting’

/ẽ/ vs. /ĩ/

Minimal-pairs were not found for these vowels. The nearest minimal pairs found to illustrate this contrast would be: /k^{w}aẽ/ [waˈʔẽ] ‘pan’ vs. /kotaĩ/ [kutaˈʔĩ] ‘love bird (sp.)’

/õ/ vs. /o/

(2.16) a. /õ/
[ˈʔõ]
‘tongue’

b. /o=/
[o]
‘1s’

c. /õpa/
[õˈba]
‘to beat’

d. /opa/
[oˈba]
o=ø-pa
1s=R-thigh
‘my thigh’

[19] *Genipa americana*

/õ/ vs. /ɨ/

(2.17) a. /õ/
[ˈʔõ]
‘tongue’

b. /ɨ/
[ˈʔɨ]
‘genipap’

/õ/ vs. /ĩ/

(2.18) a. /kõjka/
[kõj̃ˈka]
kõj̃-ka
pound-TR
‘to pound’

b. /kĩnka/
[kĩnˈka]
kĩn-ka
sift-TR
‘to sift’

/ɨ̃/ vs. /ɨ/

(2.19) a. /akɨ̃tʃen/
[akə̃ˈtʃẽn˺]
‘vegetable (sp.)’

b. /kɨ/
[ˈkɨ]
‘liquid’

/ã/ vs. /a/

(2.20) a. /koɾã/
[kuˈɾã] ~ [kõˈnã]
‘white grub (sp.)’

b. /ikoɾa/
[iˈkoɾa]
i=koɾa
3s=search
‘(He/she) searchs for it’

c. /tʃoã/
[tʃoˈʔã]
‘cricket (sp.)’

d. /itʃoa/
[iˈtʃoa]
i=tʃop-a
3s=see-THV
‘(He/she) sees it’

It was not easy to find minimal pairs in the language to identify contrasts that distinguish vowels by the presence/absence of the [nasal] feature on a specific vowel. This is seen in examples (2.11) and (2.12) where forms are repeated, and especially between /ẽ/ and /ĩ/ where no minimal pairs were found (only near minimal pairs).

Even with a large corpus analyzed, it is rare to find minimal pairs to illustrate nasal

vowels in contrast. Note, however, that this is not unusual cross-linguistically. According to various reports in the literature, such as Ferguson (1963:18), underlying nasal vowels are indeed less frequent than oral vowels in most languages that have contrastive nasal vowels.

2.2.1.2 Nasality in vowels

In this section, I describe the basic patterning of nasality in vowels in the language, outlining a hypothesis to account for the distribution of underlying nasalized vowels and surface nasalized vowels.

Nasalized vowels in the language are contrastive only in stressed syllables. In stressed syllables, underlying oral vowels will not assimilate the nasal feature of adjacent consonants, as they do in unstressed syllables. That is, in unstressed syllables, vowels tend to become nasalized (showing up as surface nasal vowels) as a result of progressive or regressive assimilation when adjacent to a [+nasal] segment, either a nasal consonant or a nasal vowel[20]. Thus, the fact that there are instances of vowels adjacent to nasal consonants that cannot become nasalized supports the analysis that nasal vowels in the language are contrastive only in stressed position. Vowels that are underlyingly oral in stressed position followed by a nasal segment do not become nasalized through the spreading of the [+nasal] feature of the adjacent nasal segment, as follows:

(2.21)	a.	/=na/	[na]	*[nã]	‘essive’
	b.	/i=ma-ɾa/ 3s=keep/spill/put-HAB	[iˈma.ɾa]	*[iˈmãɾa]	‘to spill it as usual’

[20] Both types of nasal assimilation, progressive and regressive, are possible in Akuntsú, as shown further in this section. Experimental studies need to be undertaken to determine whether or not regressive or progressive assimilation is stronger in this language. This will be the focus of a future study (Aragon forthcoming).

c. /eme/ [ɛ.ˈmɛ] *[ɛ.ˈmɛ̃] ‘DEM’

Therefore, it is possible to find minimal or near-minimal pairs with both oral and underlying nasalized vowels following nasal segments in stressed syllables, such as: /ma/ ‘to keep/spill/put’ vs. /mã/ ‘certainty.’

On the other hand, oral vowels may become nasalized vowels by the optional assimilation of the feature [+nasal], which applies from left to right in progressive assimilation (2.22a-e) or from right to left by regressive assimilation (2.22f-j)[21], where the nasal feature is spread from underlying nasalized vowels.

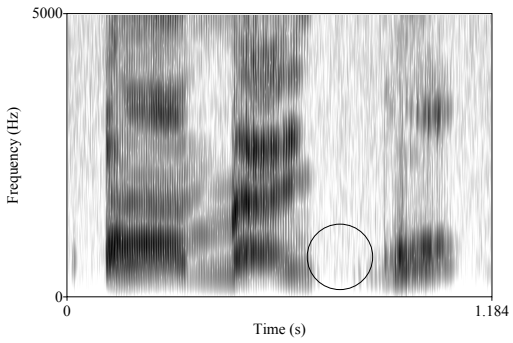
Moreover, as a result of progressive assimilation, optional syllable-final nasal segments are produced when nasalized vowels precede an obstruent.

(2.22)	a.	/ameko/	[ɔ.mɛ̃ŋ.ˈko] ~ [ɔ.mɛ̃.ˈko]	‘jaguar’
	b.	/nako/	[nɛ̃ŋ.ˈko] ~ [nɛ̃.ˈko]	‘man/male’
	c.	/peniket/	[pe.nĩŋ.ˈkʲɛtˀ] ~ [pe.nĩ.ˈkʲɛtˀ]	‘ladybug (sp.)’
	d.	/meti/	[mɛ̃nˀ.ˈdi] ~ [mɛ̃.ˈdi]	‘maripa (fruit sp.)’
	e.	/o=ø-mepit/ 1s=R-son/daughter.of.woman	[o.ˈmɛ̃mˀ.bitˀ] ~ [o.ˈmɛ̃.bitˀ]	‘my son’
	f.	/ɨmɨmeɾe/	[ə.mə̃.ˈmɛ.ɾe]	‘Omerê (river's name)’
	g.	/jãj/	[ˈj̃ãj̃] ~ [ˈɲãj̃]	‘tooh’
	h.	/kojõpe/	[kõ.ˈɲõ.pe]	‘(At) night’

[21] Through a process of nasal harmony, nasal assimilation affects only glides and vowels. In (22j) below, the obstruent became [+voice] due to the fact that voiceless consonants tend to vary in voicing word-initially. For further details see section 2.2.2.1.

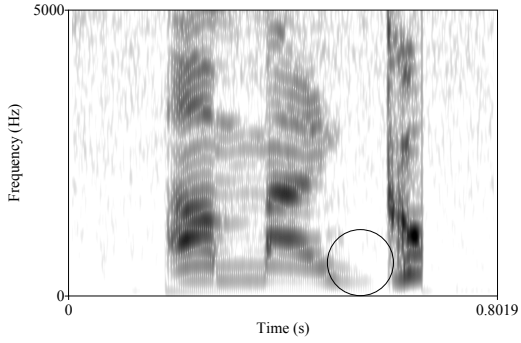
i.	/i=õpa/[22] 3s=beat	[j̃ũ.ˈba] ~ [ɲõ.ˈba]	‘to beat him’
j.	/ki=jẽ/ 1PL.INCL=mouth	[gĩ.ˈɲɛ̃] ~ [gĩ.ˈj̃ɛ̃]	‘our mouth’

Compare figure 2.2 (a-b) which illustrate two spectrograms that show variation in the production of the token /ameko/ ‘jaguar.’ The first picture shows a token where no syllable-final nasal segment is produced, as seen in the outlined part shown by the circle. In figure (2.2b), however, the speaker is producing a nasal segment syllable-finally as a result of progressive assimilation of the [nasal] feature that spreads from the segment [m] up to the vowel [ɛ]; the resulting [ɛ̃] then goes further to create also the surface [ŋ].



[õ m ɛ̃ k o]

Figure 2.2 (a) - No nasal segment after nasalized vowel



[õ m ɛ̃ ŋ ku]

(b) Homorganic nasal segment after nasalized vowel

One would argue that instead of having for instance /ameko/, we should postulate /amenko/ [ɔ.mɛ̃ŋ.ko] as the underlying form of this word (as well as for others that undergo the same process), and say that the nasalization of the vowel would occur due to regressive assimilation spread from the coda nasal segment /n/, rather than saying that the vowel becomes nasalized from progressive assimilation spread from the onset nasal segment /m/.

[22] Note that the third personal pronoun may have the following phonetic realizations: [j] before oral vowels, [j̃] ~ [ɲ] before nasal vowels and [i] before consonants.

However, this would create a puzzle since one would have to argue and explain why there is sometimes variation between [ɔ.mɛ̃ŋ.'ko] ~ [ɔ.mɛ̃.'ko] by creating additional rules to account for this variation.

Note that there are cases where regressive or progressive assimilation may not occur because: **(a)** nasal assimilation is optional across syllable boundaries or it may be very low (see (2.23a-b). Nasal spreading tends to prefer vowels that are contiguous by tautosyllabic nasal segment. This means that, in some cases, syllabification can affect nasal assimilation, interfering in the spreading of the [+nasal] feature; **(b)** the type of consonant can be an obstacle to the spreading of the [+nasal] feature. In Akuntsú, for example, sonorants are more likely to spread the feature as they can also be affected by nasality (2.23c-e)[23], while obstruents tend to completely block any tentative spreading of the [+nasal] feature (2.23f-g). Note here that the progressive assimilation usually occurs in adjacent segments that are [+nasal] or [+continuant].

(2.23)	a.	/tʃajã/	[tʃa.ˈɲɛ̃] ~ [tʃɛ̃.ˈj̃ɛ̃]	‘earring’
	b.	/e=ø-amĩna/ 2s=R-knee	[ɛa.ˈmĩ.nɛ̃] ~ [ɛ̃ɛ̃.ˈmĩ.nɛ̃]	‘your knee’
	c.	/wɛ̃ɾo-wɛ̃ɾo/	[˛w̃ɛ̃.ɾ̃õ ˈw̃ɛ̃.ɾ̃õ] ~ [˛w̃ɛ̃.nõ ˈw̃ɛ̃.nõ]	‘bee (sp.)’
	d.	/aɾamĩɾa/	[ɛ̃.ɾ̃ɛ̃.ˈmĩ.ɾ̃ɛ̃] ~ [ɛ̃.nɛ̃.ˈmĩ.ɾ̃ɛ̃]	‘woman’
	e.	/kɨɾɛ̃/	[kə̃.ˈɾ̃ɛ̃] ~ [kə̃.ˈnɛ̃]	‘today’
	f.	/mapi/	[mɛ̃.ˈpi] ~ [mɛ̃mˀ.ˈbi]	‘arrow’

Based upon the nasal harmony process across languages, Piggott (1992) argues that languages may be divided into two patterns: (a) languages that have a set of consonants,

[23] Note that approximants are the only underlyingly non-nasal consonants that can have nasal allophones [w̃, j̃, ɾ̃] when adjacent to nasal segments. The segment [j̃] may also be realized as [ɲ] syllable-initially.

namely obstruents and liquids, that block the spreading of the feature [nasal]; and (b) languages in which all obstruents and liquids are transparent to the process of nasality, and do not block the spread of the feature [nasal] to adjacent segments (in this pattern, consonants are dominated by the spontaneous voicing (SV) node, rather than by the soft palate (SP) articulator node). In face of Piggott's discussion, we would argue that Akuntsú could not fit the patterns above, mainly because obstruents block the process of nasal harmony in the language, whereas liquids do not block nasality.

Nasalization may also have an effect on vowel quality; the quality of the vowel often changes when it carries the [+nasal] feature. As seen in some of the examples above, high and mid vowels tend to lower while low vowels tends to raise their height, as seen below:

Oral vowels ------ Nasalized Vowels
a ------ ɐ̃ ~ ɔ̃ ~ ʌ̃
e ------ ɛ̃
ɨ ------ ə̃
i ------ ĩ
o ------ õ ~ ɔ̃ ~ ʊ̃ ~ ʌ̃

Table 2.5 - Quality of [+nasal] vowels.

2.2.1.3 Laryngealized (creaky) vowels

In this section, I will discuss creaky (laryngealized) voice in the language, providing the cues that signal the presence of laryngealized vowels and their motivation. In Akuntsú, there are no underlying creaky-voiced vowels, which means that voice quality does not play any distinguishing role in lexical items; rather, it is possible to identify three main types of creaky voice depending on function. The implementation of laryngealization is mostly

motivated by prosodic variables; for example, vowels in stressed syllables are highly marked by tightened glottis. Arguments in favor of laryngealization as a phonetic motivation rather than as a phonemic characteristic of vowels in Akuntsú are also presented in this section.

The [glottal] feature is one that motivates creaky voice in surrounding vowels in this language[24]. Glottal stop may be realized either as a complete closure or as creakiness in surrounding vowels.

Aragon (2008) stated that the likelihood of creaky-voiced vowels is not restricted only to the presence of an adjacent glottal stop in the language. Note that for cases such as the one in (2.24d) below, Rodrigues (2003) argued that there is a relation between nasalization and laryngealization attested in different Brazilian indigenous languages, where the nasality provokes the manifestation of the glottal feature and vice-versa (Rodrigues 2003:19)[25]; this was also found among Tuparí speakers (Rodrigues and Alves 1992).

(2.24)	a.	/kɨpek/	[kɨ.ˈbe̯k˞]	‘papaya’
	b.	/atap/	[a.ˈta̯p˞]	‘hair’
	c.	/pea/	[pe̯.ˈʔa̯]	‘firewood’
	d.	/i=ø-men/ 3s=R-husband	[iʔˈmɛ̯n˞]	‘her husband’

In order to explain laryngealization in the language, Carvalho and Aragon (2009) showed that the main acoustic cues of laryngealized vowels in the language are seen in: (a) variation in the duration of *jitter*[26] that tends to be higher in creaky-voiced vowels than in

[24] According to Gordon and Ladefoged (2001), syllable position, stress, and adjacent glottal stops are likely locations for the occurrence of laryngealization cross-linguistically.

[25] Matisoff (*apud* Rodrigues 2003:19) also called attention to this phenomenon (where nasality influences glottalization) among some Asian languages.

[26] Fluctuations in pitch.

vowels that have a normal mode of vibration (modal vowels); and from (b) the difference in amplitude between H1-H2 in creaky-voiced vowels and non-creaky voiced vowels, where the laryngealized vowels have higher H1-H2 values than modals.

After having justified the arguments above, Carvalho and Aragon compared vowels in stressed and unstressed syllables where the results supported the hypothesis that indeed, by comparing vowels in stressed syllables with those in non-stressed syllables, the vowel quality in stressed syllables tends to be much more marked by constricted glottis than their unstressed counterparts. In conclusion, Carvalho and Aragon claimed that:

> "[...] Although there is no evidence for a lexical, underlying contrast between modally-voice and laryngealized vowels in Akuntsú, the strength with which pressed voice (i.e., laryngealized voice) is realized in the language suggests a role for this distinguished phonetic event beyond that of variations in phonation setting [...]" (Carvalho & Aragon 2009:12).

CREAKINESS - TYPE 1

Stress motivates creakiness in the language. In figure 2.3 below, by comparing the two vowels of the token [kɨ'bɐ̯:kˀ] 'papaya', we see that [ɐ̯] is being produced with asymmetrical glottal pulses (by tightening the vocal chords) with increased *jitter* when compared with the first vowel [ɨ].

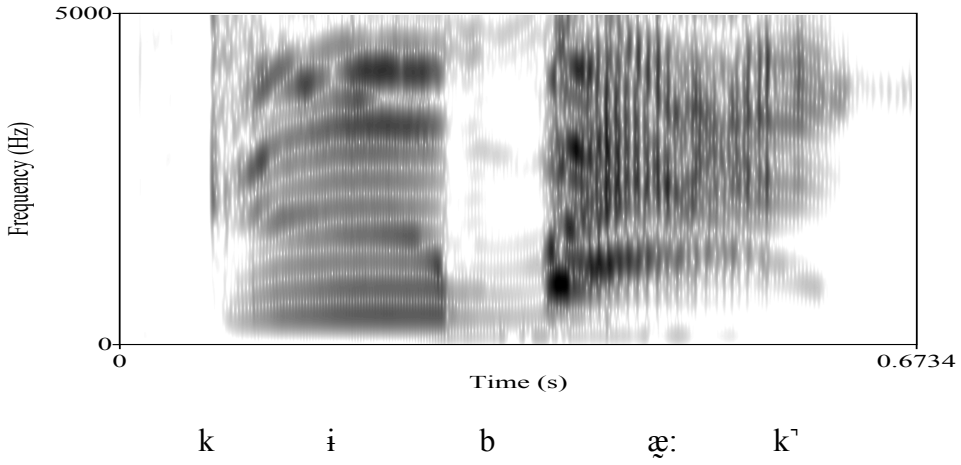


Figure 2.3 - Laryngealized vowel in /kɨpek/ [kɨ'bɐ̯:kˀ] 'papaya'.

Note from Figure 2.3 (a sample token from among others) that creaky-voiced vowels tend to be longer than modal vowels, where the vowel [i̤] measures 164 ms. and [æ̰:] 191 ms. This is not a characteristic only of Akuntsú. Kirk et al. (1993) reported earlier that non-modal vowels tend to have longer duration (§2.2.1.4 for vowel length).

By considering the fact that stressed syllables tend to be more marked by constricted glottis in the language, I may assume that creaky voice functions to play on the perception of a syllable's prominence in the word, since creaky voice enhances the level of energy, by increasing the loudness.

However, there are some examples in which vowels, even though in unstressed position, may have a higher level of constricted glottis than those in stressed syllables, which leads us to describe a second type of creaky voice in the language.

CREAKINESS - TYPE 2

This type of laryngealization can be explained by speech rate and the insertion of the glottal feature syllable-initially and syllable-finally, which in this case is being phonetically realized as creakiness on the vowel. In example illustrated below, the epenthesis of the glottal is due to speech rate, whereas the word is being used emphatically in a careful and slow speech. Careful and slow speech is often realized in the language with lengthened vowels caused by the creakiness and/or the speech rate. Consider the spectrogram shown in figure 2.4 below, which shows a word being pronounced in slow speech.

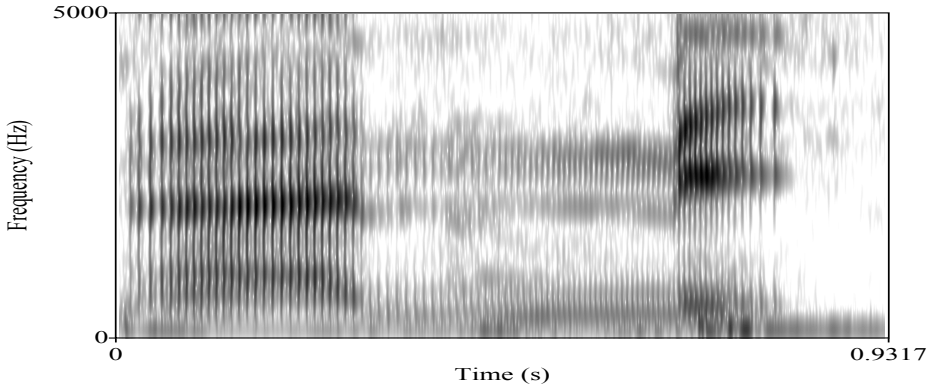


Figure 2.4 - Unstressed syllable highly laryngealized /eni/ [ɛ̃:n'nĩ] 'hammock'.

Now, compare figure 2.4 with figure 2.5 (below) where the same word is been pronounced under different prosodic conditions, i.e., in figure 2.5 the speaker is saying this word in normal speech (opposite situation found in the figure 2.4 above).

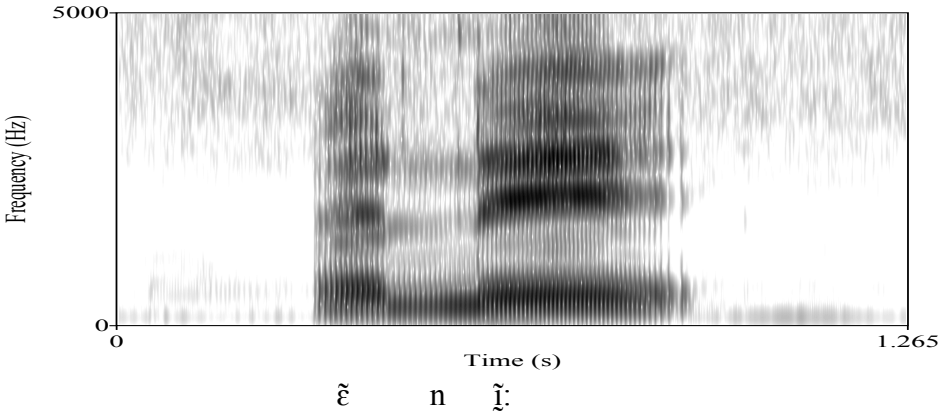


Figure 2.5 - Stressed syllable highly laryngealized /eni/ [ɛ̃'nĩ].

The vowel in stressed position (the final vowel) is longer than the one in the unstressed syllable, which is the opposite situation of both vowels (initial and final) described in figure 2.4 above.

In this language, syllable-initial or syllable-final vowels (specially those at the end of

a prosodic unit) tend to bear some degree of laryngealization.

Thus, the tightening of the vocal folds in these positions is often motivated by (a) the epenthesis of a glottal stop resulting in a glottalized[27] consonant when in syllable final position (2.25a), (b) creaky vowel (2.25b) (due to TYPE 1, TYPE 2 or TYPE 3 conditions, as presented further in this section), or (c) the presence of a full glottal stop (2.25c). Examples are provided below:

(2.25)	a.	/otat/	[ṵtˀ.ˈta̰t˺]	'fire'
	b.	/tato=na/ tato=na armadillo=ESS	[ta.ˈdo ̩.na̰ˀ]	'(It is) an armadillo'
	c.	/apaɾa-atʃo/ banana-INT	[ˀapaɾaa̰:tʃo]	'big banana'

In (2.25a-b), the words are pronounced in careful and slow speech where speakers tend to reinforce the perception, and therefore the clarity, of the speech through a natural process of fortition, which is a phonetic process that optimizes individual segments—that is, yields them to be easily perceived and articulated by the speakers (Donegan and Stampe 2009). In (2.25c), the glottal stop works as a good indication of word-boundary between two grammatical elements. In other words, the epenthesis of a glottal stop in those contexts tends to increase the perception of the syllable boundary or phrasal boundary, i.e., laryngealized vowels syllable-finally and/or word-finally in unstressed position come from the presence of an emphatic glottal stop.

[27] The term glottalized is being used in this study to mean that either the consonant or the vowel has a sequence involving V or C and glottal stop, or that the V is laryngealized.

CREAKINESS - TYPE 3

Besides the creakiness of TYPE 1 and TYPE 2, pragmatic variables also influence the distribution of creaky voice. Paralinguistic use also causes creakiness. In Akuntsú, Aragon (2008) argued that the recounting of past traumatic or stressful situations might be accompanied by creaky voice in the whole phrases and/or stretches of speech, in utterances longer than words. Creaky voice, in this case, functions in the language to enhance the expression of emotions.

Creakiness in Akuntsú also varies across speakers, which means that the level (high vs. low creaked vowels) and the manifestation of laryngealization tend to be speaker dependent, as well.

2.2.1.4 Vowel length

Acoustic duration is the main cue to distinguish between long and short vowels; however, other factors, such as stress, voicing, gender, numbers of syllables in the word , rate of speech, and vowel height (cf. Diehl 1996, Lehiste 1970) have been found to affect vowel duration in languages. Vowel length is common cross-linguistically where several languages have contrastive long and short vowels phonemically. In these languages, there are "pure" length contrasts, as in Finnish, where duration is the sole feature distinguishing the vowels. However, in languages such as Spanish, two degrees of length depend on the context, on whether the vowel is stressed or not. Vowels are shorter in unstressed syllables and longer in stressed syllables — a phonetic difference, but not a phonemic one. English, for example, is another instance of a language that has a difference in length depending on different phonetic contexts, but vowel length is not phonemic in English. The difference between languages

such as Spanish and English, and languages with a true phonemic vowel-length contrast is that in Spanish and English long and short vowels are not distinctive — they are conditioned by certain phonetic contexts, such as whether the adjacent consonant is voiced or whether the vowel is stressed.

To verify the status of vowel length in Akuntsú, this section first investigates the interaction of stress with vowel length in Akuntsú to determine whether or not the quantity of vowels is increased under stress. Secondly, it examines the phonological and acoustic evidence to determine underlying vowel length in the language.

For Akuntsú, there is no previous analysis or description of vowel length, especially not of vowel length and the effects of stress on vowel duration. However, in previous descriptions of languages closely related to Akuntsú, at least three of the five Tuparí languages have been analyzed as having phonemic vowel length, a fact that motivates us to undertake a deeper analysis here. The PUTATIVE MINIMAL PAIRS below based on auditory perception constitute an argument to support the hypothesis that Akuntsú does have contrastive vowel length. Below putative minimal pairs are proposed. There are relatively few minimal pairs (and near-minimal pairs) based on vowel length alone (compared to those for nasal and oral vowels).

PUTATIVE MINIMAL PAIRS

(2.26)

a.	[ˈka:p] ‘flute’	b.	[ˈkap] ‘wasp’
c.	[ˈpi:pa] ‘broom’	d.	[piˈpa] ‘arrow (type)’
e.	[iˈto:] ‘its pit’	f.	[iˈtop] ‘his/her father’

Nonetheless, these putative minimal pairs ignore the variables that, according to previous literature on vowel length, may contribute to increasing the duration of vowels, such as: (a) vowel height; (b) adjacent consonants; (c) position of the syllable in the word; (d) syllable structure (closed or open); (e) gender; and (f) rate of speech. But the most important note to make here is that there is variation in my transcriptions, which means that they are not always consistent, and those long vowels presented above are sometimes transcribed as short.

After undertaking some acoustic investigations we found that, not surprisingly, stressed vowels have longer duration than their unstressed counterparts. The purpose of the analysis was to determine if vowel duration varies as a function of stress. All the syllables were taken in isolation. The target syllables have voiceless labial onsets and the same vowel quality in the nucleus, and they are in open syllables. A total of 20 tokens were used. Averages and ratio (vowel duration by word duration) were calculated to present the results. The standard deviation value was used here as a measure of dispersion of the sample.

	Mean	Std. Deviation
Stressed syllables	0.1361	0.05607
Unstressed syllables	0.0985	0.04665

Table 2.6 - Mean of the ratio found for syllables in unstressed and stressed syllables.

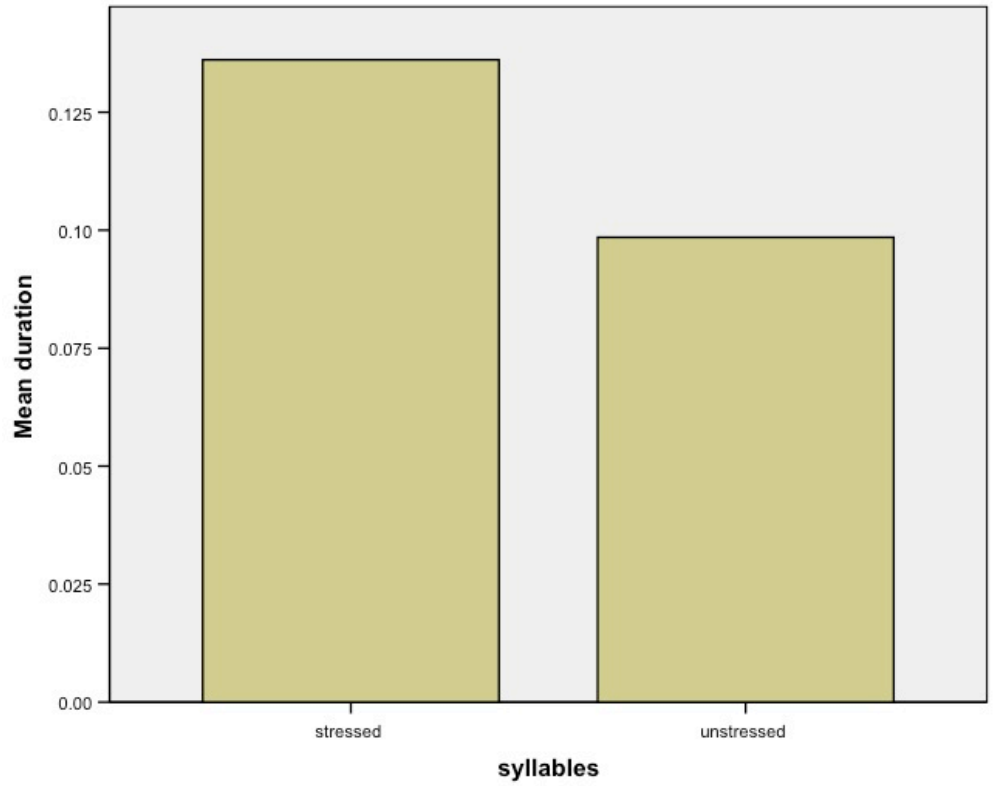


Figure 2.6 - Stressed and Unstressed syllable

On the basis of these findings, vowels in stressed syllables tend to have longer duration than those in non-stressed syllables. Shorter vowels are commonly found in unstressed syllables while the longer ones are found primarily in stressed syllables. As illustrated by the rule below, vowels will be longer when stressed in a normal speech event, as following:

Rule (Stressed Syllables)

V→ [+ long]/ [+ stress]

Note, however, that the rule above depends on speech events since in careful and slow speech the speaker may optionally lengthen the unstressed vowels (as shown in creaky vowel section above), and thus, unstressed vowels tend to be shorter than the stressed

vowels. The examples provided in creaky vowel section above are repeated here to clarify the discussion, including the ratio of each vowel for each token — the ratios of phonetic long vowels are in bold.

SLOW SPEECH VS. NORMAL SPEECH			
[ɛ̃ːnˈnɪ̃]		[ɛ̃ˈnɪ̃ː]	
[ɛ̃ː]	**0.354**	[ɛ̃]	0.196
[ɪ̃]	0.151	**[ɪ̃ː]**	**0.556**

Table 2.7 - Ratio for vowel in slow and normal speech.

Another fact to address is that vowels tend to be longer in open syllables than in closed syllables[28]. It is possible to visualize it from the values below which present similar results as compared to other tokens analyzed for this language. Though it represents but a sample of the data, it is elucidating, as presented below:

	STRESSED	RATIO	UNSTRESSED	RATIO
OPEN SYLLABLE	[ɛˈp**u**] ‘your hand’	0.322 ms.	[**u**ˈtɛkˀ] ‘my house’	0.284 ms.
CLOSED SYLLABLE	[tɔpˀˈd**u**tˀ] ‘manioc’	0.266 ms	[**u**tˀˈtatˀ] ‘fire’	0.220 ms.

Table 2.8 - Ratio for open and closed syllables.

Though it wasn't possible to state contrastive pairs based on vowel length, there are vowels that are longer than others, especially monosyllabic vowels. Based on the data analyzed, I hypothesize that the lengthening of vowels in monosyllabic words is not to assign grammatical meaning, but rather that vowels (with identical quality) tend to be far shorter in

[28] Vowel height also has an effect on vowel duration. Commonly cross-linguistically, “vowels that are lower in the vowel space are longer than those that are higher in that space” (Myers 2005:434).

disyllabic words (or words with more than two syllables) than in monosyllabic words, due to the creation of an expansion effect in monosyllabic words in order to maintain roughly uniform the word duration in the language.

While investigating vowel length, we also need to keep in mind that words with long vowels should be consistently longer in duration than those with short vowels (Hirata 2004). After analyzing the corpus, though I couldn't totally control for some of the variables — for instance, vowel height and adjacent consonants — it was not possible to find cases of words that seemingly have contrastive length (minimal or near-minimal pairs). It is likely that there is no phonemic vowel-length contrast in the language based on this first analysis presented here.

This data suggests that length in this language is predictable. However, one would argue that there might be possible cases of underlying vowel-length (due to cases of lengthening in monosyllabic words), and if one would like to consider this hypothesis, the functional load of vowel length in the language would be extremely infrequent and very atypical of languages that do have, indeed, contrastive length.

TYPOLOGICAL NOTE

For Mekéns, Alves and Galucio (2007) investigated the oral vowels in this language in the speech of three native speakers as part of the experiment. They based their preliminary study on acoustic analysis (average and standard deviation values for each) in which they concluded that Mekéns has phonemic short and long vowels. However, the authors did not discuss factors such as rate of speech and other variables that may cause the lengthening of vowels.

For Tuparí, on the other hand, Alves (2004) addressed vowel length based on phonological arguments. She argued that the set of minimal pairs in this language is sufficient to diagnose vowel length and to determine phonemic status. Based on the minimal pairs below, Alves (2004) argues that duration is phonemic in Tuparí, because the examples show a contrast between short and long vowels.

TUPARÍ (adapted from Alves (2004))

(2.27)

a.	/a:p/ 'flute'		b.	/ap/ 'lard'
c.	/ho:p/ 'father'		d.	/hop/ 'clay'

In her phonological study, the minimal pairs above are the only one encountered; however, she also presents examples of long vowels, but those are not compared with their short counterparts. Some of the words found with long vowels are reproduced below:

TUPARÍ (adapted from Alves (2004))

(2.28)

a.	/a:pe/ 'road'	b.	/py:j/ 'soup'
c.	/ha:p/ 'housing'	d.	/mi:n/ 'hummingbird'
e.	/ha:n/ 'length'	f.	/po:t/ 'old'
g.	/ki:t/ 'seed'	h.	/era:t/ 'big'

In Makuráp, Braga (2005) doesn't mention long vowels as part of the vocalic inventory of this language, and neither does she mention whether there is phonetic

lengthening within specific contexts. However, for Wayoró, Nogueira (2011) argues that there is a set of long oral vowels and long nasal vowels in this language. The author supports her analysis with near-minimal pairs and few minimal pairs.

2.2.1.5 Vowels and glides

In this subsection, the goal is to analyze the behavior of [w] and [j] syllable-finally and syllable-initially, *where no morphophonological process is involved*. Akuntsú has underlying vowels /i/ and /o/[29], as well as underlying consonants /j/ and /w/, so the main goal here is to give reasons to support the claim that glides in this language are considered underlying consonants. This subsection deals with the distribution of glides and their sources: the nature of what is transcribed with [j] and [w] will be described.

[w] and [j] behave as [-vocalic] segments word-initially, word-finally, and intervocalically, and as such they are treated as consonants in such positions. Some examples of words with approximants follow (see more in §2.2.2.4.2):

WORD-INITIALLY AND WORD-FINALLY

(2.29)	a.	/tʃaw/	[ˈdʒaw]	‘to chew’
	b.	/wẽn/	[ˈwɛ̃n˺]	‘to finish’
	c.	/jat/	[ˈjat˺]	‘2PL’
	d.	/baj/	[ˈbaj]	‘buriti (palm fiber (sp.)’

INTERVOCALICALLY

(2.30)	a.	/aw-aw/[30]	[aw.ˈaw]	‘baby/child’

[29] Recall that I am using /o/ rather than /u/ to follow the table of vocalic phonemes presented in table 2.3.

[30] In this lexicalized form, there is the reduplication of the ideophone *aw*.

b.	/ojoja/	[o.jo.ˈja]	‘bee (sp.)’
c.	/tawʧe/	[tawˈdʒɛ]	‘peccary’
d.	/tawkop/	[tawˈkopˀ]	‘holler mokey (*Alouatta*)’

MOTIVATIONS

The analysis of [j] and [w] word-initially as consonants is consistent with the fact that all consonants with the exception of /ɾ/ and /ŋ/ can occur at the beginning of words, and considering these surface forms as non-syllabic creates a more symmetrical pattern in the language.

In the claim that word-final glides are surface consonants rather than vowels, one would have to argue that vowels also surface in that position. Considering the distribution of vowels and consonants it is possible to affirm that all vowels occur syllable-finally, which is not the case for the consonants; only unreleased consonants [pˀ, tˀ, kˀ] and the nasals [mˀ, nˀ, ŋ] occur finally. Based on this assumption, one could consider the final glides as surface forms of underlying vowels. However, the evidence which most strongly convinced me that the glides are consonants, both underlyingly and on the surface, is a morphophonological process that takes place when the negative suffix is attached to nouns. There are two allomorphs of the negative suffix: *=eɾom* and *=ɾom*. The first attaches to nouns and verbs that end in a consonant and the other to forms that end in a vowel. In cases where there are glides word-finally, the allomorph chosen is *=eɾom* rather than *=ɾom*, as shown in (2.31):

=(e)ɾom ‘NEGATIVE’

(2.31)	a.	/jãj=eɾõm/ tooth=NEG	[ɳɐ̃jɐ̃ɛ̃ɾõmˀ]	‘There is no tooth’

b. /apaw=eɾõm/ [apawɛɾõm˥] ‘There is no grub (sp.)’
grub (sp.)=NEG

2.2.1.6 Phonetic diphthongs

Cross-linguistically, there are two types of diphthongs: underlying diphthongs or true diphthong and those considered phonetic diphthongs (false diphthongs)[31]. Akuntsú has false diphthongs, which means that they are not single phonemes; rather, they are sequences of underlying vowels that are subject to constraints regarding their combination (with exception of some VG sequences that are sequences of [VOWELS + [-VOCALIC] SEGMENTS]). Sequences of vowels in the language are constrained and morphophonologically conditioned.

The main constraints related to the formation of diphthongs in this language can be conditioned mainly by the following characteristics found in this language:

(1) Diphthongs are formed when two unstressed vowels are combined in the same syllable[32];

(2) Diphthong formation is conditioned by rate of speech.

One noteworthy point from table 2.9 below is related to the lack of examples of diphthongs formed with the high central vowel /ɨ/. Examples of diphthong formation are illustrated in the table 2.9, as follows:

[31] See Rehg (2007) for discussion on diphthongs.

[32] When two vowels are adjacent to each other and one is stressed, the obligatory epenthesis of glottal stop between them avoids diphthong formation.

	i	**e**	**ɨ**	**a**	**o**
i	---	/i=eɾek-k^{w}a/ 3s-speak-TR.PL [**jɛ**.ˈɾe.k^{w}a] 'she/he speaks'	?	/kiakop/ [k^{j}**a.**ˈkopˀ] ~ [k**ia.**ˈkopˀ] 'sun'	/oɾoɾo i-ko/ Ururu OBJ.NMLZ-ingest [u.ɾu.ɾ**uj**.ˈko] 'Ururu's food'
e	/e=i-mi/ 2s=OBJ.NMLZ-kill [**ɛj.**ˈmi] 'your killed (thing)'	---	?	/e=ø-amina/ 2s=R-knee [**ɛa**.ˈmĩ.nɛ̃] 'your knee'	/ke o=tʃop-a/ DEM 1S=see-THV [k**ɛw.**dʒoa] 'That one sees me'
ɨ	?	/ɨeko/ [**ɨɛ.**ˈko] 'vulture'	---	?	?
a	/aɾamiɾa i-ko/ Aramira OBJ.NMLZ-ingest [ã.ɾ̃ã.mĩ.ɾ**aj.**ˈko] 'Aramira's food'	/aeɾaka/ [**aɛ.**ɾa.ˈka] 'soco-boi (bird sp.)'	?	---	/aɾamiɾa o=tʃop-a/ Aramira 1S=see-THV [ã.ɾã.mĩ.ɾ**aw.**ˈdʒoa] 'Aramira sees me'
o	/o=i-ko/ 1s=OBJ.NMLZ-ingest [**uj.**ˈko] 'my food'	/poetop/ [p**wɛ.**ˈtopˀ] 'to know'	?	/oanam/ [**wa.**ˈnɛ̃mˀ] 'my head'	---

Table 2.9 - Possible sequences of false diphthongs.

Diphthong formation in this language is often of two kinds: **(i)** sequences of vowel + glide[33] [VG], **(ii)** glide + vowel [GV], where glides are formed under the conditions provided in (1) and (2) above.

The examples (2.32a-b) illustrate the distribution of surface glides that come from underlying /o/ and /i/ across word boundary. In these cases, glides form phonetic diphthongs,

[33] Acoustically the difference between glides and vowels in Akuntsú is that vowels show a slow formant transition and glides are realized with a fast formant transition. Moreover, glides show less constricted spectrogram than vowels, and this is true generally also cross-linguistically (Ladefoged and Maddieson 1996).

since they are vowel-like, but different from vowels in that they cannot form a syllable by themselves. Some cases of GLIDES + VOWELS (2.32a) and VOWELS + GLIDES (2.32b-c) sequences are exemplified in the following examples (in boldface):

(2.32) a. /o=ø-akõja/ [**wa**.ˈkũ.j̃ɐ̃]
1S=R-beard
'my beard'

b. /k^{w}ako i=ko-a/ [k^{w}a.ˌk**uj**.ˈka]
guan (sp.) 3S=ingest-THV
'guan (sp.) is eating it'

c. /oɾoɾo i-ko/ [u.ɾu.ɾ**uj**.ko]
Ururu OBJ.NMLZ-ea
'Ururu's food'

In addition, diphthong formation also depends on paralinguistic factors, such as the rate of speech of the speaker, as illustrated below — diphthongs are in boldface:

(2.33) a. /o=ø-atap/ [**wa.**ˈtapˀ]
1S=R-hair
'my hair'

b. /o=ø-atap/ [**u.**ˌ**ʔa.**ˈtapˀ]
1S=R-hair
'my hair'

When the speakers pronounce the word in careful and slow speech, they can optionally place a glottal stop between the sequences of vowels[34], and as such there is no diphthong formation (as shown in slow speech (2.33b) as opposed to faster speech (2.33a)

[34] See §2.2.2.1.8 for glottal stop epenthesis.

above). I turn now to some of the main factors that contribute to diphthong formation: RATE OF SPEECH and STRESS.

The sequence of vowels may or may not be tautosyllabic. With respect to glide formation the rate of rate of speech determines glide formation across word boundaries. The same applies to the vowel-vowel sequences that do not involve glides, i.e., the combination of vowels (VV) can be placed in the same nucleus in normal and especially in fast speech, or the vowels of the sequence can be placed in different syllables in slower speech (forming a hiatus (V.V)), as shown below in (2.34).

ACROSS WORD BOUNDARY

			NORMAL OR FAST SPEECH	SLOW SPEECH
(2.34)	a.	/o=ø-ajtʃi/ 1S=R-wife 'my wife'	[**wa**j.tʃi]	[**o̯.ʔa̯**j.tʃi]
	b.	/te=i-ko/ 3COR=OBJ.NMLZ-ingest 'his own food'	[t**ɛj**.ko]	[t**ɛ̯.ʔi̯**.ko]

WORD-NTERNALLY

		NORMAL OR FAST SPEECH	SLOW SPEECH
(2.35)	/ɨeko/ 'vulture'	[**ɨɛ**.ˈko]	[**ɨ̯ː.ʔe̯**.go]

Thus, as shown above, in this language, instances of hiatus are formed under paralinguistic conditions. Note, however, that the examples in (2.36) below are sequence of VOWEL + VOWEL where there is no glide formation. This is due to the fact that the last vowel is stressed. In this case, when one of the two sequences of vowels is associated with stress,

speakers consistently syllabify the words and add a glottal between them, to avoid diphthongization. Some examples are given below:

(2.36)	a.	/eɨ/	[ɛˈʔɨ̰]	‘blood’
	b.	/k^{w}aẽ/	[waˈʔḛ̃]	‘pot’
	c.	/eo/	[ɛˈʔṵ]	‘belly’
	d.	/ai/	[aˈʔḭ]	‘caterpillar (sp.)’

Factors such as the one that the final vowel is placed in stressed position and the insertion of a glottal stop, are involved in the avoidance of diphthongization.

2.2.1.7 Speech rate, length, and stress

Depending on the rate of speech, vowels may tend either to become longer or to be deleted. In slow speech, for example, vowels are more likely to have longer length and to bear hard laryngealization than in normal and fast speech, as in the following examples:

SLOW SPEECH

(2.37)	a.	/apaɾa/ ‘banana’	[a̰:pa̰ˈɾa]
	b.	/kopiba/ ‘parrot (sp.)’	[ko̰:ˈpiba]

On the other hand, in fast speech (and sometimes in normal speech) unstressed vowels and even whole unstressed syllables within words of three syllables or more are more likely to be deleted, as in the following examples:

FAST SPEECH

(2.38)

a.	/aɾamĩɾa/ 'woman'	[nãˈmĩɾ̃ɛ̃]
b.	/takɨɾap/ 'spider-monkey'	[kɨˈɾap˺]
c.	/ameko/ 'jaguar'	[mɛ̃ˈku]
d.	/akataba/ 'tucum (palm fiber (sp.)'	[kaˈtaba]

2.2.2 Consonants

The underlying consonants in Akuntsú are characterized by the features [±continuant], [labial], [coronal], [strident], [dorsal], and [labial, dorsal] for active articulators. There are five manners of articulation for the consonants, namely stops, affricates, nasals, flaps and approximants. All the consonants are introduced below described according to their manner and place of articulation. In subsections of this section, I also introduce the distribution of consonants, the forms in complementary distribution, as well as the ones in free variation. Table 2.10 below describes the underlying consonants, represented with IPA symbols.

			[labial]	[coronal]	[strident]	[dorsal]	[labial, dorsal]	
[-continuant]	Stops	[-sonorant]	p b	t d		k g	k^w	[- voice] [+ voice]
	Affricate [delayed release]				tʃ			[- voice]
	Nasals	[+sonorant]	m	n		ŋ		[+ voice]
[+ continuant]	Flap Approximants			ɾ		 j	 w	

Table 2.10 - Consonantal phonemes.

2.2.2.1 Stops

There are five underlying supra-glottal voiceless stopped consonants /p/, /t/, /k/, /tʃ/ and three voiced stopped consonants, the bilabial /b/, the alveolar /d/ and the velar /g/, which is presented later in this section. The stops or obstruents differ from the other segments by being [-sonorant]. The affricate is the only [+delayed release] obstruent; there are no underlying voiced counterparts for the affricate and for the /k^w/ segment either. The inclusion of the phoneme /k^w / in the phonemic chart is discussed in the approximant section, §2.2.2.4.2.

The following sections describe the main phonetic realizations and issues that involve the stop consonants.

2.2.2.1.1 The feature voice

Aragon (2008) gave only voiceless stop consonants in the Akuntsú phonemic chart. However, after significantly more data were acquired, it became clear that there is some process in the language affecting voiceless and voiced segments. That is, minimal pairs that contrast in voice were found, even though there are very few cases compared to the number of minimal pairs that distinguish other consonants. The words in which speakers allow change in voicing are those that are here considered to have underlying voiceless stops, while there are other words where speakers do not allow changing voiced stops to their voiceless counterparts, which are here analyzed as phonologically voiced consonants.

Minimal and near-minimal pairs are exemplified below for the words that contrast the voiceless velar /k/ and the voiced velar /g/, as follows:

(2.39) a.	/poga/	vs.	/poka/
	[poˈga]		[poˈka]
	‘tortoise’		‘to burn’
b.	/kõm/	vs.	/gõn/
	[ˈkõm]		[ˈgõn]
	‘PROJECTIVE’		‘(It is) over’
c.	/itʃoka/	vs.	/itʃoga/
	[iˈtʃoka]		[iˈtʃoga]
	3s=build		3s=bite
	‘(He/she) builds it’		‘(He/she) bites it’

As for the voiced bilabial stop, there are words that have this segment in which the speakers do not allow the *b* to be changed to its voiceless counterpart [p]. Some examples are presented below:

(2.40)	a.	/abobo/	[aboˈbo]	‘bird sp.’
	b.	/abatʃo/	[abaˈtʃo]	‘grandfather’
	c.	/baj/	[ˈbaj]	‘garb (made of buriti, palm fiber (sp.)’
	d.	/=bõ/	[=bõ]	‘DATIVE/ALLATIVE/INSTRUMENTAL’
	e.	/babape/	[babaˈpe]	‘gourd’
	f.	/ãpaba/	[ãˈpaba]	‘victoria amazonica (plant (sp.))’

Minimal and near-minimal pairs involving /p/ and /b/ are illustrated below:

(2.41)	a.	/i=ø-boɾo/	vs.	/i=poɾo-ka/
		3S=R-back		3S=dig-TR
		[iˈbuɾu]		[iˈpuɾuka]
		‘his/her/its back’		‘to dig it’
	b.	/pagop/	vs.	/bago/
		[paˈgopˀ]		[baˈgo]
		‘new/young’		‘ant (sp.)’
	c.	/i=pita/	vs.	/i=bita/
		[iˈpita]		[iˈbita]
		‘(He/she) walks’		‘its liver’

Finally, minimal and near-minimal pairs involving /t/ and /d/ are illustrated as follows:

(2.42)	a.	/i=daɾa/	vs.	/taɾa/
		3S=unfold		[ˈtaɾa]
		[iˈdaɾa]		‘question word’
		‘to unfold it’		

b.	/atap/	vs.	/dap/	
	[aˈtapˀ]		[ˈdapˀ]	
	‘hair’		‘reportative’	

c.	/ta ti/	vs.	/ʧadi/	
	DEM mother		[ʧaˈdi]	
	[taˈti]		‘armadillo (sp.)’	
	‘that mother’			

2.2.2.1.2 Neutralization of the feature [±voice]

The neutralization of the voicing feature occurs in the following contexts:

(i) When voiceless consonants occur after a [+nasal] segment (in boldface);

[+NASAL]

$C_{[-voice, +labial]} \rightarrow C_{[+voice, +labial, -nasal]}$ /[+nasal] __

(2.43)	a.	/mepit/	[mẽ'**pit**ˀ] ~ [mẽ'**bit**ˀ]	‘son/daughter of woman’
	b.	/komata/	[kõmẽ**'ta**] ~ [kõmẽ**'da**]	‘bean (sp.)’
	c.	/ãka/	[ã'**ka**] ~ [ã'**ga**]	‘like this, in that way’

(ii) voiceless consonants may alternate in unstressed position word-initially. Examples are presented below, and the target variation is marked in boldface:

WORD-INITIALLY

$C_{[-voice, +labial]} \rightarrow C_{[+voice, +labial, -nasal]}$ /# __

(2.44)	a.	/pɨtkɨp/	[pɨtˀˈkɨpˀ] ~ [**bɨt**ˀˈkɨpˀ]	‘neck’

	b.	/tato/	[taˈto] ~ [**da**ˈto]	‘armadillo’
	c.	/ko/	[ko] ~ [**go**]	‘to ingest’

(iii) Voiceless consonants may alternate in stressed position word-medially;

WORD-MEDIALLY

$C_{[-voice, +labial]} \rightarrow C_{[+voice, +labial, -nasal]} / V \_\_ V_{[+stress]}$

(2.45)	a.	/ebape/	[ebaˈ**pɛ**] ~ [ebaˈ**bɛ**]	‘forehead’
	b.	/atap/	[aˈ**tap̚**] ~ [aˈ**dap̚**]	‘hair’
	c.	/ɨkɨ/	[ɨˈ**kɨ**] ~ [ɨˈ**gɨ**]	‘water’

The opposite variation in voicing does not occur, i.e., underlyingly voiced consonants do not alternate with their voiceless counterpart in any environment.

2.2.2.1.3 Unreleased stops

In this language, the stops in coda position are unreleased and voiceless [p̚, t̚, k̚], and they do not undergo a voicing process in this position. All the released stops occur in onset positions, both syllable-initially and intervocalically.

Below, examples of unreleased stops are presented for each stop: bilabial, alveolar, and velar, respectively:

(2.46)	a.	/ebapap/	[ebaˈpap̚]	‘eye’
	b.	/kɨjtpit/	[kɨjt̚ˈpit̚]	‘fish (generic)’
	c.	/ek/	[ɛk̚]	‘house’

Unreleased consonants become voiced across word boundaries when followed by a vowel (details in section 2.4.2.1).

2.2.2.1.4 Bilabial

Underlying bilabial stop /b/ tends to assimilate the nasal feature of adjacent nasal segments. It commonly occurs through a regressive process of nasal assimilation. There are two possible rules that drive this process, as seen below:

$C_{[+voice, +labial, -nasal]} \rightarrow C_{[+voice, +labial, +nasal]} / \_\_ [+nasal]$

(2.47)	a.	/mabɨ̃ɾa/	[mãˈmɨ̃ɾa]	‘manioc flour’
	b.	/eɾẽbõ/	[eˈɾẽmõ]	‘for/to you’

$C_{[+voice, +labial, -nasal]} \rightarrow C_{[+voice, +labial, +nasal]} / \#\#\_\_$

(2.48)	/bawɾape/	[mawɾaˈpe]	‘shaker’
	/baj/	[ˈmaj]	‘buriti (palm fiber (sp.))’

2.2.2.1.5 Velar

The voiceless velar stop functions differently from the other stops in the sense that it can phonetically become a (full) glottal stop. Voiceless velars may become glottals initially in stressed position. Acoustically, the glottal, in this case, is often realized as a complete closure. Rule 1 below is applied in non-slow speech:

Rule 1 (Optional Glottal):

$/k/ \rightarrow [ʔ] / \$\_\_V_{[+stress]}$

(2.49)	a.	/poɾakɨ/	[poɾaˈʔə̯]	‘curassow (sp.)’
	b.	/k^{w}ako/	[waˈʔʊ̯]	‘sweet potato’
	c.	/oɾokoj/	[uɾuˈʔʊ̯j]	‘tangerine’

Within morphemes, there is another rule, Rule 1, which indicates that velars may also become palatalized when followed by coronal vowels.

Rule 2 (Optional Palatalization):

/k/ → [k^{j}] /__ V $_{[+coronal]}$

(2.50)	a.	/tokej/	[toˈk^{j}ɛj]	‘ant (sp.)’
	b.	/kiw-kiw/	[ˈk^{j}iwˌk^{j}iw]	‘to cut (ideophone)’
	c.	/kẽm/	[ˈk^{j}ẽmˀ]	‘breast’
	d.	/i=ø-kiɾi/ 3s=R-gut	[iˈk^{j}iɾi]	‘its guts’

At word-boundaries, a rule of intervocalic lenition applies in which velar [kˀ] becomes [ɣ] in faster speech:

Rule 3 (Spirantization)

[kˀ] → [ɣ] /V__##V

(2.51)	a.	/ɨkɨ apeka/ water drink	[ɨˌɣapɛˈka][35]	‘to drink water’

[35] Note that the vowel deletion rule must be undergone before this rule. The vowel deletion rule says that a vowel is deleted when two vowels that do not share all their articulatory features are encountered at a word boundary in non-slow speech., as shown: V_1##V_2 → øV_2 (more on section 2.4.1). Thus, it occurs as following: ɨkɨ##apeka → ɨk##apeka → ɨɣapeka.

b.	/Pupak i-mi/ Pupak OBJ.NMLZ-kill	[puˌpaɣiˈmi]	‘Pupak's killed (thing)’
c.	/kɨbek a/ papaya fruit	[kɨbeˈɣa]	‘fruit of papaya’

2.2.2.1.6 Alveolar

There are clearly phonological differences between the alveolar stop and flap in this language, since minimal pairs are found, as in the below examples:

WITH /o/

(2.52)

/ototo/	vs.	/oɾoɾo/
[oˈtoto]		[oɾoˈɾo]
o=ø-toto		‘cotton’
1s=R-grandma		
‘my grandma’		

WITH /e/

/ete/	vs.	/eɾek/
[ɛˈtɛ]		[ɛˈɾɛk]
‘RELATIVE’		‘speech’

WITH /i/

/ɨti/	vs.	/iɾiɾi/
[iˈti]		[iɾiˈɾi]
i=ø-ti		‘bird (sp.)’
3s=R-mother		
‘his/her mother’		

Consider the following examples:

/t/

Position	*Underlying form*	*Surface form*	*Gloss*
Medial Intervocalic	/atiti/	[ati'ti]	‘corn’
	/enotej/	[ẽnõ'tɛj]	‘Enotej (proper name)’

	/etɨ/	[ɛ'tɨ]	'basket'
Medial Cluster	/k^{w}atkãm/	[watˀ'kɐ̃mˀ]	'shrimp'
	/tɨtpe/	[tɨtˀ'pɛ]	'fig'

/ɾ/

Position	*Underlying form*	*Surface form*	*Gloss*
Medial Intervocalic	/oɾoɾo/	[oɾo'ɾo]	'cotton'
	/bawɾo/	[baw'ɾu]	'black woodpecker (sp.)'
	/eɾape/	[e'ɾapɛ]	'tomorrow'
Medial Cluster	----	----	----

The alveolar consonant becomes [ɾ], a coronal flap, morpheme-internally or across a word boundary. Note that there are few words that undergo this process morpheme-internally, which will be driven by speech rate; this is discussed further below.

Alveolar [t] becomes voiced syllable-initially. The following examples illustrate alveolars syllable-initially, as previously described in section 2.2.2.1.2.

(2.53) a. /taɨkop/ [taɨˈkopˀ] ~ [daɨˈkopˀ] 'howler-monkey'

b. /ek+top/ [ɛkˀˈtopˀ] ~ [ɛkˀˈdopˀ] 'roof'
house+cover

c. /o=ø-toa-ap/ [oˈtoapˀ] ~ [oˈdoapˀ] 'my place.of.lying'
1s=R-lay-NMLZ

In root-internal position, both /ɾ/ and /t/ are found. It is possible to find [t], [d], and [tˀ] as allophones of the phoneme /t/, as well as [ɾ] as surface form of the phoneme /ɾ/.

As for the voiced alveolar /d/, it may become a flap through a weakening (lenition) process, in stressed position and in non-slow speech.

(2.54) a. /tedo/ [tɛˈdo] ~ [tɛˈɾo] ‘rubber’

b. /kado/ [kaˈdo] ~ [kaˈɾo] ‘necklace’

c. /oɾodia/ [ɔɾɔˈdia] ~ [ɔɾɔˈɾia] ‘fruit (sp.)’

d. /kobode/ [koboˈdɛ] ~ [koboˈɾɛ] ‘bamboo (sp.)’

Note that syllable-finally, the alveolar is unreleased and always voiceless, as seen earlier in this subsection. Across word boundary, the unreleased alveolar obligatorily becomes a flap [ɾ], as exemplified below in rule 1, where in such position the contrast between /t/ and /ɾ/ is neutralized.

Rule 1: Obligatory flapping

[tˀ] → [ɾ] /__##V

(2.22) *emo* ‘also’

a. /o=ø-mepit emo ko-a/
1S=R-son/daughter.of woman also ingest-THV [omẽˌpiɾemoˈka] ‘my daughter also eats’

ete ‘RELATIVE’

b. /e=t-et ete/ [ɛˌtɛɾɛˈtɛ] ‘What is your name?’
2S=R-name REL

-k^{w}a ‘TRANSITIVIZER AND PLURALIZER’

c. /i=t-et-k^{w}a/ [iteɾeˈk^{w}a] ‘to call it’
3S=R-nme-TR.PL

-a ‘THEMATIC VOWEL’

d. /te=k^{w}at-a/ [teˈk^{w}aɾa] ‘he left’
3COR=leave-THV

Across morpheme (2.56a) or word boundary (2.56b), if the alveolar is between vowels and one of them is a nasal vowel, the alveolar can optionally undergo the following alternations: /t/ → [ɾ] → [n], as illustrated below:

(2.56) a. /mepit-ẽpit/ [mẽpiɾẽˈpitˀ] → [mẽpinẽˈpitˀ] ‘grandchild.of.woman’
son/daughter of woman-RED

b. /i=t-et=eɾom/ [itɛɾeˈɾõmˀ] → [itɛɾeˈnõmˀ] ‘(he/she) doesn't have a name’
3s=R-name=NEG

2.2.2.1.7 Speech rate and lengthening of stops

Voiceless stops in the onset of medial stressed syllables have more alternations than just shown. The allophonic variation of stops is here defined by the position of the consonants in syllables and by speech rates. That is, in slow speech, speakers can length the voiceless consonants due to the long closure of the consonant. Another interesting feature resulting from a slow speech rate (and careful speech) is that when the speakers length the voiceless consonant word-medially, the second half of the closure may become voiced[36].

As for the lengthening of the consonants, two consonants intervocalically tend to be placed in different positions, the first one being placed in the coda position of the preceding syllable and the second one remaining in the onset position of the next syllable; the second voiceless consonant in a VCCV structure may become voiced, as in [otˈtatˀ] ~ [otˈdatˀ] ‘fire’[37]. The rule for this alternation is presented below:

[36] Aragon (2008 *apud* Aragon and Cabral 2004b).

[37] Instrumental analysis is being undertaken to increase the discussion on this subject matter (Aragon forthcoming).

Optional Gemination, caused by slow speech production:

$\emptyset \rightarrow (C_{i\ [-\ voice]}) / VC_{i\ [-\ voice]}\_V_{[+\ stress]}$

	[p]	~ [pp]	~ [pb]	
/opo/	[o'po]	[opˀ"po]	[opˀ"bo]	'my hand'
/ɨpek/	[ɨ'pekˀ]	[ɨpˀˈpekˀ]	[ɨpˀˈbekˀ]	'duck'
	[t]	~ [tt] ~	[td]	
/k^{w}ato/	[k^{w}a'to]	[k^{w}atˀ"to]	[k^{w}atˀ"do]	'alligator'
/otat/	[o'tatˀ]	[otˀ"tatˀ]	[otˀ"datˀ]	'fire'
	[k]	~ [kk] ~	[kg]	
/ɨkɨ/	[ɨ'kɨ]	[ɨkˀˈkɨ]	[ɨkˀ"gɨ]	'water'
/ɨeko/	[ɨɛ'ko]	[ɨɛkˀ"ko]	[ɨɛkˀ"go]	'vulture'

Table 2.11 - Lengthening of voiceless consonants.

The below spectrogram and waveform illustrate a token (out of other tokens) of the word 'duck' *ɨpek,* being produced by a male speaker.

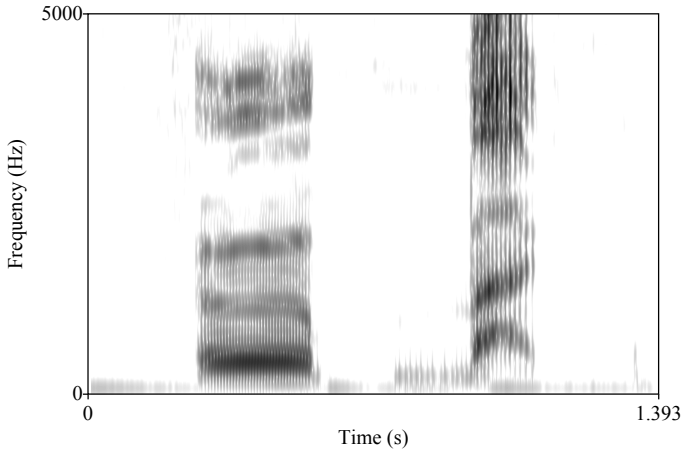


Figure 2.7a - Spectrograms of /ɨpek/ **[ɨpˀˈbekˀ]** 'duck' .

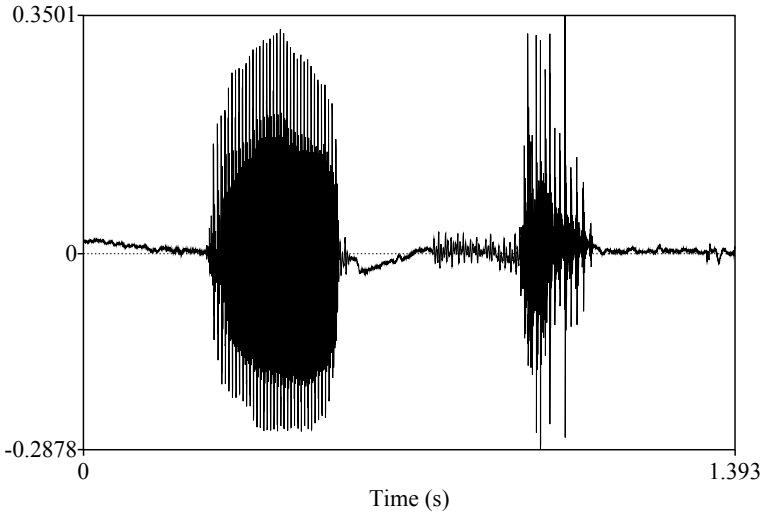


Figure 2.7b - Waveform of /ɨpek/ **[ɨpˀˈbekˀ]** 'duck'.

Note that the process of optional gemination is not in free variation, but rather a phonetic realization, caused by slow speech conditions, that varies among speakers.

2.2.2.1.8 Glottal Stop epenthesis

Phonologically, glottal stops in the language are not contrastive, as proposed in Aragon (2008). The glottal stop is predictable and phonetically it occurs syllable-initially and syllable-finally, depending on prosodic conditions. The glottal stop is acoustically realized either as a long and silent closure or as creaky voice. Vowels, when adjacent to glottal stops , are always laryngealized (with creaky voice)[38]. The epenthesis of glottal stops often functions to assign syllable boundary or word boundary, which varies according to speech rate and speakers. Another common environment for the epenthesis of the glottal is in monosyllabic words with the V(C) structure, where the glottal occurs word-initially:

[38] See §2.2.1.3 for creaky vowels.

Rule 1 (glottal epenthesis):

Ø → [ʔ] /##__V(C)

(2.57) a. /ap/ [ˈʔa̰:pˀ] ‘fat’

b. /õ/ [ˈʔõ̰:] ‘tongue’

c. /ɨ/ [ˈʔɨ̰:] ‘genipap/liquid’

In words with two vowels together and one of them is stressed, the glottal stop is obligatorily inserted, as shown:

Rule 2 (glottal epenthesis):

Ø → [ʔ] /V__V [+stress]

(2.58) a. /eɨ/ [ɛˈʔɨ̰] ‘blood’

b. /kʷaẽ/ [kʷaˈʔḛ̃] ‘pot’

c. /eo/ [ɛˈʔu̯] ‘belly’

d. /ai/ [aˈʔi̯] ‘caterpillar (sp.)’

The epenthetic glottal stop in the cases presented above is not due to syllable constraints, since in Akuntsú onsetless syllables are possible (see for instance /abatʃo/ [a.ba.'tʃo] ‘grandfather’). Rather, it is used in the language to prevent diphthong formation in stressed positions, as well as to assign syllable or grammatical boundaries (as presented below).

The glottal stop is often phonetically realized as creaky voice, though it can also be realized as a complete closure (see figure 2.8 below). The production of the glottal stop as a complete closure will depend on speech rate. Complete closure is often seen in slow and careful speech.

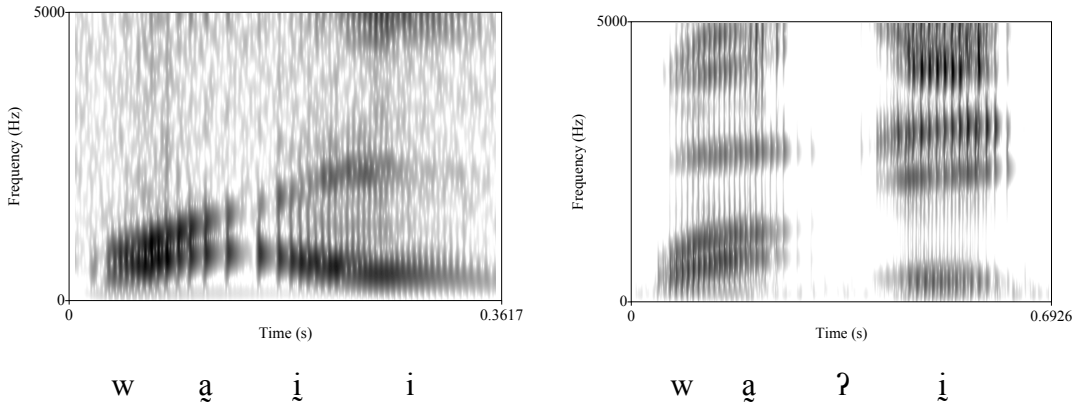


Figure 2.8 - Two spectrograms of the token /k^{w}ai/ 'stone' being produced with creakiness on the left image [wą̲'į̲:] and with a complete closure as observed on the right [wą̲'ʔį̲].

In the spectrogram on the left, the glottal is realized as an entirely creaky phonation with strongly constricted voicing. Note, however, that in the right image the glottal is manifested as a complete closure and the boundary of the onset and offset vowel is highly marked by intense glottal feature, whereas the vowel [i] in coda position presents heavy creakiness over the vowel, and not only in its boundary. This is explained by the stress, which in this case is placed on the last syllable.

Below, we see the glottal being realized as heavy creakiness to assign word-boundary:

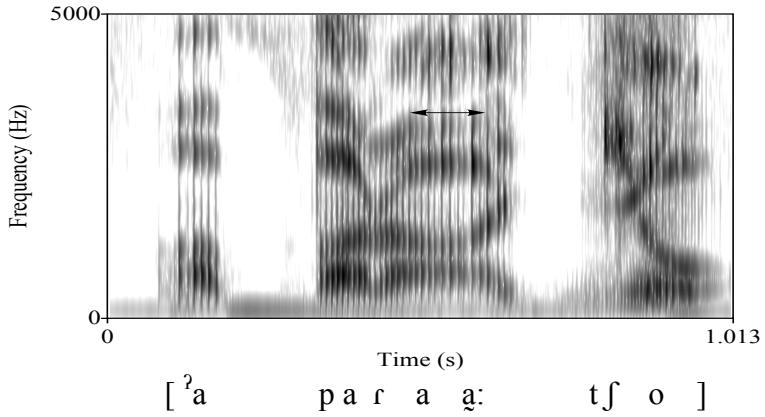


Figure 2.9 - Spectrograms of /apaɾa-atʃo/ [ʔapaɾaą̲:tʃo] 'big banana' where the intense constricted

glottis, marked by the arrow, shows the grammatical boundary.

Thus, the above spectrogram illustrates a word boundary marked by creakiness. The heavily constricted activity falls at the syllable-onset position of the second word of the phrase (in boldface) [**a̰:**tʃo].

GLOTTAL STOP AMONG TUPARÍAN LANGUAGES

Most of the Tupían languages have been described as languages that do present at least surface glottal stops. Among the Tuparían languages, the glottal has been analyzed as follows:

LANGUAGES	PRESENCE OF GLOTTAL STOP
Makuráp Braga (1992, 2005)	No phonemic glottal stops; phonetically glottal stops were not discussed.
Mekéns Galucio (2001)	There is no phonemic glottal stop, though it is inserted in the phonological chart as a major allophone.
Tuparí Alves (1991, 2004) Demolin, Sandalo and Storto (2004)	This author describes two laringeal consonant: a glottal /ʔ/ and a fricative one /h/. They argue that glottal stop is not phonemically.
Wayoró Nogueira (2011)	Glottal stop is not considered in the phonological analysis.

Table 2.12 - Glottal stops among Tuparían languages.

2.2.2.2 Affricate

The only underlying affricate in Akuntsú is the alveopalatal /tʃ/, with no other sibilants in the language. The /tʃ/ contrasts with the other stops, which is briefly shown below:

(2.59) a. /tʃã/ [ˈtʃɐ̃] ‘to knead ’
/tãm/ [ˈtɐ̃m˺] ‘full’
/pekã/ [peˈkɐ̃m˺] ‘cold’

b. /tʃe/ [tʃe] ‘come’
/te/ [ˈte] ‘FOCUS’
/ape/ [aˈpɛ] ‘path/skin’

c. /tʃĩk^{w}a/ [ˈtʃĩk^{w}a] ‘to kiss’
/-tĩn/ [ˈtĩn˺] ‘DIMINUTIVE’
/kĩn/ [ˈgĩn˺] ‘to sift’
/tiɾa/ [tiˈɾa] ‘flower (generic)’
/tʃiɾa/ [ˈtʃiɾa] ‘to leave’
tʃet-a
leave-THV

d. /itʃoga/ [iˈtʃoga] ‘(he/she) bites it’
i=tʃoga
3s=bite
/toga/ [tuˈga] ‘belly button’
/poga/ [puˈga] ‘tortoise (sp.)’

Note that even though the examples above show instances of affricates syllable-initially, they never appear syllable-finally. Note also that affricates do not undergo gemination in the language as the other stops do.

It is interesting to note here that the names from Portuguese that have sibilants are

nativized with the affricate, as for example, [mãtʃɛˈɾu] ‘Marcelo’, [dʒamuˈew] ‘Samuel’ and [tʃamaˈɾa] ‘Samara’.

2.2.2.3 Nasals

The underlying nasals are /m/, /n/ and /ŋ/. The nasals [m] and [n] occur syllable-initially, both word-medially and word-initially. /ŋ/ occurs word-finally[39], where it is the only place that /m/, /n/ and /ŋ/ nasal phonemes contrast.

(2.60) **WORD-INITIALLY**

/m/			**/n/**		
/ma/	[ma]	‘to /put/spill ’	/na/	[na]	‘ESSIVE’
/mõ-/	[mõ-]	‘CAUSATIVE’	/nõ/	[nõ]	‘other’

WORD-MEDIALLY

/emo/	[ɛ̃mũ]	‘too/also’	/enõ/ en=õ 2s=ALL	[ɛ̃nũ]	‘to you’
/eimi/ e=i-mi 2s-OBJ.NMLZ-kill	[ɛjˈmi]	‘your game’ Lit. Your killed thing	/ini/	[ĩˈni]	‘sting’

WORD-FINALLY

/m/			**/n/**			**/ŋ/**		
/anĩm/	[anĩmˀ]	‘worm (sp.)’	/tĩn/	[tĩnˀ]	‘small’	/nĩŋ/	[nĩŋ]	‘striped’
/kɛ̃m/	[kɛ̃mˀ]	‘cold’	/ãm/	[ʔɛ̃mˀ]	‘rope’	/ãŋ/	[ʔɛ̃ŋ]	‘penis’

[39] It may occur word-medially by a regressive assimilation process of the nasal feature, when preceded by a velar, as in /peniket/ [peni̯ŋˈkɛt̚] ‘ladybug (sp.)’.

Nasal vowels that precede stops word-internally tend to assimilate the feature place of the stops through a regressive homorganic process. As previously discussed in section 2.2.1.2, the speaker is producing a nasal segment syllable-finally as a result of progressive assimilation of the [nasal] feature that spreads from the segment [m] up to the vowel, and then the resulting [Ṽ] goes further to also create the surface nasal consonant. See the following examples:

(2.61)	a. /mepit/	[mẽmˀ.ˈbitˀ]	'son/daughter.of.woman'
	b. /meti/	[mẽnˀ.ˈdi]	'maripa (fruit sp.)[40]'
	c. /makoɾa/	[mãŋ.ˈku.ɾa]	'squirrel (sp.)'

However, note that underlying stops do not undergo the process of homorganic assimilation with preceding stops at word boundaries, as shown below:

(2.62)	/kẽm##kɨ/ breast##liquid	[kʲẽmˀˈkɨ]	not	*[kʲẽŋˈkɨ]	'breast milk'

2.2.2.4 Flap, approximants and labialized velar

There is only one underlying flap /ɾ/ and two approximants, /j/ and /w/, in the language. The fact that Akuntsú has only one liquid is typical of Tupían languages (Rodrigues 1999:113), which usually have only one liquid phoneme. Firstly I describe the flap and then the approximants are analyzed.

[40] *Attalea maripa*

2.2.2.4.1 Flap

The voiced alveolar flap /ɾ/ in Akuntsú occurs syllable-initially in intervocalic position. As was briefly mentioned above, the flap is found neither word-initially nor word-finally. Some examples of the occurrence of the flap are presented below:

(2.63)	a.	/oboɾo/ o=ø-boɾo 1s=R-back	[o.ˈbu.ɾu]	‘my back’
	b.	/takɨɾap/	[tɔ.ˈkɨ.ɾapˀ]	‘spider-monkey’
	c.	/tɨɾɨ/	[ˈtɨ.ɾɨ]	‘two’
	d.	/eɾape/	[e.ˈɾa.pɛ]	‘tomorrow’
	e.	/aɾato/	[a.ɾa.ˈto]	‘cocoa’

In nasal environments the flap may be nasalized [ɾ̃] or may become the alveolar nasal consonant [n], which are the two possible variants in this environment.

(2.64)	a.	/aɾamɨ̃ɾa/	[ɛ̃.ɾ̃ɛ̃.ˈmɨ̃.ɾ̃ɛ̃] ~ [ɛ̃.nɛ̃.ˈmɨ̃.nɛ̃]	‘woman’
	b.	/niɾãm/	[nɨ̃.ˈɾ̃ɛ̃mˀ] ~ [nɨ̃.ˈnɛ̃mˀ]	‘to defecate’
	c.	/eɾẽ/	[ẽ.ˈɾ̃ẽ] ~ [ẽ.ˈnẽ]	‘2S.EM’
	d.	/jẽɾom/	[j̃ẽ.ˈɾ̃ũm] ~ [j̃ẽ.ˈnũm]	‘DEM’

Depending on speech events, vowels may be deleted when unstressed (§2.2.1.7 for interaction among vowel, speech rate and stress); however, when the vowel is followed by a flap [ɾ], there are two options: **(1)** the vowel is not deleted in conformity to syllable constraints, since a flap is not allowed syllable-initially; or **(2)** the flap has to undergo some type of process. In the case of for example the word /aɾamɨ̃ɾa/ ‘woman’, [ɾ] becomes the

alveolar nasal [n] to further undergo the vowel deletion process[41] word-initially, as seen in the following: [ãr̃ãmı̃r̃ã] → [ãnãmı̃r̃ã] → [nãmı̃r̃ã] 'woman'.

2.2.2.4.2 Approximants and the labialized velar

In this section the approximants will be described. First, arguments will be provided to explain the insertion of the labialized velar in the phonological chapter. Secondly, the distribution of /j/ will be presented (2.2.2.4.2.2). A comparison with earlier studies will be also summarized along the subsections.

2.2.2.4.2.1 /w/ and /k^{w}/

Aragon (2008) found two underlying approximants in Akuntsú: the labiovelar /w/, which is pronounced without lip rounding, and the palatal /j/. For the labiovelar, three surface forms were described: [w], [k^{w}] and [g^{w}], conditioned by their position in the syllable, as shown in the following:

(2.65) Labio-velar distributions (Aragon 2008 (adapted))

/w/

WORD-INITIALLY*:* [w] ~ [k^{w}] ~ [g^{w}]

(a)	[k^{w}a.ˈʔi] ~ [g^{w}a.ˈʔi] ~ [wa.ˈʔi]	'stone'
	[ˈk^{w}ɛ] ~ [ˈg^{w}ɛ] ~ [ˈwɛ]	'game meat'
	[k^{w}a.ˈko] ~ [g^{w}a.ˈko] ~ [wa.ˈko]	'guan (sp.)'

[41] See vowel deletion rule in section 2.4.1.1.

INTERVOCALICALLY: [k^w] ~ [g^w]

(b)	[a.ˈk^wa] ~ [a.ˈg^wa]	‘yam (sp.)’
	[ɛ.ˈk^witˀ] ~ [ɛ.ˈg^witˀ]	‘honey’
	[k^wɛ.ˈɾɛpˀ] ~ [g^wɛ.ˈɾɛpˀ]	‘black/dark’

SYLLABLE-FINALLY: [w]

(c)	[a.ˈpaw]	‘grub (sp.)’
	[baw.ɾa.ˈpɛ]	‘shaker’

Based on these examples, the question to be answered is: what is the basic (underlying) form of this segment? Is it [k^w] or [w], or can both be considered underlying in this language? In order to answer the question, I discuss possible hypotheses for considering [w] to be the basic form (the underlying form), as well as possible arguments for considering [k^w] the basic form. At the end of this discussion, I justify my decision based on the most convincing of the hypotheses considered in this current analysis.

HYPOTHESIS 1: if one considers [w] the basic form, then it would be necessary to account for the variation between [k^w] and [w] word-initially and the occurrence of [k^w] intervocalically.

With regard to the alternations between [k^w] and [w] found word-initially and the realization of [k^w] intervocalically, one would explain that the labiovelar approximant is strengthened to a labialized voiceless velar word-initially and obligatory strengthened intervocalically. In turn, it would correctly describe the examples illustrated above and reproduced below for clarification:

WORD-INITIALLY*:* [w] ~ [k^w] ~ [g^w]

[k^wa.ˈʔi] ~ [g^wa.ˈʔi] ~ [wa.ˈʔi]	‘stone’
[ˈk^wɛ] ~ [ˈg^wɛ] ~ [ˈwɛ]	‘game meat’
[k^wa.ˈko] ~ [g^wa.ˈko] ~ [wa.ˈko]	‘guan (sp.)’

INTERVOCALICALLY: [k^w] ~ [g^w]

[a.ˈk^wa] ~ [a.ˈg^wa]	‘yam (sp.)’
[ɛ.ˈk^wi̱t̄] ~ [ɛ.ˈg^wi̱t̄]	‘honey’
[k^wɛ.ˈɾɛp̄] ~ [g^wɛ.ˈɾɛp̄]	‘black/dark’

Note that if [k^w] occurred only in word-medial position, we would say that [k^w] and [w] were in complementary distribution; however, this is not the case, because [k^w] is optionally found in word-initial position in variation with [w]. By accepting this hypothesis, one would have to explain the motivations that trigger the syllable-initial fortition. An alternative possible motivation of the reinforcement process could be the fact that the velar release burst provides an important clue for the perception of the labiovelar [w], as [-vocalic], in opposition to vowels, that are [+vocalic]; the fortition process would, then, increase the perception of the consonant, as well as avoiding possible missyllabification, i.e., to avoid placing [w] in coda position in fast speech, e.g. *[aw.ˈa] rather than [a.ˈwa] ‘yam (sp.)’.

A parallel argument can be offered to the fortition hypothesis[42]. There is a change from Proto-Tupían (PT)[43] where **w > k in Akuntsú, as in ***wup* > [kup̄] ~ [kop̄] ‘red’, where we would argue a possible intermediate stage as in: **wup > k^wup > kup (/kop/). This

[42] Note that this is a hypothesis to account for the variations ([k^w] ~ [w]) diachronically; however, I want to clarify that, for now, it cannot be considered strong evidence due to the lack of data to compare them historically. Nonetheless, I think that it is worth mentioning, since it may be a case for further investigation.

[43] The Proto-Tupían examples used in this study are from Rodrigues (2007b) and Rodrigues & Cabral (2012).

change would be found only in word-initial position followed by a rounded vowel[44]: **w / [+ round] [+vocalic] > [k] in the language. If we consider other environments where there is no adjacent back round vowel, as in PT **(w)aku > [kʷaˈku] ~ [waˈku] ‘guan (sp.)’, the alternation between [kʷ] and [w] is still attested in Akuntsú.

However, two other arguments may weaken this hypothesis. Firstly, one would have to account for words that do not have the overlap between [kʷ] and [w] word-initially, where there is only [w] is realized word-initially: [ˈwɛn̄] ‘to finish,’ [wataˈwa] ‘bird sp. (onomatopeic),’ [ˈwẽɾũˌwẽɾũ] ‘bee (sp.),’ [wã] ‘near’ [wip] ‘to slide.’ Besides, minimal and near-minimal pairs can be also found word-initially (though few cases were found), as in:

(2.66)	a.	/kʷiɾi/	vs.	/wiɾi/
		[ˈkʷiɾi]		[ˈwiɾi]
		‘day/clean/empty’		‘to curl’
	b.	/kʷe/	vs.	/wẽn/
		[ˈkʷe]		[ˈwẽn]
		‘game meat’		‘to finish’
	c.	/kʷãm/	vs.	/wã/
		[ˈkʷãm]		[ˈwã]
		‘solitary tinamou’		‘near’

Secondly, a phoneme *k^w has been postulated in Proto-Tuparí (Galucio and Nogueira 2011, Moore and Galucio 1994).

HYPOTHESIS 2: If one considers [kʷ] to be the basic form, it would be plausible to argue that there are two different phonemes /kʷ/ and /w/ in Akuntsú; if one argues in favor of /kʷ/ as the underlying form, this analysis would also lead to the postulation of /w/ as a

[44] Investigation is needed in order to affirm whether or not it is considered a regular change.

phoneme, in order to justify the instances where /w/ occurs syllable-finally (and does not alternate in those words with [k^w]; /k^w/ would occur only in syllable-initial position and /w/ both syllable-initially and syllable-finally. In the examples shown above, where [k^w] and [w] varies word-initially, the alternations between [k^w] and [w] would be justified by the loss of the velar closure before silence through a lenition process. Thus, in light of the discussion presented above, I assume that there is an underlying phoneme /w/ and a separate phoneme /k^w/ in the language, as argued in hypothesis 2 above.

(2.67) **/k^w/**

WORD-INITIALLY: [w] ~ [k^w] ~ [g^w]

(a)	/k^wai/	[k^waˈʔi] ~ [g^waˈʔi] ~ [waˈʔi]	‘stone’
	/k^we/	[ˈk^wɛ] ~ [ˈg^wɛ] ~ [ˈwɛ]	‘meat’
	/k^wako/	[k^waˈko] ~ [g^waˈko] ~ [waˈko]	‘guan (sp.)’

INTERVOCALICALLY: [k^w] ~ [g^w]

(b)	/ak^{w}a/	[aˈk^wa] ~ [aˈg^wa]	‘yam (sp.)’
	/ek^{w}it/	[ɛˈk^witˀ] ~ [ɛˈg^witˀ]	‘honey’
	/k^werep/	[k^wɛ.ɾɛpˀ] ~ [g^wɛ.ɾɛpˀ]	‘its stripes’

(2.68) **/w/**

WORD-INITIALLY:

(a)	/wip/	[ˈwip]	‘to slide’
	/watawa/	[waˈtawa]	‘bird (sp.)’
	/wã/	[wã]	‘near’

WORD-MEDIALLY:

(b)	/awtʃe/	[awˈtʃɛ]	‘peccary’

/bawɾape/	[bawɾaˈpɛ]	‘shaker’
/awkap/	[awkapˀ]	‘flute (sp.)’
/awjap/	[awˈjapˀ]	‘fly (sp.)’

WORD-FINALLY: only [w] is found:

(c)	/k^{w}ew/	[ˈk^{w}ɛw]	‘shadow’
	/apaw/	[aˈpaw]	‘grub (sp.)’
	/pow-pow/	[powˈpow]	‘owl (sp.)’

The approximant /w/ and the labiovelar stop /k^{w}/ can both be distinguished from /k/ with minimal pairs:

(2.69)	a.	/k^{w}i/	[ˈk^{w}i]	‘axe’
		/wip/	[ˈwip]	‘to slide’
		/ki=/	[ki]	‘1PL.INCL’
	b.	/-k^{w}a/	[ˈk^{w}a]	‘TR.PL’
		/-ka/	[ˈka]	‘TR’
		/wã/	[ˈwã]	‘near’
	c.	/k^{w}e/	[ˈk^{w}e]	‘game’
		/ke/	[ˈk^{j}e]	‘DEM’
		/wẽn/	[ˈw̃ɛ̃nˀ]	‘to finish’

Now, we turn to answer the following question: Why should we consider the form [k^{w}] a unit consonant rather than a sequence as in [kw]?

Three criteria are discussed here that may shed light on this matter: (1) productivity, (2) syllable structure, and (3) timing duration of Cw.

Ladefoged (1968) and Chan (1985) have taken the productivity of Cw combinations in languages as an argument for choosing Cw as part of the phonemic inventory of languages

(cited in Suh (2009:9)). In languages that have several instances of Cw with different stop segments (with labials, alveolars and velars), they argued that to minimize the numbers of phonemes in the language (economy[45]), it would be plausible to claim that sequence Cw is a cluster, rather than a unit segment. Akuntsú Cw combinations only occur when C is a velar, which means that there is no wide range of Cw consonantal segments in this language, which lead us to argue that in the case of Cw, /w/ is realized as a secondary articulation of labialization, rather than as a cluster.

Another criterion is syllable structure in this language. Akuntsú has no complex onsets. The syllable pattern in this language is (C)V(C)(C); vowels always occupy the head of the syllable (nucleus position); the onset position can be occupied by a single consonant ((C)V); the coda position can be occupied by a consonant (V(C)). Thus, if one were to consider k + w as a sequence of two consonants, this would go against the phonotactics of this language, where complex onsets are not allowed.

A third criterion to be analyzed is the timing duration of the Cw combination acoustically (Ladefoged and Maddieson 1996). By comparing the timing duration of a CVw with CwV, we can see from a spectrogram observation that the CVw has a greater duration than CwV — almost 100 ms. of difference in duration.

In turn, the three criteria above imply that in Cw combinations, [w] is realized as a secondary articulation of labialization, i.e., Cw is a unit segment.

[45] Languages tend to have symmetrical inventories (though asymmetrical inventories are also possible, while less common) in order to maximize speakers' perception and minimize the articulatory efforts by selecting vowels and consonants that are more functional and more economical (Chomsky & Halle 1968; Clements 2003; Donegan & Stampe 2009).

2.2.2.4.3 Palatal /j/

There is one palatal in the language, /j/, which can be distinguished from /w/ as well as from /tʃ/ by means of minimal pairs.

(2.70)	a.	/jat/	[ˈjatˀ]	‘2PL’
		/wã/	[ˈwã]	‘near’
	b.	/jã/	[ˈj̃ɛ̃]	‘to sit/stay, sitting’
		/tʃã/	[ˈtʃɛ̃]	‘to knead’
	c.	/jẽ/	[ˈj̃ɛ̃]	‘DEM’
		/wẽn/	[ˈw̃ɛ̃nˀ]	‘to finish’
	d.	/jat ø-anam/ 2PL R-head	[jɔɾaˈnɛ̃mˀ]	‘your heads’
		/tʃaɾinãm/	[tʃaɾiˈnɛ̃mˀ]	‘hummingbird (sp.)’

Approximants are the consonants that have more affinity with vowels, especially because they also can undergo nasal harmony, like vowels do. There are two nasal surface forms for the palatal consonant [j] when adjacent to a nasal sound: [j̃] or [ɲ]. The nasal allophones vary freely when surrounded by nasal consonants or vowels, as in the following example:

(2.71)	/tʃajã/	[tʃaˈj̃ɛ̃] ~ [tʃaˈɲɛ̃]	‘earring’
	/jẽn/	[ˈj̃ɛ̃nˀ] ~ [ˈɲɛ̃nˀ]	‘feces/stinky’
	/pakãja/	[paˈkɛ̃j̃ɛ̃] ~ [paˈkɛ̃ɲa]	‘agouti (sp.)’
	/jõ/	[ˈj̃ũ] ~ [ˈɲũ]	‘here’

As visible in the data presented above, palatal approximants are also reinforced and may become a nasal consonant either word-initially or in intervocalic position.

2.3 Phonotactics

Aragon (2008) described the syllable pattern of this language as ((C)V(C)(C)). Thus, it is possible to find syllables of the shapes CVCC, CVC, CV, VC, and V. The language does not have complex onsets, and has no consonant clusters. Vowels always occupy the head of the syllable (the nucleus). The nucleus is always occupied by only one vowel. Syllables can have more than one mora; the onset position can be occupied by only one consonant ((C)V), and the coda position can be occupied by only two consonants ($V(C_1)(C_2)$), where C_1 is always an approximant. Only unreleased voiceless stops and nasals /m, n, ŋ/ occur in coda position, whereas /ɾ/ and /tʃ/ can only occupy onset position. The syllable structure types are illustrated in table 2.13:

	INITIAL	MEDIAL	FINAL
V	/**a.**tap/ 'hair'	/a.p**a**.ɾa/ 'banana'	/ko.**a**/ 'parakeet (sp.)'
CV	/**kɨ**/ 'liquid'	/tʃa**.tʃa**.kop/ 'taxi (sp. of ant)'	/a.ɾa.mĩ.**ɾa**/ 'woman'
VC	/**ek**/ 'house'	/i.**ap**.na/ 'There is fat in him'	/o.**ip**/ 'I came back'
CVC	/**tɨt**.pe/ 'fig'	/**pɨt**.kɨp/ 'neck'	/kɨ.**pek**/ 'papaya'
CVCC	/**kojt**.pe/ 'older.sister'	_____	_____

Table 2.13 - Syllable structure type.

2.3.1 Constraints

Below, we illustrate the phonemes according to their possible places in the syllable structure of this language.

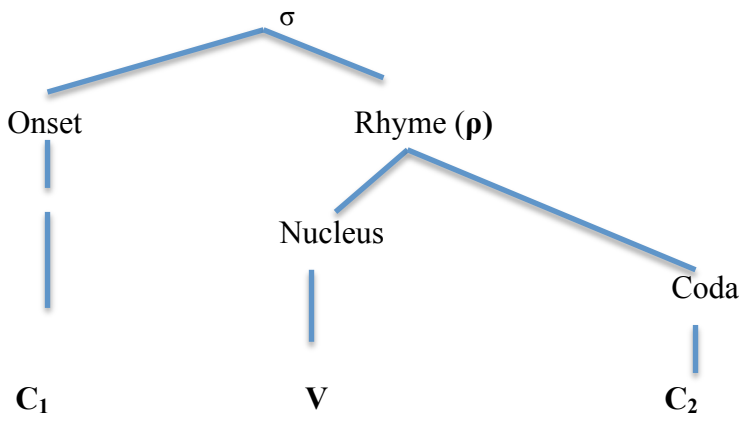


Figure 2.10 - Syllable structure and the distribution of allophones within the syllable.

Note above that the syllable allows many more consonants in onset position than in coda position. All underlying consonants, except /ŋ/, are allowed in C_1 position. Syllable-finally, only unreleased stops, the nasal /ŋ/, and approximants are found. When a voiceless stop consonant appears word-internally, as in VCV́, phonetically, it can optionally become VC_iC_iV, which is syllabified with the first C_i forming the coda of the first syllable and the second C_i being the onset of the second syllable.

According to the voicing of stops allowed in sequence of consonants, the language only allows a C_1 stop to be voiceless. In a sequence of consonants word-internally, such as in /pɨtkɨp/ 'neck'/ or /tɨtpe/ 'fig,' the stop consonant in coda position may be voiceless or voiced. Strictly speaking, the possible surface forms are: [pɨtˀˈkɨpˀ] but never *[pɨdˀˈkɨpˀ].

For the geminate consonants, there are cases attested morpheme-internally and across morpheme boundaries [46]. Note that geminate consonants word-medially are always

[46] Across word boundaries, C_iC_i tends to be glottalized $C_i\#C_i \rightarrow C_i^{ʔ}\#C_i$, as in for example: [taɾa ɛmenʔna] 'who is your husband?'

heterosyllabic. Voiceless stops and the nasals /m/ and /n/ geminate word-medially in slow or careful speech, where a single segment is syllabified as the coda of the first syllable and the onset of the next one.

The discussion above leads us to explain why the order for two stops can be $C_i$voiceless-$C_i$voiced (as well as $C_i$voiceless-$C_i$voiceless), but not $C_i$voiced-$C_i$voiceless. With syllabification in Akuntsú, it is possible to assume that when a voiceless-voiced consonant is produced, the voiceless one is re-syllabified and placed at the coda of the preceding syllable. The voiced consonant remains in the onset position. In this way, the voiceless consonant placed in coda position cannot alternate between voiceless and voiced when syllable-final; however, the consonant that occupies the onset position can become voiced.

Note that at an underlying phonemic level, sequences of $C_i$voiceless-$C_i$voiced constitute single intervocalic consonants, at the onset of the second syllable; however, phonetically, they appear to have a different status, namely as both the coda of the preceding syllable and the onset of the following one, as in [otˀ.ˈtatˀ] and [otˀ.ˈdatˀ]. This means that the analysis of phonetic geminate consonants falls under the same process of syllabification shown above for the voiceless-voiced cluster, whereas the geminates are a sequence of two identical consonants with a syllable boundary placing them in two different syllables. In accordance with this discussion, it is reasonable to assume that the voiceless geminate consonant can alternate between [tt] ~ [td], with the [t] ~ [d] final part of these becoming the onsets of non-initial stressed syllables. However, as Akuntsú syllable structure does not allow a voiced stop in coda position, neither a voiced geminate consonant nor a voiced-voiceless consonant combination is allowed in this language.

Another note involving syllabification is the one that concerns unreleased consonants across word boundaries. Medial consonants that precede a vowel are syllabified as onsets rather than as codas. Some examples illustrating this are presented below:

(2.72)	a.	/kɨp=eɾõm/ wood/stick=NEG	[kɨ.**bɛ**.ɾõmˀ]	‘(There is) no wood’
	b.	/kem-atʃo/ breast-INT	[kʲẽ.**ma**.tʃu]	‘big breast’
	c.	/o=ø-anãm atʃi/ 1s=R-head pain	[w̃ã.nã.**ma**.tʃĩ]	‘my head hurts’
	d.	/kɨjtpit-atʃo/ fish-INT	[kɨjt.pi.**ɾa**.tʃo]	‘big fish’
	e.	/kɨp t-ep eɨ/ wood/stick R-leaf blood	[kɨp.te.**be.ʔɨ**]	‘the blood of the wood's leaf’

2.4 Morphophonology

In this chapter, we give our attention to the remaining processes at the segmental level that involve, in particular, vowels and consonants across word boundary (§2.4.1 and §2.4.2 respectivelly), as well as reduplication processes (§2.4.3). Stress assignment under morphological processes and in compounds is accounted for on the suprasegmental level (§2.4.4).

2.4.1 Vowels

2.4.1.1 Vowel deletion

Two situations have been identified so far where vowels are deleted across word boundaries. The first case is when two sequences of identical vowels come together across a word boundary. The process is described in Rule 1.

Rule 1: vowel deletion

$V_1 \rightarrow Ø/\_\_\#\#V_1$

The examples below show that instead of coalescing to create underlying long vowels, two identical vowels are reduced to a single vowel, as shown in (§2.7.2):

(2.73)	a.	/e=ø-toa-ap/ 2s=R-lay-NMLZ	[ɛˈtoapˀ] ~ [ɛˈdoapˀ]	‘your place.of.lying’
	b.	/ɨmɨmeɾe etʃe/ Omerê DIFF	[ə̃mə̃ˌmɛɾeˈtʃɛ]	‘over the Omerê’
	c.	/eme emo/ DEM also	[eˈmɛmu]	‘this too’

The other identified case of vowel deletion is when two vowels that do not share all their articulatory features are encountered at a word boundary in non-slow speech.

Rule 2: vowel deletion

$V_1 \rightarrow Ø/C\_\_\#\#V_2$ (fast speech or casual speech)

(2.74)	a.	/te=ø-boɾo etʃe/ 3COR=R-back DIFF	[teˌburɛˈtʃɛ]	‘It is over his back ’
	b.	/ɨkɨ apeka/ water drink	[ɨˌɣapeˈka]	‘It drinks water’
	c.	/mõ-atʃo-a/ CAUS-bathe-THV	[mãˈdʒoa]	‘to cause someone to bathe’

However, in cases such as the one shown below, where the deletion of the vowel may affect the grammatical content, vowels with the same articulatory quality are not deleted by

the vowel deletion processes; rather, the quality of one of the vowels is shifted or a glottal stop is inserted, as in the following examples:

(2.75)	a.	/e=ø-ebapap/ 2S=R-eye	[ɛˌebaˈbapˉ]	‘your eye’
	b.	/te=ege/ 3COR=stand.up	[teˈɛge]	‘She/he stands up’
	c.	/o=ø-õ/ 1S=R-tongue	[oˈʔõ]	‘my tongue’

2.4.1.2 The effect of the thematic vowel *-a*

In Akuntsú, there is a thematic vowel *-a* (Aragon 2008). This thematic vowel attaches only to verb stems[47], which tends to modify the original phonological form. With the addition of the thematic vowel *-a,* there are two phonological processes involved: **(1)** the deletion of the final vowel of the verb, if it is [-high]; **(2)** the deletion of the final consonant; and **(3)** vowel quality change to [+high] when it is [-high, -low].

(1) Deletion of the final vowel of the verb root
$V_{[-high]} \rightarrow Ø$ / __#-*a*

(2.76) (a) /ko-a/ → [ka]

/apaɾa ko-a on/ [apaɾa **ka** on]
banana ingest-THV 1s
‘I eat bananas’

Verbs with high vowels do not undergo the vowel deletion process, as illustrated in the example (2.77):

[47] See details in section 5.12.

(2.77) /mi-a/ → [mia]

/en tawtʃe mi-a kõm/ [ɛ̃n tawdʒɛ **mia** kõmˀ]
2s peccary kill-THV PROJ
'You're going to kill the peccary'

Now let us turn to the deletion of the final consonant of the verb root when the thematic vowel is applied (in boldface), as presented below:

(2) The deletion of the final consonant

$C_{[+labial]}$ → Ø / C__#-*a* (only if the coda consonant is [+labial] and the syllable is CVC)

(2.78) a. /k^{w}ep-a/ → [k^{w}ia]

/karow te=k^{w}ep-a ãka kota/ [karow te**k^{w}ia** ɐ̃ga kuta]
Carol 3COR=climb-THV that.way go.up
'Carol climbs, that way, (she) goes up'

b. /tʃop-a/ → [tʃoa]

/konibu ɛrek-k^{w}a k^{w}ak tʃop-a on/ [Konĩbu ɛrek^{w}a k^{w}akˀ **dʒoa** õn]
Konibú speak-TR.PL sound see-THV 1s
'I'm going to talk to Konibú'
Lit: I'm going to see the sound (that) Konibú speaks.

However, if the syllable is VC, the rule (2) above does not apply and the final consonant is not deleted after the addition of the thematic vowel to the verb.

(2.79) /ip-a/ → [ipa]

/erape o=ip-a kõm/ [erapɛ o**iba** kõmˀ]
tomorrow 1s=come.back-THV PROJ
'I will come back tomorrow'

As for alveolars, when in coda position, they become a flap[48] when the thematic vowel is inserted, as in the following examples:

(2.80) a. /et-a/ → [eɾa]

/tʃaruj te=et-a/ [tʃaruj te[ʔ]**ɪɾa**][49]
Tʃarúj 3COR=sleep-THV
'Tʃarúj sleeps'

b. /tʃet-a/ → [tʃiɾa]

/aɾemaw te=tʃet-a/ [aɾemãw te**tʃɪɾa**]
Alemão 3COR=leave-THV
'Alemão left'

In addition, when the thematic vowel is added to the verbal root, vowels tend to become [+high], if the verbal root is (C)VC.

(3) Vowel quality changing
$V_{[-\text{ high, -low}]} \rightarrow V_{[+\text{ high, -low}]}$ / (C)__C#-*a*

This can be seen, for example, in the verbs 'to go away' /tʃet-a/ → [tʃiɾa] and 'to climb' /k[w]ep-a/ → [k[w]ia].

Rule 3 (vowel quality changing) counterbleeds rule 2 (deletion of final consonant), since if the deletion of consonant were to apply first, rule 1 (deletion of the vowel) would delete the [-high] vowel, and this is not what happens; compare table 2.14 on the right with the table 2.15 on the left (which shows wrong rule ordering):

[48] See also section 2.2.2.1.6 where the obligatory flap rule is described.

[49] It is also possible to find [tʃaɾuj te[ʔ]eɾa].

Underlying form	/k^{w}ep-a/ ‘to climb’
Vowel quality changing	k^{w}ipa
Deletion of the final consonant	k^{w}ia
Deletion of the final vowel	----
Phonetic Output	[k^{w}ia]

Table 2.14 - Rules ordering.

Underlying form	/k^{w}ep-a/ ‘to climb’
Deletion of the final consonant	k^{w}ea
Deletion of the final vowel	k^{w}a
Vowel quality changing	----
Phonetic Output	*[k^{w}a]

Table 2.15 - Wrong ordering of rules.

2.4.2 Consonants

2.4.2.1 Voicing

Unreleased consonants become voiced across word boundaries when followed by a vowel.

Rule:
$C_{[+unreleased]} \rightarrow$ [+voice] /__##V

(2.81) a. /mepit=erom/ [mẽˌpi**ɾɛ**ˈɾõm˺] ‘There is no son/daughter’
son/daughter.of.woman=NEG

b. /atap=erom/ [aˌta**bɛ**ˈɾõm˺] ‘bold’
hair=NEG Lit: There is no hair

c. /o=t-ek etʃe/ [uˌtɛ**gɛ**ˈtʃɛ] ‘over the house’
1s=R-house DIFF

2.4.2.2 Consonant reduction

When two identical consonants are found across a word boundary, they are reduced to only one segment in normal or fast speech. Examples follow:

(2.82)	a.	/atap peɾek/ hair long	[ataˈ**p**ɛɾekˉ]	‘long hair’
	b.	/taɾa e=ø-men=na/ who 2s=R-husband=ESS	[ˌtaɾa ɛˈmẽ**n**a]	‘who is your husband?’[50]
	c.	/e=t-ek etʃe/ 2s=R-house DIFF	[ɛˌtɛ**g**ɛˈtʃɛ]	‘over your house’

2.4.3 Reduplication

Reduplication in Akuntsú marks pluralilty in nouns and aspectual function in verbs[51]. It can be monosyllabic (involving the first or the second syllable of the stem) or dissyllabic (for the shape of these, see below). In monosyllabic reduplication, it is possible for the first syllable to be reduplicated, or the final syllable. Reduplication of the middle syllable does occur, but it is not as productive as the other types.

2.4.3.1 Monosyllabic

As mentioned above, monosyllabic reduplication can be CV or VC, or with complex syllables CVC. Examples of monosyllabic reduplication follow:

(2.83) a. **CV**

ãbi	‘to pull’	→	ãbi-bi	‘to pull successively’
baoɾo	‘woodpecker’	→	ba-baoɾo	‘many woodpeckers’
pi	‘foot’	→	pi-pi	‘feet’

b. **VC(VC)**

mepit	‘daughter/son of woman’	→	mepit-ẽpit	‘grandchild of woman’
tʃokĩn	‘small’	→	tʃokĩn-ĩn	‘very small’

[50] It is important to recall that C_iC_i clusters also tend to be glottalized in slow speech $C_i\#C_i \rightarrow C_i^{?}\#C_i$, as in for example: [taɾa ɛmen$^{?}$na] ‘who (turned into) your husband?’

[51] See more on sections 4.6 and 5.11.4 respectivelly.

c. **CVC**

baw	'wind'	→	baw-baw	'windy'
kop	'ripe'	→	kop-kop	'very ripe'

2.4.3.2 Dissyllabic

Dissyllabic reduplication in this language affects only words with the shape CV.CV; forms with complex syllables of the form CVC.CVC have not yet been found reduplicated. Some examples illustrating dissyllabic reduplication that does occur are:

(2.84) a. CV.CV

kapa	'to tie'	→	kapa-kapa	'to tie repeatedly'
tɨɾɨ	'two'	→	tɨɾɨ-tɨɾɨ	'four (or many)'

2.4.4 Stress and morphophonological boundaries

In this language, suffixes and prefixes do not affect the stress pattern in the language — that is, they figure into stress placement just as syllables of roots do. However, proclitics do have an impact on stress placement. The primary stress in stems is restricted to final or penultimate syllables (see §5 for discussion of stress); clitics are never stressed in this language. The examples below illustrate the effect of dependent personal pronouns in word-level stress and how they are attached to the phonological word (PW), as follows:

NOUNS

(2.85) a.	/o=kado/	[kaˈɾo]	→	[uˈkaɾo]	[uka.ɾo]$_{PW}$	'My necklace'
b.	/i=pebo/	[pɛˈbo]	→	[iˈpɛbo]	[ipɛ.bo]$_{PW}$	'Its feather'
c.	/ki=pea/	[peˈʔa]	→	[kiˈpeʔa]	[kipe.ʔa]$_{PW}$	'Our firewood'

VERBS

(2.86) a. /o=õba/	[õˈba]	→	[oˈõba]	$[oõ.ba]_{PW}$	'(He/she) hit me'
b. /ki=eɾek-ka/	[ɛɾeˈka]	→	[kiˈɛɾeka]	$[kie.ɾe.ka]_{PW}$	'We speak'
c. /i=keɾa/	[kʲeˈɾa]	→	[iˈkʲeɾa]	$[ikʲe.ɾa]_{PW}$	'(He/she) splits it'

2.4.5 Compounding

Compounds form one phonological word, and, as such, they are characterized by only one primary stress, which is illustrated in the following examples. The primary stress falls on the second component of the compound. There are cases of compounds composed of noun and adjective roots[52].

When two components of a compound come together, each of which would receive primary stress in isolation, the rightmost component of the compound is assigned the strongest (primary) stress, and stress on the other component is reduced (secondary). Note that stress assignment is the same also for compounds. It is not a surprising effect of stress assignment in Akuntsú, since most of the phonological words follow this same pattern of iambic stress.

NOUNS + NOUNS

(2.87) a. /kẽm/ 'breast' + /kɨ/ 'liquid'	[kɛmˉ] + [kɨ] →	[ˌkẽmˈgɨ]	'milk'
b. /oɾoɾo/ 'cotton' + /pe/ 'skin/peel'	[oɾoˈɾo] + [pɛ] →	[oˌɾoɾoˈpɛ]	'clothes'

NOUNS + ADJECTIVES

(2.88) a. /otat/ 'fire' + /nĩŋ/ 'striped'	[uˈtatˉ] [nĩŋ] →	[uˌtaˈnĩŋ]	'smoke'

[52] For more on compounds, see section 4.5

b. /otat/ ‘fire’ + /jɛ̃n/ ‘stinky/feces’ [oˈtatˤ] [j̃ɛ̃nˤ] → [oˌtaˈj̃ɛ̃nˤ] ‘ashes’

2.5 Prosody

In the linguistic literature, there are various different ways to analyze and represent the types of stress in world’s languages. Studies on prosodic systems have used the term ‘pitch accent’ to classify languages that either have a lexical accent system or a system in which tone and stress combine (though there is also considerable variation among scholars in how they define or characterize pitch accent). As noted by Halle & Idsaardi (1995), the fundamental idea behind Liberman’s discussion (1975) of accent is that stress (accent) is not a distinctive feature of the segment, rather it is a phonetic manifestation to represent diverse modes of phonological grouping (1975:403), such as the relative prominence of syllables on the word level and the relative prominence of words on the phrase level. For versions from the metrical theory, such as in Halle & Vergnaud (1987), Kager (1995), and Hayes (1995), the rhythm constitutes the main cue to distinguish weak vs. strong characteristics among syllables.

Metrical theory is concerned with representing the metrical foot as a central theoretical element. According to Hayes (1995), metric structures can be divided into two sorts: iambic and trochaic. The hierarchical structure of stress is marked by bracketed grids, which illustrate (abstractly) the difference between the weak syllable and the strong one. A representation of the pattern proposed in Hayes (1995) is exemplified below, where each syllable are grouped in feet (higher metrical units). The dot marks light syllables and the x strong syllables. The moraic trochee differs from syllabic trochee, because the former counts the moras, where light syllables count for one mora and heavy syllables count for two moras,

and the latter count the syllable independent of syllable weight. As for Iambic pattern, heavy syllable can make up a foot, as in (2.11).

MORAIC TROCHEE: (x .) or (x)
SYLLABIC TROCHEE: (. x) or (x)
IAMBIC: (. x) or (x)

Figure 2.11 - Foot types (Hayes 1995).

2.5.1 Profile of Tupían Stress

The Tupían family consists of 35 languages, which are spoken from French Guiana to Paraguay. The descriptive literature on Tupían languages has shown that the main stress in Tupían languages is usually predictably on the final or penultimate syllable (cf. Wetzels and Meira (2010)). In Araweté (in example (2.89a-c)) and Guajá (2.90d-f), the word-level stress is on the final syllable; however, in Chiriguano (2.91a-c), also a Tupí-Guaranían language, the word-level stress falls consistently on the penultimate syllable. Among the Tupían languages, there are cases of pitch-accent, as in Karitiana (Storto 1999), and of tonal languages, such as Karo (Gabas 1999) and Mundurukú (Picanço 2005). There is also the case of Suruí, a Tupí-Mondé language, in which word-level stress is unpredictable (Van der Mer 1982) (cf. Wetzels and Meira (2010))[53].

FINAL SYLLABLE STRESS

(2.89) Araweté (adapted from Solano 2009:82)

a. /pane/ [paˈnɛ] 'almost'
b. /haʔɨwe/ [haʔɨˈβɛ] 'tomorrow'
c. /ɯrukuku/ [ɯrukuˈku] 'snake sp. (surucucu)'

[53] See this article for more on typology of stress of Tupían and other Amazonian languages.

(2.90) Guajá (Nascimento 2008:59)

a. /kaʔa/	[kaˈʔa]	‘jungle’
b. mutuwe/	[mutuˈwe]	‘morning’
c. /tamanawã/	[tamanaˈw̃ã]	‘ant-eater sp.’

PENULTIMATE SYLLABLE STRESS

(2.91) Chiriguano (Dietrich 1986:49)

a. /akwa/	[ˈakwa]	‘to hit’
b. /agwata/	[aˈgwata]	‘to walk’
c. /apɨsakwe/	[apɨˈsakwe]	‘lost ear’

As for the Tuparían subfamily, Rodrigues (1999:114) argues, “in languages of the Tuparí subfamily there is salient pitch accent, but it is predictable from stress which is itself predictable from other phonological and morphological factors.” Besides Rodrigues’s analysis, there is also a preliminary analysis for the Wayoró language that says that there are pitch levels without lexical contrast identified (Moore 1999). Besides these cases, no other publication about the prosodic analysis for Akuntsú sister’s languages is known; rather, the prosodic constructions of the other Tuparían languages are yet to be determined.

2.5.2 Rhythmic pattern of words and phrases

In previous work, Aragon (2008) proposed that the main stress could occur either in the final or in the penultimate syllable. The questions to be addressed in this section are: **(1)** does the main stress fall on the penultimate or on the final syllable, and is it predictable?; **(2)** what are the arguments to justify the occurrence of word-level stress to be presented?; The

findings in this section are the first tentative analysis of stress assignment in Akuntsú, therefore there is room for further speculation.

Below, examples are divided up according to their number of syllables to further discuss stress patterns in this language.

A. Monosyllabic words

NOUNS

(a) /ti/	[ˈti]	‘mother’
(b) /ek/	[ˈɛkˀ]	‘house’
(c) /ko/	[ˈko]	‘hook’
(d) /kap/	[ˈkapˀ]	‘wasp’

As for the verbs, they are not pronounced in isolation, i.e., without being included in a phrase, and, as such, verbal stress interacts with preceding and/or following function words. Some examples of verbs are illustrated in the following:

VERBS

(a) /nom ʧet/ no leave	[ˌnõmˀˈʧɛtˀ]	‘(He) didn't leave’
(b) /te=ip/ 3COR=come.back	[teˈipˀ]	‘He came back’
(c) /apaɾa o=i-ko/ banana 1s=OBJ.NMLZ-ingest	[aˌpaɾaˈojko]	‘banana my food’
(d) /koɾa-koɾa nom aot/ chicken no go.out	[ˌkuɾaˌkuɾaˌnõmaˈʔutˀ]	‘the chicken doesn't go out’

B. Disyllabic

ULTIMATE

(a) /tawtʃe/	[tawˈdʒɛ]	‘peccary’
(b) /niɾam/	[nĩˈɾ̃ãm˥]	‘to defecate’
(c) /ek^{w}it/	[ɛˈk^{w}it˥]	‘honey’
(d) /k^{w}ako/	[k^{w}aˈko]	‘sweet potato’
(e) /kitap/	[kiˈtap˥]	‘wax’
(f) /ɨkɨ/	[ɨˈkɨ]	‘water’
(g) /kado/	[kaˈɾo]	‘necklace’
(h) /nako/	[nãˈko]	‘man’
(i) /ojtpe/	[ɔjt˥ˈbɛ]	‘hat’

PENULTIMATE

(a) /bago/	[ˈbago]	‘dry’
(b) /k^{w}iɾi/	[ˈk^{w}iɾi]	‘day/clean/empty’
(c) /peɾa/	[ˈpeɾa]	‘to wake up’
(d) /tɨɾɨ/	[ˈtɨɾɨ]	‘two (or more)’

C. Trisyllabic

ULTIMATE

(a) /biɾita/	[biɾiˈta]	‘traíra (fish (sp.)’
(c) /komata/	[kumãˈta]	‘beans (sp.)’
(d) /aɾak^{w}i/	[aɾaˈk^{w}i]	‘peanut’
(e) /kiɾito/	[kiɾiˈto]	‘spider (generic)’
(f) /ameko/	[ɔmɛ̃ˈku]	‘jaguar’
(g) /atiti/	[atiˈti]	‘corn’
(h) /ebapa/	[ebaˈpa]	‘moon’
(i) /ababa/	[abaˈba]	‘fly (sp.)’

PENULTIMATE

(a) /takiɾap/	[tɔˈkiɾapˀ]	‘spider-monkey (sp.)’
(b) /tojtõna/	[tojˈtõna]	‘boss/chief’
(c) /kapkaba/	[kɔpˀˈgaba]	‘flute (type)’
(d) /jõnebo/	[j̃ũˈnɛbʊ]	‘lizard (sp.)’
(e) /kojõpe/	[kõ.ˈj̃õ.pe]	‘night’
(f) /amĩna/	[a.ˈmĩ.nɛ̃]	‘knee’

With clitics

(a) /o=ø-kado/ 1s=R-necklace	[u.ˈkɑ̰.dɑ̰] ~ [u.ˈka.ɾo]	‘my necklace’
(b) /i=ø-bita/ 3s=R-liver	[i.ˈbi.ta]	‘its liver’
(c) /o=ø-akõja/ 1s=R-beard	[wa.ˈkũ.j̃ã]	‘my beard’
(d) /o=ø-akop-ka/ 1s=R-hot-TR	[waˈkopˀka]	‘my warming’

D. Polysyllabic (more than three syllables)

ULTIMATE

No polysyllabic lexical words were found with ultimate stress. See the behavior of nominal phrases with more than three syllables, as in the following examples:

(a) /kiakop etʃe/ sun DIFF	[kʲaˌkobeˈtʃɛ]	‘in the sun’

PENULTIMATE

(a) /aɾamĩɾa/	[aɾaˈmĩɾa]	‘woman’
(b) /akataba/	[akaˈtaba]	‘tucum (palm fiber (sp.)’
(c) /toɾodita/	[tɔɾɔˈɾita]	‘rattlesnake (sp.)’

Phrases

(a) /õjpe ko-a-ɾa/ snuff ingest-THV-HAB	[ˌõj̃bɛˈkaɾa]	‘I am going to sniff snuff as usual’
(b) /o=etɨ tʃeɾe-ka te/ 1s=basket cut-TR 3S	[wɛˌtɨˌtʃeɾẽˈkate]	‘He is cutting my basket’

The stress will fall on the ultimate syllable or on the penultimate syllable, which means that it will fall on one of the last two syllables at the right edge of the lexical word, as shown in the examples. The discussion of how it falls on the penultimate or on the ultimate are presented further in this section.

- ✓ Stress is not sensitive to syllable weight.

(2.92)	(a) /takɨɾap/	[dɔˈkɨɾapˀ]	‘spider-monkey’
	(b) /tojtõna/	[tojˈtõna]	‘boss’
	(c) /kapkaba/	[kɔpˀˈgaba]	‘flute (four holes)’
	(d) /tawtʃe/	[tawˈtʃɛ]	‘peccary’

- ✓ The stress will fall on the ultimate or on the penultimate syllable (predictable), which means that it will fall on one of the last two syllables at the right edge of the lexical word.

(2.93)	(a) /ameko/	[ɔmẽˈku]	‘jaguar’
	(b) /atiti/	[atiˈti]	‘corn’
	(c) /aɾamĩɾa/	[aɾaˈmĩɾa]	‘woman’

(d) /akataba/ [akaˈtaba] ‘tucum (palm fiber (sp.)’

- ✓ Content words tend to have more prominence in speech than function words, where the latter are often reduced.

The next sections will deal with the phonetics of stress patterns and the metrical structure of stress assignment in this language.

2.5.3 The phonetics of the rhythmic pattern

In this section, the rhythmic pattern of the language is discussed based on the phonetic characteristics of stress. The main cues to be analyzed are duration of vowels, pitch, and intensity. Based on Beckman (1986), stress here is viewed as “a phonological delimitation type of accent” (1986:1).

The duration of the vowels, the pitch, and the intensity for each syllable (table 2.16 below) were measured using the PRAAT speech analysis software. The default specifications of the program were used, a dynamic range of 60 dB and analysis window duration of five ms. (0,005 s). For pitch measurement, the pitch range setting was adjusted to 75-300Hz for male speakers and 100-500Hz for female speakers. Vowels were measured from their onset marked at the consonant release “indicated by the beginning of an increase of the amplitude and complexity of the wave” (Myers 2005:431). Initial-vowel duration was marked at the onset of the acoustic energy.

In summary, table 2.16 below shows samples of words where the values of each vowel for duration and the value of each syllable for pitch and intensity are provided[54] (the stressed syllable of each word is in boldface).

PENULTIMATE					FINAL				
(1)	/aramiɾa/ 'woman'				(2) /apaɾa ko-a/ '(he/she) eats banana' banana ingest-THV				
	a	ɾa	ˈ**mi**	ɾa		a	ˌpa	ɾa	ˈ**ka**
pitch	95	100	**120**	83	pitch	153	178	159	**173**
duration	84	71	**175**	75	duration	79	75	74	**180**
intensity	63	65	**69**	60	intensity	70	79	70	**80**
(3)	/takɨɾap/ 'spider monkey'				(4)	/oɾoɾo/ 'cotton'			
	tɔ	**kɨ**	ɾap			o	ɾo	ˈ**ɾo**	
pitch	91	**130**	124		pitch	94	134	**203**	
duration	74	**109**	67		duration	51	65	**140**	
intensity	67	**73**	67		intensity	57	63	**75**	
(5)	/koɾo/ 'bowl'				(6)	/aɾakʷi/ 'peanut'			
	ko	ˈ**ɾo**				a	ɾa	ˈ**kʷi**	
pitch	221	**275**			pitch	114	108	**138**	
duration	162	**194**			duration	90	164	**200**	
intensity	70	**73**			intensity	84	82	**81**	
(7)	/akataba/ 'buriti'				(8)	/poɾakɨ/ 'mutum (sp.)'			
	a	ka	ˈ**ta**	ba		po	ɾa	ˈ**kɨ**	
pitch	200	203	**185**	180	pitch	104	94	**128**	
duration	77	65	**115**	74	duration	70	97	**184**	
intensity	60	65	**69**	63	intensity	71	75	**83**	

Table 2.16 - Sample of the phonetics of stress

In most Akuntsú words, the duration of vowels are greater under stress; when duration is higher in unstressed syllables this is due to: **(i)** speaking rate (see details in

[54] The pitch and intensity values for some syllables are difficult to measure due to the effect of creaky voice, hence words with no creaky voice (or minimal sign of creaky voice) were preferred for inclusion in this table.

§2.2.1.4 and §2.2.1.7), and **(ii)** the voicing of adjacent consonants which also tends to increase the duration of vowels (Ladefoged 2003:94).

Another phonetic characteristic to help to identify stress in this language is intensity and pitch. Pitch and intensity are related notions, and higher pitch, in most cases (with some exceptions, and the one presented in example (6) above), tends to be accompanied by higher intensity, where the higher sub-glottal pressure also causes the syllable to be louder.

In addition, there are also some phonological and morphological factors which characterize stress assignment in Akuntsú, such as: **(a)** the occurrence of [ɪ, ɔ, ʌ, e and ʊ] vowels is usually in unstressed position while [a, o, ɛ, æ, ɨ, and u] in stressed position[55]; **(b)** alveolars tend to become a flap in unstressed word-final position; **(c)** voiceless stops tend to be lengthened in stressed syllables; and **(d)** the vowels in unstressed syllables in word final position tend to be devoiced when the stress falls on the penultimate syllable. These processes are exemplified in the following:

A. QUALITY SHIFTING IN UNSTRESSED POSITION

(a) /kapkaba/	[kɔpˈgaba]	~	[kʌpˈgaba]	‘flute (type)’
(b) /taptot/	[tɔpˈdut˺]	~	[tʌpˈdut˺]	‘manioc’
(c) /otat/	[ɔˈtat˺]	~	[ʌˈtat˺]	‘fire’
(d) /ope/	[uˈpɛ]	~	[uˈpæ]	‘my skin’
(e) /kɨpek/	[kɨˈbɛk˺]	~	[kɨˈbæk˺]	‘papaya’

B. FLAPPING

(a) /taptot/ ‘manioc’ + /-et/ ‘determinative’	[tɔp˺ˌduˈɾet˺]	‘the manioc’
(b) /mepit/ ‘son/daughter’ + /=erõm/ ‘negation’	[mẽˌpiɾɛˈɾõm˺]	‘There is no son/daughter’

[55] Note that this is a tendency, not a general rule.

C. STOP LENGTHENING

(a) /o=ø-pi/ 1s=R-foot	[opˀˈpi]	~	[opˀˈbi]	‘my feet’
(b) /k^{w}ato/	[watˀˈto]	~	[watˀˈdo]	‘alligator’

D. DEVOICING

(a) /jõnebo/	[j̃ũˈnɛb̆o]	‘lizard (sp.)’
(b) /koboɾo/	[koˈboɾ̆o]	‘bowl (type)’

On the basis of those findings, it is possible to state that pitch is determined by the absence or presence of stress and the most prominent acoustic characteristic of stress in Akuntsú is high pitch, which interacts with such factors as duration and intensity.

2.5.4 Metrical analysis

An example of word-level stress in a metrical grid (Hayes 1995) is presented below. On line 1 (foot level), feet are organized where ‘x’ marks strong syllable and the dot ‘.’ marks weak ones; and on line 2 (PrWd-level) it is assigned the primary stress of the word based by the proposed rule described in (A) below:

(A) CONDITIONS FOR FOOT FORMATION IN THIS LANGUAGE

- *Foot type: iamb* (. x)
- *Primary stress is on the right edge of the rightmost foot*;
- *No quantity-sensitivity;*
- *Parsing is left to right:* L → R;

• *Unparsed syllables*[56] *are allowed only if when peripheral syllables are unstressed. Syllables unparsed usually have short vowel.*

• *Degenerate feet are allowed if the foot is formed of a strong syllable, and this strong syllable carries the primary stress.*

In TRISYLLABLES and POLYSYLLABLES (words of more than three syllables), the stress may fall either on the second or on the first right most edge of the word. The predominant rhythmic pattern of trisyllables and polysyllables is the iambic and it is illustrated in metrical grids below. Note that ultimate unstressed syllables (usually short syllables) are unparsed and do not take part in the process of metricallity.

(2.94) a.

```
(        x        )
( .      x)    .
 jõ     ne     bo
   [j̃ũˈnɛbʊ]
 'lizard (sp.)'
```

b.

```
(          x       )
(  .       x)    .
  ta       kɨ    ɾap
   [tɔˈkɨɾap]
  'spider-monkey'
```

In the examples below, for the first and second syllable a foot is formed according to the iambic pattern, the primary stress is assigned to the last syllable, and then the syllable is able to form a DEGENERATE FOOT. For example, in (2.95b) the last syllable is unstressed, being UNPARSED. In (2.95b), the penultimate forms a degenerate foot, since it receives the

[56] Whether it is a case or not of extrametricality (syllables excluded from the metrical structure) is questionable. For now, we assume that extrametrical foot is not possible, since if we consider final unstressed syllables extrametrical, we would have to explain their behavior of forming a foot when extra elements are added to the phrase.

primary stress, and the last syllable is left apart as an extrametrical to keep the iamb pattern, as following:

(2.95) a.

(x)
(. x) (x)
po ɾa kɨ
[poɾaˈkɨ]
‘curassow (sp.)’

b.

(x)
(. x) (x)
a ɾa mĩ ɾa
[aɾaˈmĩɾa]
‘woman’

Words that have unparsed feet and degenerate feet allow optional initial-vowel or initial-syllable deletion. This allows the language to create a more symmetrical foot parsing. For example:

[ãr̃aˈmĩr̃ã] → [ãnãˈmĩr̃ã] → [nãˈmĩr̃ã] ‘woman’.

(2.96)

(x)
(. x)
na mĩ ɾa
[naˈmĩɾa]
‘woman’

Disyllabic words present either ultimate or penultimate stress, which means that they can be either iambic or trochaic. The stress pattern of disyllabic words may suggest a possible lexical stress (i.e., phonemic stress) in the language, even though the quantity of minimal pairs found may be not so convinced, as illustrated below:

(2.97) a. /bago/ [ˈbago] ‘dry’

vs.

/bago/ [baˈgo] ‘ant (sp.)’

b. /kʷiɾi/ [kʷiˈɾi] ‘açaí’

vs.

/kʷiɾi/ [ˈkʷiɾi] ‘day/clean/empty’

IAMBIC PATTERN FOR DISSYLLABIC WORDS	TROCHEE PATTERN FOR DISSYLLABIC WORDS
(2.98) a. (x) (. x) ɨ kɨ [ɨˈkɨ] ‘water’	(2.99) a. (x) (x .) pe ɾo [ˈpɛɾu] ‘macaw (sp.)’
b. (x) (. x) taw tʃe [tawˈdʒɛ] ‘peccary’	b. (x) (x .) kɨ te [ˈkɨte] ‘one/alone’
c. (x) (. x) a tap [aˈtapˀ] ‘hair’	c. (x) (x .) ba go [ˈbago] ‘dry’

Figure 2.12 - Patterns for dissyllabic words.

However, note that there is a tendency in the language to prefer the iambic pattern[57]. In cases where clitics are present, the stress assignment pattern is modified. The examples presented in (2.100) illustrate the effect of clitics in word-level stress.

[57] Most of the dissyllabic words in my database have ultimate stress.

(2.100)

	x		(	x)
(.	x)	→	(.	x) .
ka	do		o	ka ɾo
[kaˈdo]			[oˈkaɾʊ]	
‘necklace’			‘my necklace’	

Another criterion to take into account is what happens to stress when a second word is added to a phrase, for example in the phrase /apaɾa ka/ ‘(he/she) eats bananas.’ In this example, when the verb root is added, the rightmost syllable takes the primary stress; as a result, the final right syllable bears the stress, following an iambic pattern.

(2.101)

(		x)				(			x)	
(.	x)	(x)	+	(x)	→	(.	x)	(.	x)	
a	pa	ɾa		ka		a	pa	ɾa	ka	
[apaˈɾa]				[ˈka]		[aˌpaɾaˈka]				
‘banana’				‘to ingest’		‘(he/she) eats bananas)’				

When a word with a degenerate foot is in a discursive context, destressing takes place to form binary feet, whereas the iambic pattern is maintained. As a result, the syllable at the right edge can be EXTRAMETRICAL, as shown in 11(a-b). Example (11c) illustrates the metrical structure of words that do not present degenerate feet, as follows:

(2.102) a.

(		x)			x		(			x	)
(.	x)	(x)	+	(.	x)	→	(.	x)	(.	x)	.
a	pa	ɾa		a	pe		a	pa	ɾa	a	pe
[apaˈɾa]				[aˈpɛ]			[aˌpaɾɑ̰ˈʔɑ̰pɛ]				
‘banana’				‘peel’			banana peel				
							‘banana's peel’				

b.

(		x)			x		(			x	)
(.	x)	(x)	+	(.	x)	→	(.	x)	(.	x)	.
po	ɾa	kɨ		pe	bo		po	ɾa	kɨ	pe	bo
[poɾaˈkɨ]				[peˈbo]			[poˌɾakɨˈpɛbʊ]				
‘curassow (sp.)’				‘feather’			curassow feather				
							‘curassow's feather’				

c.

(	x)		(	x)		(			x)
(.	x)	+	(.	x)	→	(.	x)	(.	x)
kia	kop		e	tʃe		kia	ko	pe	tʃe
[kʲaˌkop]			[eˈtʃe]			[kʲaˌkobeˈtʃɛ]			
‘sun’			‘in’			‘In the sun’			

In light of the data and discussion presented above, we can make the following generalizations about stress assignment:

- *This language has a strong tendency towards iambic patterning.*
- *Parsing is left-to-right* L → R.
- *Assign primary stress to the rightmost foot.*
- *Assign secondary stress to all other prominent foot heads on the left.*

Figure 2.13 - Summary of stress in Akuntsú

2.5.5 Overview of intonation

Besides stress, another place where pitch and duration play important roles is in the domain of intonation. In this language, intonation is a cue to identify speech acts, e.g. whether an utterance is imperative, declarative or interrogative. Additionally, it is also a cue to identify focused constituents. In imperative clauses, when the imperative marker *-tʃo* is not

present, the only difference between declaratives and imperatives is the intonational contour. Moreover, in yes/no questions, the intonation contour at the end of the phrase is the main cue to identify it as an interrogative utterance.

2.6 Summary

This chapter described several topics in segmental phonology, starting with a presentation of vowels, where five underlying oral and nasal vowels are present in the language. This study also includes a discussion on nasality in vowels and the process of nasalization. Nasal vowels in the language are contrastive only in stressed syllables, where underlying vowels can occur both in stressed and unstressed environments. Nasalization in the language can occur progressively or regressively.

Laryngealized vowels are then discussed. Data is presented to illustrate that creaky voice in the language is phonetically conditioned by the presence of glottal stops, stress and paralinguistic factors. In addition, this chapter also dealt with vowel length and its behavior in the language. It was found that vowel length is not contrastive. The formation of diphthongs is then presented along with the main analysis of glides. Finally, the vowels section concluded with an overview of how speech rate and stress affect vowel quality.

The description then turned to describing the distribution of consonants. A total of thirteen underlying consonants are found in this language. The glottal stop is considered a surface segment.

The distribution of syllables was also described. The syllable structure in Akuntsú has the pattern (C)V(C)(C). Structure types of CVC, CV, VC, and V are found in the language. Further on, the main topics in morphophonology were presented. Finally, the analysis of

rhythmic pattern of words and phrases was described, where Akuntsú was described as an iambic language, where primary stress is assigned to the right-most foot of a word or phrase.

CHAPTER 3

WORD-STRUCTURE AND GRAMMATICAL CATEGORY

3.1 Introduction

This chapter provides an overview of the word-structure and grammatical categories found in Akuntsú. It provides basic definitions used in the subsequent chapters and an overview of the grammatical categories available in this language.

Akuntsú is mostly a suffixing language, though its number of affixes and suffixes are relatively small if compared to some other South American languages. Words in this language tend to be composed of one single morpheme. Inflection, derivation and compounding are processes found in the language, and derivation and compounding are productive in word formation.

The first section discusses the morphological structure (§3.2), giving an overview of the morphological structure of the language, describing the main characteristics of clitics, affixes and particles. Next, a typological overview of the morphological processes among Tupían languages is described, with comparison to the morphological processes described in this study for Akuntsú. The relational prefixes are introduced, showing the main function of these prefixes in this language. The second section briefly presents an overview of the lexical classes in Akuntsú (§3.3), showing the main function of nouns, verbs, adjectives, adverbs, pro-forms, particles, postpositions, ideophones and interjections. A summary is provided at

the end (§3.4).

3.2 Morphological structure

In this section, the definition of a phonological and grammatical word will be discussed based on the features and processes identified in Akuntsú. In addition, clitics, affixes and particles will be defined.

3.2.1 Overview of the phonological and grammatical word

In Akuntsú, a PHONOLOGICAL WORD needs to bear a foot at its right edge, i.e., needs to receive a primary stress that falls at the right-most edge of the word. Phonological word is then defined as a syntactic unit formed by the root and any grammatical affix integrated with the root; and as such, the phonological word can be identified by (a) prosodic features and (b) phonological processes (Dixon and Aikhenvald 2002).

(A) PROSODIC FEATURES: Each phonological word has a primary stress, and when words form a phonological phrase, the primary stress goes on the right-most word. Clitics are integrated into the phonological word, causing stress shift. Enclitics are usually unparsed while particles or affixes are usually parsed into the foot, depeding on their syllabic position within the phrase. There is no difference in stress assignment between nouns and verbs. The stress assignment found in verbal and nominal constructions depends on their combination with the different grammatical morphemes found in the language (see §2.5 for stress assignment).

In a compound, two independent "words" are joined to form two phonological words that together form one semantic unit, a lexical entry. As with all other phonological phrases encountered in this language, the primary stress of compounds is assigned to the right-most

component in the compound and the main stress of other components is reduced to secondary. That is, the stress of the first conjunct of the compound is reduced to secondary stress level (see §2.4.5 for compounding).

(B) PHONOLOGICAL PROCESSES: The phonological traits used to identify phonological words are related to morphophonemic processes: for example, vowel deletion, voicing, and consonant reduction (see §2.4). In this language, these types of processes are restricted to phonological words and they can identify whether or not a root and the attached morphemes are integrated into the same phonological word.

The GRAMMATICAL WORD is composed of a root with or without other grammatical element. The grammatical element can be either a bound morpheme (affixes or clitics) attached to the root or can be a phonologically free morpheme, as in the case of particles. In other words, the root forms the basis of the grammatical word, taking one or more bound morphemes.

3.2.2 Clitics, affixes and particles

This language exhibits few bound morphemes when compared to other Amazonian languages. These bound morphemes can be divided into clitics and affixes. Clitics and affixes are distinguished in this language based upon the criteria proposed by Zwicky (1085), Zwicky and Pullum (1983), Anderson (2005) and Bickel and Nichols (2007).

By definition, clitics are phonologically and grammatically dependent on their roots (hosts). The phonological dependence is what differentiates clitics from particles, as well as

from non-cohering affixes[58]. In addition, the main difference found between affix and clitic is that the latter is not limited to a specific part of the speech, i.e., it is not governed by the grammatical category of the stem to which it is attached. This means that clitics are not restricted to occurring when attached to a specific grammatical element as affixes are. For example, in Akuntsú, dependent personal pronouns, clitic-like morphemes, can be attached to any verb independently of their grammatical relation to that verb, as well as to nouns and postpositions. Besides personal pronouns, there are other clitics in the language, which express different grammatical functions. The possible clitics found in this language are: PROCLITICS (clitics that precede the root) and ENCLITICS (clitics that follow the root). However, let us show in this section some of the characteristics of pronominal markers in the language. Based upon the criteria proposed by Zwicky and Pullum (1983) the personal pronouns[59] in Akuntsú exhibit a clitic-like behavior. The Zwicky and Pullum's criteria are reproduced below:

A. Clitics can exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection

B. Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.

C. Morphophonological idiosyncrasies are more characteristic of affixed words than of clitic groups.

D. Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups.

58 Cohering affixes, like clitics, are phonological dependent to a host (Booij 2007:166).

[59] Note that in this chapter when I talk about personal pronouns as clitic-like, I only refer to the first, second and third person singular, as well as the third coreferential pronoun, which are the only pronouns that fit clitic characteristics.

E. Syntactic rules can affect affixed words, but not clitic groups.

F. Clitics can attach to material already containing clitics, but affixes cannot.

As described below only criteria A, B and C are conclusive:

CRITERION A: In Akuntsú, personal pronouns can be attached to nouns and verbs. This means that the personal pronouns can be attached to words of different lexical categories and are not restricted to a specific element, as affixes are. Dependent pronouns in this language are freely attached to any lexical category. Thus, personal pronouns based on this criterion would be characterized as clitic-like rather than affix-like.

CRITERION B: According to this criterion, dependent pronouns would be considered clitic-like, because they can be attached to any particular verb independently of its grammatical relation. This criterion means that clitics do not "refuse selectively to appear (in the case of gaps) (...) since they have no access to the internal properties of the specific lexical elements with which they combine" (Anderson 2005:34).

CRITERION C: Affixes behave differently according to the element to which they are attached, whereas clitics do not. This difference is due to the fact that affixes are "introduced in the lexicon and are performed by word-formation rules" whereas clitics are introduced post-lexically (Anderson 2005:34). In Akuntsú, there are no cases where the association of personal pronouns with verbs or nouns shows an unexpected phonological form (3.1a). Affixes, on the other hand, are able to change the phonological form of their stems (3.1b).

(3.1) a. ***o=a****t∫o-a*
1s=bathe-THV
'I bathe'

b. *on* *i=**k**o-**a*** ➔ [ik**a**]
1s 3s=ingest-THV
'I eat it'

The remaining criteria are not conclusive for determining whether personal pronouns are clitics or affixes. Besides the criteria proposed by Zwicky and Pullum (1983), there are other arguments that might help to understand the (morpho)syntactic status of the dependent personal pronominal markers in Akuntsú: for example, the fact that dependent pronouns have lexical properties, and that personal pronouns are not part of the noun phrase when a full nominal form can replace them. These dependent pronouns are therefore clitic elements due to the fact that, unlike affixes, they do not form morphological and syntactic units with their hosts; that is, they correspond to elements that can be expressed as independent words (see details in section 3.2.4 on relational prefixes).

On the other hand, particles are here considered phonologically and morphologically free forms, i.e., they can stand independently on their own. They may occur at the beginning or at the final position of a phrase. The template of how clitics, affixes and particles are attached to their roots is presented below. The figure 3.1 illustrates the nominal root template, as following:

(particle) (proclitic)=(prefix)-ROOT-(suffix)=(enclitic) (particle)

Figure 3.1 - Nominal root template.

(3.2) a. *o=t-ek* *ete*
1s=R-house REL
'It is about my house'

b. *e=ø-top* *te* *Konibu*
2S=R-father FOC Konibu
'Your father is Konibu'

c. *o=ø-ti* *te* *Aramira* *o=ø-ti* *jẽ*
1S=R-mother FOC Aramira 1S=R-mother DEM
'My mother is Aramira, my mother is this one'

The template of how clitics, affixes and particles are attached to the verbal root is illustrated here.

(particle) (proclitic)=(prefix)-ROOT-(suffix) =(enclitic) (particle)

Figure 3.2 - Verbal root template.

(3.3) a. *o=ʧet-a=ɾa* *kom*
1S=leave-THV-HAB PROJ
'I will leave'

b. *tawtfe* *o=i-mi*
peccary 1S=OBJ.NMLZ-kill
'my hunted peccary'
Literally: 'peccary my killing (my hunted thing)'

3.2.3 Morphological processes

The morphological processes across Tupían languages, including Akuntsú, involve primarily inflection, derivation, and compounding (Rodrigues and Cabral 2012). Tupían languages also present iconic morphological processes involving reduplication, which is considered a productive process in some of the Tupían families, including Akuntsú (see

§5.11.4 for further details)[60]. Based on the discussion of morphological aspects of Tupían languages, it is possible to infer some general contributions that the Tupían languages have made to typology generally and to the description of Akuntsú itself.

INFLECTIONAL MORPHOLOGY in Akuntsú includes relational affixes and modality. Modality markers occur with verbs (or verb phrases — they are often particles or suffixes), distinguishing among indicative, gerund, imperative, and subjunctive, though only indicative and imperative moods are presented in this study[61]. Note that indicatives are often called declaratives (statements) in analyses of Tuparían languages.

I would like to recall that the pronominal markers are considered clitics in this language, and as such they fit into neither inflection nor derivation processes, though they have grammatical functions that affect the overall meaning of the pronominal and its host. Personal pronouns are divided into two classes, where one functions as absolutive markers, and the other as ergative markers. The coding of grammatical roles is indirect; core arguments are cross-referenced in transitive and intransitive verbs by pronominal markers.

DERIVATIONAL MORPHOLOGY involves markers of valence-changing and meaning-changing. In Akuntsú, derivational morphemes apply to nouns and verb classes, through suffixation or prefixation. There are some main types of derivational process found, namely: (a) derivations marked on verbs: reflexives, causative markers *mõ- ~ õ-,* and nominalizer affixes, for instance object nominalizer *i-*, and circumstance nominalizer *-ap* and; (b) derivations marked on nouns, for example the verbalizer suffixes.

[60]Ablaut/apophony (change by vowel alternation) wasn't found in this language.

[61]More details on independent and dependent clauses across Tupían languages are found in Rodrigues and Cabral (2004, 2006, 2012).

At this point in the discussion, let us summarize the main differences found between inflectional and derivational process in Akuntsú[62]. However, note that there are few affixes in the language and the boundary between inflection and derivation is not always so straightforward. The main characteristics found in inflectional processes that differentiate them from derivational ones are described as following:

INFLECTION VS. DERIVATION
(1) INFLECTION results in the same word with a different form (does not change its basic meaning);
(2) INFLECTION does not change the lexical category, i.e., it only adds specifications to a word or emphasizes certain characteristics of a specific meaning of the word. For instance, by adding the nominalizer *-ap* to the verb, it changes the lexical category of the stem from noun to verb, and is therefore a derivational affix, not inflectional.
(3) INFLECTION is obligatory in some situations (at least) while DERIVATION is optional.

Figure 3.3 - Inflection versus Derivation.

COMPOUNDING is a word formation process that includes combinations of the free stems joined to create compound words: [NOUN-NOUN] and [NOUN-ADJECTIVE]. Among other Tupían languages, there are also compounds involving [NOUN-INTRANSITIVE.VERB], and [NOUN-TRANSITIVE.VERB]; the last is found only in four of the Tupían subfamilies: Mawé, Awetí, Tupí-Guaraní and Mundurukú (Rodrigues and Cabral 2012:539).

[62] This discussion is based on Bickel and Nichols (2007).

ICONICITY refers in this study to 'the phenomenon that the meaning of a linguistic expression is reflected by its formal structure' (Booij 2007:314). An instance of word formation process that is often iconic is REDUPLICATION; this process is found in nouns and verbs. In Akuntsú verbs, this process also assigns aspect (see §5.11). An example of iconicity in Akuntsú is seen in their diminutive and augmentative markers. These two derivational markers are typologically often considered sound-symbolic, in the sense that "high closed vowels tend to be employed in diminutives, while augmentatives tend to use low open vowels" (Aikhenvald 2007:23).

3.2.4 Relational prefixes

Rodrigues used this notion for descriptions of the Tupían languages (Rodrigues 1981), especially for the Tupí-Guaranían languages in which the phenomenon is clearly observed in paradigms (Cabral 2001). This morphosyntactic process was described in many Tupían languages, including e.g. Mundurukú (Gomes 2006), Sateré-Mawé (Rodrigues 1990), Guajá (Magalhães 2007), and Araweté (Solano 2009). Note, however, that this is not found only in Tupían languages, but it was also noted in Cariban languages and in some languages of the Macro-Jean family (Rodrigues 1990, cf. Corrêa da Silva 2010:225)[63].

The main function of relational prefixes is to indicate whether the dependent element is syntactically contiguous in a possession construction, marking the relation between the nucleus and its dependent. Thus, the relational prefixes indicate whether the possessed noun is or is not contiguous to its possessor or if the argument(s) of the verb is/are contiguous or not to its/their governing verb within a syntactic unit (Rodrigues 1999, Cabral 2001).

[63] For Proto-Tupían, it was postulated three relational prefixes: ***t*ʔ ~ *Ø*- (R^1-), ***i*- ~ ***c*- (R^2-), ***m*- ~ ***Ø*– ~ ***t*- (R^4), where R^4 indicates that its determiner is generic and human (Rodrigues and Cabral 2012:511).

3.2.4.1 Relational prefixes in the Tuparían subfamily

Relational prefixes have been described in two of the five Tuparían languages: Makuráp (Braga 2005) and Tuparí (Caspar and Rodrigues 1957, Alves 2002, 2004).

In Makuráp, for example, there are two types of relational prefixes, which are responsible for dividing the nouns into two different classes according to their combination with relational prefixes. The possible relational prefixes in Makuráp are $R^1$and R^2. The first is responsible for indicating whether or not the argument of the verb or the possessor of a noun is contiguous to its nucleus in a syntactic constituent; the second, R^2, is responsible for indicating that the dependent element does not form a syntactic unit with its nucleus — with its possessed noun or its verb. Makuráp's relational prefixes are divided into four classes: class I, class II, class III and class IV[64] .

The classes (not only in Makuráp but in other Tupían languages too) are organized according to the combination of the relational prefix with each nominal thematic class, varying according to the phonetic nature of the root that the relational prefix is attached to.

[64]Braga calls the R^1- PRC and R^2 - PRCN.

	R^1	R^2
Class I	tʃ- [~ j-] *o+j-ãj-t* 1ps+PRC-tooth-GEN 'my tooth'	t- *t-ãy-en* PRNC-tooth-GEN 'his/her tooth'
Class II	ø- *o+ø-akare-t* 1ps+PRC.head-GEN 'my head'	i- *i-akare-t* PRNC.head-GEN 'his/her head'
Class III	w- *o+w-okap-et* 1ps+PRC-radio-GEN 'my radio'	
Class IV	ø- *o+ø-kat-et* 1ps+PRC-body-GEN 'my body'	

Table 3.1 - Makuráp relational prefixes (adapted from Braga 2005)[65].

Table X above shows how the relational prefixes are organized in Makuráp according to their noun class. Examples below help to identify the difference between R^1 and R^2 in this language:

MAKURÁP (adapted from Braga 2005)

(3.4) a. *[Mario tʃ-ek-et]$_{NP}$ tok-ng-a*
Mário R^1-house-GEN build-EFF-IMPERF[66]
'They have built Mário's house'

b. *Mario [t-ek-et]$_{NP}$ tok-ng-a*
Mário R^2-house-GEN build-EFF-IMPERF
'Mário has built his (somebody else's) house'

[65] Braga (2005:48-53) leaves blank the R^2 collumn of class III and IV. She affirms that for nouns grouped in these classes the difference between R^1 and R^2 is neutralized, and as a consequence it may create ambiguity readings.

[66] I did not change the original abbreviations: GEN 'génitif' EFF 'effective' IMPERF ' imperfectif' (Braga 2005).

According to Alves (2004), in Tuparí, there are two relational prefixes R^1 and R^2, divided into three thematic classes: Class I, Class II and Class III. These relations are described in the table below.

	R^1	R^2
Class I	ø- *koepa Ø-epa* moon R^1-eye 'eyes of the moon'	s- *s-epa* R^2-eye 'someone's eyes'
Class II	ø- *Pabit Ø-a:pe* Pabit R^1-path 'Pabit's path'	i- *i-a:pe* R^2-path 'someone's path'
Class III	h- *toto h-ayp* grandfather R^1-son 'Grandfather's son'	i- *i-ayp* R^2-son 'his son'

Table 3.2 - Tuparí relational prefixes (adapted from Alves 2004).

3.2.4.2 Akuntsú relational prefix and noun phrases

Aragon (2008), by following the description suggested in Rodrigues (1996), described one type of relational prefix for Akuntsú: R with two thematic classes, namely class I and class II, which is cognate to relational prefixes found in other Tuparían languages, as illustrated in the above tables. The contiguity expressed by the relational prefix is structural. The relational R expresses the contiguity between the two elements within the same phrase. So far, only two thematic classes were clearly identified, the class I represented by a zero morpheme and the class II by *t-*.

Note that this study doesn't describe all the lexical classes that occur with each thematic class. To do so, it would need an accurate lexicographic investigation, which is not the purpose of the present work.

	R
Class I	ø-
Class II	t-

Table 3.3 - Akuntsú relational prefixes (Aragon 2008).

In Akuntsú, the main function of this prefix is to indicate contiguity between the possessor and the possessed element within a syntactic unit. Compare example (3.5a-b) where example (3.5a) illustrates a non-possessor relation, while example (3.5b) indicates the contiguity between possessor and possessed noun.

(3.5) a. *jẽ* *ep*
DEM leaf
'this leaf'

b. *jẽ* *t-ep*
DEM R-leaf
'this one's leaf'

Dependent pronouns always precede the relational prefixes in genitive (possessive) constructions. A noun phrase can also replace person markers and a dependent pronoun cannot co-occur with the NP, as shown in the phrase considered non-acceptable by the speakers:

(3.6) *[*Pupák i=t-ek*]$_{NP}$
Pupák 3s=R-house
'Pupák's house'

The examples below provide more illustrations about the behavior of the R relational prefix in Akuntsú, both with class I and with class II.

R CLASS I

(3.7) a. [*o=ø-anam*] NP
1s=R-head
'My head'

b. [*e=ø-mepit*] NP
2s=R-son/daughter of woman
'Your daughter'

c. [*o=ø-kado*] NP
1s=R-necklace
'My necklace'

d. [*aw-aw ø-arape*] NP
baby R-sling
'baby's sling'

e. *Konibu ø-ajtʃi Aramira*
Konibu R-wife Aramira
'Konibu's wife is Aramira'

f. *o=ø-atap kop*
1S-R-hair red
'My red hair'

R CLASS II

(3.8) a. [*Pupak t-ek*] NP
Pupak R-house
'Pupak's house'

b. [*i=t-ek*] NP
3=R-house
'His/her house'

c. [*i=t-ɨt*]$_{NP}$ *jẽ* *ɨt*
3=R-buttocks DEM buttocks
'Its buttocks, this buttocks'

Among the Tupían literatures, there are some analyses that describe what are identified as relational prefixes in some Tupían languages, as a mark of third-person personal pronouns[67]. The issue is that relational prefixes refer to third person elements, and the analyses can be trick.

When there is no contiguity element to form a syntactic unit of the possessor and the possessed noun, there is no need for the appearance of the relational prefix. Compare the word for 'house' (in bold) with no relational prefix to the following phrases where the word 'house' appears with R relational prefix (3.9):

(3.9) ***ek*** *no* *jẽrom* ***otʃe t-ek*** *no* *jẽrom* ***ke*** ***t-ek***
house other DEM 1EXCL R-house other DEM DEM R-house
'The other house is there, our other house is there, that one's house'

o=t-ek *emo*
1s=R-house also
'and my house too.'

Compare the below example where the relational prefix occurs in the NP (3.10a) with that where the relational prefix is absent (3.10b).

(3.10) a. ***ep*** *ko-a* *jẽ*
leaf ingest-THV DEM
'This one eats leaf'

[67] See for example Galúcio (2001), Rose (2003), and Jensen (1999).

b. *apara t-**ep*** *tʃop-a* *jẽ*
banana R-leaf see-THV DEM
'This one sees banana's leaf'

3.3 Overview of grammatical categories

The purpose of this section is to introduce the parts of speech (lexical categories) found in Akuntsú to give some insight into their distribution and organization in the language. The analysis of parts of speech in this language mostly follows Schachter and Shopen (2007) and Givón (2001).

The grammatical categories (parts of speech) are lexical classes, which have different grammatical functions in the language. They are divided into closed and open classes. The open word classes found in Akuntsú are nouns, verbs, adjectives and adverbs. The nouns and verbs are the major open class categories, and adjectives and adverbs are smaller ones. Thus, according to their pragmatic functions, nouns tend to function as arguments, verbs tend to function as predicates, and adjectives as attributes. On the other hand, according to their grammatical function, nouns tend to combine with grammatical categories that denote for example, case, while verbs tend to combine with categories that denote aspect, modality, and voice. Adjectives may follow certain categories of nouns or verbs, but not all them.

The closed classes are composed by pro-forms, particles, postpositions, ideophones, and interjections. The pronouns are divided into two main classes, the independent and dependent pronouns. The dependent pronouns are not morphologically free morphemes; they must be cliticized to either a member of the verbal category or of the noun category (or to postpositions). The demonstratives in this language express orientation with relation to the speaker or listener, expressing distance and position. Particles may convey aspectual, focus,

and negation meanings, and the way that events end up in the discourse. Ideophones[68] are very common in the language and play an important function for communicative purposes between Akuntsú people and non-Indians. Interjections are words that express overflow of emotion and speaker attitude; unlike ideophones, the interjections cannot be used within syntactic constructions.

3.3.1 Nouns

The nouns are here considered the most time-stable class expressed as identifiable masses. They designate stable entities and they function as arguments or heads of arguments as shown in the bold words (3.11) below.

HEADS OF ARGUMENTS

(3.11) ***Konibu*** ***apaɾa*** *ko-a*
Konibú banana ingest-THV
'Konibú eats banana'

Furthermore, nouns can also function as predicates, as seen below in the boldfaced words:

NOUNS AS PREDICATES

(3.12) *kitʃe* ***aɾamiɾa***
1PL.INCL woman
'We are woman'

Nouns can also be the head of postpositional phrases (3.3a-b).

[68] Ideophones are here described as "marked words that vividly depict sensory events" (Dingemanse 2011:83).

(3.13) a. *te=ø-**boɾo*** *etʃe*
3COR=R-back DIFF
'(It's) over his own back'

b. ***tabɨt*** *ete*
garden REL
'In the garden'

The categories of nouns included in Akuntsú are: proper, common, dependent (inalienable) and independent (alienable) nouns. Morphologically, common nouns differ from proper nouns. 'Proper' nouns do not take the determinative marker, as shown in (3.14).

COMMON

(3.14) *taɨpɨk ø-ok^{w}aj* *t=ø-ok^{w}aj-**et***
holler.monkey R-tail 3S=R-tail-DEF
'Holler's monkey tail, its tail'

PROPER

(3.15) ***Pupak-et***
Pupak-DEF
'the Pupak'

DEPENDENT (INALIENABLE) NOUNS

These are nouns that require a possessor, i.e., nouns that are morphologically dependent (inalienably possessed). See some examples of body parts, plant parts and kinship parts:

(3.16)	**Body parts**	**Plant parts**	**Kinship terms**
	a. *o=ø-anãm*	b. *apara ø-pe*	c. *ki=ø-ti*
	1s=R-head	banana R-peel	1PL.INCL=R-mother
	'my head'	'banana's peel'	'our mother'

d. *e=ø-boɾo*
2s=R-back
'your back'

e. *kɨpek ø-kit*
papaya R-seed
'papaya's seed'

f. *Pupak ø-top*
Pupak R-father
'Pupak's father'

INDEPENDET (ALIENABLE) NOUNS

Alienable nouns are those where the inclusion of a possessor is not obligatory.

(3.17) a. *k^{w}ai*
'stone'

b. *oɾoɾo*
'cotton'

In certain pragmatic contexts these nouns may be possessed, though it is not obligatory. They may be possessed when they begin to be part of the speakers' personal/daily activities. In (3.18a) the stone placed at the fireplace is used as a support for their pots, while in (3.18b) the cotton is part of the material used to weave their bracelets.

(3.18) a. *o=ø-k^{w}ai*
1s=R-stone
'my stone'

b. *otʃe ø-oɾoɾo*
1PL.EXCL R-cotton
'our cotton'

3.3.2 Verbs

The verbs are classes of words that denote action, processes, or states. The arguments may codify a subject or an object. Verbs obligatorily receive pronominal clitic agreement markers, though some exceptions are found; for example, when the subject is third person or the subject was cited earlier in the discourse, the verbs in such cases do not take overt

pronominal markers. Verbs may have only one argument (intransitive verbs), two arguments or they may have three arguments: a subject, a theme, and a recipient (transitive verbs).

INTRANSITIVE

The intransitive verb below takes one obligatory argument, the subject pronoun *ki=* '1PL.INCL' , as shown in boldface:

(3.19) ***ki=****tʃet-a=ɾa* *kom*
1PL.INCL=leave-THV=HAB PROJ
'We will leave (as usual)'

TRANSITIVE

TWO-ARGUMENTS

The verb below requires two arguments: the subject *Pura* and the object pronoun *i=* '3s' , as following:

(3.20) *Pura i=ko-a te*
Pura 3s=ingest-THV FOC
'Pura eats it'

THREE-ARGUMENTS

In the example below, the verb *õ* 'to give' may allow three arguments: the subject *Tʃaɾuj*, the object *kɨjtpit* 'fish', and an indirect object (not obligatory) *Kani*:

(3.21) *Tʃaruj kɨjtpit õ-a te Kani=bõ*
Tʃarúj fish give-THV FOC Kani=DAT
'Tʃarúj gave fish to Kani'

Verbs can be nominalized, and as such, they can occupy the position of arguments in the sentence:

(3.22) *Karow* ***et-ap*** *t-ek* *iw*
Carol sleep-NMLZ R-house rotten/ugly/bad
'Carol's bed is damaged'

3.3.3 Adjectives

The class of adjectives includes words that describe attributes or qualities. This class is here defined as a class that modify nouns — a notional definition that was proposed for other languages as well. Additionally, adjectives can also function as predicate complements. Examples of adjectives modifying nouns and adjectives as predicate complements follow:

ADJECTIVE AS NOUN MODIFIERS

(3.23) a. *potʃek* ***niŋ***
thing striped
'Striped notebook'

b. *pero* *ø-ok^{w}aj* *t=ø-ok^{w}aj* ***perek***
macaw R-tail 3S=R-tail long
'Macaw's tail, its long tail'

ADJECTIVES AS PREDICATES

(3.24) a. *Tʃaruj* ***ten*** *te*
Tʃarúj strong FOC
'Tʃarúj is strong'

b. *t=**akop*** *te*
3S=hot FOC
'It is hot'
Context: after touching the hot pan.

A list of adjectives encountered in the language is given in table 3.4 below[69].

DIMENSION	*ʧokĩn*	'small'	*ĩka*	'short'
	perek	'wide/long'		
	aõn	'round/square'		
	There are also two morphemes that express dimension *-atʃo* 'big' and *-tin* 'small'.			
AGE	*pagop*	'new (thing)'		
	pagop	'young.man'		
	kẽm toka	'young.woman'		
	papa	'woman (after having a child, middle-aged)'		
	kipɨ	'elder/worthless'		
COLOR	*kop*	'red'	*tɨerep*	'green'
	k^{w}erep	'black/dark'		
	ʧaro	'yellow'		
	pak	'white'		
PHYSICAL PROPERTY	*ten*	'hard/heavy/strong'	*nĩŋ*	'striped'
	kɨpitʃik[70]*/pekã*	'cold'	*tip*	'soft'
	akop	'hot'	*tõm*	'deep'
	ɨt	'unripe'	*ʧobe*	'delicious'
	jẽn	'stinky'	*kɨre*	'not delicious/bad'
	kop	'ripe'	*kon*	'sweet'
	ereto	'skinny'	*pekãj*	'bitter'
	ko	'wet'		
	bago	'dry'		
	tãm	'full'		
	k^{w}iri	'empty/clean'		
VALUE	*petʃe*	'good (non-human)'		
	iw	'ugly/rotten/bad'		
	ʧame	'beautiful/good (human)'		

Table 3.4 - Sample of semantic types of adjectives roots

[69] The semantic division below follows Dixon (2004:3)

[70] The word *kɨpitiʃik* may be considered a lexicalized word formed from *kɨ* 'liquid' + *pitʃik* 'cold'.

In Akuntsú, there are few true adjective words (as presented in the above table), in comparison to the number of nouns and verbs found in this language. They would be considered a closed class due to its finite number of words; however, I will keep them into the open class, since they share some characteristics with nouns and verbs (see chapter 6 for further details).

3.3.4 Adverbs

The adverbs, like the adjectives, form a small class, diverging from the other prototypical open classes, the noun and verb classes. Adverbs are characterized as modifiers of verbs, adjectives, and other adverbs. Besides adverbial roots, the language uses reduplication and ideophones to express some adverbial notions, especially manner and degree. Morphologically, adverbs do not differ from adjectives, especially those called manner adverbs and locative adverbs. However, they are included into a separate class by means of syntax, since only nouns and adjectives can function as arguments of verbs[71]. See examples below where the adverbs are in bold font.

ADVERB ROOT CODING TEMPORAL POINT

(3.25) a. ***ɾape*** *o=k^{w}at-a* *kom*
tomorrow 1s=leave-THV PROJ
'Tomorrow I will leave'

b. *Ariano* *te=ita* ***kiɾẽ***
Adriano 3COR=arrive today/now
'Adriano arrives today'

[71]More on adverbs in chapter 6.

REDUPLICATION AND IDEOPHONES - MANNER ADVERB

(3.26) *ɨkɨ* ***k^{w}at-k^{w}at-****ka*
water boil-boil-TR
'The water os boiling (vigorously)'

In addition, locative expressions also present adverbial function, such as place, direction, and manner. An example of this case is seen in (3.27) below:

LOCATIVE MEANING

(3.27) *potʃek* *mo-mo* *te=jã* ***o=t-ek*** ***etʃe***
thing IDEO-RED 3COR=sitting 1S=R-house DIFF.
'The notebook stayed for long time in my house'

3.3.5 Pro-forms

There are pro-forms used in this language to replace nouns or noun phrases. The pro-forms are divided into personal pronouns and demonstratives. The pro-forms refer to the arguments of a predicate grammatically, and not lexically as the nouns do.

3.3.5.1 Personal pronouns

The personal pronouns are divided into two sets: dependent and independent pronouns. There is also a set of emphatic pronouns for first and second person (only). Below some of the pronouns are exemplified in their syntactic positions.

SUBJECT OF TRANSITIVE

(3.28) a. ***kitʃe*** *tawtʃe* *ko-a*
1PL.INCL peccary ingest-THV
'We eat peccary'

b. ***en*** *i=koɾom-ka*
2s 3s=cut-TR
'You cut it'

SUBJECT OF INTRANSITIVE

(3.29) ***o=****et-a-ɾa* *o=toa*
1s=sleep-THV-HAB 1s=lying
'I am going to sleep'

OBJECT

(3.30) *k^{w}aẽ te* ***i=****pit-ka*
pot 3S 3s=scrape-TR
'The pot, she is scraping it'

GENITIVE RELATION

(3.31) ***o=****ø-keɾe* *petʃe*
1s=R-rib good
'My good rib'

EMPHATIC

(3.32) ***eɾẽ*** *e=ø-po* *tʃoga* ***eɾẽ***
2S.EM 2s=R-hand bite 2S.EM
'You bite your hand'

3.3.5.2 Demonstratives and indefinite pronoun

The demonstratives in this language express their deictic reference point, showing their space location in relation to the speech act (distance/person-oriented). The demonstratives also indicate the position (laying, sitting or standing) of the referent point. Demonstratives can occur as noun specifiers or as predicate complements (more on demonstratives in §4.8.2). Some examples are described below:

DEMONSTRATIVE PRONOUNS

(3.33) a. *otʃe t-ek* *no* ***jẽɾom*** *tʃok*
1PL.EXCL R-house other DEM build
'Our other house, they built that one'

b. ***jẽ*** *kem+ki* ***jẽ*** *kem+ki=ɾõm*
DEM breast+liquid DEM breast+liquid=NEG
'This one has breast-milk, this one doesn't have breast-milk'

In Akuntsú, there is also the indefinite pronoun *no* 'other' (more on this pro-form in §4.8.3)

INDEFINITE PRONOUN

(3.34) *e=t-et* ***no****?*
2s=R-name other
'What is your other name?'
Lit: Is there your other name?

3.3.6 Particles

The particles in Akuntsú are classified as phonologically independent words. The particle can be linked up in broader constituents with different sorts of predicates according to their function. Particles are defined here as a free-standing morpheme that do not undergo any derivational or inflectional process. Semantically, it is hard to define them because they are a heterogeneous class. The particles can be divided up among discursive, negation, focus, interrogative, and modality, among others. Some examples are provided below.

(3.35) *o=ø-atap* ***ãka*** *ẽ* *ẽ* *o=ø-atap* *õk^{w}a* *on*
1s=R-hair that.way IDEO IDEO 1s=R-hair wash 1s
'My hair, that way, I wash my hair'

3.3.7 Postpositions

Postpositions are a closed class. It contains a very small number of morphemes that cannot undergo derivational or inflectional processes. Postposition phrases may function as adverb phrases syntactically. The postpositions differ from nouns, adjectives, verbs, adverbs and particles, as following:

(1) verbs take the thematic vowel and postpositions don't;

(2) the main difference from particles is that postpositions give peripheral status to the noun phrase that they are linked to. In addition, postpositions are a class that does not combine with any inflectional morphology, distinguishing them from nouns, adjectives and verbs;

(3) postpositions differ from adverbs mainly because the latter cannot not go together with nouns, as postpositions do.

These and other discussions on postpositions are presented in further chapters (see §4.3.1.1). A sample postposition is presented below:

(3.36) *te=ø-ti* *puru-ru* *aj* *imimere etʃe*
3COR=R-mother IDEO-RED stay Omerê DIFF
'His mother comes and stays around Omerê'

3.3.8 Ideophones

Ideophones are very common in Akuntsú. The ideophones and their representation of iconicity illustrate the speaker's life experience. Ideophones are used in narratives, natural conversations among themselves, and with non-Indians (more on ideophones and communicative purposes in chapter 7). A few examples of ideophones used in sentences are illustrated in the following:

(3.37) a. *on* *i=ta* ***ʧok-ʧok***
1s 3s=plant IDEO-RED
'I am planting it, planting, planting'

b. ***ʧok-ʧok*** *atiti* *ta*
IDEO-RED corn plant
'planting, planting, (I am) planting corn'

3.3.9 Interjections

Interjections in Akuntsú are words that reflect the speakers' reaction and emotion to different situations. They may express surprise, agreement, and other reactions related to attitude, feelings, etc. There is no gender distinction in the use of interjections - interjections are gender-neutral; all speakers may use them when convenient.

3.4 Summary

The purpose of this chapter was to provide a definition of clitics, affixes and particles employed during this chapter. In addition, it provided an overview of the inflectional and derivational processes in this language.

It was also demonstrated that there is only one class of relational prefix in this language, and unlike Tupí-Guaranían languages, the occurrence of these prefixes in Akuntsú is limited to nouns. Also presented was an overview of the grammatical classes in this language and a brief description of the lexical classes: (a) open classes — nouns, verbs, adjectives and adverbs — and (b) closed classes — including the remaining lexical words found in this language.

Some of the main findings are presented below:

MORPHEMES	CLASSIFICATION	CHARACTERISTICS
Oblique markers; pronouns; negation.	Clitic	• Bound morphemes • Attached to NPs and VPs
Inflection: imperative marker, relational prefix, aspectual markers. Derivation: causative markers, nominalizers, verbalizers.	Affix	• Bound morphemes • Attached to NPs and VPs • Inflection/Derivation
Negation, focus, discoursive markers.	Particle	• Independent morphemes

Table 3.5 - Sample of types of morphemes.

Below, the table summarizes the main classes in this language and the possible morphological processes that each lexical class can be involved in:

LEXICAL CLASSES	(POSSIBLE) MORPHOLOGICAL PROCESSES	TYPE: FREE OR BOUND
Nouns	• Inflection/Derivation • Reduplication • Compounding	Free
Verbs	• Inflection/Derivation • Reduplication	Free
Adjectives	• Reduplication	Free
Adverbs	• Reduplication	Free
Pronouns	None	Clitic and Free
Demonstratives	None	Free
Particle	None	Free
Postposition	None	Free

Table 3.6 - Summary of lexical classes and their allowed morphological processes.

CHAPTER 4

NOMINAL MORPHOLOGY

4.1 Introduction

This chapter aims to describe nouns in Akuntsú, focusing on their structural and functional properties. Nouns can be simple or complex: the complex nouns are the derived nouns and the compounds. The primary function of the nouns is as the nucleus of nominal phrases, as arguments, i.e. as subject/agent, object of transitive verbs, or the complement of postposition. Nominal phrases can also function as predicates where no overt copula is found.

This chapter describes the nominal classes, which are grouped into dependent, independent, proper and common (§4.2). Nominal morphology is discussed in (§4.3). Firstly, a discussion on oblique clitics and postpositions is presented, showing the difference between them, and then a brief discussion of the determinative morpheme. After that, the derivational processes are presented (§4.4). In addition, this chapter presents the possible compound forms (§4.5), as well as addressing the types of nominal reduplication (§4.6), the structure of the noun phrase (§4.7), the function of pro-forms (§4.8), and numeral quantifiers (§4.9). Next, the behavior of genitive constructions is addressed with their relation to noun phrases (§4.10). Finally, the last section gives a summary of the chapter (§4.11).

4.2 Nominal class

In Akuntsú, the nouns are morphologically divided into independent (alienable) and dependent (inalienable) nouns. By "independent nouns" is meant those nouns that represent independent entities where no possessor is required, for example elements of nature, human beings, animals, plants (though not their parts), artifacts, and generic names (see §4.2.1). Dependent nouns are inalienable nouns (that is, inalienably possessed nouns) and include elements that form part of a whole, such as parts of plants or parts of the human body (see §4.2.2). The difference between dependent and independent nominal classes is seen in the morphology and semantics of those nouns[72]. In other Tupían literature, different terminology is sometimes used to describe dependent and independent nouns: for example, "relative" and "autonomous" nouns. Some also distinguish among relative (alienable), autonomous, and absolute nouns (both of the latter two representing independent/alienable nouns)[73].

In Akuntsú, besides the distinction between dependent and independent nouns, there are also morphological differences between proper and common nouns. Common nouns can be either independent or dependent nouns, while proper nouns can only refer to individuals and places names.

Gender and classifier markers are not expressed in the morphology of this language. The notion of plural is expressed through numerals, particles and reduplication processes, where the absence of these morphemes usually conveys the singular .

[72] More on nominal classes and the terminologies employed to describe Tupían languages see, for example Rodrigues (1981, 1996), Cabral (2001), Seki (2001), and Queixalós (2005).

[73] See, for example, the description of Praça (2007) for Tapirapé, a Tupí-Guaranían language and the description of Guajá nouns found in Magalhães (2007). Magalhães (2007) differently from Praça (2007) uses the term *determiner*, distinguishing three subclasses of nouns: one with obligatory determiners, another with optional determiners and the other that do not allow determiners directly associated with the noun.

Table 4.1 illustrates types of nouns according to their specific classes. In the left column, types of nouns found in the language are described, and examples of nouns are listed in the column of the nominal class that they belong to. Note, however, that common nouns and proper nouns are not included in this table.

TYPES OF NOUNS	MORPHOLOGICAL CLASSIFICATION	
	Dependent class	**Independent class**
Kinship	*e=ø-apatʃo* *te =et-a* 2S=R-grandfather 3COR=sleep-THV 'Your grandfather sleeps'	_____
Parts of a whole	i=*ø-kit piri* 3S=R-seed throw 'Throw its seed'	_____
Human properties	o=*t-ek pagop* 1S=R-house new 'my new house'	_____
Artefacts	_____	*kɨpe* 'machete' *kado* 'necklace' *ojtpe* 'hat' *tʃajã* 'earring' *ãpe* 'comb'
Nature	_____	*karã* 'brazil nut' *kɨpek* 'papaya' borote 'star' *k^{w}ai* 'stone' *kɨp* 'tree'
Animals	_____	*patʃo* 'rat (sp.)' *jõkora* 'bird (sp.)' *ɨtɨ* 'deer' *tʃatʃakop* 'ant (sp.)' *kopiba* 'parrot (sp.)'

Table 4.1 - Types of Nouns

4.2.1 Dependent nouns

Semantically, dependent nouns (inalienable nouns) are characterized as elements that are part of a whole, kinship terms, and certain social terms, where their existence implies on the existence of other elements with which they are inherently associated. Dependent nouns are exemplified below (the dependent nouns are in bold):

(4.1) a. *no* *t-**et*** *eni* *ø-**ãm**-k^{w}a* *on*
other R-name hammock R-rope-TR 1s
'The other (thing's) name I (say is) rope of the hammock'

b. *Kani* *o=ø-**kɨpi*** *kem+kɨ=ɾom*
Kani 1s=R-younger sister breast+liquid=NEG
'Kani, my younger sister, doesn't have breast-milk'

c. *kaɾã* *t-**ep*** *=na*
brazil.nut R-leaf =ESS
'It's for the brazil nut's leaf '
Context: Talking about the leaf that will serve to store the brazil nuts.

Dependent nouns are different from independent nouns because the former form a syntactic unit with a possessive pronoun (or other type of noun), P + N (as in (4.1b)) or N + N (as in (4.1a and 4.1c)).

4.2.2 Independent nouns

The independent nouns (alienable nouns) do not require a possessor, however depednding on the pragmatics, they may optionally take another lexical noun, a pronoun or another deictic element as their possessor. When a possessor is present, the syntactic construction formed requires a relational prefix (*t-* or *ø-*). See examples 4.2 (a-c)), as following:

(4.2) a. *o=ø-**ko*** *o=ø-**ko*** *te* *iw*
1s=R-hook 1s=R-hook FOC ugly/rotten/bad
'As for my hooks, they are damaged'

b. *o=ø-k^{w}**ako*** *i-ko=na*
1s=R-guan OBJ.NMLZ-ingest=ESS
'It is my guan's food'

c. *eɾẽ* *e=ø-**koɾo*** *nõm*
2s.EM 2s=R-bowl NEG
'You don't have a bowl'

In cases where the noun is used without a possessor (4.3 (a-c)), it is seen as an element with no semantic connection to any other existential element, being totally independent from a possession construction.

(4.3) a. ***ko-tin*** *eme* *peka*
hook-ATEN DEM bring
'The small hook, bring this one'

b. ***k^{w}ako*** *kɨpek* *ko-a*
guan (sp.) papaya ingest-THV
'The guan is eating papaya'

c. ***koɾo*** *o=eɾe-k^{w}a*
bowl 1s=speak-TR
'Bowl, I say'

4.2.3 Proper Nouns

Proper nouns are understood as names that refer to unique entities that the community identifies. The proper names can also be derived from words for common nouns, depending on: **(1)** whether the intended referent in a given utterance is intended to be one of the members of the community, and **(2)** when the speakers want to give nicknames to people that

they know. Konibú's name[74] is an example of a proper name that originated from a common noun. Konibú explains that in fact his name is *k^{w}atin-atʃo*, which means 'big rattlesnake' in his own language, and that *Konibú* is what they started calling him after contact with FUNAI. His name comes from the fact that he almost died when one of these snakes bit him.

One of the main reasons that they like to use nicknames is so that the person named in that way won't know they are talking about him/her in conversations. Usually, the nicknames are from animals, fruits, or any other relevant attribute that the speakers think that the person may have.

In addition to first names, there are also other names that belong to the class of proper nouns: names of rivers and cities that they know or have heard about. Some well-known river names are*: ɨkɨtʃe* 'River of the arrows,' *ɨmɨmerɛ* 'Omerê,' *ɨkɨpiton* 'Deeper River,' *tʃarap kɨ* 'River of rays,' *moẽ* 'Moẽ' and *kawra kɨ* 'Kawra River.'

Proper nouns neither occur under the scope of demonstratives (see example (4.4)) nor appear with determinative markers (compare the proper name with no marker and the common name with determinative marker in (4.5)). These are the main morphological characteristics that distinguish proper nouns from common nouns.

(4.4) *o=ø-kɨp atap=erom* ***ke*** ***ø-kɨp*** *atap*
1S=R-leg hair=NEG DEM R-leg hair
'My leg doesn't have hair, this one's leg has hair'

(4.5) ***Karow*** *o=ø-mepirẽpit-et* *k^{w}ep* *te*
Carol 1S=R-grandchild.of.woman-DEF climb FOC
'Carol, my granddaughter, climbs'

Proper nouns cannot form a single constituent with a determinant, as in [DET +

[74] Konibú /koɾ̃ipo/ means 'snake' in Mekéns language (Galucio 2001:207).

PROPER NOUN]$_{NP}$. They are, rather, found in clauses where demonstratives form a single NP followed by another NP, which is filled by a proper noun, as indicated below:

(4.6) ***ke*** *Kani*
DEM Kani
'This is Kani'

4.2.4 Common nouns

Common nouns are those that, morphologically, are optionally marked by the determinative morpheme[75]. Common nouns can be either dependent (4.7) or independent (4.8).

(4.7) *o=ø-ei-t*
1S=R-blood-DEF
'(the) my blood'
Context: She was referring to the blood on the floor.

(4.8) *ameko-t* *k^{w}erep*
jaguar-DEF black/dark
'the black jaguar'
Context: Distinguishing cats; there were two cats at the FUNAI house — one black and the other yellow.

Common nouns can co-occur in the same NP with demonstratives. However, unlike proper nouns, the common nouns can enter into a constituent with the demonstratives, as in the following:

(4.9) ***ke*** *t-ek*
DEM R-house
'That one's house'

[75] See section 4.3.2 for more on determinative.

4.3 Nominal morphology

The language employs specific derivational morphemes, compounding, and reduplication strategies to derive and inflect nouns. In this section, oblique clitics and postpositions are presented (§4.3.1), followed by a description of determinative morphemes (§4.3.2).

4.3.1 Oblique clitics and postpositions

The bound (non-clitic) oblique markers are here called case markers, while the term "postposition" is reserved only for cases of independent words, not bound forms which come after the word that they are grammatically related to. This view differs from some Tupían literature that calls fully bound affixes "postpositions." Thus, the main difference between cases and postpositions as used in this study is whether the form referred to is attached (case markers) or whether it is an unbound word, i.e., postposition. Core arguments marked by case markers are not found in Akuntsú—i.e. there are no nominative, ergative or absolutive case markers as affixes on nouns[76], though this language has non-core arguments that are signaled by a specific clitic in Akuntsú[77].

Another term used in this section is "oblique marker," i.e. clitics that have an oblique function; they can either be attached to nouns or to phrases. Note that clitics are defined as functional word-like entities, which have to be attached to a host (phonologically), and which can be attached to hosts that belong to different grammatical categories. Clitics are placed on a continuum scale in the middle between affixes and free (unbound) forms, where the free

[76] This is also the case of other Tupían languages, as described by Rodrigues (1999:115).

[77] Some Tupían languages behave similar to Akuntsú, including for example: Mekéns (Galucio 2001), Mundurukú (Crofts 1973), Tuparí (Caspar and Rodrigues 1957, Rodrigues 1999), and Karitiana (Everett 2007).

forms can include, for example, the postpositions. A morpheme is only called an affix when it is found in a stable location - when it is attached only to a specific lexical class (see more on clitics and affixes in §3.2.2). Figure (4.1) indicates the position of clitics on a continuum.

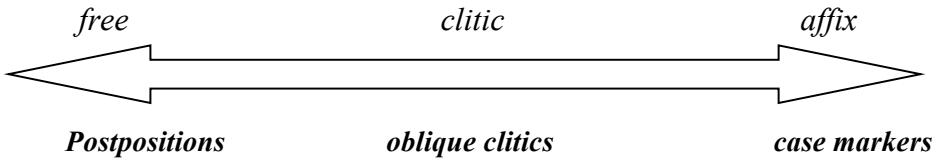


Figure 4.1 - Continuum of postpositions, clitics and case markers.

Historically, nominal case-markers across languages (core and non-core arguments) might come from either locational nouns or from serial verbs (Givón 2001:95). Looking back to Proto-Tupían, Rodrigues and Cabral (2012) postulated that "Proto-Tupían probably lacked inflectional nominal cases for marking grammatical relations (...) the morphological cases found in some Tupían families are traceable from the Proto-Tupían postpositions" (2012:517).

The main oblique clitics and postpositions found in the language are described in the chart below. Note that all types of nouns (dependent, independent, proper and common nous) can be bear oblique clitics or can be linked to postpositions, with no restrictions found so far. The glosses of each morpheme will be explained along this section.

TYPES	MORPHEMES	GLOSSES
Postposition	*etʃe*	Diffuse
	ete	Relative/Comitative
	pi	Inessive
Clitic	*=(b)õ*	Allative/Dative/Instrumental
	=(e)ɾi	Ablative
	=na	Essive/Translative
	=pe	Locative

Table 4.2 - Summary of oblique clitics and postpositions.

Semantically, the above morphemes may indicate the following meanings: locative, associative and/or temporal meanings. Note that some morphemes can be associated with more than one meaning. The discussion below will be organized according to the type of morpheme: first will be a description of postpostions, followed by a description of oblique clitics.

4.3.1.1 Postpositions

a. *etʃe*

The postposition *etʃe* corresponds to a diffuse locative. This postposition expresses a non-precise location 'through/over/at/along.' With the diffuse locative the speakers refer to a location, but do not specify the exact location. For instance, in (4.10a) the speaker is talking about a thorn that got into her own thigh, but she is not sure exactly where it is.

(4.10) a. *koni tʃe o=ø-kɨp etʃe*
thorn come 1s=R-leg DIFF
'The thorn gets into my leg'

b. *e=ø-boɾo* *etʃe*
2s=R-back DIFF
'It is along your back'

c. *k^{w}ako* *aj* *ek* *etʃe*
guan (sp.) stay house DIFF
'Guan stays at home'

d. *ek* *etʃe* *i=maã*
house DIFF 3s=store/wear
'Store it in the house'

b. *ete*

There are two semantic meanings related to the postposition *ete*: (1) the first meaning marks a noun as the point of reference; the meaning is associated with the notion 'in relation to/about;' and (2) the third meaning is the comitative postposition that expresses the idea of 'together with.' The examples below indicate a noun or a situation as the point of reference, indicating the subject matter that the speaker is talking about, meaning 'about' or 'in relation to', as shown:

(4.11) a. *te=ø-atap* *nĩ-ap* *ete*
3COR-R-hair weave-NMLZ REL
'It is the braided of her hair'

b. *i=ø-toa-ap* *atʃoa-ap* *ete*
3s=R-lying-NMLZ wet-NMLZ REL
'His place of sleeping is wet'

c. *te=potʃek* *at-a-k^{w}a* *ete*
3COR=thing catch-THV-TR.PL REL
'It is to take her things (for the second time)'

d. *aparabia t-et ete?*
non-Indian R-name REL
'What about the non-Indian's name?'

e. *o=ø-mapi ete?*
1S=R-arrow REL
'What about my arrow?'

It can also express an associative meaning (see example 4.12).

(4.12) *en baj ete*
2s buriti REL
'You are with the buriti'

The comitative postposition *ete* is attached to nouns. It semantically expresses the idea of 'together with.' It indicates that the subject of the verb phrase is doing an event accompanied by someone.

(4.13) *te=k^{w}at-a Buko ete*
3COR=leave-THV Buquá COM
'He leaves with Buquá'

c. *pi*

The inessive postposition indicates the location where the element is immersed, or inserted in. It provides the sense of 'interior', as in the example (4.14a) that indicates that the subject is going to see the interior part of the house, as follows:

(4.14) a. *o=ø-mepit t-ek pi tʃop-a on*
1S=R-daughter/son.of.woman R-house interior see-THV 1S
'I am going to see the interior of my daughter's house'

b. *o=ø-jẽ* *pi* *õk^{w}a*
1S=R-mouth interior wash
'I am washing the interior of my mouth'

c. *poga* *ø-pe* *pi* *ameko* *i=koɾa* *tʃe*
tortoise R-skin interior jaguar 3S=look.for coming
'The interior of tortoise's skin, jaguar comes to look for it'

The clitic *=bõ* can also be attached to the postpositional phrase, indicating the directionality of the element to the interior of something as in (4.15).

(4.15) *o=ø-keɾe* *atʃi* *pi=bõ*
1S=R-rib pain interior=ALL
'I have pain into my ribs'

More examples of oblique clitics are presented in the next subsection.

4.3.1.2 Oblique clitics

a. *=(b)õ*

The clitic *=(b)õ* covers two separate meanings: **(1)** an allative meaning 'towards/to/up to' and a dative one 'for;' and **(2)** an instrumental one. The morpheme *=õ* occurs after consonants while *=bõ* occurs after vowels. Below, examples with allative/dative meaning are presented:

=õ

(4.16) a. *o=ø-tʃipap* *tabɨt=õ* *ka*
1s=R-grandmother garden=ALL go
'My grandmother went to the garden'

b. *apaɾapia* *kʷamoa* *t-ek=õ*
non.Indian doctor/shaman R-house=ALL
'to doctor's house'

c. *ek=õ* *ka*
house=ALL go
'(He's) going to the house'

=bõ

(4.17) a. *eɾẽ=bõ* *i=kɨj*
2s.EM=DAT 3s=take
'For you to take it'

b. *oɾẽ=bõ* *kaɾã*
1s.EM=DAT brazil nut
'It is brazil nut'
Lit. For me, it is brazil nut.

c. *te=bõ* *kɨte* *puɾu-ɾu-ɾu* *ke=bõ* *nom*
3COR=DAT one IDEO-RED-RED DEM=DAT no
'For him (there is) one coming back, for that one there isn't'

d. *kopiba* *i=t-ek* *pi=bõ*
parrot 3S=R-house interior =ALL
'Parrot got into his house'

This clitic can also be attached to adverbs, as shown:

(4.18) a. *kojõpe=bõ* *kɨjtpit* *at* *kom*
night=ALL fish catch PROJ
'I will fish up to (until) the night'

b. *eɾape* *te=kʷat-a* *kɨɾẽ=bõ* *nõm*
tomorrow 3COR=leave-THV today/now=ALL no
'Tomorrow he'll leave, today he doesn't'

The second idea expressed by these morphemes is instrumental. The instrumental clitic is attached to the noun given the role of instrument used to achieve a goal, as shown in the example below:

(4.19) a. *pabape=bõ* *ɨkɨ* *kiram-ka* *en*
gourd=INS water pour-TR 2s
'You pour the water with the gourd'

b. *mapi=bõ* *dow*
arrow/gun=INS IDEO
'(He) killed with a gun [...]'

b. *=(e)ɾi*

The ablative clitic *=(e)ɾi* has two variations: *=ɾi,* which occurs after vowels, and *=eri,* which occurs after consonants. The ablative case expresses the meaning 'away' or 'from,' as in the following example:

(4.20) *i=ø-men=eɾi* *tʃotʃe*
3s=R-husband=ABL José
'From her husband, José'

The examples below show the ablative case functioning as the reason, source or cause of an event. For instance, in (4.21a) the papaya is the cause that motivates the event of staying home. In (4.21b) the reason for storing the kitchen is because of the jaguar, which may come to kill them. In (4.21c) shows that the parrot may die due to the hot weather. Example (4.21d) shows that the person is going to the forest with the purpose of killing wild pig and not fishing.

(4.21) a. *kɨpek* *atʃi=ɾi* *aj*
papaya pain=ABL stay
'Because of the pain from the papaya, she stays'

b. *ameko=ɾi* *i=maã*
jaguar=ABL 3s=store/wear
'Because of the jaguar, she stores them'

c. *kiakopatʃi=ɾi* *pap*
hot=ABL die
'Because of the hot weather, it may die'

d. *tawtʃe=ɾi* *mi-a* *kɨjtpit* *nom*
peccary=ABL kill-THV fish no
'It's to kill the peccary, not fish'

In addition, the ablative also indicates the moment that an event starts, giving the point in time where the event begins. The ablative is attached to an adverb in the example below:

(4.22) *kɨɾẽ=ɾi* *ta* *baj-a* *kiw-kiw*
Today=ABL DEM clean-THV IDEO-RED
'From now one, that one cleans it, ripping, ripping'

c. *=na*

The semantic function of *=na* is primarily to indicate an essive meaning, i.e., what something is, how it functions, or reporting what something's state is. This morpheme is often used to indicate how the speaker considers the existing state of things.

(4.23) a. *k^{w}e* *poket-ap=na*
game roast-NMLZ=ESS
'Game animal for roasting'

b. *pow-pow* *i-ko=na*
owl OBJ.NMLZ-ingest=ESS
'It will be owl's food (the bird that they killed)'

c. *kʷe=na* *tawtʃe=na* *takɨɾap=na* *tawpɨk=na*
game=ESS peccary=ESS spider.monkey=ESS black.monkey=ESS
'As for game animal, peccary, spider-monkey, black-monkey'

tato=na *tato* *kʷakʷa* *takɨɾap* *kʷakʷa* [...]
armadillo=ESS armadillo grab spider.monkey grab
'armadillo, (he) grabbed an armadillo, (he) grabbed a spider-monkey [...]'[78]

A change in the state of a noun is also represented by this morpheme, which seems to collapse two semantic meanings, i.e., the essive and the translative. The translative meaning indicates the results of a change, 'becoming X' or 'changing X'. The examples below express more directly the idea of changing state. For instance, the example (4.24a) shows that the man, the one who became her husband, made the bracelet she was wearing.

(4.24) a. *i=ø-men* *i-õ* *i=ø-mepit* *men=na*
3s-R-husband OBJ.NMLZ-give 3s=R-son/daughter.of.woman husband=ESS
'Her husband's given (thing), her daughter's husband (the one who became here daughter's husband)'

b. *ɨkɨ* *pekã* *a=na*
water cold exist=ESS
'There is cold water'
Lit: It turned into cold water.

d. *=pe*

The meaning of the clitic *=pe* is to express the location of a noun with more precision,

[78] The word *tato* 'armadillo' is not a loan from Portuguese 'tatu'. The word reconstructed for the Proto-Tupí is ** tʔa(j)tʔu (Rodrigues 2007b).

or to show exactly where it is placed. This clitic is semantically opposite to the diffuse locative postposition *etfe*.

With respect to the semantic locational function of *=pe*, in example (4.25a), for instance, the speaker is telling someone to go to the river to get water, specifying what part of the bank river one should go to (by pointing to the direction). The same happens in the examples (4.25b-c) below:

(4.25) a. *ɨkɨ* *at-a* *en* *ɨkɨ=pe*
water catch-THV 2s water=LOC
'You get water at the river'

b. *tɨero* *k^{w}iro=pe*
chicha container=LOC
'Chicha is at the container'

c. *kɨp* *t-ep* *e=ø-anam=pe*
tree R-leaf 2s=R-head=LOC
'The leaf of the tree is on your head'

4.3.2 Determinative

The determinative is a nominal morpheme that can indicate the idea of specificity or familiarity of the noun. When the determinative morpheme expresses the idea of familiarity, both speaker and listener understand which element is being referred to (Dryer 2011)[79]. Note that it is not an obligatory marker and speakers tend to use it depending on the pragmatics of the situation. There are three allomorphs found so far: *-t* (before vowels), *-et* (before consonants), and *-n* (before nasal vowels), as seen in the following examples:

[79] In Matthew Dryer & Martin Haspelmath, eds. *The World Atlas of Language Structures Online*. Munich: Max Planck Digital Library, chapter 37 and chapter 38 (http://wals.info/chapter/38 and http://wals.info/chapter/37).

(4.26) a. *Enotej ø-ei-t βuh*
Enotej R-blood-DEF IDEO
'Enotej's blood fell'

b. *Kawra ki-t*
Kawra liquid-DEF
'Kawra River'

c. *tʃaɾimẽ ø-okʷaj t=ø-okʷaj-et* [...]
hummingbird R-tail 3S=R-tail-DEF
'Hummingbird's tail, its tail [...]'

d. *akop te e=t-ek-**et***
hot FOC 2s-R-house-DEF
'Your house is hot'

e. *mepit-**et** jẽ jẽɾom tiɾi*
woman/son.of.woman-DEF DEM DEM two
'These are the daughters, there are two there'

f. *aɾamĩɾa-**n**-atʃo*
mulher-DEF-INT
'The big female'

g. *aparabia-**t** kʷamoa o=iɾi-ka*
non.Indian-DEF shaman 1s=heal-TR
'The doctor healed me'

In addition, the determinative morpheme presents a case of argument tracking through the discourse. That is, in discourse, when a previously introduced NP is repeated later in the clause, the same NP may be repeated but with the determinative marker attached to the repeated NP. In (4.27c), it is used to refer back to some previously mentioned referent, however the referent is known only for the speaker but not for the listener, as illustrated below:

(4.27) a. *te* ***aj*** *ko-a* ***aj-et*** *ko-a* [...]
3s cajá ingest-THV cajá-DEF ingest-THV
'He eats cajá, (he) eats the cajá [...]'

b. *on* *i=kiɾam-ka* ***ɨkɨ*** *tʃooo* *kɨpitʃik* ***ɨkɨ-t*** *ãka* [...]
1s 3S=pour-TR water IDEO cold water-DEF that.way
'I poured the water, I poured water, the cold water, that way [...]'

c. [...] *aramira nom* *aramira* ***apaɾabia*** *dow*
woman no woman non.Indian IDEO
'woman no, woman, the Non-Indian shot'

nako *at-a* *ãka* *ɨkɨ* *ø-ape* *dow* ***apaɾabia-t*** [...]
man catch-THV that.way water R-path IDEO non-Indian-DEF
'[...] (they) caught men, that way, the river's path, the non-Indian shot [...]'

The morpheme *-(e)t* described in this section was also analyzed in two other Tuparían languages: Tuparí (Rodrigues and Caspar 1957, Alves 2002, Seki 2002) and Makuráp (Braga 2005). Seki (2002:304-305) analyses the morpheme as a nominative suffix for the Tuparían language, while Rodrigues and Caspar (2007) and Alaves (2004) it as a determinative morpheme. Braga (2005), on the other hand, analyses it as a genitive morpheme. By looking at the occurence of the determinative morpheme in Akuntsú, it is possible to affirm that the behavior of this morpheme in this language is similar to one analyzed for Tuparí language (Cabral, Raul Tuparí, Isaias Tuparí and Barros (forthcoming)). Briefly stating, the authors present the morpheme *-et* in Tuparí as a suffix that specify the noun as the main topic of the discourse, which is familiar to the speaker (only)[80].

[80] The authors of this study and I keep the same label given for Rodrigues and Caspar (1957).

4.4 Derivational Morphology

Derivational morphology affects both verbs and nouns. In this section, only derivational morphemes responsible for deriving nouns are discussed. Nominal derivation is formed through affixation onto verbal roots, creating derived nouns. Next, the augmentative and diminutive affixes will be described. These affixes derive nouns whose meaning changes, but whose lexical class does not change.

4.4.1 Derived nouns

The morpheme *-ap* derives nouns from transitive verbs (4.56-4.57) and intransitive verbs (4.58). A cognate suffix of the same shape and meaning is also described for languages related to Akuntsú (Alves 2004:67; Braga 2005:72; Galucio 2001:101 and Nogueira 2011:107). The nominalizer is known as NAME OF CIRCUMSTANCE, a term used by Rodrigues (2001:112, cf. also Braga 2005:78) to refer to a morphosyntactic phenomenon characteristic of Tupían languages. The morpheme derives nouns from verbs giving them a meaning of place, time, instrument, means, cause or the product of the verbal action.[81]

NAME OF CIRCUNSTANCE

[81] There is also the suffix *-at,* which has a similar behavior to one found in Tuparí, called AGENT NOMINALIZER (as proposed by Rodrigues and Caspar (1957)). This suffix derives nouns from transitive verbs, giving them a semantic status of agent. This nominalizer does not occur as frequently in the data as the nominalizer cited above, and it was only found with the verb 'to ingest' *ko*. However, I decided to not include in this dissertation due to the number of examples attested so far.

e=ø-men	*pitoa*	*ko-a-at*
2S=R-husband	tobacco	ingest-THV-AG.NMLZ

'Your husband is smoker'

(4.28) a. *õjpe* *paj-ap* *=na*
snuff clean-NMLZ =ESS
'It is for snuff-brush'

b. *õjpe* *ko-ap*
snuff aspire-NMLZ
'Sniffer'

c. *tokej* *et-ap*
ant (sp.) sleep-NMLZ
'Ant's sleeping place'

d. *tʃop-a* *te* *parã-ap*
see-THV FOC overthrow-NMLZ
'She will see the overthrow'

e. *tawtʃe* *tʃoga-ap*
peccary bite-NMLZ
'Peccary's bite'

The other affix that derives nouns is the OBJECT NOMINALIZER *i-*. Unlike the suffix *-ap*, the prefix *i-* is only attached to transitive verbs. It always occurs after a noun or a pronoun in a possessive syntactic relation with the derived noun.[82]

OBJECT NOMINALIZER

(4.29) a. *taptot* *te=i-ko*
manioc 3COR=OBJ.NMLZ-ingest
'Manioc is his own food'

b. *kopkap* *o=i-at*
Annatto 1s=OBJ.NMLZ-catch
'Annatto my caught (thing)'
Lit: Annatto of catching.

[82] The other related languages also present a cognate prefix: *-i* for Akuntsú, Mekéns and Tuparí and *-ĩ* for Makuráp language, which according to Rodrigues, Cabral and Corrêa-da-Silva (2006:29) resulted from the Proto-Tupí **-*imi*.

c. *niam Tʃaruj=i-mok^{w}a*
bracelet Tʃaruj=OBJ.NMLZ-make
'Bracelet of Tʃaruj's making'

d. *o=i-ko tok-k^{w}a o=jã*
1S=NMZL-ingest IDEO-TR.PL 1s=sitting
'I am punching my food'

4.4.2 Diminutive and augmentative

Akuntsú employs a diminutive morpheme *-tin* and an augmentative *-atʃo*. The origin of these morphemes can be traced back to the Proto-Tupían **-*ʔin* and **-*atʃu* (Rodrigues and Cabral 2012:521). These morphemes refer to the size of something or the expansion of an event (if it is big or not). They are analyzed here as derivational morphemes (see also the difference between inflection and derivation in section 3.2.3) because of their semantics, changing the meaning of the noun, though the class is not affected.

DIMINUTIVE

	Column A		Column B
(4.30) a.	*kɨpe* 'machete'	→	*kɨpe-tin* 'knife'
b.	*apaɾa* 'banana'	→	*apaɾa-tin* 'small banana'
c.	*ɨkɨ* 'river'	→	*ɨkɨ-tin* 'stream/small tributary'
d.	*tawtʃe* 'peccary[83] (*Pecari tayassu*)'	→	*tawtʃe-tin* 'caititu (*Pecari tajacu)*'
e.	*mepit* 'son/daughter.of.woman'	→	*mepit-tin* 'offspring'
f.	*k^{w}ako* 'rusty-margined guan *(Penelope superciliaris)*'	→	*k^{w}ako-tin* 'black-fronted guan (*Pipile jacutinga*)'

The diminutive is used to talk about something with affection. In example (4.31), the

[83] Knowing also as '*queixada*' in Brazil.

speaker is reporting a story in which he is talking to his granddaughter.

(4.31) *o=ø-tojẽpit-tin* *ẽ tow ẽ tow*
1s=R-grandchild.of.man-DIM DEM dark DEM dark
'My dear granddaughter (little granddaughter) this is dark, this is dark,'

ebapap ɨɾo tojẽpit-tin
eye dimmish grandchild.of.man-DIM
'the eyes are shrinking, my dear granddaughter'

The diminutive *-tin* can also be attached to the noun *mepit* 'son/daughter.of.woman' expressing the meaning of small (or a very small thing) (4.32a-c) and offspring (4.33), forming a complex word.

(4.32) a. *taptot t-ep mepit-tin*
manioc R-leaf small
'Small leaf of manioc'

b. *kɨp t-ep mepit-tin*
tree R-leaf small
'Small leaf of a tree'

c. *k^{w}i mepit-tin*
ax small
'Small ax'

(4.33) *jõkoɾa mepit-tin*
bird (sp.) offspring
'Bird's offspring'

Besides the affix *-tin*, the notion of small size is also expressed by the adjective *tʃokĩn* (4.34a). The adjective can be reduplicated to indicate the degree of smallness (4.34b). *tʃokĩn* can also express a meaning of 'little/few' as in illustrated in (4.34c).

(4.34) a. *en* *tʃokĩn* *te*
2s small FOC
'You are small'

b. *Aramira* *ø-toa-ap* *tʃokĩn-ĩn-ĩn*
Aramira R-lay-NMLZ small-RED-RED
'Aramira's hammock is very small'

c. *tʃokĩn* *i=ko-a*
little 3s=ingest-THV
'(He) eats little (of) it'

In addition, the diminutive can be attached to nouns indicating the amplitude of some event, as for instance in (4.35) where *-tin* indicates that the cracking of the hands was not louder, giving to the phrase an attenuative meaning.

(4.35) *orẽ=bõ* *po ø-akã* *pia-tin* *ãka* *piiii*
1S.EM=DAT hand R-bone crack-DIM that.way IDEO
'For me, there is small cracking of hand bones, that way, cracking'

AUGMENTATIVE

	Column A		Column B
(4.36) a.	*kɨp* 'leg'	→	*kɨp-atʃo* 'wide leg'
b.	*apara* 'banana'	→	*apara-atʃo* 'big banana'
c.	*ɨkɨ* 'river'	→	*ɨkɨ-atʃo* 'big river'
d.	*k*^{w}*atin* 'snake (generic)'	→	*k*^{w}*atin-atʃo* 'rattlesnake'

The suffix *-atʃo* conveys the meaning of 'big size,' 'tall,' and 'wide', as illustrated in the following examples:

(4.37) a. *on* *o=ø-po-atʃo* *en* *te* *tʃokĩn*
1s 1s=R-hand-INT 2S FOC small
'My hand is big, you have a small (one)'

b. *kɨp-atʃo*
tree-INT
'Wide tree'

c. *Pupak* *kɨjtpit-atʃo* *at-a* *kom*
Pupák fish-INT catch-THV PROJ
'Pupák will get big fish'

In addition, speakers also make use of the ideophone *tʃo* to represent the meaning of big size, and the vowel is often lengthened (more on ideophones in chapter 7).

(4.38) *ke* *borote-atʃo=ri* *tʃooo* *jẽrom* *baro-baro*
DEM star-INT=ABL IDEO DEM star
'That star is getting bigger, there it is the star (another type of)'

The word *tʃoke* carries the feature of big size and also adds the sense of a person or thing growing up:

(4.39) a. *o=ø-eo* *tʃoke*
1s=R-belly big
'My belly is big'

b. *i=tʃoke* *tʃop* *en*
3s=big see 2s
'See the big one!'

c. [...] *ko-a* *ko-a* *tʃoke*
ingest-THV ingest-THV big
'[...] he ate a lot and he got big!'

4.5 Compound forms

The noun in Akuntsú can consist of two or more elements that together form a lexical unit. Compound forms can be combined of two or three forms, including nouns and adjectives. This creates one lexical unit of two (or more) juxtaposed nominal or adjectival components. Juxtapositions are combinations of two independent words, which have their own stress, functioning syntactically as unit. Juxtaposed elements form a noun that has one of the meanings associated with one of the combined elements. On the other hand, compound nouns (also labeled exocentric compounds by the literature) are the combination of two elements where the semantic result of such combination is a noun completely semantically different from the combined parts. Compound nouns also have independent stress, as juxtaposed nouns do. Thus, juxtaposition here relates to what are called endocentric compounds, where the meaning of the compound corresponds to the meaning of one of the components. The exocentric compounds are those whose meaning denotes "something which is different from either of their free forms" (Aikenvald 2007:30).

According to Payne (1997:92-93), there are two criteria used to refer to something as a compound: (1) FORMAL CRITERIA: stress, unusual word order, morphophonemic processes — which are not the case in the Akuntsú language; (2) SEMANTICS: the meaning of a compound is either more specific or entirely different from the combined meanings of the word that make up the compound — this criterion is the one that most fit compounds in Akuntsú.[84]

[84] Among the related languages, Mekéns has an unusual word order of noun and adjective when they form a compound. In compound words, the adjective comes first while in a noun phrase the adjective always follows the noun (Galucio 2001:105).

However, one useful test to check for compound status is by checking whether or not combined elements allow the insertion of an extra element between them. This type of evidence has been the most efficient to differentiate noun phrases (that allow adjectives after the noun) and compound forms (where an adjective is not allowed among the elements in a compound).[85]

(4.40) *kijtpit pepo kop perek* <u>But not</u> **kijtpit perek pepo kop*
fish wing/fin red long
'long fish (sp.)'

Each element of the compound carries its own stress. Besides the semantic criteria and the inserted element test, there are no other efficient formal criteria to differentiate compounds from noun phrases.

From the three patterns described in section 3.2.3 for the Tupían languages, Akuntsú compounds consist of only [NOUN + NOUN]. The cross-category compound of [NOUN + INTRANSITIVE.VERB] and [NOUN + TRANSITIVE.VERB] were not identified in Akuntsú. The other compound patterns found in Akuntsú are the forms [NOUN + ADJECTIVE] — since in this language adjectives are considered an independent (open) class — [NOUN - NOUN - ADJECTIVE], and [NOUN + NOUN + NOUN]. Note that the opposite order of [ADJECTIVE + NOUN] is not found in compounds (it does not occur in other morphosyntactic contexts either).

[85] This type of test is not uncommon. It was used to identify compounds in others languages too, as for example in Karo (Gabas 1999:114), a Tupían language that like Akuntsú there are no formal criteria to differentiate compounds and noun phrases.

JUXTAPOSITION

The nouns in juxtaposition form a syntactic unit of [DETERMINANT + DETERMINER], where the head of the juxtaposed elements is on the right. The examples below are semantically compositional in the sense that the meaning of the compound is a sum of the meanings of its the components in the compound. A juxtaposed noun never refers to a specific item, but only those items generically, i.e., it does not denote a particular referent but the entire class — that is, in *koɾo +am* 'rope of the bowl,' the element rope does not refer to a particular bowl, but rather to ropes of bowls in general.

Some of these compounds are formed with alienable nouns, which can occur without any other element, forming a complete noun phrase; others are formed with inalienable nouns that cannot occur by themselves as a complete noun phrase, e.g. *jãj* 'tooth' and *am* 'rope'.

$[N_1 + N_2]$

MODIFIER + HEAD

(4.41) a. *ãpita + k^{w}ak*
nose + sound
'snoring'

b. *koɾo + am*
bowl + rope
'rope of the bowl'

c. *boɾo + kɨp*
back + wood
'spine'

d. *pi + ape*
foot + skin
'foot's nail'

Note that when there are more than two elements forming the juxtaposed noun, the head is still the right-most element. The examples in (4.42 a-d) present nouns with more complex formations than those presented above:

(4.42) a. *o=ø-jãj + kɨp + pe*
1S=R-tooth + stick + skin/bark
'my gum'

b. *aw-aw + jã + pe*
child + sitting + skin/bark
'uterus'

c. *ko + jã + pe*
ingest + sitting + skin/bark
'stomach'

d. *eni + am + kɨp*
hammock + rope + stick
'hook of the hammock'[86]

Other types of compounds with different lexical classes are exemplified below.

[NOUN + ADJECTIVE]

(4.43) a. *ɨkɨ + tʃaro*
river + yellow
'Yellow River (name of river)'

b. *tedo + pak*
rubber + white
'Candle'

[86] Talking about the non-Indian's hook.

c. *tapɨt + pɨt*
garden + old
'capoeira'[87]

[NOUN + NOUN + ADJECTIVE]

(4.44) *kɨtpit + pepo + kop*
fish + wing/fin + red
'fish (sp.)'

COMPOUNDS

Compounds here are treated as a combination of elements which has a different semantic meaning from the sum of the combined elements. The resulting meaning is not predictable from the two (or more) constituents of the compound, as seen in the following examples:

(4.45) a. *ebapap + pi + ʧop-ap*
eye + interior + see-NMLZ
'mirror'

b. *otat + niŋ*
fire + striped
'smoke'

c. *ororo + pe*
cotton + skin/bark
'clothes'

[87] According to wikipedia http://en.wikipedia.org/wiki/Capoeira, the word *capoeira* in Portuguese "may have come from Tupi words *ka'a* ("jungle") *e pûer* ("it was")"; it is used to refer to an old part of the jungle that has been burned and being used as a garden for Indians or non-Indians.

d. *toa-ap + t-ep*
lie-NMLZ + R-leaf
'mattress'

There are also examples of lexicalized compounds that form complex words. Some of them are illustrated below:

(4.46) a. *te=(a)kat-a-ap*[88]
3COR=fall-THV-NMLZ
'rain'

b. *epa + kɨ*
eye[89] + liquid
'tear'

4.6 Nominal reduplication

Nominal reduplication signals the semantic meaning of plurality. Either the stem can be reduplicated (4.47) or the syllable can be reduplicated (4.48), where (4.48a) is a lexicalized form.

(4.47) a.

REDUPLICATED FORM	UNREDUPLICATED FORM
pi pi maã en	*pi maã en*
foot foot store/wear 2S	foot store/wear 2S
'You wear the feet'	'You wear the foot'

b.

REDUPLICATED FORM	UNREDUPLICATED FORM
aw-aw aw-aw wen-a	*aw-aw erek-k^{w}a*
child child finish-THV	child speech-TR.PL
'Children are gone'	'The child is talking'

[88] Note that the phonological form of the verb 'to fall' is *akat*, however, the first vowel of the verb is deleted to form the compound. The compound is always pronounced as [teˈkarap].

[89] *epa* is part of the radical of the word for 'eye' *epapap*.

(4.48) a.

REDUPLICATED FORM	UNREDUPLICATED FORM
o=mepit-ẽpit	*o=mepit*
'my granddaughter'	'my daughter'

b.

REDUPLICATED FORM	UNREDUPLICATED FORM
ba.baoɾo	*baoɾo*
'many woodpeckers'	'woodpecker'

c.

REDUPLICATED FORM	UNREDUPLICATED FORM
ɨɾi-ɨɾibo	*ɨɾibo*
'many locusts (sp.)'	'(one) locust (sp.)'

Numeral quantifiers can also be reduplicated, as shown:

(4.49)

REDUPLICATED FORM	UNREDUPLICATED FORM
tiɾi-tiɾi apaɾa	*tiɾi apaɾa*
two-RED banana	two banana
'four (or many) bananas'	'two bananas'

Note that the language also has reduplicated stems that are fully lexicalized; some examples are given below:

(4.50)

ʧa-ʧakop	'ant (sp.)'
k^{w}ẽ-k^{w}ẽ	'scissors'
baw-baw	'wind'
beɾi-beɾi	'mat'
wẽɾo-wẽɾo	'European bee'
ɨɾo-ɨɾo	'bird (sp.)'
koɾa-koɾa	'chicken'

4.7 Structure of the Noun Phrase

An obligatory noun is the central constituent of noun phrases. The noun that forms the head of the NP can be attached to personal pronouns (pron) (with the exception of the

proper nouns); it can be modified by demonstratives (dem), numeral quantifiers (quant), and adjectives (adj).

The NP functions as an argument when used as subject or object of a predicate. The order of the constituents is basically the one provided below. However, the order is not rigid for quantifiers and demonstratives. The basic noun phrase template is presented here:

[(Dem) (quant) (pron) (rel prefix) Noun (Adj)] $_{\mathbf{NP}}$

Figure 4.2 - Noun phrase template.

NPs - GENITIVE (POSSESSIVE)

Possessive noun phrases occur with pro-forms or with nouns. The noun phrase has a fixed order where the pronoun always precedes the possessed element. When there is no pronoun to determine the possessive relation, a noun is used in a genitive construction [N + N] (details in section 4.10).

NPs - WITH DEMONSTRATIVES

The demonstrative appears in a noun phrase coding spatial orientation and position of the element in discussion with respect to the hearer and speaker. They do not have a fixed order; they may appear before or after the noun. Note, however, that demonstratives can also appear as the head of a NP (see details in section 4.8.2).

(4.51) a. *jẽ* *jõkora*
DEM bird
'This bird (sp.)'

b. *jõkoɾa jẽ*
bird DEM
'This bird (sp.)'

NPs - WITH QUANTIFIERS

Numeral quantifiers can modify a noun phrase. As with demonstratives, the numbers can appear on their own, functioning as the head of the NP.

(4.52) *Patʃo Patʃe ti̵ɾi̵ t=ø-ajtʃi*
Patʃo Patʃe two 3S=R-wife
'Patʃo and Patʃe were his two wives'

(4.53) *Puɾa te ki̵te*
Pura FOC one
'Pura is alone'
Lit: Pura is one.

NPs- WITH ATTRIBUTIVE

This type of noun phrase contains a noun as its head and an adjective as its modifier. The adjective *baba* can form a possessive (genitive) construction with the noun, as in (4.54) or the adjective can form a predicate by itself, as in (4.55).

(4.54) *en aɾamiɾa* [*aɾamiɾa baba*] Genitive construction
2s woman woman woman (after having a baby)
'You are woman, (a) middle-aged woman'

(4.55) *eɾẽ* [*baba*]$_{\text{predicate}}$ *o=eɾek-k^{w}a*
2s woman (after having a baby) 1s=speech-TR.PL
'You are middle-aged woman, I say'

4.8 Pro-forms

The pro-forms described in this section are personal pronouns, demonstrative pronouns and indefinite pronouns.

4.8.1 Personal pronouns

Akuntsú has three sets of personal pronouns: independent, dependent and emphatic. The pronouns function as arguments of the predicate. The arguments can be expressed by both dependent (bound forms) and independent pronouns (free forms). The dependent forms represent the reduced form of their counterparts' free forms (with exception of first person exclusive, second and third person plural).

Dependent (bound) pronouns are attached to nouns, indicating the possessor of the phrase, and to verbs, indicating the arguments of the verb. The first person plural is divided into two categories: the exclusive and inclusive persons. Among the dependent pronouns, there is only one coreferential pronoun to indicate third person[90]. The dependent pronouns are clitics that function as pro-clitics in the clause. Bound pronouns can function as object or subject when attached to verbs or as the possessor when attached to nouns.

On the other hand, independent (free) pronouns only function as subjects of transitive verbs. In verbs, there is only one pronoun attached directly on the verb, which is also the case of most Tupían languages (Rodrigues 1999)[91]. The below table shows all three types of pronominal forms in this language:

[90] More on coreferentiality in section 5.10

[91] Details in section 5.4

	INDEPENDENT	DEPENDENT	EMPHATIC
1S	on	o=	oɾɛ̃
2S	en	e=	eɾɛ̃
3S	te	i= ~ t=	---
3COR	---	te=	---
1PL.INCL	kitʃe	ki=	kiɾɛ̃
1PL.EXCL	otʃe	otʃe[92]	---
2 PL	iat	iat	---
3 PL	kejat	kejat	---

Table 4.3 - Pronominal forms.

The personal pronouns, independent and dependent forms, can be fully replaced by full nominal phrases (NP), as illustrated below:

(4.56) a. *Tʃaruj* *k^{w}ako* *poɾo-ka*
Tʃaruj sweet.potato dig-TR
'Tʃaruj is taking out the sweet potato'

b. *on* *i=poɾo-ka*
1s 3s=dig-TR
'I am digging it up'

(4.57) *on* *eni* *eɾepe* *on* ***t***=*eɾepe*
1S hammock tie 1S 3S=tie
'I tie the hammock, I tie it'

In light of the data presented above, it might be important to ask: is it possible in Akuntsú for personal pronouns and NPs to co-occur in the same utterance? The co-occurrence of NPs and pronominal markers in the same utterance will depend on whether the

[92] Note that *otʃe*, *iat*, and *kejat* are not considered clitics. These pronouns carry their own word-level stress and as such are not considered phonologically bound to their hosts. That some dependent pronouns of the language are considered clitic-like while others are not suggests that Akuntsú pronouns are still in transition from independent words to clitics.

full NP is in topic position or not, i.e., whether it is left-dislocated and placed outside of the phrase. Personal pronouns, which behave as the subject of intransitive clauses, are in complementary distribution with full NPs. However, the personal pronouns in object position can optionally co-occur with full NPs when the full NP is placed in topic position. The example below shows the noun *kʷiɾo* 'recipient' and the *i=* third person pronoun (both objects) in a non-complementary distribution:

(4.58) a. *kʷiɾo* *on* *i=kɨta*
recipient 1s 3s=cover
'Recipient, I cover it'

b. *pea* *en* *i=poka*
firewood 2s 3s=burn
'Firewood, I burned it'

The structures above illustrate that the object noun in these cases is not an argument but an adjunct; thus, the dependent pronouns can co-occur with a noun in the same clause. The relation between the object noun and the object clitic is an anaphoric one, where the personal marker is the internal argument and the noun is merely an adjunct. The data above is similar to what is discussed, for instance, by Arregi (2003) for Spanish. In Spanish, Arregi (2003:33) calls the same situation found in Akuntsú a left-dislocation clitic (see also Payne 1997).

The main syntactic characteristics of independent and dependent pronouns are summarized in the table below and discussed further in this section.

INDEPENDENT PRONOUNS	DEPENDENT PRONOUNS
• Free word-order • They can appear at the beginning or end of the utterance	• Fixed word-order • OV for transitive or SV for intransitive
• Agent of transitive verbs	• Subject of intransitive verbs
• Anaphoric topic of intransitive utterance	

Table 4.4 - Syntactic characteristics of pronouns.

DEPENDENT PRONOUNS

Dependent pronouns function as the subject markers of intransitive predicates (4.59), the object markers of transitive predicates (4.60), and the subject markers of stative predicates (4.61). Dependent pronouns also mark the possessors of possessed nouns (4.62).

(4.59) *e=neme-ø*
2S=run-THV
'You ran'

(4.60) *kap* *e=pɨt-ka*
wasp 2s=hole-TR
'Wasp stung you'

(4.61) a. *e=pip*
2s=be.afraid
'You are afraid'

b. *t=akat-a*
3S=fall-THV
'It fell'

(4.62) a. *e=ø-ampita* *tãm*
2S=R-nose full
'Your nose is congested (Lit. Your nose is full)'

b. *te=ø-men* *te=ø-kɨjt* *at-a*
3COR=R-husband 3COR=R-salt catch-THV
'Her husband got his salt'

INDEPENDENT PRONOUNS

The independent pronouns assume the semantic function of agent (A) in transitive clauses, as follows:

(4.63) a. *on* *i=mi-a*
1s 3s=kill-THV
'I killed it'

b. *en* *i=at-a* *ka*
2s 3s=catch-THV go
'You (go and) get it'

c. *te* *kit* *ko*
3S seed ingest
'He ate the seed'

d. *kitʃe* *kɨp* *boja*
1PL.INCL wood cut
'We cut the wood'

Note that in intransitive constructions the occurrence of independent pronouns is optional, as indicated by the parentheses.

(4.64) a. *e=neme* *(en)*
2S=run (2S)
'You ran'

b. *o=atʃino (on)*
1S=sneeze (1S)
'I sneezed'

Independent pronouns can also be attached to oblique markers, as exemplified below:

(4.65) *en=õ ki pi?*
2S=ALL liquid interior
'Is there liquid inside you?'

EMPHATIC PRONOUNS

Besides the dependent and independent pronouns, there is another set of pronouns that are used to emphasize the subject of a sentence; this class is called emphatic pronouns.

(4.66) a. *oɾẽ o=erek-k^{w}a*
1S.EM 1s=speech-TR.PL
'I speak'

b. *eɾẽ o=ø-tojẽpit*
2S.EM 1s=R-grandchild.of.man
'You are my grandchild'

Emphatic pronouns can also be attached to oblique clitics, as provided below:

(4.67) *kiɾẽ=bõ ki=pera*
1PL.INC.EM=DAT 1PL.INCL=wake.up
'We woke up'

4.8.2 Demonstrative pronouns

The demonstratives in Akuntsú form a closed class. They express a deictic notion, serving as pronouns, and can also appear with some oblique clitics. The demonstratives

semantically indicate the spatial location of a referent (speaker or hearer), give it meaning as 'there/here'[93], and indicate its position (standing, sitting, laying). So far, eleven demonstratives have been attested in this language[94], and a tentative summary of their functions in the language is presented in the table 4.5 below:

	ORIENTATION WITH RESPECT TO HEARER/SPEAKER			POSITION			
	Close to speaker	Close to hearer	Far from Hearer/Speaker	Lying	Sitting	Suspended	Standing
eme	x			x			
ẽ	x					x	
ẽrom			x			x	
jẽ	x	x			x		
jẽrom			x		x		
õ		x				x	
õrom		x		x			
ta			x				x
tarom		x					x
ke	DEFAULT						
ẽne			x	x			

Table 4.5 - Demonstratives

[93] Demonstrative pronouns that can indicate the meanings 'there/here' can be also classified as adverbial demonstratives.

[94] Aragon (2008:95) identified *eme*, *jẽ*, *jerõm*, and *tejke*. The demonstrative *tejke* presented in Aragon is not included in the class of demonsstratives here.

From a pragmatic point of view, the demonstratives function to direct the hearer to the element mentioned in the present situation. In addition, the demonstratives also function as anaphoric and discursive deictics.

a. *eme* 'close to the speaker, lying'

(4.68) a. *ororo +pe eme eme pi+kapa-kapa*
cotton+skin DEM DEM foot+roll-RED
'This shirt, this shoes'

b. *koro+am eme t-et =na* (Aragon 2008:96)
bowl+rope DEM R-name=ESS
'Rope's bowl, it is this one's name'

c. *eme maã eme*
DEM cover DEM
'This one, cover this one!'

b. *jẽ* 'close to the speaker and the hearer, sitting'

(4.69) a. [...] *i=no t-et jẽ t-et*
3s=other R-name DEM R-name
'[...] his other name, this one's name'

b. *e=ø-toa-ap jẽ*
2s=R-lying-NMLZ DEM
'Your hammock is this one'

c. *en e=ø-kem kɨ pi jẽ=bõ nom*
2s 2s=R-breast liquid interior DEM=DAT no
'You have milk inside, for this one there isn't'

d. *jẽ aw-aw* (Aragon 2008:96)
DEM baby
'This is a baby'

c. *jẽrom* ‘far from speaker/hearer, sitting’

(4.70) a. *jẽrom tʃe bok*
DEM COMING stay
‘It is coming to stay there’
Context: Showing the place where they are going to build the house.

b. *jẽrom tʃe tope*
DEM COMING disappear
‘From there it disappeared’
Context: where the fish moved and disappeared.

c. *jẽrom õpa en* (Aragon 2008:97)
DEM beat 2s
‘You hit that’

d. *pero jẽrom te aj*
macaw DEM FOC stay
‘Macaw stays there’

d. *ẽ* ‘close to speaker, suspended’

(4.71) *ẽ apaɾa*
DEM banana
‘This is banana’

e. *ẽrom* ‘far from speaker/hearer, suspended’

(4.72) a. *ẽrom apaɾa*
DEM banana
‘That is banana’

b. *ebapa ẽrom*
moon DEM
‘That is the moon’

f. *ke* Default demonstrative[95]

(4.73) a. *ke* *amon*
DEM soap
'This is soap'

b. *ke* *ɨtɨpope*
DEM liana (sp.)
'This is liana (sp.)'

c. *ke* *jõ*
DEM here
'This was here'

d. *Pupak* *ko* *at-a* *ke=bõ*
Pupák fishhook catch-THV DEM=DAT
'Pupák catches the fishhook for this one'

e. *ke=bõ* *nɨram*
DEM=DAT stand
'For that one, (she) is standing'

f. *ke=bõ*
DEM=ALL
'To/for that one'

g. *ke* *tʃe*
DEM coming
'Coming from this (part)'
Context: Showing where he should cut the game animal.

h. *ke=bõ* *nom* *t-et*
DEM=DAT no R-name
'For this one there is no name'

[95] In Mekéns *ke* is analyzed as a pro-uninflected verb, which is used as an anaphoric element to reference information that occurred previously in the discourse (Galucio 2001:51). In Makuráp, *ke* is seen as a particle that reports someone's words, reinforcing what the person is saying or the word of someone else that is reported by the speaker (Braga 2005).

i. *ke=bõ* *nom*
DEM=DAT no
'That is not'
Context: Answering if the thing is hers.

There is also the demonstrative *ke=tʃa* which was found in only two examples:

(4.74) a. *ke=tʃa* *βuh*
DEM=HIGH IDEO
'This one fell'

b. *ke=bõ=tʃa*
DEM-ALL-HIGH
'To this one'
Context: the one sitting on the rail.

g. *õ* 'close to the hearer, suspended'

(4.75) *õ*
DEM
'This one'
Context: showing which banana's stem I should get.

h. *õɾom* 'close to the hearer, lying'

(4.76) *oɾom* *a*
DEM exist
'There is one there'
Context: Talking about the bowl on the floor.

i. *taɾom* 'far from hearer and speaker, standing'

(4.77) *kɨɾẽ=ɾi* *ta* *paj-a* *kiw-kiw*
Today=ABL DEM clean-THV IDEO-RED
'From now one, that one cleans it, ripping, ripping' (repeated from (4.22))

j. *taɾom* ‘close to the hearer, standing’

(4.78) *taɾom o=ø-kɨpe*
DEM 1S=R-machete
‘That one is my machete’
Context: There were two machetes: one standing and the other lying on the floor.

k. *ẽne* ‘invisible’

(4.79) *ẽne at*
DEM catch
‘Catch it!’
Context: It is to the hearer catch the thing that he was asking for.

(4.80) *ẽne*
DEM
‘This’
Context: In the conversation, he was pointing to the direction of the river which was not visible.

4.8.3 Indefinite pronoun

There is also the pro-form *no* ‘other’ that can function as the head noun of the phrase. However, it doesn't appear alone in the NP; that is, it needs to be specified by a noun, another demonstrative or by a personal pronoun.

NOUN + NO

(4.81) a. *ebapa no ebapa no te=ita*
moon other moon other 3COR=arrive
‘other moon, other moon, he arrives’

b. *ek no*
house other
‘other house’

DEM + NO

(4.82) a. *tojẽpit* *jẽ no* *i=at*
grandchild.of.man DEM other 3s=catch
'Granddaughter, this other one, catch it'

b. *k^{w}ako ø-ok^{w}aj* *ke no ø-ok^{w}aj*
guan R-tail DEM other R-guan
'Guan's tail, this other one's tail'

PRONOUN + NO

(4.83) a. *i =no* *i=ko-ɾa* *en*
3s=other 3s=ingest-HAB 2s
'the other one, you ate it (as usual)'

b. *i=no* *te=ita*
3s=other 3COR=arrive
'The other one is arriving'

4.9 Numeral quantifiers

In this section, I present the numeral quantifiers identified in Akuntsú. This class is composed of only two lexical words: *kɨte* 'one' and *tɨrɨ* 'two' or 'more than two.' The numbers operate as modifiers of the head noun or as the head noun of the phrase. They can appear before or after the noun; however the latter is not as frequent as the former in my data

kɨte 'one'

(4.84) a. *kɨte tea*
one exist
'There is one'

b. *kɨte babape at*
one gourd catch
'Catch one glass!'

c. *Buko kɨte koɾa-koɾa mi*
Buquá one chicken kill
'Buquá killed one chicken'

The numeral *kɨte* may also code the meaning 'alone' or 'by one self' (4.85).

(4.85) a. *oɾẽ=bõ kɨte*
1S.EM=DAT one
'I am alone
Lit. For me, there is one.

b. *Konibu kɨte ip-a ka*
Konibú one return-THV go
'Konibú (goes and) comes back alone'

tiɾi 'two' or 'more than two'

(4.86) a. *tiɾi no te=ʧet*
two other 3COR=leave
'Two other (days), he leaves'

b. *tiɾi o=ø-tak o=ø-tak o=ø-tak tiɾi*
two 1s=R-daughter.of.man 1s=R-daughter.of.man 1s=R-daughter.of.man two
'[...] my two daughters, my daughter (and) my daughter, two' (pointing to the daughters).

c. *tiɾi peɾo a*
two macaw (sp.) exist
'I have two macaws'

d. *tiɾi-tiɾi-tiɾi ʧe ma i=ma en*
two-RED-RED coming keep/put/spill 3s=keep/put/spill 2s
'You come and put it, many of it'

Note that when the numbers operate as the head of a NP, they function like a noun, and no distinction is found between numerals and nouns. A possible reason explaining why numbers can occur in a sentence without a noun or a demonstrative may be because the noun

or demonstrative is not overtly expressed, and as such, the numeral is not really functioning as the head, but rather as a modifier. That is, they may just be serving their anaphoric function, as in example (4.87) below; the conversation is about people who use wooden labrets, and for the last person mentioned in the discourse the word *k^{w}ajta* 'wooden labret' is not mentioned. Part of the discourse is described, as follows:

(4.87) *k^{w}ajta* *e=bõ* *nom* *oɾẽ-bõ* *k^{w}ajta* *kɨte* *ke=bõ* *tiɾɨ* [...]
wooden labret 2S=DAT no 1S=DAT wooden labret one DEM=DAT two
'Labial wood, you don't have, I have one labial wood, this one has two [...]'

4.10 Genitive constructions and the NP

Genitive (or possessive) constructions refer to two nouns, a pronoun and a noun, or a demonstrative and a noun in a juxtaposition, which have a possession interpretation. There is no morphological marker to indicate the genitive construction. The order is [POSSESSOR + POSSESSED][96]. The three patterns found in the language are illustrated below:

(4.88) a. *kopiba* *ø-ok^{w}aj*
parrot (sp.) R-tail
'Parrot's tail'

b. *ke* *ø-pebo*
DEM R-feather
'This one's feather'

c. *o=ø-pi*
1S=R-foot
'my foot'

It is also possible to have a complex genitive construction, where the noun possessor

[96] Dryer (1992, 2008) observed that [OBJECT + VERB] languages tend to have [POSSESSOR + POSSESSED] order.

is attached to a pronoun [pro=N]$_{possessor}$ juxtaposed to another noun [N]$_{possessed}$ as follows:

(4.89) a. *o=ø-kɨpi* *t-ek*
1s=R-young.sister R-house
'My sister's house'

b. *poɾakɨ* *pebo* *t-ek*
curassow feather R-house
'house of feathers of curassow'

In Makuráp (Braga 2005) and Mekéns (Galucio 2001), a pronoun and an independent noun in a genitive construction are usually combined with a mediator of possession, indicated by the word *pet* in these languages. As presented in Aragon (2008:112), Akuntsú lacks this type of genitive construction with independent nouns. The Akuntsús' relatives were all killed and they now raise animals as if they were their surrogate children. The women raise their pets as children, carrying them everywhere, chatting with them. When I ask what they are, the women immediately refer to them with a kinship term. Thus, the Akuntsú do not use the same linguistic construction (genitive classifier construction) found in Makuráp and Mekéns, but instead use the possessed kinship term 'son/daughter of woman' for these possessed animals as follows:

(4.90) a. *o=ø-mepit* *pow-pow*
1s=R-son/daughter.of.woman owl
'My son owl'

b. *peɾo* *Aɾamiɾa* *ø-mepitẽpit*
macaw Aramira R-grandchild.of.woman
'Aramira's grandson macaw'

4.11 Summary

This chapter presented the nominal classes in Akuntsú, including a description of the noun morphology found in this language, the difference between oblique clitics and postpositions where no core case markers are described for this language, a survey of the derived noun morphemes, and the behavior of diminutive and augmentative in Akuntsú.

TYPES OF NOUNS	MORPHOLOGY	EXAMPLES AND/OR NOTES
Simple nouns	• Attached to oblique clitics and linked to postpositions; • Undergo reduplication and compound processes; • Can receive the determinative morpheme; • Can receive two derivational morphemes: diminutive and augmentative	Alienable nouns; Inalienable nouns Common nouns Exception: proper nouns can only take (some of) Inflectional morphology
Complex Nouns	• Can be attached to oblique clitics or linked to postpositions	Juxtaposition; Compound
Numerals	• Undergo reduplication	One; two (or more than two)
Personal Pronouns	• Can be attached to oblique clitics	Only free pronouns and emphatic pronouns may be attached to oblique clitics.
Demonstratives	• Can be attached to oblique clitics or linked to postpositions	They are classified according to location and position from the hearer/speaker's perspective.

Table 4.6 - Summary of nominal morphology.

In relation to word formation processes, compounds and reduplication were presented, and particular attention was given to possible types of compound forms and nominal reduplication. Later in the chapter, a noteworthy point includes the pro-forms in the language, divided into bound and free pronouns, which play an important role in the understanding of the alignment system[97]. In addition, a description of demonstratives and numeral quantifiers was also presented.

[97] More on alignment system in chapter 5.

CHAPTER 5

VERBAL MORPHOLOGY

5.1 Introduction

This chapter describes the verb phrase template (§5.2), followed by a discussion of the basic structure of verbs and the morphology that affects them in this language (§5.3). Also presented are the verbal formatives and other morphemes that are attached to verbs, the organization of the verbal arguments in the clause, the animacy hierarchy (§5.4), and the verb alignment system (§5.5).

The auxiliaries are presented in section (§5.6); morphemes characterized as transitivizers (§5.7 and §5.8), middle voice (§5.9), reciprocal and reflexive (§5.10) and the main aspectual forms related to verbs (§5.11) are also provided. Finally, the thematic vowel (§5.12) and an overview of mood and modality (§5.13) are described. A summary of this chapter is provided in section (§5.14).

5.2 Verb phrase

In Akuntsú, the verbal construction may contain: (i) a subject, which can be a full NP, a bound or free pronoun (depending on the type of verb); (ii) an object (in transitive clauses); and (iii) a verb. Depending on the type of the clause and its semantics, different morphemes are added to the verb. Also attested are adverbs, which can add complementary information

to the VP, and the focus particle *te*, besides other verbal particles. A template of the verb phrase is presented below:

[(NOUN or PRON) (FOC) (PREF) **stem** (SUFF) (PART) (AUX)]$_{\mathbf{VP}}$

Figure 5.1 - Template of verb phrase.

The NPs function as the object and the subject of transitive verbs and as the subject of intransitive verbs — the NPs in subject function are outside the verb phrase constituent. The prefixes found in the VP are causative *mõ- ~ õ-*, middle voice *e-*, and the object nominalizer *i-* (see details in chapter 4). The suffixes that may attach to the verbal stem include the thematic vowel *-a*, the habitual *-ɾa*, nominalizer *-ap* (described in chapter 4), the auxiliaries, and the suffixes *-ka* and *-k^{w}a*. The aspectual particles include the projective *kom* and the iterative *ek^{w}a*. Depending on the type of clause, it may take an interrogative words, negative particle or imperative marker (more on §8.4, §8.5 and §5.13.1.2 respectively).

5.3 The lexical category verb

Verbs in Akuntsú consist of a verb root and affixes or clitics. The most important classification of verbs is according to their transitivity: (1) verbs that allow two or three arguments, including at least one obligatory direct object — transitive verbs, and (b) verbs that require only one obligatory argument — intransitive verbs. The differences between the two are determined by morphological and semantic factors, as described in this chapter.

5.3.1 Intransitive verbs

Intransitive verbs are differentiated from transitive verbs by the following key morphological and syntactic characteristics (among others described in this subsection):

TRANSITIVE VS. INTRANSITIVE VERBS

- TRANSITIVE VERBS employ the set of independent personal pronouns as the subject of the clause, while intransitive verbs employ the set of clitic personal pronouns to represent their subjects;
- INTRANSITIVE VERBS only require one obligatory argument, i.e., the subject, while transitives require at least two obligatory arguments, i.e., the subject and the object;
- INTRANSITIVE VERBS can bear the causative prefixes *mõ- ~ õ-* while transitives cannot;
- TRANSITIVE VERBS can bear the object nominalizer *i-*, intransitives cannot.

Figure 5.2 - Transitive vs. intransitive verbs.

Verbs that exemplify intransitives include 'to fall,' 'to dance,' 'to throw up,' 'to climb' and 'to come back,' as seen in the following examples:

(5.1) a. *o=akat-a*
1S=fall-THV
'I fell'

b. *ki=amojã*
1PL.INCL=dance
'We dance'

c. *o=k^{w}ira*
1S=throw.up
'I threw up'

d. *o=k^{w}ep-a*
1S=climb-THV
'I climb'

e. *o=ø-kɨpi* *te= ip*
1s=R-young.daughter 3COR=come.back
'My young daughter came back'

Intransitive verbs can bear the causative prefixes *mõ- ~ õ-*. The structure is [CAUS-INTRANSITIVE.PREDICATE], which results in a transitive predicate, as in the following[98]. Note that for some examples below, when vowel deletion rule is applied, the surface form is presented[99].

(5.2) a. *kopiba* *te=aot-a*
parrot (sp.) 3COR= go.out-THV
'The parrot has left'

b. *etɨ* ***mõ-aot-a*** [*ɛˌtɨ mãˀˈoɾa*]
basket CAUS-go.out-THV
'She caused the basket to leave'

(5.3) a. *on* *o=atʃo-a*
1s 1S= bathe-THV
'I bathe'

b. *kopiba* ***mõ-atʃo-a*** *on* [*kupˌpiba mãˈdʒoa*]
parrot (sp.) CAUS= bathe-THV 1S
'I make the parrot bathe'

(5.4) a. *o=ø-mepit-et* *te=et-a*
1s=R-son/daughter.of.woman-DEF 3COR= sleep-THV
'My daughter sleeps'

[98] The investigation of whether or not all intransitive verbs are allowed to take this causative morpheme will be undertaken in future studies.

[99] See vowel deletion rule in section (3.1.1).

b. *o=ø-mepit-et* ***õ-et-a***
1s=R-son/daughter of woman-DEF CAUS= sleep-THV
'I make my daughter sleep'

(5.5) a. *ɨkɨ* *te=akat-a*
water 3COR= fall-THV
'Water is falling'

b. *ɨkɨ* ***mõ-akat-a*** *on* [*ɨˌ kɨ mãˈkara^{ʔ}on*]
water CAUS= fall-THV 1S
'I make the water fall'

5.3.2 Transitive verbs

The transitive verbs are defined as the verbs that require two arguments: the object (O) and the subject (S), where the former semantically indicates the patient (P) and the latter the agent (A). The transitive only allows one morpheme to be marked directly on the verb: the pronoun, which functions as a substitute for a noun. Note that in transitive verbs, the pronominal prefixes can co-occur with an overt independent NP only when the full NP is placed in topic position (see section (4.8.1)). Examples of transitive verbs are provided below:

(5.6) a. *kɨbapi* *poka* *on*
bush burn 1s
'I burned the bush'

b. *atiti* *tʃaja-ka* *on*
corn thresh-TR 1S
'I'm threshing corn'

c. *eni* + *am* *tʃop-a* *en*
hammock + rope see-THV 2S
'You see the rope of the hammock'

d. *etɨ* *ʧeɾe-ka* *te*
basket cut-TR 3S
'It's cutting the basket'

e. *etɨ* *pɨt-ka* *i=ko*
basket hole-TR 3S=MOVING
'He is going to stick the basket'

There are also some types of transitive verbs that may allow more than two arguments: a subject, direct object and indirect object. The indirect object is marked by an oblique clitic. Examples of this type of verbs is illustrated below:

(5.7) *Tʃaɾuj* *kɨjtpit* *õ-a* *te* *Kani=bõ*
Tʃarúj fish give-THV FOC Kani=DAT
'Tʃarúj gave fish to Kani' (repeated from (3.14))

However, the indirect object is not obligatory, as shown:

(5.8) a. *Tʃaɾuj* *kɨjtpit* *õ-a*
Tʃarúj fish give-THV
'Tʃarúj gave fish'

b. *e=ø-ti* *etɨ* *õ-a* *te*
2S=R-mother basket give-THV FOC
'Your mother gave the basket'

The transitive verbs differ from intransitives in the morphological markers they are able to take: for example, the object nominalizer *i-* that is only attached to transitive verbs (5.9 a-b).

(5.9) a. *abatʃo* *i-mi* *ko-a-ɾa*
grandfather OBJ.NMLZ-kill ingest-THV-HAB
'She is going to eat grandfather's prey'
Lit: 'She is going to eat grandfather's hunting/killing'

b. *o=ø-mepit* *i-õ* *ma*
1s=R-son/daughter.of.woman OBJ.NMLZ-give keep/spill/put
'Put my daughter's given thing!'
Lit: 'Put my daughter's giving (the thing that she gave)'

c. *e=i-at* *at-a* *mã*
2s=OBJ.NMLZ-catch catch-THV CERT
'He caught your thing'
Lit: 'He caught your caught thing'

Of the two arguments required by transitive verbs, only one is marked on the verb, which will then follow the participant hierarchy of this language. Even though only one argument is marked on the verb, it is still possible to identify both the agent and the patient due to the semantic roles of the participants involved in the discourse, which determine the identity of the agent and patient.[100]

5.4 Animacy hierarchy on verbs

As described in Foley (2007:414, cf. Silverstein 1976), there is a hierarchy regarding speech-act participants across languages, which involves a natural hierarchy for marking the topic in clauses where third person is usually subclassified according to humanness or animacy:

SPEAKER > ADDRESSEE > THIRD PERSON

[100] It is also a well-known characteristic of other Tupían languages (Cabral and Rodrigues (2001)).

For the Tupían languages, Monserrat and Soares (1983) proposed the same hierarchy presented above for these languages, suggesting a 1 > 2 > 3 hierarchy for pronouns for Proto-Tupí-Guaranían. In the Tupían languages analyzed for their study, the authors showed that only one pronominal marker can be attached directly on the verb. For intransitive verbs, the authors state that the marking is systematic and clear; for transitive predicates, whether the A (agent) and P (patient) are marked on the verb will depend on the animacy hierarchy, which means that the one which is higher on the hierarchy scale will be marked on the verb[101].

For instance, in the scenario 2 > 1 (a second-person agent acting on a first-person patient), the first person patient is higher than the second person agent, and therefore the 1st (patient) is procliticized/prefixed to the transitive verb while the 2nd (agent) is marked by an independent pronoun and placed outside of the verb proper.

Among Tuparían languages, Mekéns was described as a language with 1/2 > 3 person hierarchy, where the first and second person are analyzed as higher than the third person based on a "non-deletability" argument: the third person is optionally omitted as the overt subject of transitive verbs, where first and second person subjects are not omitted in this way (Galucio 2001:80).

5.4.2 Animacy and transitive verbs

In Akuntsú, when both the agent and patient are pronouns, the object pronoun is always attached to the verb (in boldface), as in the following:

THIRD PERSON OBJECT PRONOUN

[101] See also Zwicky (1977) for the participant hierarchy.

(5.10) a. *on* ***i=****tʃop-a*
1s 3s=see-THV
'I see it'

b. *en* ***i=****tʃop-a*
2s 3s=see-THV
'You see it'

FIRST AND SECOND OBJECT PRONOUN

(5.11) a. *en* ***o=****tʃop-a*
2s 1s=see-THV
'You see me'

b. *on* ***e=****tʃop-a*
1s 2s=see-THV
'I see you'

The following depicts a scenario where third person is a full NP and the patient a pronoun, where the latter (the object) is marked on the verb (as occurs in the examples above):

(5.12) a. *Konibu* *e=tʃop-a*
Konibú 2s=see-THV
'Konibú sees you'

b. *aparabia* *o=tʃop-a*
non.Indian 1s=see-THV
'the non-Indian saw me'

c. *tawtʃe* *i=tʃoga*
peccary 3s=bite
'The peccary bit her'

In certain scenarios, both the subject and object may be third person nouns. In this situation, it is possible to find OSV, SVO[102] or OV order with no morphological marker on the verb to assign agreement either with the object or with the subject. The change in the word order is only possible due to the animacy hierarchy where animate nouns act on inanimate nouns, as shown[103]:

THIRD PERSON NOUN AGENT AND PATIENT

	O	S	V	S	V	O	O	V	
(5.13)	*etɨ*	*Ururu*	*nĩ-a*	*Ururu*	*nĩ-a*	*etɨ*	*etɨ*	*nĩ-a*	*nĩ-nĩ-nĩ-a*
	basket	Ururu	weave-THV	Ururu	weave-THV	basket	basket	weave-THV	weave-RED-RED-THV

'Ururu is weaving the basket, Ururu is weaving the basket, she is weaving the basket, weaving, weaving '

However, a different situation occurs when the patient is an inanimate third person noun. When the patient is a non-animate third person noun and the agent is a pronoun, the marker on the verb will be the one higher on the hierarchy scale, following the 1 > 2 > 3 hierarchy, as shown below. The sentences below were extracted from natural conversation.

SCENARIO:

1 (AGENT) > 3 (NON-ANIMATE PATIENT)

(5.14) a. *kɨpkap* *o=paj-a*
annatto 1s=clean-THV
'I clean the annatto (by removing the leaves from the fruit)'

[102] When the object is placed after the verb, the object is usually preceded by the focus marker *te*. The type of example seen above is not frequent in my data. I also would like to note here that the word *etɨ* 'basket', in the SVO clause, carries a high pitch level.

[103] Note that when both subject and patient are proper nouns or animate nouns the object precedes the verb, and when it is placed after it, the focus marker is obligatorily inserted in the clause.

b. *kora*[104] *ø-õpita* *o=kaw-k*^{w}*a*
chicken R-egg 1s=split-TR.PL
'I split the chicken's egg'

c. *kɨp* *t-ep* *o=ĩ-a*
tree R-leaf 1s=smell-THV
'I smell the leaf of the tree'

2 (AGENT) > 3 (NON-ANIMATE PATIENT)

(5.15) a. *o=ø-jã + po* *e=õ-a*
1s=R-teeth + hand 2s=give-THV
'You gave my spoon'

b. *komãta* *e=at-a*
bean 2s=catch-THV
'You caught beans'

In the cases described in the above scenario, we identify a hierarchy involving the semantic roles, where the agent is hierarchically superior to the patient—that is, the agent is the one marked on transitive verbs. In light of this discussion, we may conclude that *the agent is only marked on transitive verbs when the patient is an inanimate full NP*, following the hierarchy proposed by Foley (1976). However, note that the speakers may choose either to mark the agent on the verb or to express the agent as a full pronominal form, without any apparent change in the semantics. Compare the examples below (further discussion in section 5.4 below):

[104] Note that the noun 'chicken' is not reduplicated in this example. Usually the speakers refer to 'chicken' as *kora-kora*.

(5.16) a. *komãta* *e=at-a*
bean 2s=catch-THV
'You caught bean'

b. *komãta* *at-a* *en*
bean catch-THV 2s
'You caught beans'

In Akuntsú, the nominal hierarchy outranks the semantic roles only when a first or second person is the agent and the patient is a non-animate noun. This may lead me to posit that the first and second person are preferred for marking on the verb, and that they are higher in the nominal hierarchy than the third person, demonstrating a hierarchy of 1/2 > 3 for this language.

5.5 Alignment system

In Akuntsú, the person markers that indicate the subject of intransitive verbs and the object of transitive verbs are coded in the same way, and these two differ from the coding for subjects of transitive verbs. Thus, Akuntsú has an ergative-absolutive verb alignment system (Aragon 2008); the subject of intransitive verbs and the object of transitive verbs are coded as Absolutive, while the subject of transitive verbs is coded as Ergative (cf. Comrie 1989). However, when the transitive clause has an inanimate noun as the patient of the verb, there are two options of alignment in the language: (1) ergative-absolutive and (2) neutralized ergative-absolutive, as follows:

(1) ERGATIVE-ABSOLUTIVE PATTERN

The agent of transitive clauses (when pronominal) is coded by independent personal pronouns and placed before or after the verb phrase (5.17a); the patient (when signaled by a

pronominal marker) is coded by clitic pronouns (5.17b). In intransitives, the subject (when pronominal) is coded by clitic personal pronouns (5.17c).

(5.17) a. ***en*** *t=akɨma* *at-a* (A of transitive)
2S 3S=cob catch-THV
'You caught its cob'

b. ***e***=*et-a* (S of intransitive)
2s=sleep-THV
'I sleep'

c. *Aramira* ***e***=*ʧop-a* (O of transitive)
Aramira 2s=see-THV
'Aramira sees you'

(2) NEUTRALIZATION OF THE ERGATIVE-ABSOLUTIVE PATTERN

When there is an inanimate noun playing the role of the object and a pronoun functioning as the agent, the ergative-absolutive system may be neutralized—that is, the clitic pronouns can assume the function of agent and then be marked on the verb. In that sense, the nominal hierarchy is responsible for signaling the grammatical relations, and there is no overt marker in the NP or in the VP to indicate the role played by the NPs.

In other words, NPs ranked lower on the nominal hierarchy are inherently more likely to be patient than, for instance, humans, which are higher on the scale; i.e., it is more likely for humans to outrank non-human nouns, or, in other words, "it is 'natural' for a higher being to act or impinge on a lower being" (Song 2001:167). This suggests that there is no need to mark the A differently from P since the nominal hierarchy indicates the syntactic function of the NP, and thus, the difference between A and P being distinguished by pronouns is not obligatory. Among the Tuparían languages, this has been described only for Akuntsú. Future investigation will be undertaken to obtain more information on this structure.

Figure 5.3 below summarizes the main notions presented in this section:

EXAMPLES	ALIGNMENT SYSTEM
OPTION 1 - ERG. ABS. SYSTEM (I) TRANSITIVE - P LOWER IN THE ANIMACY *en t=akima at-a* 2S 3S=cob catch-THV 'You caught its cob' (II) INTRANSITIVE *e=tʃet-a* 2s=leave-THV 'You left'	S O V S V
OPTION 2 - NEUTRALIZATION (I) TRANSITIVE - P LOWER IN THE ANIMACY *t=akima e=at-a* 3S=cob 2s=catch-THV 'You caught its cob' (II) INTRANSITIVE *e=tʃet-a* 2s=leave-THV 'You left'	O S V S V
(III) TRANSITIVE WHEN P IS HIGHER IN THE ANIMACY *on e=k^{w}ak^{w}a* 1S 2s=grab 'I grabbed you'	S O V O of transitive = S of intransitive

Figure 5.3 - Alignment system.

5.6 Auxiliary

There are in Akuntsú auxiliaries that express the notion of 'sitting,' 'lying,' 'standing,' 'walking,' 'moving,' 'coming' and 'going,' as presented in the table below. In sentences with an auxiliary verb, a combination of main verb and auxiliary is often attested, though there are some exceptions to be found, as discussed later in this section.

AUXILIARY	
standing (upright position)	*ãm*
sitting	*jã*
lying	*toa*
in movement	*ko*
coming	*ʧe*
going	*ka*

Table 5.1 - Auxiliary.

The auxiliary represents a dynamic or static position of the subject, providing information about the subject's posture or movement that is not included in the semantics of the verb—for example, instances of the verb 'to sleep' are found where the subject sleeps lying, sitting or standing. The choice of auxiliary depends on the subject's position at the moment of the event expressed by the main verb (5.18a-b). Some examples of this construction are presented below:

(5.18) a. *e=et-a* *e=toa*
2s=sleep-THV 2s=laying
'You are sleeping (laying down)'

b. *te=et-a* *te=jã*
3COR=sleep-THV 3COR=sitting
'You are sleeping (sitting)'

A pronominal marker is attached to the auxiliary, where there is a cross-referential marker between the main verb and the auxiliary.

COMBINATION OF MAIN VERB + AUXILIARY

-jã 'sitting'

(5.19) a. *t=ø-anam* *ko-a* *e=jã*
3S=R-head ingest-THV 2s=sitting
'You are eating its head' (while in a sitting posture)

b. *õjpe* *ko-a* *o=jã*
snuff ingest-THV 1s=sitting
'I am sniffing snuff (while sitting)'

c. *kora-kora* *nom* *aot* *te=jã*
chicken no go.out 3COR=sitting
'Chicken is not going out (sitting there)'

-ko 'moving'

(5.20) a. *e=ʧet-a* *e=ko*
2s=leave 2s=MOV.
'You are leaving'

b. *Aramira* *pitoa* *at-a* *i=ko*
Aramira tobacco catch-THV 3s=MOV.
'Aramira is catching tobacco'

c. *tabɨt* *ʧop-a* *i=ko*
garden see-THV 3s=MOV.
'He is going to see the garden (moving to see the garden)'

-toa ‘lying’

(5.21) *ki=et-a-ɾa* *ki=toa*
1PL.INCL=sleep-THV-HAB 1PL.INCL=lying
‘We are going to sleep once again’

-ãm ‘standing’

(5.22) *ameko* *te=et-a* *i=ãm*
jaguar[105] 3COR=sleep-THV 3S=standing
‘Jaguar sleeps (standing there)’

The positional verbs usually occur in a construction with a main verb. However, a positional verb can also occur independently without a separate main verb[106], but only in the case of *-jã* ‘sit, stay’ and the directional morpheme *ka* and *tʃe* (as seen in further sections). In cases where positional verbs occur without a main verb, they function as the main predicate, as in the following examples:

(5.23) a. *Enotej* *te=j̃ã*
Enotej 3COR=sitting
‘Enotej stays’

b. *ɨmɨmeɾe* *etʃe* *o=jã* *tʃiɾamãtɨ* *eɾek-k^{w}a*
Omerê DIFF 1s=sitting Txiramanty speech-TR.PL
‘Over the Omerê, I stay, (I) talk to Txiramanty’

Similar constructions in other Amazonian languages are often analyzed as ‘serial verbs’[107]. Here, we prefer to analyze them as auxiliary verb constructions, given that the set

[105] They use the same word for ‘jaguar’ to call domestic cats.

[106] This is also attested in Mekéns (Galucio 2001:56).

[107] Aikhenvald (2006:1) defines serial verbs as a "sequence of verbs which act together as a single predicate,

of possible verbs in this languages (which can occur in combination with others in the construction) is limited to just the six auxiliaries cited in table 5.1 above.

5.6.1 Auxiliary and Aspect

The auxiliaries (positional morphemes) express progressive aspect, showing an on-going event, which occurs at the time referenced in the discourse event. The auxiliary provides information on the duration of the action, expressing the continuity of the event.

(5.24) a. *o=et-a-ɾa* ***o=toa***
1s=sleep-THV-HAB 1s=laying
'I am going to sleep'
Context: He was talking while he was lying in the hammock.

b. *jẽrom Moẽ* *k^{w}iri* *boja* *jõ* *ape* ***o=jã***
DEM Moẽ[108] açaí cut here path 1s=sitting
'There, it is Moẽ where I cut açaí (the tree), here is the path [...]'

c. *o=tʃop-a* *te* *Enotej* ***te=ko*** *o=tʃop-a* *tʃe*
1s=see-THV FOC Enotéj 3COR=MOV. 1s=see-THV come
'Enotéj sees me, she is came to see me'

The auxiliaries were found co-occurring with aspectual forms at the same phrasal level, as with the projective *kom* (5.25). That is, the construction has two verb roots, the auxiliary and the main verb, where the aspect markers appear only once and apply to the whole construction (a single aspect marker modifies the entire construction).

(5.25) *mapi* *at-a* *kom* *i=ko*
arrow catch-THV PROJ 3S=MOV.
'He is going to get the arrow'

---

without any overt marker of coordination, subordination or syntactic dependency of any other sort."

[108] River name

5.6.2 Directionality

Directional auxiliaries occur to assign movement to the nucleus of the noun or verb phrase. They are used according to the events with reference to the deictic centers: (1) with relation to the speaker, or (2) with relation to the speaker's selected viewpoint. The auxiliary *ʧe* is used when the target point is moving to the deictic center; however, if the opposite holds, the speakers use the auxiliary *ka*. The morpheme *ka* can function as a full verb (5.26) an auxiliary, as seen in (5.27), or as a transitivizer, as explained in the next sections.

(5.26) a. Konibu *ɨkɨ=bõ* *ka*
Konibu river=ALL go
'Konibu is going up to the river'

b. *o=ø-ʧipap* *tabɨt=õ* *ka*
1s=R-grandmother garden=ALL go
'My grandmother went to the garden' (repeated from (4.15))

(5.27) a. *en* *i=at-a* *ka*
2s 3s=catch go
'You (go and) get it' (repeated from (4.63b))

b. *erẽ=bõ* *atʃo-a* *ka* *orẽ=bõ* *nom* *atʃo=ɾom*
2S.EM=DAT bathe-THV go 1S.EM=DAT no bathe=NEG
'You (go and) bathe, I don't bathe'

The directional *ʧe* can occur either as a full verb or as an auxiliary. First, its occurrence as a full verb is exemplified below, followed by examples of the directional as an auxiliary:

FULL VERB

(5.28) a. *i=ø-atap tʃe te*
3s=R-hair come 3s
'She is pulling her hair'
Lit: She is coming with the hair.

b. [...] *ebapa ẽ tʃe* [...]
moon DEM come
'[...] The moon, that moves [...]'
Context: Explaining the lunar movement.

Within the verb phrase, the morpheme *tʃe* can appear before the main verb as in (5.29) or after the verb as in (5.30). In both examples (5.29) and (5.30), the directional morpheme functions as an auxiliary.

AUXILIARY

(5.29) a. *Pupak tʃe i=ko-a*
Pupák come 3s=ingest-THV
'Pupák comes to eat it'

b. *pitoa tʃe ko-a on*
tobacco come ingest-THV 1s
'I am coming to smoke'

(5.30) a. *kɨjtpit at-a tʃe*
fish catch-THV come
'(He) came to catch fish'

b. *Pupak i-mi tʃop-a tʃe*
Pupak OBJ.NMLZ-kill see-THV come
'(He) is coming to see Pupák's hunting (hunted thing)'

These directional morphemes, when they fulfill the auxiliary function, behave differently from the positional auxiliary presented in the section above, due to two main

factors: **(i)** the former do not bear personal clitic pronouns; and **(ii)** they do not indicate aspect.

5.7 Functions of the morpheme *-ka*

A feature that is common among some verbal affixes in this language is their tendency to be polysemous, assuming different semantic meanings and functions. For example, the morpheme *ka*[109] can function as verbalizer/transitivizer, as a full verb, as an auxiliary, and as a transitivizer. Whether the morpheme is bound or not and its semantics will be crucial to determine the function of the morpheme.

It may have different meanings according to its function in the clause. One of them is when it functions as a derived suffix, attaching to nouns and adjectives. This suffix, when added to nouns and adjectives, derives verbs (5.31).

(5.31) a. *ameko tʃaro erek-ka kete*
jaguar yellow speech-TR there
'The yellow jaguar meows there'

b. *pero t-et-ka*
macaw R-name-TR
'Call the macaw's name!'

c. *i=ɨ-ka*
3s=liquid/genipap-TR
'It boils'

d. *ororo ø-pe te=akop-ka*
cotton R-skin/bark 3COR=hot-TR
'Clothes are drying'

[109] All the Tuparían languages have a morpheme cognate to this.

e. *kʷi jãj-ka*
axe teeth-TR
'He is sharpening the axe'

f. *i=am-ka on*
3s=thread-TR 1s
'I am threading it'

g. *aɾamiɾa i=kit-ka*
Aramira 3s=seed-TR
'Aramira is taking it off'

h. *e=ø-po ɨ-ka kʷiɾi ø-ɨ*
2s=R-hand liquid/genipap-TR açaí liquid/genipap
'Your hand is painted, (it's) açaí's liquid'

5.7.1 *-ka* on verbs

Another occurrence of the morpheme *-ka* is with verbs. The verbs that occur with the morpheme *-ka* are those that: **(1)** can be used with or without the morpheme *-ka*; **(2)** require two obligatory complements; and **(3)** are those where *-ka* does not semantically affect the primary function of the stem that it attaches to.

(5.32) a. *nako kʷiɾi tʃã-ka*
man açaí knead-TR
'Men are kneading (with a powder) the açaí'

b. *apaɾa jõmaj-ka*
banana knead-TR
'I am kneading (with the hands) the banana'

c. *takɨɾap ø-jẽn poɾo-ka*
spider.monkey R-feces/stinky dig-TR
'(I'm) taking out the spider monkey's feces '
Context: She was cleaning the inside of the spider monkey.

d. *akataba* *ataba-ka*
tucum[110] shred-TR
'(I'm) shredding the tucum (palm tree sp.)'

e. *baj* *koɾõ-ka*
palm fiber cut-TR
'He is cutting the palm fiber[111],

f. *on* *i=keɾa-ka*
1s 3s=split-TR
'I am splitting it (the firewood)'

When the morpheme *-ka* is attached to intransitive verbs (or to verb ideophones, as in (5.33c)), that is, to elements that only require one obligatory argument, it makes the verb transitive, adding to its semantic value a CAUSATIVE reading, as in the below examples:

(5.33) a. *en* *i=wip-ka*
2s 3s=slide-TR
'You dropped it'
Lit: You made it slide (from the hammock to the floor).

b. *kɨp* *keɾẽ-ka*
wood get in-TR
'The wood was inserted (into my leg)'

c. *te=etɨ* *βuh-ka*
3COR=basket IDEO-TR
'Her basket fell'

d. *Aɾamiɾa* *kani* *wip-ka*
Aramira kani slide-TR
'Aramira gave birth to Kani'
Lit: Aramira made Kani slide.

[110] *Astrocaryum vulgare*

[111] *Mauritia flexuosa* (palm sp.)

e. *peɾo* *moɾã-ka*
macaw jump-TR
'Macaw is jumping'
Lit: (I) make the macaw jump.
Context: She was swinging the macaw which was on a piece of wood, playing with it.

5.8 Functions of the morpheme *-k^{w}a*

The morpheme *-k^{w}a* has similar functions when compared to the morpheme *-ka:* **(i)** it also derives verbs from nouns; **(ii)** in addition, it can be also attached to transitive and intransitive verbs. The main difference between *-k^{w}a* and *-ka* is related to the semantics of repetition/continuity of the action. The suffix *-k^{w}a* occurs with intransitive verbs, adding to its semantics the idea of continuity/repetition of the action[112]. For example, in (5.34) the act of sneezing is continuous.

(5.34) a. *o=atʃino-k^{w}a*
1s=sneeze-TR.PL
'I sneezed'

b. *te=ketʃo-k^{w}a*
3COR=laugh-TR.PL
'He is laughing'

c. *o=aaw-k^{w}a*
1S=yawn-TR.PL
'I yawned'

d. *Aiga* *niɾam-k^{w}a*
Aiga defecate-TR.PL
'Aiga defecated'

Similarly, when it occurs with transitive verbs, the morpheme *-k^{w}a* also refers to the continuity/repetition of the action (doing the same event repeatedly), as shown below:

[112] Galucio (2001:107) defines its function as a morpheme that provides the plurality of the action. In Akuntsú, it seems to function like it does in Mekéns and Wayoró (Nogueira 2011:105, 119).

(5.35) a. *Enotej ɨkɨ kɨram-k^{w}a*
Enotéj water pour-TR.PL
'Enotéj is pouring water'

c. *o=ø-po tʃoga-k^{w}a*
1S=R-hand bite-TR.PL
'(She's) biting my hand'

c. *k^{w}ɨri perop-ka tip i=tʃã-k^{w}a*
açaí cooked-TR soft 3S=knead-TR.PL
'She cooks the açaí, (when it is) soft, she kneads it (with a powder)'

The suffix *-k^{w}a* also occurs with nouns, deriving verbs from nouns (5.36), providing a sense of the action's continuity. The morpheme may also occur with auxiliaries as seen in (5.36d).

(5.36) a. *koro + am-k^{w}a on*
bowl + rope-TR.PL 1S
'I am putting the rope (folding repeatedly)'

b. *apaw i=t-et-k^{w}a*
grub (sp.) 3S=R-name-TR.PL
'I call it grub (sp.) (after saying the word for 'grub' two times)'

c. *Konibu kopkaba-k^{w}a*
Konibú flute-TR.PL
'Konibú is playing flute (over and over)'
Lit: He is fluting.

d. *te=poratʃi-k^{w}a te= j̃ã-k^{w}a*
3COR=shamanism-TR.PL 3COR=SITTING-TR.PL
'He is doing shamanistic activity'

e. *kɨbapi k^{w}ɨri-k^{w}a*
bush clean/day-TR.PL
'He is cleaning the bush (the path into the forest)'

There are some verbs that have -$k^w a$ as part of their lexical entry. It is not sufficiently clear from a synchronic point of view whether they are lexicalized forms that contain the suffix (because they always appear with this morpheme) or whether they do not have any morphological connection to the morpheme -$k^w a$, where -$k^w a$ may just be part of the phonological segments that make up the verb root. Examples are presented below in boldface:

(5.37) a. *ororo + pe* ***õk^{w}a***
cotton + skin/peel wash
'(She) is washing the clothes'

b. *Enotej ø-po* ***õk^{w}a***
Enotej R-hand wash
'(She) washes Enotej's hand'

c. *o=ø-po* ***tʃĩk^{w}a*** *on*
1S=R-hand kiss 1S
'I kiss my hand'

d. *o=i-ko* ***mõk^{w}a*** *on*
1S=OBJ.NMLZ-ingest make 1S
'I prepare my food'

5.9 Middle voice

The morpheme *e-* attaches to the verb and indicates an event in which the semantic agent and the object are coreferential (Givón 2001:95), activating a REFLEXIVE reading (e.g. *I cut myself*). It can also be attached to a verb encoding actions where the subject is semantically affected by the event — i.e., the subject is the beneficiary of the action — activating a MIDDLE VOICE reading, where the referent of the subject is affected by the action and also has some participation in the action, i.e., the "participant has patient-like

characteristics as well, in that it sustains the action's principal effects" (Klaiman 1991:3)[113].

The middle morpheme *e-* can be attached to both transitive verbs (5.38a), where *e-* indicates that the semantic agent is the beneficiary of her/his own action; and to intransitive verbs (5.38b), which yields a middle voice reading that, in combination with the transitivizer *-ka*, also conveys an indirect causation, i.e., the *causee* and the *causer* (which are the same person) have some relative control of the event.

(5.38) a. *en* *i=e-kɨj* *puɾu-ɾu*
2S 3S=MID-take IDEO-RED
'You yourself take it there, go!'

b. *on* *o=e-wip-ka* *puɾu-ɾu-ɾu* *βuh*
1s 1S=MID-slide-TR IDEO-RED-RED IDEO
'I slide, (I) go and fall'
Lit: I make myself to slide, I go and fall.
Context: She was acting out her fall.

The other use of *e-* is with the self-act reading attaching to intransitive verbs, indicating that the subject is doing some action to its own benefit; that is, the subject is the one who undertakes the action and at the same time is affected by it, as seen below in (5.39)[114].

[113] Middle voice was also described in earlier literatures as for example Kemmer (1993) and Shibatani (2006). Sanskrit grammarians (such as Panini) also presented the middle voice as a term to express actions that affect their sources or express self-actions.

[114] In Akuntsú, there is an expression in which the morpheme *-e* may be grammaticalized to the verb *o=epago* 'good morning' (Lit. 'I woke up'). This expression is used to say that the person has woken up, which is different from the verb 'to wake up' *o=peɾa* 'I woke up'. The expression is similar to the one found in Mekéns and Wajoró (Wj):

mb-e-pa-g-a-t õn (Wj)
1s-INTR-wake.up-g-V.T-PASS 1s
'I woke up' (Nogueira 2011:100).

(5.39) a. *ke* *õ-a* *o=e-kota* *õn*
DEM give-THV 1S=MID-climb 1S
'Give this (that) I myself climb'

5.10 Reflexives and reciprocals

5.10.1 Third person reflexive pronoun

The morpheme *te* has several functions; some are closely related to one another. As seen in the section on pro-forms (3.3.5), *te* can be employed as an independent pronoun, syntactically functioning as the subject of transitive sentences. Besides this function, it can also assume a reflexive, reciprocal and focus function in a clause. In this section, I discuss *te* as a reflexive and reciprocal morpheme. In order to discern the function of the morpheme *te* in any given circumstance, it is important to investigate: **(1)** the type of verb (transitive or intransitive); **(2)** its morphophonological characteristics (i.e. if it is an independent word (particle) or a clitic); and **(3)** the number of arguments (subjects) involved.

The only reflexive pronoun encountered in the language was the one for third person. The third person coreferential pronoun carries a reflexive reading, indicating that the subject is the one who undergoes the event expressed by the verb, as exemplified below:

(5.40) *Aramira* *te=ø-po* *kini-ka*
Aramira 3COR=R-hand cut/rip-TR
'Aramira herself cut her hand'

Note that when the subject is third person, it is frequent in my data that the third coreferential (reflexive) pronoun (3COR) *te=* is attached to the verb, as following:

(5.41) a. *Konibu* *te=et-a*
Konibú 3COR=sleep-THV
'Konibú is sleeping'

b. *kɨp* *te=akat-a*
tree 3COR=fall-THV
'The tree fell'

c. *Aiga* *te=tʃet-a*
Aiga 3COR=leave-THV
'Aiga leaves'

d. *eɨ* *te=aot-a*
blood 3COR=go.out-THV
'Blood got out'

However, it is important to be aware that the presence of the third person coreferential pronoun is not always attested, as shown in (5.42a-b).

(5.42) a. *o=ø-ike* *pita* *o=ø-ike* *k^{w}at*
1S=R-older.brother walk 1S=R-older.brother leave
'My older brother walked, my older brother went away'

b. *o=ø-ti* *te=ip* *otʃe=ø-ti* *ip*
1S=R-mother 3COR= come.back 1PL.EXCL=R-mother come.back
'My mother is coming back, our mother is coming back'

5.10.2 Reciprocal

Additionally, the reflexive pronoun *te* can also have a reciprocal reading. The reciprocal *te*, unlike the reflexive, reduces the valence of transitive verbs, and only one syntactic argument is expressed in the clause. It involves plural arguments, whereas no explicit syntactic object is found.

(5.43) a. *pero* *te=õpa*
macaw 3COR=beat
'The macaws are fighting'
Lit. They are beating each other.

b. *aparabia* *te=erek-k^{w}a*
non-Indian 3COR=speech-TR.PL
'[...] the non-Indians are talking to each other'

5.11 Aspectual forms

In Akuntsú, manner is indicated by aspectual morphemes, by other morphological processes such as reduplication, or by the pragmatics of the clause. Aspect encodes how an event is understood according to its internal process. The only marker that clearly encodes temporal information is the projective aspectual marker, which shows that the event will occur at a future time. Aside from this, the language does not mark the present or the past morphologically. In talking about "temporal spaces," we may affirm, then, that Akuntsú has a basic tense distinction of future versus non-future (which includes past and present)[115].

Among the other Tuparían languages, Mekéns (Mk) and Wayoró (Ww) have been analyzed as having a past marker *-t*. In Mekéns, this past marker is attached directly to transitive and intransitive verbs, to the transitivizer *-ka*, or to the thematic vowel *-a*[116]. In Wayoró, the morpheme *-t* was analyzed as a past marker, appearing in progressive clauses (Nogueira 2011:83)[117].

In the other remaining Tuparían languages, Braga described two particles that mark tense in Makuráp, namely *xe:t* 'past' and *eya* 'future.' In Tuparí, tense is not morphologically

[115] Dietrich (2010b) describes deeply this idea for Guaraní language.

[116] However, the past marker is not always found in past tense clauses (Galucio 2001:91).

[117] Examples:
a. *ndeke* *te-agop-k-a-t* (Nogueira 2011:83)
3s 3-warm$_{intr}$-vblz-v.t-past
'She warmed herself' ('Ela se esquentou')

b. *ɨgɨ* *te-e-tɨ̃m-ŋg-a-t* (Nogueira 2011:83)
water 3-intr-drop-vblz-v.t-past
'The water is dropping' (Água está pingando')

encoded on the verb. In Tuparí, auxiliaries are described as morphemes responsible for coding tense and aspect (Alves 2004).

On the other hand, Makuráp is the only one of these languages with perfective and imperfective aspectual markers — i.e., what are called 'thematic vowels' or 'thematic suffixes' in other languages are described as the perfective aspectual marker *-ø* and imperfective aspectual marker *-a* in Makuráp (Braga 2005)[118].

Tupían languages in general tend to express tense and aspect through particles and/or auxiliaries (Rodrigues and Cabral 2012).

In this section, the main aspectual morphemes found in Akuntsú are presented, which include: *-ɾa* 'habitual,' *ek^{w}a* 'iterative,' and *kom* 'projective,' followed by a discussion of verbal reduplication.

5.11.1 Habitual *-ɾa*

In this language, habitual aspect is expressed by the morpheme *-ɾa*. It designates an event that regularly takes place, instantiated from time to time. The habitual aspect may indicate an event that used to occur in the past (5.44), occurs in the present (5.45) or in the future (5.46). The examples below show that through the use of the habitual morpheme *-ɾa*, the speaker makes reference to the habit of doing some event. For instance, in (5.45a), the habit of sleeping in the afternoon is common to the speaker and the other person that he refers to; that is, the situation of sleeping occurs frequently. Example (5.45b) indicates the

[118] Examples:

a. wawo ngoy-ø (Braga 2005)
potato dig up-perf
'The potato is dug up' ('La patate est arrachée')

b. yemõ wawo ngoy-a (Braga 2005)
let's go potato dig up-imper
'Let's go dig up some potatoes' ('Allons arracher des patates')

habitual process of coming back by a person who is used to going away and coming back regularly. Turning to the examples in (5.46a-b), the speaker comments on the fact that it is customary to sniff snuff and to eat bananas; he is going to do it as usual. Finally, the last example (5.46c) indicates the habit of going to the forest.

(5.44) *i=no* *i=ko-ɾa* *en*
3s=other 3s=ingest-HAB 2s
'the other one, you ate it (as usual)' (repeated from (4.83a)).

(5.45) a. *o=et-a-ɾa* *te=et-a* [...]
1s=sleep-THV-HAB 3COR=sleep-THV
'I am used to sleeping and he's used to sleeping [...]'

b. *te=ip-a-ɾa*
3COR=come.back-THV-HAB
'He comes back'

(5.46) a. *õjpe* *ko-a-ɾa*
snuff ingest-THV-HAB
'(I am going to) sniff snuff as usual'

b. *apaɾa* *ko-a-ɾa* *kom*
banana ingest-THV-HAB PROJ
'I will eat bananas as usual'

c. *e=ʧet-a-ɾa* *kom*
2s=leave-THV-HAB PROJ
'You will leave (to the forest)'

The habitual morpheme can also occur with negative clauses, as exemplified below:

(5.47) *ke* *nom* *mi-ɾa*
DEM no kill-HAB
'That one is not used to hunting'

5.11.2 Iterative *ek^{w}a*

The iterative morpheme *ek^{w}a* expresses the idea that the event occurred several times, that an event happened repeatedly, expressing plurality. Iteration is also expressed through reduplication, which is the only morphological process that conveys this meaning. Reduplication is described in section 5.11.4.

The iterative morpheme may have two semantic readings: **(i)** the event occurred many times or **(ii)** it reflects the idea of the plurality of objects affected.

Example (5.48a) comes from a natural conversation where the speaker is talking about a person who leaves the rainforest repeatedly. In this scenario, the action of leaving happens several times in the frame time. In (5.48b-c) the act of running and sleeping is regular and it is happening once again. In the examples below, the subjects are singular and the iterative morpheme linked to the verb indicates that the action happens repeatedly, where the action is realized by the same subject over and over, as follows:

(5.48) a. *te=tʃet* ***ek^{w}a***
3COR=leave ITER
'He leaves repeatedly'

b. *te=eɾa* ***ek^{w}a***
3COR=sleep ITER
'He sleeps continuously'

c. *(en)* *e=neme* ***ek^{w}a***
(2s) 2s=run ITER
'You are going to run many times'

In the scenario below, the particle is attached to transitive verbs, and when it occurs, the iterative morpheme involves multiple objects, reflecting the plurality of the objects

involved in the action. In (5.49a) the speaker is explaining to the addressee that the next time that he leaves the Indigenous area he needs to bring many 'fishing lines.' Example (5.49b) also gives the idea of multiple things to bring, while (5.49c-d) gives the idea of multiple animals to hunt/to kill.

It is worth noting that the particle *ek^{w}a* gives the plurality of the object, when attached to transitive verbs, while the morpheme *-k^{w}a* yields the repetition/continuity/plurality of the action only (see section (5.7) from above). Examples of the iterative particle are shown below[119]:

(5.49) a. *ko am* *pega* ***ek^{w}a***
fishhook thread bring ITER
'He brings many fishing lines'

b. *erẽ* *i=pega* ***ek^{w}a***
2s.EM 3s=bring ITER
'You bring many of them'

c. *Konibu* *i=mi* ***ek^{w}a***
Konibu 3s=kill ITER
'Konibu hunted them'

d. *jõnebo* *mi* ***ek^{w}a***
cricket kill ITER
'Kill the crickets!'

Unlike the habitual aspect, the iterative shows an event that happens repeatedly many times over a certain period of time, which does not imply that it is habitual. There are examples where the iterative morpheme appears in phrases that also contain the habitual morpheme, as follows:

[119] It may be hypothesized that the suffix *-k^{w}a* was derived from the particle *ek^{w}a*. However, diachronic investigation needs to be undertaken to test this.

(5.50) *te=ip-a-ɾa* *ekʷa*
3COR=come.back-THV-HAB ITER
'He is used to coming back repeatedly'

5.11.3 Projective *kom*

The morpheme *kom* was previously described in Aragon (2008) as a projective morpheme. It indicates that **(i)** an event is going to occur right after a reference point (5.51); or **(ii)** it may also occur in a non-immediate future in which the speaker is not certain about the precise time at which it is going to happen, but it usually refers to an event that speakers do indeed expect to occur in the future (5.52).

(5.51) a. *e=ø-abatʃo* *kɨpe* *jãj-ka* *kom*
2S=R-grandfather machete teeth-TR PROJ
'Your grandfather will sharpen the machete'

b. *oɾẽ=bõ* *o=tʃet-a* *kom*
1S.EM=DAT 1s=leave-THV PROJ
'I will leave'

(5.52) a. *o=amõj-a-ɾa* *kom*
1s=dance-THV-HAB PROJ
'I am going to dance'

b. *tawtʃe* *mĩ* *o=amoj-a* *kom*
peccary kill 1s=dance-THV PROJ
'If he kills the peccary, I will dance'

The two examples below show that 'the rain' will happen but they are not sure when exactly it will take place; they do, however, believe that the event is going to happen, due to some changing in the weather.

(5.53) *tekarap* *ita-a* *kom*
rain arrive-THV PROJ
'The rain will arrive soon'
Context: It is not raining yet.

Similarly, this is seen in the two examples below. The two situations may occur in the future but the precise time is not known. In (5.54a) he will catch something, but it will depend on certain things, so the speaker is not sure when it will happen. In (5.54b), Purá may fall from the chair, because the chair is shaking, but it is only a presumption of a probability.

(5.54) a. *kojõpe=bõ* *i=at* *kom*
night=ALL 3S=catch PROJ
'At night he will catch it'

b. *Purɑ* *te=akat-a* *kom* *Purɑ* *βuh*
Purá 3COR=fall-THV PROJ Purá IDEO
'Purá will fall, Purá will fall'

Note that the projective morpheme occurs after the independent pronoun when the latter is placed at the end of the verb phrase, as illustrated below:

(5.55) a. *o=i-ko* *korɑ* ***on*** *kom*
1S=OBJ.NMZL-ingest look.for 1S PROJ
'I will look for my food'

b. *karã* *at-a* ***on*** *kom*
Brazil nut catch-THV 1S PROJ
'I will catch Brazil nut'

c. *i=ta* ***te*** *kom*
3S=plant 3S PROJ
'He will plant it'

The projective morpheme *kom* also has scope over the nominal phrase, as seen in the NP in bold:

(5.56) *pebo* *at-a* *kom* ***Pura kom*** ***pebo*** ***kom***
feather catch PROJ Purá PROJ feather PROJ
'He will catch the feather, it will be Purá, it will be the feather'

5.11.4 Verbal reduplication

Reduplication in this language occurs with several different word classes, including verbs, nouns, and ideophones. In verbs and verb ideophones, it indicates aspect. There are two types of reduplication found in the language: **(i)** monosyllabic (5.57) and **(ii)** disyllabic reduplication (5.58).

In example (5.57a) the last syllable of the verb *ãpi* 'to pull' is repeated to indicate the fact that the speaker is pulling the head recurrently. The idea expressed is that the person, by holding the hair, pulls the head in a continuous process without stopping. In (5.57b) the reduplication of *mara* 'to fold' indicates that the folding of the rope is continuous and iterative; the rope was folded many times.

(5.57) a. *o=ø-anam* *ãpi-pi-ka*
1S=R-head pull-RED-TR
'I am pulling and pulling my head'

b. *koro + am* *mara* *ma-ma-mara*
bowl + rope fold RED-RED-fold
'He keeps folding the rope of the bowl'

In (5.58a) the idea expressed by the reduplication is that something is being rolled repeatedly, and in (5.58b) the reduplication of the verb *paj* 'to clean' indicates cleaning

happening over and over until there is no more meat on the *jirau*[120]. In (5.58c) the hair has been curling until the hair has become entirely curly.

(5.58) a. *en* *i=kapa-kapa*
2S 3S=roll-RED
'You roll it repeatedly'

b. *k^{w}etʃope* *baj-a-baj-a*
jirau clean-THV-RED-THV
'Clean the *jirau* entirely!'

c. *e=ø-atap* *wiɾi-wiɾi*
2s=R-hair curl-RED
'(You) curl your hair over and over'

5.12 Thematic vowel

The morpheme *-a*, with its counterpart *-ø*, has been called a 'thematic vowel' or 'thematic suffix' in the Tuparían literature, with the exception of Makuráp, where these are described as a perfective and imperfective aspectual marker respectively.

In Akuntsú, the thematic vowel occurs in clauses that express different aspectual meanings, as following:

(5.59) *apaɾa* ***ko-a*** *apaɾa* ***ko*** *apaɾa* ***ko*** *wen*
banana ingest-THV banana ingest banana ingest finish
'(She) is eating bananas over and over, (they are) gone'
Context: Narrating the process of eating bananas.

(5.60) a. *e=ø-mepit* ***tʃop*** *en*
2s=R-son/daughter.of.woman see 2s
'You see your daughter'
Context: When the person arrived, the speaker told her to see her daughter who came to talk to her.

[120] Brazilian Portuguese word to refer to a platform made of sticks to dry/roast game meat, Brazil nuts, etc.

b. *ɨkɨ* *te=kʷat-a* ***i=tʃop-a***
water 3COR=leave-NMLZ 3S=see-THV
'The water is going away, see it'

(5.61) a. *te=**kʷat-a***
3COR=leave-THV
'He left'
Context: The person left the place by car, but it was still possible to hear the sound of the car.

b. *te=**kʷat***
3COR=leave
'He left'
Context: Talking about a person who left the place long time ago.

c. *te=nɨɾam* ***te=kʷat***
3COR=stand.up 3COR=leave
'She stands up, she leaves'
Context: Talking about the movement that the person is doing.

(5.62) a. *eɾape* *tʃiɾamãtɨ* ***te=ip***
tomorrow Txiramanty 3COR=come.back
'Txiramanty will come back tomorrow'

b. *Konibu* ***te=ip***
Konibu 3COR=come.back
'Konibu came back'

c. ***te=ip-a-ɾa*** *ekʷa*
3COR=come.back-THV-HAB ITER
'He is used to coming back repeatedly' (repeated from (5.67)).

In Akuntsú, I describe *-a* as a thematic vowel, although I do not consider a morpheme *-ø* to be its counterpart, hence no reason is found to consider a zero morpheme as a thematic vowel. One would argue that verbs such as *poka* 'to burn' may consist of the root *pok-* attached to a thematic vowel, as in *pok-a*. One counter-argument to this claim is that in negative constructions, the verb does not allow thematic vowels. When verbal roots like *poka*

‘to burn’ occur in negative constructions, as in *nom i=poka* ‘he doesn't burn it,’ the final *a* is still there, which means that the final *a* is not a thematic vowel, but rather a part of the verbal root. The examples (5.63) below show situations where the negative morpheme *nom* is employed and the speakers do not make use of the thematic vowel.

(5.63) a. *eɾape* [*nom* *e=**k**^{w}**at***] *te=**k**^{w}**at-a***
tomorrow no 2s=leave 3COR=leave-THV
‘Tomorrow you don't leave, he leaves’

b. *en i=ø-kit* ***ko-a*** *oɾẽ=bõ* *nom* *iwe* [*nom* *i=ø-kit* ***ko***]
2s 3s=R-seed ingest-THV 1S.EM=DAT no INTERJ no 3s=R-seed ingest
‘You eat the seed, I don't, it hurts, I don't eat it.’

c. *aw-aw* [*nom* ***aot***] [...]
baby no go.out
‘Baby didn't go out [...]’

d. *te=tʃet-a ...* [*nom* ***tʃet***] [...]
3COR=leave-THV no leave
‘He leaves... he doesn't leave [...]’

Note that the thematic vowel is only attached to verbs. Nouns do not bear the thematic vowel.

(5.64) ***e=i-at*** ***at-a*** *en*
2s=OBJ.NMLZ-catch catch-THV 2S
‘You catch your caught (thing)’

In imperative sentences the thematic vowel is not common, though it is possible to find it in some examples (which are fewer than those that do not have thematic vowels). See example (5.65a) without the thematic vowel and example (5.65b) with an occurrence of the thematic vowel.

(5.65) a. *tɨero* ***ko***
chicha ingest
'Let's drink chicha'

b. ***ko-a*** *i=ø-pi*
ingest-THV 3s=R-foot
'Eat its feet'

It may be worth investigating whether or not the thematic vowel is now a frozen morpheme, that is, its function is no longer visible or predictable from phonological context or from in any other function that it may have. However, this issue needs further investigation in the future in order to clarify this matter.

5.13 Mood and Modality

Modality involves "how we come to know and speak about the world..." (Timberlake 2007:315). Modality is the speaker's attitude toward the realities expressed by the speaker, or by some other participant, within the proposition. The typology of modal systems often distinguishes two general types of modalities: 'realis' and 'irrealis' modality. The difference between 'realis' and 'irrealis' follows the description found in Mithun (1999:173 *apud* Palmer 2001:1): "The realis portrays situations as actualized, as having occurred or actually occurring, knowable through direct perception. The irrealis portrays situations as purely within the realm of thought, knowable only through imagination."

In Akuntsú, three kinds of moods are discussed in this section: indicative, interrogative, and imperative. The indicative is unmarked, fitting into the realis modal system, while the other moods tend to fit into irrealis modality. Imperative and interrogative are often morphologically marked in the language. The notion of splitting moods, the

indicative into realis and the other moods into irrealis, is not new. Payne (1997:245), for example, has discussed the fact that interrogative and imperative are "likely to be irrealis," including negative clauses as well. Palmer (2001:4) also noted that even though there are two categories of modality in terms of modal system and mood, he affirms that "typically with mood, all or most clauses are either realis or irrealis: the system is basically ('prototypically') binary."

Next, the types of mood in this language are briefly presented. Modality is described in chapter 7 of this dissertation, where particles are discussed.

5.13.1 Mood

This subsection provides an overview of indicative, imperative and interrogative moods. These three moods have in common the semantics of the uncertainty of an event, which can be described as happening in the past, present or future.

5.13.1.1 Indicative

The indicative is not overtly marked morphologically in this language. The indicative indicates if a proposition is factual, truth (realis [declarative] assertion) or non-truth (negative assertion). Notice, however, that the non-truth assertion is not semantically realis, since negative clauses refer to actions that have not taken place or that will not take place; as such, it indicates the irrealis status of the proposition, as seen below:

FACTUAL TRUTH

(5.66) *otfe* *i=at-a*
1PL.EXCL 3s=catch-THV
'We catch it'

IRREALIS

(5.67) *nom* *i=at=om*
no 3S=catch=NEG
'[...] (you) don't catch it'

5.13.1.2 Imperative

The imperative mood indicates that the speaker wants the addressee to do or not to do some event. It can indicate orders, commands, requests, suggestions or advice. The imperative is often marked by the suffix *-tʃo* (5.68). Imperative clauses refer to actions that have yet to take place (irrealis).

(5.68) a. *i=dara-tʃo*
3=unfold-IMP
'Unfold it!'

b. *tʃajã* *aot-a-tʃo*
earring go.out-THV-IMP
'Get out the earring!'

c. *ege-tʃo*
stand.up-IMP
'Stand up!'

d. *te=wip-ka-tʃo*
3COR=slide-TR-IMP
'They are going to slide'
Context: When things are coming out of baskets, bags, etc.

However, it is possible to have imperative clauses without the presence of the suffix *-tʃo,* some examples of which are presented below:

(5.69) a. *i=ko*
3s=ingest
'Eat it!'

b. *takɨɾap* *mĩ*
spider.monkey kill
'Hunt spider monkey!'

c. *eɾẽ=bõ* *aj*
2S.EM=DAT stay
'You stay!'

d. *jẽ* *at*
DEM catch
'Catch this!'

There are also lexical words used to indicate hortative meanings, as in (5.70a) and (5.70b)[121]:

(5.70) a. *ʈʃobaɾa*
'Let's go!'

b. *toptʃika*
'Look!'

5.13.1.3 Interrogative

A speaker uses interrogatives to get information about something that is not known. As described in detail in chapter 8, there are two types of interrogative clauses: *yes-no* questions (polar questions) and content questions (information questions). Interrogative clauses also involve an inherent uncertainty. Examples below show an illustration of a *yes-no* question (5.71) and a content question (5.72).

[121] So far, there is no evidence to segment them into separate morphemes.

YES-NO QUESTION

(5.71) *e=tʃet-a* *ek^{w}a?*
2s=leave-THV ITER
'Are you going to leave once again?'

CONTENT QUESTION

(5.72) *i=t-et* *ete?*
3s=R-name REL
'What is his name?'

5.14 Summary

This chapter described several topics related to the verbal morphology, including a brief discussion on types of moods and the alignment system in this language. The alignment system is by default ergative-absolutive; however, this pattern may be optionally neutralized in transitive clauses, if (and only if) the object is inanimate. A summary of types of verbs and their respective morphemes is presented in table 5.2 below. The verbs that allow combination with the morphemes on the left of the table are marked with an X, as shown:

VERB MORPHEMES	TYPES OF VERBS	
	TRANSITIVE	INTRANSITIVE
Causative ***(m)õ-***		X
Object Nominalizer ***i-***	X	
Transitivizer ***-ka***	X	X
Transitivizer ***-k^{w}a***	X	X
Middle ***e-***	X	X
Aspectual forms	X	X

Table 5.2 - Verbal morphology.

CHAPTER 6

ADJECTIVES AND ADVERBS

6.1 Introduction

In this chapter, adjectives and adverbs are described; it is argued that they are small open classes of their own. In section 6.2, an overview of adjectives in this language is presented, showing their differences and similarities with the classes of nouns and verbs. In section 6.3, adverbs are presented with a discussion of their primary characteristics.

6.2 Adjectives

Adjectives have been the subject of many analyses and theories cross-linguistically, with debate, for instance, about whether or not they are a universal word class. Some previous works suggested that adjectives are not a class found in all languages (*e.g.* Dixon 1982, Croft 2001) and others argue the opposite: adjectives are indeed a universal word class (*e.g.* later, Dixon 2004).

Adjectives share many characteristics both with nouns and with verbs. Some of these similarities lead some scholars to classify adjectives as specifically belonging either to the class of nouns, or of verbs, or as an independent class of their own, i.e., belonging to the adjective word class. The fact is that the category of adjectives, according to Givón (2001), varies across a scale of temporal stability from less-prototypical adjectives (such as

temporary states: temperature, feelings, etc.) to more prototypical ones (such as the adjectives that denote durable physical properties). This scale means that the less-prototypical adjectives tend to share more characteristics with verbs, and those considered more-prototypical tend to share similarities with nouns (Givón 2001:54).

Dixon (2004) discusses intensively some criteria for recognizing the class of adjectives in terms of its grammatical properties. He affirms, based on typological study involving different languages, that although the adjectives may share properties with nouns and verbs in some languages, and in other languages only with verbs or only with nouns, and in some with neither, there will be always some kind of grammatical criteria to classify adjectives as an independent word class, and, hence, "a distinct class for adjectives can be recognized for every human language" (Dixon 2004:1).

The issue of whether or not adjectives are an independent word class has been a subject of debate in the description of the Tupían languages as well, which is the reason adjectives deserve special attention here. The evidence found supports the argument that Akuntsú has a set of lexemes that seem to be more adjective-like, supporting an independent lexical class with true adjectives as its members. Examples and an overview of how adjectives function in Akuntsú are discussed in this section. Firstly, some examples of adjectives in phrases are provided, and the difference and similarities found between adjectives and the other open word classes will be provided in further subsections.

Traditionally, adjectives include a class of words that describe attributes or qualities and typically modify a noun. The adjectives in this language co-occur with a noun (6.1a-b), a pronoun (6.2a-b) or a demonstrative (6.3a-b).

(6.1) a. *otʃe* *pitoa* *tɨt*
2PL.EXCL tobacco unripe
'We have unripe tobacco'

b. *abobo* *niŋ*
caterpillar striped
'Striped caterpillar (sp.)'

(6.2) a. *apara* *kop*
banana red
'Ripe banana'

b. *atiti* *petʃe*
corn good
'Good corn'

(6.3) *kɨpkap* *iw*
annatto ugly/rotten/bad
'Rotten annatto'

Adjectives may function as predicate complements (6.4) or they may function as the head of a phrase by themselves (6.5). Examples (6.5a) and (6.5b) indicate a situation where the speaker, by answering a question, uses the adjective 'delicious' and 'red' independently in the phrase.

(6.4) *ek* *pi* *k^{w}iri*
house interior empty/clean
'The interior of the house is empty'

(6.5) a. *tʃobe* *te*
delicious FOC
'(It's) delicious'

b. *kop* *te*
red FOC
'(It's) red'

Another situation where adjectives function as the head of a phrase by themselves is when a speaker uses the adjective as an exclamation. Note that in both situations, by answering a question (as shown above) and in an exclamation clause (as exemplified below in (6.6)), the adjectives are necessarily accompanied by the focus particle *te*.

(6.6) *ẽh* *ten* *te*
INTER heavy FOC
'Hey, (it's) heavy!'
Context: Trying to lift some heavy thing.

An adjective can also occur as the head of a phrase by itself when followed by the essive clitic *=na*, as illustrated by the below example:

(6.7) *kɨpitʃik =na*
cold=ESS
'It is cold'
Lit: It (the weather) became cold.

Syntactically, adjectives can function: **(i)** as predicates (6.8), where there is no overt copula between the head noun and the adjective; or **(ii)** as modifiers of nouns (post-nominal, attributive adjectives), as in (6.9):

(6.8) *iat* *pitoa* *petʃe*
2PL tobacco good
'Your tobacco is good'

(6.9) *o=t-ek* *pagop*
1s=R-house new
'My new house'

Adjectives can be negated with the negative clitic *=(e)ɾom*. Adjectives (6.10) are negated as the same way as verbs (6.11) and nouns (6.12), as illustrated in the following set of examples:

(6.10) *Konibu i=ʧame=eɾom*
Konibú 3s=beautiful/good=NEG
'Konibú is not well'

(6.11) *o=ʧet=eɾom*
1S=leave=NEG
'I don't leave'

(6.12) *ek=eɾom*
house=NEG
'There is no house'

Akuntsú employs vowel lengthening in adjectives to represent the degree of intensity of meaning 'very', as in the following example:

(6.13) a. *k^{w}ako ø-ok^{w}aj p**eee**ɾek=na*
guan (sp.) R-tail wide/long=ESS
'The guan's tail is very long'

b. *o=ø-jãj at**ʃiiii** nom o=i-ko ko=ɾom*
1S=R-tooth pain no 1s=OBJ.NMLZ-ingest ingest=NEG
'I don't eat my food, my teeth hurts very much'

With respect to the order of the adjectives in the clause, the adjectives follow the head of the noun phrase when they function syntactically as noun modifiers. See template of adjectives order, as follows:

[(noun) (pron) (dem) **adj**][122]$_{\mathbf{NP}}$

Figure 6.1 - Template of adjective order within the NP.

6.2.1 Adjectives and nouns

Adjectives and nouns are similar in many aspects. The relevant aspects are cited in this section. The first common aspect worth mentioning is that both can be arguments (complements) of a predicate; compare the adjective in (6.14a) and the noun in (6.14b), both in boldface:

(6.14) a. *erape* ***kɨpitʃik*** *te=k^{w}at-a*
tomorrow cold 3COR=leave-THV
'The cold will go away tomorrow'

b. *erape* ***ɑremãw*** *te=k^{w}at-a*
tomorrow Alemão 3COR=leave-THV
'Alemão will go away tomorrow'

Both nouns and adjectives can occur with oblique clitics (see section 4.3.1), as shown in the examples below, which illustrate a noun (6.15a) and an adjective (6.15b) with the essive clitic *=na*:

(6.15) a. *e=ø-kora-kora=na*
2s=R-chicken=ESS
'It became your chicken'

b. *i=k^{w}erep=na*
3s=black/dark=ESS
'It turned into black'

[122] Note that only one of the elements in parentheses can occur.

From the data available, only nouns receive the suffix *-a* that carries the meaning of comparativeness '*like/as.*' This similar (probably cognate) suffix also occurs in Tuparí, described by Rodrigues and Caspar (1957) as a suffix that gives a special characteristic to the noun, literally meaning '*the one that is...*' or '*the one that has...*' Compare, in Akuntsú, examples below:

(6.16) a. *kõj-kõj*
'Catfish'

b. *kõj-a-kõj-a* *te*
catfish-N-catfish-N 3S
'He is like a catfish'

(6.17) a. *kɨpek*
'Papaya'

b. *kɨpek-a* *perek* *kɨpek-a* *ĩka*
papaya-N wide papaya-N short
'It is long papaya and it is short papaya'

Unlike common nouns, adjectives (in bold) are not marked by the determinative morpheme *-(e)t*, as following:

(6.18) a. *ameko-t* ***k^{w}erep***
jaguar-DEF black/dark
'the black jaguar' (repeated from (4.8))

b. *otʃe* *t-ek-et* ***iw***
1PL.EXCL. R-house-DEF ugly/rotten/bad
'Our damaged house'

6.2.2 Adjectives and verbs

It is difficult in Akuntsú to apply the criterion that says that verbs are the only word class that can be combined with categories that denote person, mainly because absolutive and genitive are coded by personal markers; thus, the verb, the noun and the adjective can bear personal markers. However, one of the main criteria that separate verbs from adjectives and nouns is the fact that neither nouns nor adjectives can take the thematic vowel *-a,* which is restricted to verb classes:

(6.19) *k^{w}ako* *te=**akat-a*** *te*
guan 3COR=fall-THV FOC
'Guan (sp.) fell'

Another difference between verbs and adjectives is that only adjectives (6.20a) can function as arguments without adding any derivational morphology. The verbs in (6.20b) must be verbalized in order to function as an argument:

(6.20) a. *kipɨ* *te=ita*
elder 3COR=arrive
'The elder (man) has arrived'

b. *poget-ap* *paj-a* *en*
roast-VBLZ clean-THV 2s
'You clean the roasted'

In addition, adjectives, not verbs, function as modifiers of nouns. See the example below that shows an adjective (in boldface) as the modifier within a noun phrase (NP):

(6.21) a. *tʃamoew* [*o=t-ek* ***pagop***]$_{NP}$ *tʃok*
Samuel 1S=R-house **new** build
'Samuel built my new house'

b. *on* [*etɨ* ***peɾek***]$_{NP}$ *mõk^{w}a*
1s basket **wide/long** make
'I'll make a wide basket'

6.3 Adverbs

As described in section 3.3.4, the adverbs, like the adjectives, form a small class, diverging from the other prototypical open classes: noun and verb classes. Syntactically, adverbs function to modify the verb (the predicate) or the entire clause. As noted before, morphologically, adverbs do not differ from adjectives, especially those called manner adverbs. However, they are included in a separate class by means of syntactic criteria, since only nouns and adjectives can function as arguments of verbs. Semantically, the adverbs are mainly divided into TEMPORAL, MANNER, and LOCATIONAL adverbs.

Adverbs occur in different position within the clause. They are commonly encountered at the beginning or at the end of the clause, without interfering in the internal structure of the clause. They differ from nouns in that they cannot be the argument of a clause, mainly because they cannot form a syntactic unit with nouns. Finally, they differ from particles due to two main factors: **(i)** being able to form a phrase by themselves while particles cannot; and **(ii)** appearing in different positions within the clause, while particles tend to have a fixed position[123].

The main reason to classify these words as adverbs is that they are encountered in different positions within the clause. Not all examples shown below illustrate all the possible alternatives for adverbial position; however, we need to be aware that the position of all three

[123] More on particles in chapter 7.

types of adverbs varies — that is, it is possible to place them at the beginning or at the end of the clause. Below, the three types of adverbs are discussed:

TEMPORAL ADVERBS

Temporal adverbs locate the predicate in a time frame. They can indicate a specific time or some event that occurred over time. They are commonly found at the beginning of the clause, though it is also possible for them to occur in clause-final position. The most frequent temporal adverbs are given in (6.22) and their behavior in the clause is shown in (6.23-6.26).

(6.22)

eɾape	'tomorrow'
kɨɾẽ	'today/now'
kojõpe	'(at) night'
kepɨ	'evening'
kʷiɾi	'(during the) day'
kʷiɾimã	'early/morning'
eɾape no	'day after tomorrow'

(6.23) ***kojõpe***=*bõ* *õjpe-ka* *on*
night=ALL snuff-TR 1s
'I am going to sniff snuff at night'

(6.24) ***eɾape*** *te=ø-poemõkʷa*[124] *tip-ka*
tomorrow 3COR=R-manufacture soft-TR
'He'll cook his food tomorrow'

[124] This word is used to talk about things that are made or prepared by someone. It is possible to refer to a basket, to cooked corn and so on by using the word *poemõ̃kʷa*.

(6.25) ***kɨrẽ*** *te=k^{w}at-a*
today/now 3COR=leave-THV
'He leaves today'

(6.26) ***kepɨ*** *te=ita*
evening 3COR=arrive
'He arrives in the evening'

The temporal adverb *erape* 'tomorrow' can also occur with the indefinite pronoun *no* 'other,' which gives the idea of 'the day after tomorrow,' as exemplified below:

(6.27) a. ***erape*** ***no*** *tapdut* *pega*
tomorrow other manioc bring
'Bring the manioc the day after tomorrow'

b. *kɨbapi* *poka* ***erape*** ***no***
bush burn tomorrow other
'He will burn the bush the day after tomorrow'

LOCATIVE ADVERBS

The adverbs in this category express a locative meaning. Some examples of the most common adverbs found in the language are presented in (6.28). In (6.29), (6.30) and (6.31) the adverbs in bold, like other adverbs found in the language, cannot cannot be used in place of the noun and have scope over the clause.

(6.28) *jõ* 'here'
wã 'close'
kete[125] 'there'

[125] It may be possible that this can be also considered a complex form of demonstrative plus another morpheme, if one could separate the form as *ke* + *te*.

(6.29) a. *beribeɾi* ***jõ***
mat here
'The mat is here'

b. ***jõ*** *e=ø-eɾek* *k^{w}ak*
here 2s-R-speech sound
'Your recorder is here'

(6.30) a. *ameko* *apoɾo-ka* ***wã***
jaguar growl-TR close
'The jaguar growls close by'

b. ***wã*** *ke=bõ* *nom*
close DEM=DAT no
'That one is not close by'

(6.31) a. *ameko ʧaɾo* *eɾek-ka* ***kete***
jaguar yellow speech-TR there
'The yellow jaguar is howling there'

b. ***kete*** *en* *i=ma*
there 2s 3s=place/put/spill
'You put it there'
Context: She was giving the parrot to be placed inside the house.

Note, however, that *jõ* 'here' and *kete* 'there' are also related to deictics[126]. In addition, there are also locative notions expressed by nouns attached to locative clitics or linked to postpositional phrases to form adverbial phrases, as discussed in sections 4.3.1 and 4.8.2. Some examples are presented below:

(6.32) a. *kopiba* *i=t-ek* *pi=bõ*
parrot 3S=R-house interior=ALL
'Parrot got into his house' (repeated from (4.17d))

[126] Sometimes discussed in the literature as adverbial demonstratives.

b. *orẽ=bõ* *nom* *ek* *etʃe*
1S.EM=DAT no house DIFF
'I am not in the house'

Another way that the language represents the idea of location is by using adjectival words to express adverbial notions. Besides the semantics (which shift), syntactic properties are what lead us to identify lexemes as adjectives or as adverbs, hence no morphology is used to mark them as adjectives or as adverbs.

The examples below illustrate the adjective *perek* 'wide/long' being used to express distance (6.33a) versus as an adjectival word (6.33b).

(6.33) a. *aparabia* *erek-k^{w}a* ***perek***
non-Indian speech-TR.PL
'The non-Indian speaks far away'

b. *kɨp* ***perek***
leg/stick wide
'Long leg'

MANNER ADVERBS

The adverbs in this category represent the way that an event occurs. They may give the idea of fast/rapidly, strongly, quickly, etc. In this category, it is more common to see reduplication in the verbal root expressing the same semantic notions as manner adverbs, rather than the use of adverbial words themselves. The words described as manner adverbs are those that behave as both adjectives and adverbs. As adverbs, the words consistently occur before or after the verb phrase. Examples (6.34a-b) show the possible positions of the manner adverb in a clause.

(6.34) a. *te=kʷakʷa* ***ten*** *orẽ=bõ* *nom*
3COR=cry strong 1S.EM=DAT no
'(She) cries strongly, I don't'

b. ***ten*** *te=kʷakʷa* *orẽ=bõ* *nom*
strong 3COR=cry 1S.EM=DAT no
'(She) cries strongly, I don't'

Note that the adverb *ten* comes after the verbal predicate (as in (6.34a) and it can be placed at the beginning of the verb phrase (as in (6.34b)) or at the end (as in (6.34a) and (6.35a)); however, it cannot be inside the elements of the predicate — that is, between the verb and the object (as in (6.35b)) — as this is ungrammatical.

(6.35) a. *õjpe* *ko-a* ***ten***
snuff ingest-THV strong
'(He) sniffs snuff strongly'

b. **õjpe* ***ten*** *ko-a*
snuff strong ingest-THV
'(He) sniffs snuff strongly'

It is important to note that verbal reduplication[127] can also be understood as expressing an adverbial notion, though it is a morphological property of the verb and not an adverbial word on its own. The context is what tells us how to understand the expression assigned by this morphological process. Below are examples of verbal reduplication that, from a semantic point of view, are used adverbially.

(6.36) a. *kota-kota-kota*
climb-RED-RED
'He climbs fast'

[127] More on verbal reduplication in section 5.11.4.

b. *o=neme-neme*
1s=run-RED
'I ran quickly'

c. *Aramira kopkap kit-kit-kit-ka*
Aramira annatto seed-RED-RED-TR
'Aramira takes the annatto's seed quickly'

d. *i-i-ka*
liquid/genipap-RED-TR
'She paints quickly'

e. *kĩn-kĩn*
scratch-RED
'It scratches very much'

6.4 Summary

In this chapter, I have examined the basic structures of adjectives and adverbs. Adjectives and adverbs are described as an open class, though a small one. Adjectives, nouns, verbs and adverbs can be similar to a degree, but they have some divergent characteristics of syntax and morphology that lead to their being categorized as independent members of different lexical classes.

Adverbs (manner adverbs and some locative adverbs) in the language, from a morphological point of view, have no independent status of their own; rather, words that are adjectives in form and basic meaning can be used to modify verbs, and thus in that context have an adverbial function. However, adjectives used as adverbs are syntactically different from prototypical adjectives; that is, adverbs are words that have no fixed order in the clause, being allowed to occur at the beginning or at the end, though they are not allowed to come between the object and verb within the verb phrase.

CHAPTER 7

PARTICLES, IDEOPHONES AND INTERJECTIONS

7.1 Introduction

The closed word classes in Akuntsú are pro-forms, particles, postpositions, ideophones, and interjections. Some of the closed classes, such as pro-forms and postpositions were discussed in sections 4.8 and 4.3.1.1 respectivelly.

The main purpose of this chapter is to address the main generalizations about, and specific functions of, the remaining closed classes: particles, ideophones and interjections. Firstly, particles are defined and illustrated in part by their semantic characteristics and in part by their form, generally considered to be small elements (§7.2). In sections 7.3 and 7.4, respectively, ideophones and interjections are discussed. The last section gives a summary of the main points presented in this chapter (§7.5).

7.2 Particles

Particles are here defined as a closed class of phonologically independent words that occur on the level of the sentence. They have a grammatical function and are usually very small, not made up of many segments. Particles are considered an invariable class of words that do not take any inflection or derivation morphemes. Particles cannot function as a

predicate by themselves and differ from both ideophones and interjections by how they are integrated syntactically into the sentence — that is, ideophones and interjections are not used in a syntactic construction with other word classes, as particles are. The most productive particles in the language are described in this chapter, with focus on their distribution in the clause and their main functions.

7.2.1 Epistemic particles

There are so far three epistemic particles identified in the texts and narratives, namely *mã* 'indeed/truly,' *nika* 'maybe/perhaps,' and *dap* 'he/she said that... (reportative).' All three of these particles indicate in some way the speaker's attitude towards the proposition.

7.2.1.1 Certainty *mã*

The particle *mã* is called in this study an epistemic particle, meaning 'indeed/truly.' It occurs at the end of the clause and it appears in sentences where the speaker wants to convey the certainty of a proposition.

(7.1) *i=iat eni etʃe mã*
3s=lay hammock DIFF CERT
'(He) is laying in the hammock'

(7.2) *otat=pe kɨj mã*
fire=OBL take CERT
'It's indeed to take the fire'

(7.3) *ompeɾa ta-ap otʃe i=tʃop-a mã*
pineapple plant-NMLZ 1PL.EXCL 3s=see-THV CERT
'The planted pineapple, indeed we are going to see them'

(7.4) *kopiba kerẽn mã*
parrot (sp.) enter CERT
'The parrot got in'

(7.5) a. *Aramira et-a mã o=iat on*
Aramira sleep-THV CERT 1s=lay 1s
'Aramira indeed sleeps, I am going to lie down'

b. *Pura et-a mã*
Pura sleep-THV CERT
'Pura sleeps'

(7.6) *en perek mã*
2s wide/long CERT
'You are indeed long'

7.2.1.2 Uncertainty *nika*

This particle conveys the uncertainty of the speaker about the truth of the proposition. It gives the idea of 'maybe/perhaps' or 'not sure,' indicating that his/her commitment to the truth value of the proposition is not certain.

(7.7) *i=t-et nika*
3s=R-name UNC
'I am not sure about its name'

(7.8) *e=i-mi tawtʃe nika*
2s=OBJ.NMLZ-kill peccary UNC
'It may be your hunted thing, peccary'

(7.9) *ariano t-ek-õ nika*
Adriano R-house-ALL UNC
'Maybe to Adriano's house'

7.2.1.3 Reportative *dap*

In Akuntsú, there is an epistemic particle *dap* that is used by the speaker when they report/quote another person's speech, expressing the concept of 'she/he said.' This particle expresses that the veracity of what is said at the moment was not attested by the speaker, and it also shows the hearer that what is being said is not the speaker's own assertion, but represents the speech of someone else. The position of the particle is clause-final.

(7.10) [...] *o=ø-ti* *pip* *dap*
1s=R-mother afraid.of RPT
'"[...] my mother is scared" he said'

(7.11) *ʧonatã* *i=mi* *dap*
Jonathan 3s=kill RPT
'"Jonathan killed it" she said'

(7.12) *te=aot-a* *dap*
3COR=go.out-THV RPT
'"It went out" she said'

(7.13) *ke=bõ* *top=erom* *dap*
DEM=DAT father=NEG RPT
'"For that one, there is no father" she said'

7.2.2 Focus marker *te*

The function of this particle is to delimit the scope of the proposition which is to be taken as relevant by the listener from the point of view of the speaker. The focus marker *te* appears in many examples of natural conversation and narratives, appearing in declaratives and in interrogative sentences[128].

[128] Section (5.10) provides the different functions of the morpheme *te* found in the language.

(7.14) a. ***te=k^{w}ep-a*** *te* *Buko* *te=i-ko* *at-a*
3COR=climb-THV FOC Buquá 3COR=OBJ.NMLZ-ingest catch-THV
'Buquá climbs, he catches his food'

b. ***te=k^{w}ep-a*** *te* *Konibu* *kota-kota*
3COR=climb-THV FOC Konibu go.up-RED
'Konibú climbs, climbs, climbs'

The focus marker takes the process as the relevant theme, that is, it highlights either the verb itself (7.15a) or the entire predicate (7.15b).

(7.15) a. ***ʧop-a*** *te* *te=mepit* *ʧiɾamatɨ*
see-THV FOC 3COR=son/daughter.of.woman Txiramanty
'Txiramanty will see her son'

b. ***i=ʧop-a*** *te* *kaɾow* *i=ko*
3s=see-THV FOC Carol 3s=MOV.
'Carol is going to see it'

The focus marker can also be used to give focus only to the object of the verb phrase. Notice that when the focus is on the object, the subject tends to move to the end of the sentence, as indicated in the following example:

(7.16) a. ***e=t-ek-et*** *ʧok-a* *te* *jẽ*
2S-R-house-DEF build-THV FOC DEM
'This one will build your house'

b. ***iki t-ek*** *ʧop-a* *te* *aparabia*
water R-house see-THV FOC non.Indian
'Non-Indian is seeing the well'

In (7.17a-b) the subject is the focus of the discourse. The speaker in these situations wants to emphasize who is doing/carrying the event, as illustrated below in boldface:

(7.17) a. ***kɨte*** ***Konibu*** *te* *atiti* *ta* *kɨte* *petkop*
one Konibú FOC corn plant one alone
'Only Konibú plants corn, one alone'

b. ***o=ø-top*** ***papa***[129] *te* *Konibu* *mã*
1s=R-father daddy FOC Konibú CERT
'My father is truly Konibú'

The subject can also be highlighted in existential clauses, as seen:

(7.18) *e=ø-pi-atʃo* ***on*** *te* *tʃokĩn*
2s=R-foot-INT 1S FOC small
'Your foot is big, I have small (one)'

When the verb or the predicate is the focus of the sentence, the object moves to a position after the verb predicate. The subject may or may not be overtly expressed in the sentence.

(7.19) a. ***tʃop-a*** *te* *tabɨt*
see-THV FOC garden
'See the garden!'

b. ***pirɨ*** *te* *kɨpe*
throw FOC machete
'Throw the machete!'

c. ***on*** ***õk^{w}a-õk^{w}a*** *te* *mĩ+kapa-kapa*
1s wash-RED FOC vagina+roll-RED
'I washed the underwear over and over'

Another way that the focus particle *te* is employed is when the speaker is answering information questions (such as questions like *what is it*, *who is it*, etc.) (7.20 a-c), as shown:

[129] This is a Portuguese loanword: *papai* 'daddy'.

(7.20) a. *kɨbek te*
papaya FOC
'(It's) papaya'

b. *Pura ojtpe te*
Pura hat FOC
'(It's) Pura's hat'

c. *pitoa=pe kɨj te=ip-a-ɾa te*
tobacco=OBL take 3COR=come.back-HAB FOC
'He comes back to take tobacco'

The particle *te* is also employed in *yes/no* questions. It is used to focalize the relevant information. In (7.21a) the temporal adverb is emphasized in the question, while in (7.21b-c) the focus is on the noun and on the adjective respectively. Note that in the interrogative sentences below there is no morphological marker that indicates whether or not it is a question; rather, the intonation is what marks these sentences as interrogatives.

(7.21) a. *kɨɾɛ̃=bõ te ip-a-ɾa Ariano?*
today=ALL FOC come.back-THV-HAB Adriano
'Is it day (that) Adriano comes back?'

b. *e=ø-ti te Ana?*
2s=R-mother FOC Ana
'Is your mother Ana?'

c. *i=petʃe te?*
3s=good FOC
'Is it good?'

7.2.3 Particle *emo*

The particle *emo* has the meaning of 'also.' This particle has scope over the entire noun phrase. It is usually an intra-sentential particle. The particle can follow a noun (7.22) or

a pro-form (7.23). In (7.24) it is possible to see the behavior of this particle in a negative sentence.

(7.22) a. *Aramira k^{w}ako emo ita*
Aramira guan also arrive
'Aramira and the guan also arrived'

b. *koɾa-koɾa emo tʃame*
chicken also well/good
'The chicken is also well'

c. *Tʃìɾamãtɨ i-õ* *Tʃìɾamãtɨ emo i-õ*
Txiramanty OBJ.NMLZ-give Txiramanty also OBJ.NMLZ-give
'It is Txiramanty's thing, it is also Txiramanty's thing (pointing to another thing)'

(7.23) a. *eme emo*
DEM also
'This one too'

b. *apaɾa no emo*
banana other also
'The other banana too'

In negative constructions, the negative particle *nom* is placed after the particle *emo*, where the negation has the scope over the proposition.

(7.24) a. *tawtʃe kɨ emo nom*
peccary river also no
'It is not the peccary's river either'

b. *en i=tʃeɾe-ka emo nom*
2s 2s=cut-TR also no
'You don't cut it either'

7.2.4 Particle *ne*

This particle appears in questions giving a hypothetical meaning to the proposition. The two examples below show how the particle is employed. Note that the particle *ne* occurs at the end of the clause.

(7.25) a. *eni=bõ* *ne*
hammock=ALL HYP
'Is it to the hammock?'

b. *etɨ* *no* *ne?*
basket other HYP
'Is the other basket?'

The particle *ne* can also appear with another interrogative particle *arop* 'who/what' (7.26). Note, however, that *ne* is not frequent in questions that already carry an interrogative word, as the one exemplified below:

(7.26) *arop* *i-õ* *ne?*
who OBJ.NMLZ-give HYP
'Who gave it?'

Besides its function above, *ne* can also appear in declarative sentences, which gives the meaning of [TO MAKE X] or [TO BECOME X], a notably different function from the one presented above. It shares characteristics both with a verbalizer (7.27) and with a translative morpheme (7.28), as following:

(7.27) a. *Tʃaruj* *ape* ***ne*** *on*
Tʃaruj path VBLZ 1S
'I'm making Tʃaruj's path'
Context: She was cleaning a path around the house.

b. *Enotej potʃek nom* ***ne***
Enotej thing no VBLZ
'Enotej didn't make the thing'
Context: Talking about the drawing on the notebook.

(7.28) a. [...] *aramira* ***ne*** *en*
woman TRANSL 2S
'Then, you become woman'

b. [...] *tawtʃe ap* ***ne***
peccary fat TRANSL
'(For) peccary's fat'

When the particle *ne* occurs in declarative sentences, it has the same meaning as the clitic *=na* 'essive.' It seems that, at least in the data available, they can be interchangeable; however, further investigation needs to be undertaken to test this assertion.

7.2.5 Particle *ãka*

The particle *ãka* has the meaning 'like this, in that way.' It is intra-sentential and it is often followed by ideophones. This particle is very common in natural discourse and texts. The distribution of the particle within the sentence is exemplified below:

(7.29) a. *oʔ o=pera* ***ãka*** *ʔɛh-ʔɛh tik pã-k^{w}a* ***ãka***
INTER 1S=wake.up that.way IDEO-RED mosquito beat-TR.PL that.way
'Oh, I woke up. That way, beating, beating, (I) beat the mosquitos, that way [...]'

b. *aparabia te=k^{w}ak^{w}a* ***ãka*** *hẽ-hẽ-hẽ-hẽ*
Non-Indian 3COR=cry that.way IDEO-RED-RED-RED
'The non-Indian is crying that way hẽ hẽ hẽ hẽ'

c. *kɨjtpit* ***ãka*** *toj-toj on toj kɨjtpit at-a ɨkɨ=ɾi*
fish that.way IDEO-RED 1S IDEO fish catch-THV river/water=ABL
'I catch fish that way (simulating the fishing), I'll catch fish from the river'

d. *e=wip-k^{w}a* ***ãka*** *βuh*
2S=slide-TR.PL that.way IDEO
'You slide, that way, falling'

7.2.6 Existential *a* and *tea*

In Akuntsú, there are two particles that produce an existential meaning, namely *tea* (7.30) and *a* (7.31). The particles occur NP-finally.

(7.30) a. *ɨkɨ* *g^{j}ɛɛ* *tea*
river IDEO exist
'There is the big river'
Context: After the raining, the volume of the river has increased.

b. *abatʃo* *i-ko* *ko-a* *tea*
grandfather OBJ.NMLZ-ingest ingest-THV exist
'There is grandfather's food to eat'

c. *te=ø-pi* *maɾa-ap* *tea*
3COR-R-foot fold-NMLZ exist
'There are his tied feet'

(7.31) a. *po* *ø-akã* *a*
hand R-bone exist
'There is the bone of the hand'

b. *õjpe* *a* *tʃop-a* *on*
tobacco exist see-THV 1s
'It's tobacco (that) I'll see'

These particles also express possession in many of the translations found in the data, even though the possessor is not overtly expressed in the clause. The sentences below are classified as clauses that fit into the constructions called in this study TYPE 2, i.e., clauses that

do not consist of a possessor and a possessed element (see chapter 8 for more information on existential clauses).

The existential constructions are reduced in terms of the number and kind of morphology they can have when compared to other constructions, which seems to be one of the cross-linguistic characteristics of existential clauses (Payne 1997:123)[130]. Examples of each particle are given below:

With /a/ [ʔa]

(7.32) a. *kado* *a*
necklace exist
'There is necklace'
Lit: Necklace exists.

b. *pawɾape* *a*
shaker
'There is shaker'
Lit: Shaker exists.

c. *jẽ* *a*
DEM exist
'There is this one'
Lit: This exists.

d. *t=ø-ok^{w}aj* *a*
3S=R-tail exist
'There is its tail'
Lit: Its tail exists.

e. *atʃi* *a*
pain exist
'There is pain'
Lit: Pain exists.

[130] According to Payne (1997:123) "usually there is no or reduced evidence of grammatical relations in existential constructions (...)"

The difference found between *a* and *tea* is not entirely clear, but the hypothesis is that the difference is connected to deictic meaning. The particle *tea* usually refers to someone or something at a distance from the speaker, while *a* refers to things or people that are usually near the speaker.

With /tea/ [teʔa]

(7.33) a. *potʃek* *tea*
thing exist
'There is the notebook'
Lit: Notebook exists.

b. *te=amõj-ap* *tea*
3COR=dance-NMLZ exist

'There is dancing'
Lit: Dancing exists.

c. *tɨrɨ* *tea*
two exist
'There are two (or more)'
Lit: Two (or more) exist.

d. *eni* *iw* *tea*
hammock ugly/rotten/bad exist
'There is a spoiled hammock'
Lit: Spoiled hammock exists.

7.3 Ideophones

Ideophones and their representation of iconicity not only show examples of how word formation occurs in Akuntsú, but also show interesting manifestations of speakers' life experiences. Iconicity and its relation to life experience are not new; earlier literature has mentioned "the intuition behind iconicity is that the structure of the language reflects in some

way the structure of experience" (Croft 2003:102). Although ideophones clearly are iconic, they do not *always* carry sounds that refer to the process or event that they related to.

Ideophones are found in many languages, and it is a well-known feature found in Tupían subfamilies, including, but not limited to Mundurukú (Crofts 1984), Rámaráma (Gabas Jr. 1999), Arikém (Landin 2005, Everett 2006), Tupí-Guaraní (Seki 2000, Solano 2009), and Tuparí (Galúcio 2001, Braga 2005). Ideophones are described in this study as expressions of sounds, appearances, manners, etc. perceived through the senses. Ideophones have been described by the literature variously; some cross-linguistic characteristics have been defined for ideophones (Voeltz & Killian-Hatz 2001:2, *apud* Smoll 2011-2012), as presented below:

CROSS-LINGUISTIC CHARACTERISTICS OF IDEOPHONES

(1) Ideophones are semantically highly marked and express perceptual imagery of events and states;
(2) Ideophones generally have a special phonology;
(3) Ideophones often do not fit into normal syntactic patterns;
(4) Ideophones are often subject to processes of reduplication;
(5) Ideophones are often only used in oral language and tend to have a special dramaturgic effect.

Figure 7.1 - Cross-linguistic characteristics of ideophones.

In Akuntsú, ideophones can contain segments that are not part of its regular phoneme inventory, which are exemplified in boldface below. The segments below represent a sound-symbolic representation of the sounds reproduced in different events.

In addition, the ideophones tend to keep the shape of the syllable structure (CV(C)) found in other lexical categories described for Akuntsú. They are typically pronounced with a relatively high pitch and intensity (this also applies to other lexical classes that allow reduplication). Some examples are given below:

(7.34)	*u**f***	voiceless labiodental fricative	'tired'; 'blowing'
	***β**uh*	voiceless bilabial fricative	'of something/someone falling'
	*wi**ʃ**ĩ*	voiceless alveolar fricative	'of someone sliding'
	*u**h***	glottal fricative	'of someone snoring/sleeping'

Additionally, ideophones carry different phonological characteristics related to vowel lengthening: they are intensively lengthened compared to other lexical categories. See for example the lengthening in the ideophones *tʃoooo* 'biiii...g' [big], and *wiiiiʃĩ* 'sliiii....ding' [sliding].

Ideophones have other peculiar characteristics. The ideophones mostly function (syntactically) as verbs in this language, although they can also be adjectives or nouns. The speakers use little morphology on verbal ideophones; some examples of derivational iconicity are shown below, where *dow* represents the sound of a gunshot. In (7.35a-b), the ideophone *dow* is being used as a verb, receiving the thematic vowel, typical of verbs, whereas in (7.35c) the same ideophone is used as a noun. Note that the examples (7.35a-b) show the ideophone with the thematic vowel; however, it is optional and most of the ideophones in the data do not take all the inflectional and derivational morphology typical of verbs (see verbal morphology in chapter 5).

(7.35) a. *o=ike* *dow-a* *o=ø-kɨpi* *dow-a* *wẽn-a*
1S=older.brother IDEO-THV 1S=R-young.sister IDEO-THV finish-THV
'My older brother died, my little sister died, (they) ended up'

b. *o=ø-ti* *dow-a* *pɨ-pɨ* *wen-a*
1S=R-mother IDEO-THV shot-RED finish-THV
'My mom died, they shot repeatedly, it's over'

c. *aparabia* *mapi* *dow*
non.Indian shotgun IDEO
'Non-Indian's gun bullet'

Another example of ideophones functioning in different word classes is shown in (7.36) below. This example shows part of a conversation where speakers are talking about a cut on the hand. In (7.36a) the lexical verb 'to cut' *korom* is mentioned, and after it they begin to replace this verb with the ideophone *kʲu*, which functions as a verb in (7.36b). In the next example, the same ideophone is used as a noun and as a verb respectively, as seen in (7.36c). Note that the final vowel of the ideophone is reduplicated indicating the manner that it was cut.

(7.36) a. *on* *o=ø-po* ***korom***-*ka*
1S 1S=R-hand cut-TR
'I cut my hand'

b. *po* ***kʲu***-*ka*
hand IDEO-TR
'I cut the hand'

c. ***kʲu*** *a* *kɨpe* ***kʲuuu***
IDEO exist machete IDEO
'I have a cut, the machete cut strongly'

There are also kinds of ideophones that function as adjectives, as seen below:

(7.37) *Konibu ø-toa-ap* ***tʃooo***
Konibú R-lay-NMLZ IDEO
'The hammock of Konibú is big'

Ideophones are often reduplicated. It is possible to have three, four or five repetitions of the basic form, or even more when it is necessary, depending on the amount of emphasis that the speaker wants to give to the event. The reduplication can also indicate repeated actions, intensification or the duration of the process. The number of repetitions depends on the context, such as the intensity of an action that the ideophone represents. Compare examples (7.38a-c), where *k^{w}at* is sound symbolic of the water boiling.

(7.38) a. *te=k^{w}at-ka*
3COR= IDEO-TR
'It's boiling'

b. *ɨkɨ k^{w}at-k^{w}at-ka*
water IDEO-RED-TR
'Water is boiling vigorously' (repeated from (3.20))

c. *k^{w}at-k^{w}at-k^{w}at-k^{w}at i=tip-ka o=jã*
IDEO-RED-RED-RED 3S=soft-TR 1s=sitting
'It boils intensively, I am cooking it'

In the examples below, *βuh* represents the sound of something/someone falling down:

(7.39) a. *kɨp te=paɾã-ka kɨp te=βuh*
wood 3COR=crack-TR wood 3COR=IDEO
'Wood cracked, wood has fallen down'

b. *te=akat-a te=βuh*
3COR=fall-THV 3COR=IDEO
'He fell, he fell down'

One of the most frequently used ideophone is *buɾu* which indicates the movement of person going or coming, as seen in (7.40).

(7.40) a. *on* *buɾu-ɾu-ɾu-ɾu* *kɨjtpit* *at-a*
1S IDEO-RED-RED-RED fish catch-THV
'I am leaving to catch fish'

b. *en* *i=at* *kom* *e=ø-ok^{w}a* *buɾu-ɾu*
2s 3s=catch PROJ 2s=R-young.brother IDEO-RED
'You'll catch him, your young brother comes'

The speakers also use other types of ideophones, and some of them are illustrated below:

(7.41) *aparabia-t* *k^{w}amoa* *kiw-kiw-kiw*
non-Indian-DEF shaman IDEO-RED-RED
'The doctor wiggled (repeatedly)'

(7.42) *Nanoj* *on* *Aɾamiɾa* *meti* *dək-dək*
Nanoj 1s Aramira maripa's fruit IDEO-RED
'Nanoj, Aramira and I are hitting the maripa's fruit many times (to break it)'

(7.43) a. *i=keɾa-k^{w}a* *ãka* *pi-pi*
3s=split-TR.PL that.way IDEO-RED
'(You) split it, that way, cutting'

b. *e=ø-po* *akã* *piiii* *te*
2s=R-hand hand IDEO FOC
'You snap your hand's bone'

(7.44) *ke=bõ* *ʧu-ʧu* *ke=bõ* *nom*
DEM=DAT IDEO-RED DEM=DAT NO
'That is pulling (repeatedly), for that one isn't (pulling)'

Akuntsú people have used ideophones and gestures as a way to facilitate their

communication with the FUNAI staff. Since the Akuntsú are monolinguals and there is no contact language to use with outsiders, the use of ideophones (full of iconic expressions) seems to be a way that they have found to compensate for the lack of communication with these outsiders. This hypothesis (along with their isolation from non-Indians) may help to explain why the Akuntsú people, since contact, have not learned Brazilian Portuguese: mostly because they do not need it; they found a way for the use of ideophones in combination with gestures to serve their primary needs.

7.4 Interjections

Interjections in Akuntsú are words used as a result of speakers' emotions and reactions to different situations, a result of "various cultural conventions that govern social and inter-personal relations" (Givón 2001:102).

They are not used in syntactic constructions with other word classes — that is, the interjections have no syntactic connection to other words found in an utterance. Unlike ideophones, interjections do not present verbal functions or any other function related to any other word class. The interjection usually comes at the beginning of the utterance, and can also form a phrase by itself. Some of the interjections most commonly used by the speakers are repeated here from previous sections in table 7.1 below:

INTERJECTION	SITUATION/MEANING
ahá	To indicate surprise, to approve some activity or the result of some work.
oʔ	The speaker wants to indicate his/her arrival.
iwe	To indicate pain; mostly used with non-Indians.
ẽ	To call someone's attention.

Table 7.1 - Sample of interjections.

Some examples of interjections within utterances are presented below:

(7.45) *oooʔ* *o=ip* *on*
Ooo 1S=come.back 1S
'Ooo, I arrived'

(7.46) *aha* *i=tʃame=na*
aha 3S=beautiful=TRANS
'Aha, it's beautiful'

There is also the borrowed word *iwe*[131] which functions as an interjection in the language; it can have both vowel lengthening (7.47) and can be reduplicated (7.48).

(7.47) *o=ø-amina* ***iweee***
1S=R-knee IDEO
'My knee is hurting very much'

(7.48) *te* *ãka* *õjpe* *ko-a* ***iwe-iwe*** *eo* *atʃi*
3S that.way snuff ingest-THV IDEO-RED belly pain
'[...] he, that way, sniffed snuff, it is hurting so much, the belly is hurting'

7.5 Summary

The purpose of this chapter was to provide an overview of the different particles found in this language, as well as their function and syntactic position in clauses. This chapter also provided a description of ideophones and their main characteristics. In addition, some of the most frequent interjections were discussed and illustrated. Table 7.2, below, summarizes the main findings:

[131] This interjection is a borrowing word from Kanoê language /iva-e/
pain-NMLZ
'pain' (Bacelar 2004:114)

CLOSED CLASSES	MAIN CHARACTERISTICS
Particles	• Syntactically integrated into the sentence; • Do not constitute a predicate by itself.
Ideophones	• Constitute a predicate by itself; • Can represent different grammatical categories.
Interjections	• Constitute a predicate by itself; • Express speaker's emotion and reaction

Table 7.2 - Main characteristics of interjections, particles and ideophones.

CHAPTER 8

SIMPLE CLAUSE TYPES

8.1 Introduction

The aim of this chapter is twofold. The first goal is to investigate the main non-verbal clauses in this language, seeking to describe their key semantic and morphosyntactic characteristics. The second goal of this chapter is to provide a brief description of the sentence types discussed in chapter 5, but this time with a focus on negative and interrogative clauses. The discussion seeks to outline the differences between various utterances, such as declarative, negative and interrogative, putting emphasis on the strategies Akuntsú employs to indicate each sentence type. This chapter is organized as following:

- Predicate complements (§8.2), with the following subsections:

- Equative and proper inclusion predicate complements (§8.2.1);

- Existential constructions (§8.2.2);

- Adjectival predicate complements (§8.2.3);

- Locative predicate complements (§8.2.4);

- Discussion of verbal predicates (§8.3);
- Interrogative clauses (§8.4), with a description of intonation pattern in polar questions and the structure of content questions in this language;
- Negative clauses (§8.5);

- A summary of the chapter (§8.6).

8.2 Predicate complements

A predicate complement is here defined as a predicate that lacks a real verb or copula. The important characteristic of this type of predicate is that there is no overt copular element in this type of sentence. There are five main kinds of sentences with predicate complements to be discussed in this section: proper inclusion and equation predicate complements, existential, adjectival, and locative (with postpositional or adverbial phrases) predicate complements.

The word order in non-verbal clauses is often [SUBJECT (NP) + COMPLEMENT (NP)] (with exceptions described further in this section) and there is a ø copula[132] between the subject NP and its predicate complement.

8.2.1 Nominal predicate complements

Nominal predicate complements are those that have a noun as the predicate complement. In the literature, it is possible to find two types of predicate complements, called proper inclusion clauses and equational clauses (by Payne 1997:114). These two types are also found in Akuntsú, as discussed and illustrated in the following subsections. Note that equatives and proper inclusion predicate complements differ from a semantic perspective (only). Table 8.1 presents the predicate complements and their grammatical structure

[132] Copula is here defined as a term that "(...) refers to a linking verb (...) whose main function is to relate other elements of clause structure, especially subject and complement" (Crystal 1980:93 *apud* Pustet 2003:2). According to Pustet (2003:2) there are three main known syntactic functions of copulas: (1) to function as a link between the subject and predicate complement; (2) to function as the element for inflectional verb morphology to be attached to; and (3) as to be a predicator, for those elements that cannot form predicates on their own.

	NOMINAL PREDICATE COMPLEMENT	
	EQUATIVE	PROPER INCLUSION
ø copula	NP + NP (Juxtaposition)	NP (independent noun) + Focus particle *te* or Essive clitic *=na* *or* NP + NP (Juxtaposition)

Table 8.1 - Predicate complement internal structure.

8.2.1.1 Equative constructions

Equative constructions are clauses that have two NPs in juxtaposition, as in the structure [$NP_1 = NP_2$], where the NP_1 is identical to the NP_2 specified in the predicate complement (Payne 1997:114). Presented below are some examples of this equative construction:

(8.1) a. *en* *o=ø-mepit*
2S 1S=R-son/daughter.of.woman
'You are my daughter'

b. *o=ø-tʃej* *te* *Pupak*
1S=R-uncle FOC Pupák
'My uncle is Pupák'

c. *kʷakʷa* *i=t-et*
kʷakʷa 3S=R-name
'*kʷ*a*kʷ*a is her name'

Note in example (8.1b) above and (8.2a) below (section 8.2.1.2) that the equative predicate has a focus marker between the subject and the predicate. In relation to the

presence of the focus marker, predicate complements pattern similarly to verbal predicates, in the sense that the focused element is the one placed before the particle *te* — i.e., the focused syntactic constituent is fronted.

8.2.1.2 Proper inclusion

Proper inclusion refers to two nominal phrases in juxtaposition where the first noun has a relationship with the second one; that is, the first noun is semantically part of a class or category specified in the nominal predicate, as in the English sentence *A trout is a fish*. (Payne 1997:114). Note that there is no morphological difference between equative and proper inclusion predicate complements. They diverge only semantically. In examples (8.2a-b) the subject NP is a pronoun while in example (8.2c) the subject NP is a full noun phrase.

(8.2) a. *en te aramira*
2S FOC woman
'You are a woman'

b. *on akũtʃu nom*
1S Akuntsu no
'I am not Akuntsú'

c. *nako-t aparapia*
man-DEF non-Indian
'The man is non-Indian'

Proper inclusion constructions can also be formed with an independent noun as the head of the predicate and they are usually followed by the focus particle *te* (8.3) or by the essive morpheme =*na*[133] (8.4), where the latter construction is more frequent in the data.

[133] For the definition and description of the essive morpheme see section (4.3.1.2).

(8.3) *kɨpek te*
papaya FOC
'It is papaya' (repeated from (7.20a))

(8.4) a. *kiakop =na*
sun=ESS
'It is sunny'

b. *i=ø-ap =na*
3s=R-fat=ESS
'It is its fat'

The next subsection describes negation in predicate nominals.

8.2.1.3 Negation

Negation in equational and proper inclusion clauses of [NP + NP] is made with the clitic *=(e)ɾom* (8.5a-b) or with the particle *nom* (8.6). In (8.7), the negation comes after the second NP:

(8.5) a. *apaw i=t-et=eɾom*
grub (sp.) 3s=R-name=NEG
'It is not called grub'

b. *jẽ aɾamiɾa ø-mepit=eɾom*
DEM Aramira R-son/daughter.of.woman=NEG
'This is not Aramira's son'

(8.6) *apaw i=t-et nom*
grub (sp.) 3s=R-name no
'It is not called grub'

This strategy to negate predicate complements is similar to negation of other types of predicates. In verb constructions, the negation usually goes before or/and after the verb,

where the scope of the negation is over the whole predicate. See details about negative clauses in section 8.5.

(8.7) *erẽ=bõ* *nom* *ʧet=om*
2S.EM=DAT no leave=NEG
'You don't leave'

The possible positions of the negation in equative clauses are summarized in Figure 8.1.

[NP + NP=NEG]
OR
[NP + NEG + NP (=NEG)]
OR
[NP + NEG]

Figure 8.1 - The position of negation in predicate complement.

8.2.2 Existential constructions

Existential predicates are those that assert the existence of an entity. They may also allow possessive readings. The existential constructions can be semantically divided into two types. TYPE 1 often associates two NPs in juxtaposition, while TYPE 2 sentences do not use the structure [NP + NP], but rather are clauses that contain the particle *a* or *tea* (existential markers)[134]. Table 8.2 illustrates how the existential predicates are distributed in this language according to internal structural criteria, as shown:

[134] Since existentials were discussed in a previous chapter, I focus here only on the types of existential constructions not mentioned earlier in this study. For the properties of particles see section 7.2.

	EXISTENTIAL PREDICATES	
	TYPE 1	TYPE 2
ø copula	NP + NP (Juxtaposition)	NP + *tea* / *a*

Table 8.2 - Existential predicates' internal structure.

The main difference between a TYPE 1 and TYPE 2 sentence (as seen from Table 8.2) is that the latter has a predicate complement that cannot be combined to another NP in a juxtaposition construction. Below, each sentence type is exemplified and discussed.

TYPE 1

TYPE 1 clauses are existential clauses (with possible possessive readings)[135] that have a noun as the head of the predicate. There are two NPs that are joined to form a genitive construction — that is, one of them refers to the possessor, and the other to the possessed. TYPE 1 predicates share features with the predicate complements, i.e., they are the result of two NPs in juxtaposition as [NP + NP], as seen below:

(8.2) a. *jẽ* *nom* *pi + kapa-kapa*
DEM no feet + roll-RED
'This one doesn't have shoes'
Lit: 'Shoes don't exist for this one.'

[135] This is not uncommon cross-linguistically. As Payne (1997:126) reported, "languages usually employ existential and/or locational structures to express the notion of possession." Turkish, for example, "uses the verb meaning 'exist' that also occurs in the existential constructions" in possessive constructions, as do many languages, including Latin, which had the construction, e.g. *mihi est* [1pers.dat is/exist.3pers.pres.indicatve] 'I have', literally 'to me is/exists'.

b. *oɾẽ* *o=ø-koɾo*
1S.EM 1S=R-bowl
'There is my bowl' ('I have a bowl')

c. *jẽ* *kem+kɨ*
DEM breast+liquid
'This one has breast-milk' (repeated from (3.29))
Lit: Breast-milk exists for this one.

d. *on* *o=ø-tʃajã*
1S 1S=R-earring
'I have earrings'
Lit: Earrings exist for me.

TYPE 2

TYPE 2 existential constructions occur with either the particle *a* or the particle *tea* (8.9).

(8.9) a. *ek^{w}it* *tea*
honey exist
'There is honey'
Context: Looking at a tree and saying that up there, there is honey to get.

b. *k^{w}e + nĩ* *a*
game meat + to weave[136] exist
'There is a mat'

c. *tʃame* *a*
good exist
'There is a good one'

However, I would like to call attention to negative constructions. In these

[136] This example shows a case of the compound form of [NOUN + TRANSITIVE VERB]. However, only a few cases were found in the data. This particular situation will be treated with special attention in future studies.

constructions, the NP can occur independently as a predicate complement, that is, it occurs without the addition of any other morphology, as follows:

[NP + NEG]

This construction can be seen in the below examples:

(8.10) a. *ek=eɾom*
house=NEG
'There is no house' (repeated from (6.12))

b. *taɨp=eɾom*
son.of.man=NEG
'There is no son'

For predicates with the particles *tea* and *a*, the only possible negative structure is the one with the particle *nom*. So far, no examples where the clitic *=(e)ɾõm* is employed in these constructions have been found.

(8.11) *e=ø-pi* *atʃi* *nom* *a*
2s=R-foot pain no exist
'There is no pain in your foot'

8.2.3 Adjectival predicate complements

In adjectival predicate complements, the adjectives occur as predicate complements indicating a property or an attribute of the noun phrase that is the subject of this construction. As seen below, as with the nouns, the adjectives are also capable of forming predicate complements in a juxtaposition construction. There are no morphological criteria to differentiate predicate complements of the [NP + NP] type from adjectival predicate complements of the [NP + ADJ] type. The predominant criterion used here was semantic. The

structure of adjectival predicate complements is [NP + ADJ].

(8.12) a. *Konibu kipɨ*
Konibú old.man
'Konibú is old'

b. *Pupak pagop*
Pupák young.man
'Pupák is young'

Adjective phrases also occur with the particle *te* or with the essive clitic *=na*. This structure is similar to some nominal predicate complements:

(8.13) a. *i=kop=na*
3s=red=ESS
'(It is) red (corn)'

b. *i=iw te*
3s=rotten FOC
'It is rotten'

Note that unlike verbs, adjectives and nouns do not allow thematic vowels to attach to them, and unlike verbs, they can function as arguments of predicates without taking any morphological marker (such as the nominalizer morpheme).

Negative constructions with adjectival predicate complements are formed by simply using the negative particle (8.14) or the negative clitic (8.15) after the adjective, as shown below:

(8.14) *Pupak i=ten nom*
Pupák 3s=strong no
'Pupák is not strong'

(8.15) *i=tʃobe=ɾom*
3s=delicious=NEG
'It isn't delicious'

Neither the particle *te* nor the essive clitic *=na* is necessary for attributive adjective complements, when the negative morphemes show up in the clause.

8.2.4 Locative predicates

There is another type of non-verbal predicate in the language, namely locative predicates. The locative predicates are the juxtaposition of a noun phrase and a postpositional phrase, in the order of [NP + PP], as seen in (8.16), or of noun and a locative adverb that has either the structure [ADVP + NP] or [NP + ADVP]. Examples of locative predicates are presented below:

[NP + LOCATIVE EXPRESSION]

(8.16) a. *amon e=ø-ape etʃe*
soap 2s=R-thigh DIFF
'The soap is on your thigh'

b. ***t***=ø-*anam etʃe kap*
3S=R-head DIFF wasp
'A wasp is on his head'

(8.17) a. *Tʃaruj otʃe t-ek etʃe*
Tʃaruj 1PL.EX R-house DIFF
'Tʃaruj is in our house'

b. *jõ kɨpe*
here machete
'Machete is here'

The negation is also formed with the particle *nom* or the clitic *=(e)ɾom*, as following:

(8.18) a. *kɨɾẽ=bõ* *nom*
today=ALL no
'It is not today'

b. *jõ* *kɨpe=ɾom*
here machete=NEG
'The machete isn't here'

8.3 Verbal predicates

Clauses composed with verbal predicates are divided into two categories: transitive predicates and intransitive predicates. This division is made according to the number of arguments required by the verb. Intransitive predicates are those that require only one argument, the subject; transitive predicates are those that require two arguments, namely a subject and an object. Pro-forms or nouns can function as object or subject in these predicates.

8.3.1 Transitive predicates

Following Hopper and Thompson (1980), transitivity is here defined as an activity which is 'carried-over' or 'transferred' from an agent subject to a patient object. It involves two arguments and an action. Transitive verbs are those that syntactically have a direct object (O). The transitive verbs in Akuntsú obligatorily bear a marker; whether it cross-references the subject or the object depends on the animacy of the object and of the subject being used in the discourse, as presented in chapter 5.

The first goal of this section is to present reasons for subject ellipsis in this language. As noted in previous examples, the subject can be omitted in transitive clauses; this is mainly

due to pragmatics, as pointed out below. The pragmatic functions discussed in figure 8.2 follow Andrews' discussion (2007:148).

SUBJECT ELLIPSIS

(1) The elided argument that plays the subject role was mentioned earlier in the conversation and so the speaker has the necessary information to determine the relationship between argument and predicate;

(2) What the hearer presumes that the speaker is conscious of, i.e., the situation that involves both speaker and addressee shows who the elided agent is. It is presupposed[137] or predictable from the context;

(3) What is foregrounded as important VERSUS what is backgrounded as secondary — that is, the parts of discourse which do not immediately contribute to the goal of the story-line are considered the background. The parts of the discourse which supply the main story-line points are the foreground. The foregrounded material conveys the skeleton of the conversation, which means that when the subject is omitted the OV is the main portion of the utterance, i.e., it contains foregrounded information.

Figure 8.2 - Pragmatic factors for subject ellipsis.

Note that even though the subject can be elided, the transitive clause needs to be instantiated by the subject somehow. Thus, two arguments (overt or not) are strictly necessary in transitive constructions. Table 8.3 shows whether or not the subject and object of transitive clauses can be a full NP, a free pronoun, a bound pronoun or a demonstrative. Note that only one element is cross-referenced on the transitive verbs, namely the object or the subject — the subject is only marked on transitive verbs when the object is a 3rd person

[137] Topics are usually presupposed information in this language.

non-animate full NP and the subject (agent) is a pronoun[138].

OBLIGATORY ARGUMENTS OF TRANSITIVE VERBS	SUBJECT AND OBJECT IN TRANSITIVE CLAUSES			
	Full NP	**Demonstrative**	**Free pronoun**	**Bound pronouns attached to the verb.**
Subject	Yes	Yes	Yes	Yes *If and only if the object is 3rd person non-animate full NP, as in (8.22) below.*
Object	Yes	Yes	No	Yes

Table 8.3 - Subject and Object in transitive clauses.

(8.19) *pitoa* *o=kõj-ka* *kõj-kõj-kõj*
tobacco 1s=pound-TR pound-RED-RED
'I'm going to pound the tobacco, kneading (intensively)'

Besides the required arguments (subject and object), transitive clauses (as well as intransitive clauses) also allow non-core arguments, such as in adverbial phrases (8.20) and other oblique phrases (8.21).

(8.20) *ororo + pe* *õk^{w}a* *kɨrẽ*
cotton + skin/peel wash/clean today/now
'...he washes the clothes now'
Lit.: 'He washes to/on the clothes'

(8.21) *erẽ=bõ* *i=kɨj*
1S.EM=DAT 3s=take
'It is for you to take it'

[138] See chapter 5 for details.

8.3.1.1 Word-order in transitive predicates

In Akuntsú discourse, the most frequently used word-order in transitive sentences is SOV; however, OVS and VOS (while less frequent than the other two) are also found in situations where the object or the event are the focus of the clause, which are often marked by the focus marker *te*.

The object of transitive clauses often precedes the verb, and the S (subject) can either precede or follow the verb phrase (OV). Thus, the word order of transitive clauses can be SOV (8.22a), OVS (8.22b) or VO(S)[139] (8.22c):

(8.24) a. *porakɨ* *ɨkɨ* *apeka* (SOV)
curassow water drink
'Curassow is drinking water'

b. *ɨkɨ* *apeka* *porakɨ* (OVS)
water drink curassow
'Curassow is drinking water'

c. *apeka* *te* *ɨkɨ* (VO(S))
water FOC water
'Drink water!'

In Akuntsú, when the agent occurs post-verbally, it is due to the fact that the object is the main topic of the conversation. Focus markers may (8.23) or may not (8.23) appear, depending on the semantics of the proposition.

(8.23) *tawtʃe* *tʃop-a* *te* *Konibú* (OVS)
peccary see-THV FOC Konibú
'Konibú is going to see the peccary'

[139] VOS word order usually happen in imperative clauses and the subject is often ellipsed.

(8.24) *pero* *õpa* *Konibú* (OVS)
macaw beat Konibú
'Konibú beat the macaw'

The position of the object is usually pre-verbal: when it is placed after the verb there is often a focus marker indicating the movement, as in (8.25-8.26).

(8.25) *mi-a* *te* *poga* (VO(S))
kill-THV FOC tortoise
'Kill the tortoise!'

(8.26) *pow-pow* *tʃoga* *te* *Tʃaroj* *ø-po* (SVO)
owl bite FOC Tʃaruj R-hand
'Owl bit Tʃaruj's hand'

8.3.1.2 Demotion of the direct object: antipassive construction

In Akuntsú, the antipassive voice is not morphologically marked directly on the verb, but through the demotion of the object to an oblique position in a given transitive clause. The oblique clitic *=pe* marks the object when it is occurring outside of the usual syntactic position of the object[140]. This type of construction is well-known as an antipassive construction. In such constructions, the subject does not change its status and it continues to be the agent of a transitive clause.[141] However, in this strategy the core internal argument of a transitive verb, its logical direct object, changes its status to a non-core, oblique argument.

However, unlike other languages in which the verb receives an antipassive morpheme (Comrie 1988), the corresponding constructions in Akuntsú do not receive any overt marker

[140] The cognate morpheme *pe* is also described as a mark of object demotion in related languages (Galucio 2001, Rodrigues & Caspar 1957).

[141] Aragon (2008:99-100) has identified a morpheme *pe* as a marker of indirect object of a lexical transitive verb.

on their verbs, i.e., there is no visible antipassive morphology, as illustrated in the following examples:

(4.27) a. *tɨrɨ puru-ru-ru me-me-me ek pagop=pe*
two IDEO-RED-RED IDEO-RED-RED house new=OBL
'In two (days) that one (go and come) and he builds at a new house'

b. *kɨpepo i=parã-ka kɨp=pe*
wind 3S=break-TR tree=OBL
'The wind is breaking the tree'

c. *aparabia o=ø-ike dow mi-a o=ike=pe*
non-Indian 1S=R-older.brother IDEO kill-TV 1S=older.brother=OBL
'The non-Indian killed my older brother, (he) killed my older brother'

d. *te=i-maj at ka atiti=pe*
3COR=OBJ.NMLZ-say/tell catch go corn=OBL
'He said: "(go and) catch corn!"'

As seen above, the patients of transitive verbs are marked as oblique in all these examples. Thus, the antipassive in this language is characterized by having a voice as seen in other Tupían languages, such as Karitiana, where antipassive voice "(...) is used in situations in which an action's effects on a patient are reduced or de-focused" (Everett 2006:438).

The example below shows an oblique marker in a complex clause:

(5.28) *k^{w}amoa mãtʃero õjpe ko o=tʃet-a õjpe ko pe=mãtʃero*
shaman Marcelo snuff ingest 1S=leave-THV snuff ingest OBL=Marcelo
'The shaman Marcelo sniffs snuff, I leave for Marcelo to sniff snuff'

8.3.2 Intransitive predicate

Intransitive predicates select only one argument, the subject (S). The subject can be expressed by different kinds of noun phrases, such as by pronouns (8.29a), non-human nouns

(8.29b), human nouns (8.29c) or demonstratives (8.29d):

(8.29) a. *te=ita*
3COR=arrive
'He has arrived'

b. *õjpe* *te=wip-ka*
tobacco 3COR=slide-TR
'Tobacco is falling'

c. *abatʃo* *te=k^{w}ep-a*
grandfather 3COR=climb-THV
'Grandfather is climbing'

d. *ke* *wen*
DEM finish
'That one ended'

This language codes the subjects of active predicates (8.30) and stative predicates (8.31) with the same set of pronominal markers. The stative predicates have stems that denote states that affect their participants, as shown in the following examples:

(8.30) a. ***o*=*atʃo-a*** *(on)*
1s=bathe-THV (1S)
'I bathe'

b. ***e*=*et-a*** *(en)*
2s=sleep-THV (2S)
'You sleep'

(8.31) a. ***o*=*pip***
1s= afraid.of
'I'm scared'

b. ***e*=*pekãm***
2s= cold
'You are cold'

In intransitive clauses, the subject is only elided when the subject is third person and has been previously mentioned in the discourse, narrative or natural conversation, as illustrated below, where the verb with no subject marker is in boldface:

(8.32) *o=pera* *uf-uf* *te=ita* ***pit-ka***
1s=wake.up IDEO-RED 3COR=arrive hole-TR
'[...] and I woke up tired, the mosquitos arrive and they stick (when they sting and blood comes out)'

8.4 Interrogative clauses

Interrogatives (questions) are used by the speaker in requesting information due to some lack of knowledge. The interrogatives in this language can be either *yes-no* questions (polar question) or content questions (information question).

The major difference between polar questions and content questions is that in the former, the speaker seeks either to confirm or deny the truth value of the proposition, whereas in the latter, the speaker may ask for information, for instance about the subject, the object, the place, the manner, the time, etc. In this section, the intonation pattern in polar questions and their structural organization are described (§8.4.1), as well as the pattern of content questions (§8.4.2).

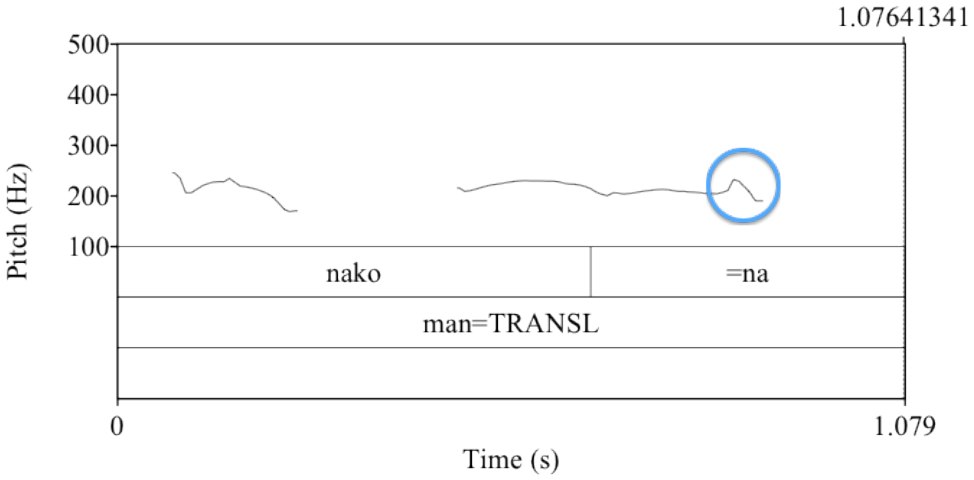
8.4.1 Intonation in polar questions

When there is no *wh-question* word present in the clause, the intonation pattern is crucial to distinguishing whether an utterance is an interrogative or a declarative sentence. Rising intonation is a common characteristic of polar questions in this language; hence polar clauses do not bear any other interrogative marker (no grammatical marker).

Rising intonation is a characteristic of interrogative clauses, even the content questions (more on content questions in the next subsection). In Akuntsú, rising intonation is usually seen at the end of the interrogative clause[142], while in declarative sentences the opposite holds — that is, declarative sentences usually carry a gradually falling intonation contour.

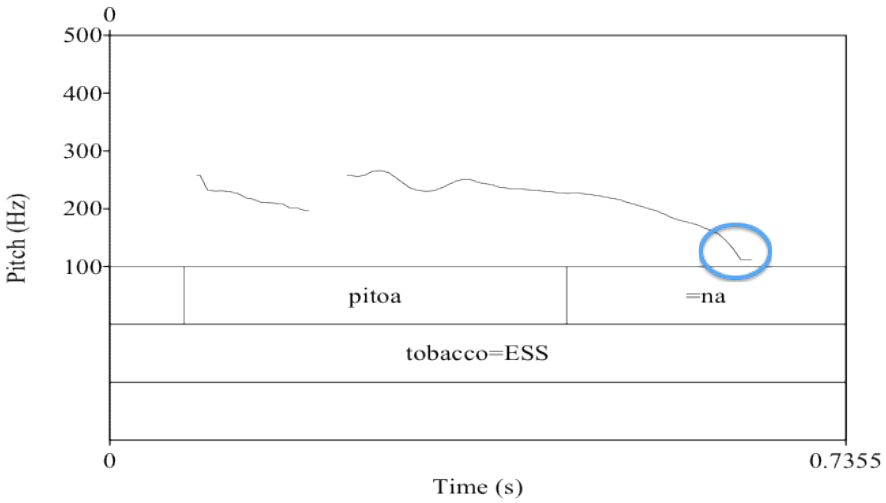
Compare in the pictures below the intonation contour at the end of interrogative clauses (a rising line at the end of each interrogative clause) with the intonation contour at the end of declaratives, which are described after the interrogatives. Note that the structure of interrogatives and declaratives is otherwise the same. Firstly, compare the two examples below that illustrate the intonation difference between interrogative (8.33) and declarative clauses (8.34).

(8.33) *nako=na?*
man=ESS
'Is it a man?'



[142] Rising intonation in interrogative clauses is also a characteristic of many languages. It is basically due to the fact that high pitch "signals uncertainty, indecision, hesitation and also insecurity" (Ohala 1993,1994; *apud* König and Siemund 2007:292).

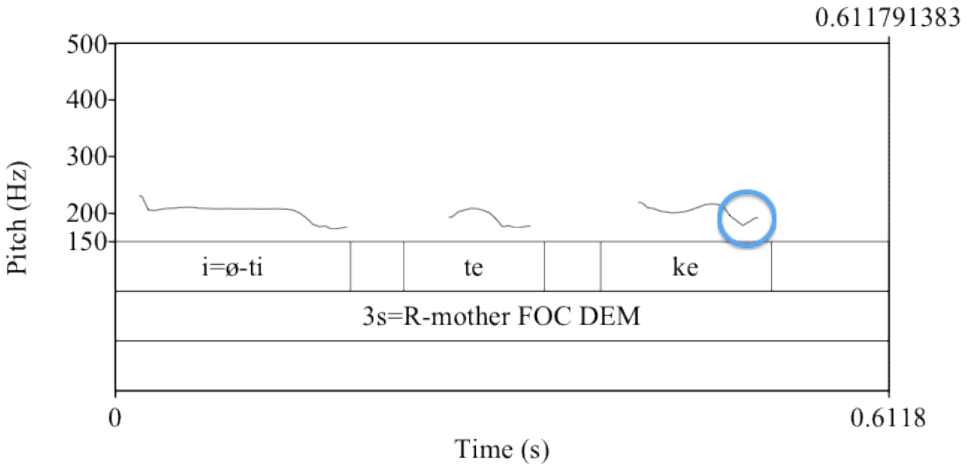
(8.34) *pitoa=na*
tobacco=ESS
'It's tobacco'



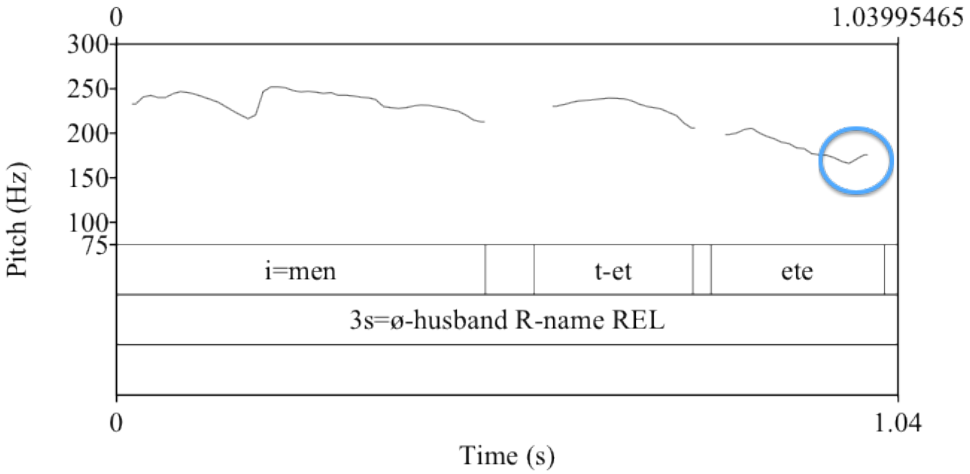
More examples of intonational contours are shown below. Interrogative clauses are presented first, followed by declarative clauses.

INTERROGATIVES - POLAR QUESTIONS

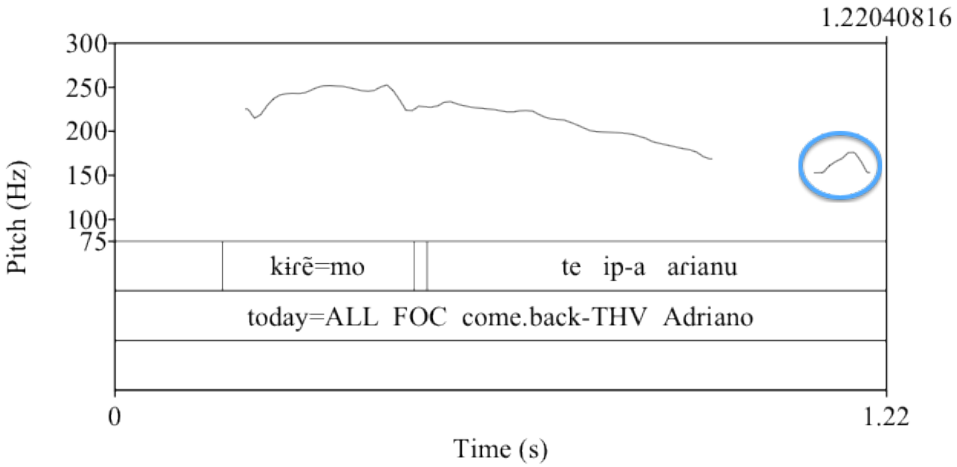
(8.35) *i=ø-ti* *te* *ke?*
3s=R-mother FOC DEM
'Is his mother that one?'



(8.36) *i=ø-men* *t-et* *ete?*
3s=R-husband R-name REL
'Is there a husband's name?'



(8.37) *kɨrẽ=bõ* *te* *ip-a* *arianu?* [kɨ̃nẽmõ te ibaˀaɾiˀanu]
today=ALL FOC come.back-THV Adriano
'Is it today (that) Adriano comes back?'

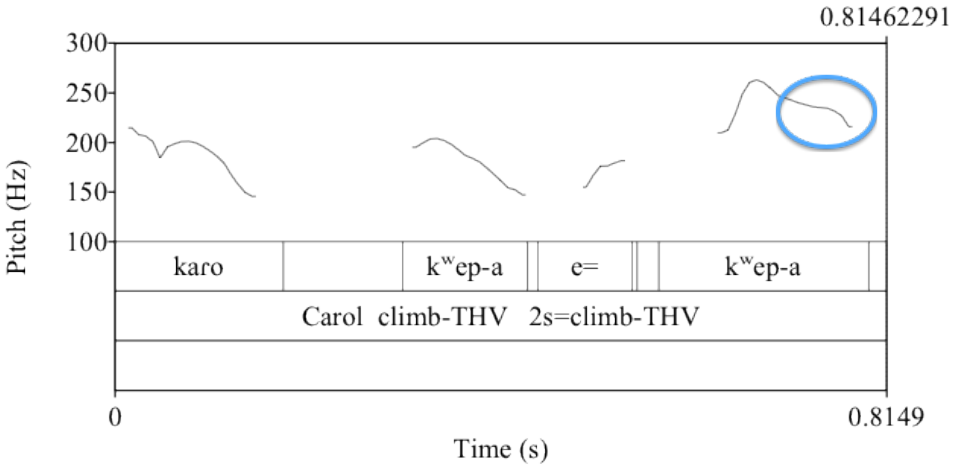


Note that in the example above (8.37), the question has the focus particle *te* (seen also in example (8.35)), indicating that the main purpose of the question is to ask whether or not the person is coming TODAY. As a focused constituent, the adverbial phrase also receives high intonation contour, as compared to the intonation contour on the rest of the utterance.

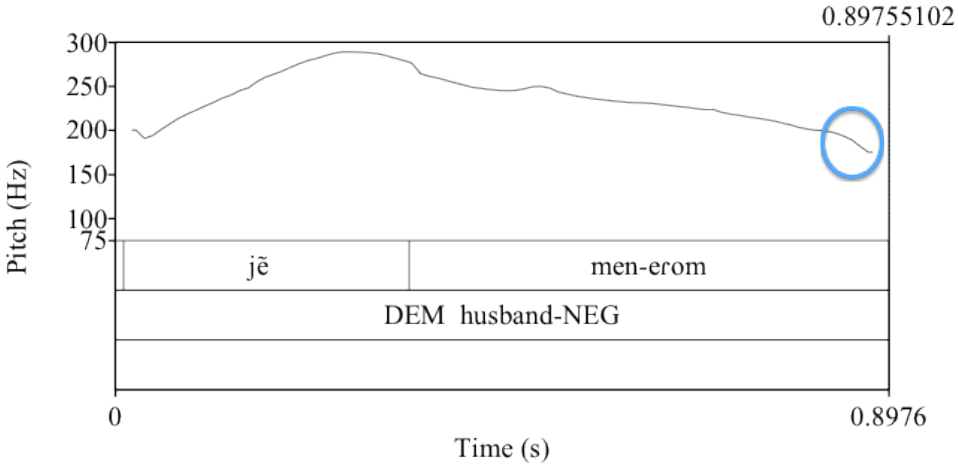
Let us now compare the intonation of interrogatives, as presented above, with the one in declarative clauses, as shown. Note the falling pitch in the end of each declarative clause.

DECLARATIVE

(8.38) *karo(w)* *k^{w}ep-a* *e=k^{w}ep-a*
Carol climb-THV 2S=climb-THV
'Carol climbs, you climb'



(8.39) *jẽ* *men=erom*
DEM husband=NEG
'This one doesn't have a husband'



Answers to polar questions are either yes or no. In Akuntsú, for a positive answer, the speaker often repeats the entire clause (with any additional information that they want to include) and usually inserts the focus marker at the end of the utterance. For example:

(8.40) a. *nako te wip?*
man FOC slide
'Did the man slid?'

b. *nako wip te*
man slide FOC
'The man slided.'

For a negative answer, the speaker can either use the negative particle *nom* (8.40a) or can use this particle and the verb (8.40b).

(8.40) a. *nom*
no
'No'

b. *nom wip*
no slide
'He didn't slide'

When it is a non-verbal predicate question, as in the above question *nako=na* 'Is it a man?' the answer can be, for example, **(i)** (8.41a) with a falling contour for an affirmative answer, or **(ii)** (8.41b) to express a possible negative answer for that question:

(8.41) a. *nako=na*
man=ESS
'It is a man'

b. *nom jẽ aramiɾa*
no DEM woman
'No, this one is woman'

8.4.2 Content questions

Content questions are those that do not require a yes/no answer. This kind of interrogative clause poses questions about a subject, an object, the manner of an action, time, place, etc. That is, the interrogative forms in this language basically indicate what part of a

proposition the speaker is guiding the hearer towards to pay attention to. Intonation to show interrogation is optional in these clauses. The main interrogative words found in this language are presented in table 8.4.

INTERROGATIVE	GLOSS
aɾop	'what/who/why/whose/which'
taɾa	'what/who'
ãka	'how/when'
ẽɾom	'where'

Table 8.4 - Interrogative words.

The interrogative forms (alternatively called 'interrogative pronouns' in the grammatical literature) presented above allow different semantic meanings, depending on what part of the clause is in focus. Some of them can indicate either 'what' or 'who,' or can even represent other semantic meanings such as 'why.' Below, each one will be presented with its respective meaning and function.

Syntactically, the interrogative words occur in sentence-initial position, as a focused constituent does.[143]

8.4.2.1 *aɾop* 'what/who/why/whose/which'

The word *aɾop* means 'what/who/why.' The difference between *aɾop* 'what' and *aɾop* 'who' is discernable from the structure of the clause. That is, when the verb is nominalized with a structure of [NP i-VERB] or [PRON=i-VERB], giving the idea of, for example, 'eaten

[143] The focus marker is described in section 7.2.2.

thing,' 'hunted thing,' etc., it makes clear to the addressee that the speaker is requesting information about the subject[144], as in:

WHAT

(8.42) a. *aɾop* *te=i-mi?*
what 3COR=OBJ.NMLZ-kill
'What may he hunt?'
Lit: What may be his hunted thing?

b. *aɾop* *te* *te=i-maj* *ʧop-a* *kom?*
what FOC 3COR=OBJ.NMLZ-tell see-THV PROJ
'What did he say he would see?'

The word *aɾop* 'who' is used less frequently than the interrogative word *taɾa* 'who' in utterances inquiring about the subject of the proposition. Only few examples of this kind of question were found in the data.

WHO

(8.43) *aɾop* *te* *i=ko-a?*
who FOC 3S=ingest-THV
'Who ate it?'

In example (8.44) below, the verb is nominalized; however, the interrogative word is the element that is linked to the nominalized verb, so it does not follow the structure of the *aɾop* 'what' questions presented above. The structure in (8.44) is used when the speaker is requesting information about the possessor of an object.

[144] Note that in questions, only the object is marked on transitive verbs.

(8.44) *aɾop* *i-tʃop=na?*
who OBJ.NMLZ-see=ESS
'For whom (whose) is the seen (thing)?'

The word *aɾop* may also bear the ablative clitic *=(e)ɾi*; when this happens, it expresses an inquiry about the reason/purpose of a proposition, meaning 'why,' as exemplified below:

WHY

(8.45) *aɾop=eɾi* *e=ip-a* *ete?*
what=ABL 2S=come.back REL
'Why did you come back?'

To inquire about a specific object, the name of the thing that the speaker wants information about comes immediately after the interrogative word, as in the following:

WHICH

(8.46) *aɾop* *koɾa-koɾa* *e=i-mi?*
what chicken 2S=OBJ.NMLZ-kill
'Which chicken will be your killed (thing)?'

POSSIBLE ANSWER TO A CONTENT QUESTION

An example of a content question (in (8.47a)) followed by its answer (in (8.47b)) follows:

(8.47) a. *aɾop* *te* *te=i-maj* *tʃop-a* *kom?*
what FOC 3COR=OBJ.NMLZ-tell see-THV PROJ
'What did he say (that he) would see?' (repeated from (8.42b)).

b. *aparapia te te=i-maj*
non-indian FOC 3COR=OBJ.NMLZ-tell
'The non-Indian said:'

ɨkʷaj i-ko kʷak ʧop-a on kom
tapir OBJ.NMLZ-ingest sound see-THV 1s PROJ
'I will see the tapir's food'

8.4.2.2 *tara* 'what/who'

The word *tara* has a semantic meaning of 'what/who.' It follows the same structure described above for the word *arop,* meaning 'what' and 'who.'

WHAT

(8.48) a. *tara i=ʧe e=erek-kʷa?*
what 3S=COMING 2s=speech-TR.PL
'What is it that you speak?'

b. *tara i=jã?*
what 3s=sitting
'What is it?'

WHO

(8.49) a. *tara e=ø-men=na?*
who 2s=R-husband=ESS
'Who is your husband?'
Lit: Who functions as your husband?

b. *eme tara i=õ?*
DEM who 3s=give
'This, who gave it?'

c. *tara te ita mã?*
who FOC arrive CERT
'Who arrived for sure?'

d. *tara* *ip* *te?*
who come.back FOC
'Who comes back?'

8.4.2.3 *ãka* 'how/when'

The word *ãka* means 'how' and 'when.' The word *ãka* behaves as a particle with the meaning 'like this, in that way' when it occurs intra-sententially, assuming characteristics of particles in this language.[145] In the example below (8.50) the interrogative word is used to question the manner (for example, by what type of transportation, car or motorcycle) by which the person will come back or will leave.

HOW

(8.50) a. *ãka* *te=ita* *ete?*
how 3COR=arrive REL
'How does he come back?'

b. *ãka* *te=ʧet-a?*
when 3COR=leave-THV
'How will he leave?'

This interrogative word is also used to inquire about the time of a proposition, and the word *ebapa* 'moon' or *kiakop* 'sun' is used after the interrogative word, as shown in the following examples[146]:

WHEN

[145] Details in section 7.2.5.

[146] Questions requiring time information without the interrogative word *ãka* are also found in the language, though this is a topic for future studies.

(8.51) a. *ãka kiakop te=ita ete?*
how sun 3COR=arrive REL
'When does he arrive?'
Lit: 'When [at what time of day] will he arrive?'

b. *ãka ebapa te=ip-a?*
how moon 3COR=return-THV
'When will he come back?'
Lit: 'When [in what month] will he come back?'

8.4.2.4 *ẽɾom* 'where'

The particle *ẽɾo* is often used to ask for information about location. As with the other *wh-question* words, it is used at the beginning of the clause. In example (8.52) the ablative clitic =ɾi is attached to the verb, creating the locative meaning of the point of origin of a movement. This interrogative form also functions as a demonstrative (as seen in section 4.8.2); however, note that when used as a *wh-question*, the notion of the spatial location of a referent and position (that the demonstrative signifies) does not matter in interrogatives.

(8.52) a. *ẽɾom=ɾi kʷatin i=ko-a te?*
where=ABL snake 3S=ingest-THV FOC
'From where did the snake start eating it?'

b. *ẽɾom i=ʧok-a ne?*
where 3S=build-THV HYP
'Where may he build it?'

8.5 Negative clauses

The particle *nom* is used to negate the verb phrase, noun phrase or the entire clause. There is also the clitic *=(e)ɾom*, employed to negate phrases that it is attached to. In earlier studies, Aragon (2008:109) described the negative morpheme as an affix with the following allomorphs: *-eɾom, -ɾom* and *-om*. Examples below illustrate nouns and verbs in negative

clauses.

NOUNS

(8.53) a. *jãj=erom*
tooth=NEG
'It isn't sharpened'

b. *jẽ men=erom*
DEM husband=NEG
'This one doesn't have a husband'

c. *abatʃo apitep=erom*
grandfather ear=NEG
'Grandfather doesn't hear' (Aragon 2008:109)
Lit: 'Grandfather doesn't have ear'.

d. *jẽrom o=i-ko nom*
DEM 1S=OBJ.NMLZ-ingest no
'I have no food'

VERBS

(8.54) a. *nom et=ɾom*
no sleep=NEG
'She doesn't sleep'

b. *akataba nom at*
buriti no catch
'Don't get buriti (palm fiber sp.)'

c. *nom ko=ɾom*
no ingest=NEG
'He doesn't eat'

d. *o=ø-mepit erek-k^{w}a nom k^{w}ak tʃop on*
1S=R-son/daughter of woman speech-TR.PL no sound see 1s
'I don't hear (what) my daughter speaks'

e. *orẽ=bõ nom ek etʃe*
1S.EM=DAT no house DIFF
'I am not home'

f. *ki=tʃet=om*
1PL.INCL=leave=NEG
'We don't leave'

g. *t=aot nom t=aot nom*
3S=go.out no 3S=go.out no
'It doesn't go out, it doesn't go out'

In addition, a particle *om* can stand alone as a predicate, with the meaning of 'nothing' or 'there isn't (any), there is no.'

(8.55) *kojõpe ebapa om tʃet-a* [...]
night moon no leave-THV
'At night there isn't a moon, it leaves [...]'

8.6 Summary

In this chapter I have presented the types of predicates, which are divided into non-verbal and verbal predicates. Predicate complements were also described in this chapter. In addition, clause types were introduced, with a focus on interrogative and negative clauses. The language uses high intonation contours to differentiate polar questions from declarative clauses. For content questions, the language uses interrogative words, which can have oblique clitics attached, to inquire about different elements of the proposition. Negative clauses use the same negative particles or negative clitics found in verbal and noun phrases. Some topics about the structure of sentences in this language were identified for future investigation; for example, more research is needed on complex sentences and constituent

order in different types of sentences, including issues of word order and topicalization/focalization.

CHAPTER 9

CONCLUDING REMARKS

This dissertation represents an investigation into many grammatical aspects of Akuntsú. The main goal of this work was to present the relevant phonological and morphosyntactic aspects of this language in order to produce a grammar of Akuntsú. Some topics were excluded from the analysis presented here (though they are the subject of current and future studies), while other topics were only briefly presented, and some were discussed in detail. But, in general, the data provided in this study and their description sought to prepare a basis for future research, including typological, historical and theoretical issues; as well, it sought to provide a basis for the future production of a comprehensive grammar of this language, by increasing the data and description of topics briefly mentioned and/or excluded from this current studies.

The topics detailed or briefly presented in this study included:

i. the main phonological structures encountered in the language;

iii. the morphosyntactic classification of nouns, processes of word formation and inflection;

iv. the morphosyntactic classification of verbs and their morphemes;

v. the lexical classes of adjectives and adverbs, which are considered small closed classes, where adverbs are only syntactically different from adjectives;

vi. ideophones, particles and interjections form independent classes of their own, where ideophones are very frequent in the language;

vii. an overview of clause types found in this language, and a description of the negative and interrogative clauses.

A project to describe and document Akuntsú is underway to extend the corpus and knowledge of this language and culture, assisting in the exploration of the above-mentioned topics as well as new ones.

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APPENDIX A

THE PHONOLOGY OF TUPARÍAN LANGUAGES

This brief typological survey presents phonological similarities and differences among Tuparían languages. This study utilizes different sources. Mekéns data are based on Galucio (2001); the Makuráp data are from Braga (1992, 2005), the Tuparí data from Caspar and Rodrigues (1957), Alves (2002, 2004), and Seki (2002), and finally, the Wayoró data are from Nogueira (2011). Some notes about Kampé are also included in this appendix.

1.1 Consonantal phonemes

1.1.1 Stops

All the Tuparían languages, Akuntsú (Ak), Makuráp (Ma), Mekéns (Me), Tuparí (Tu) and Wayoró (Wa), have voiceless stop consonants /p, t, k/ that occur syllable-initially.

Onset position	Ak	Ma	Me	Tu	Wa
Initially **/p/** Medially	/**p**uga/ 'turtle sp.' /a**p**aɾa/ 'banana'	/**p**ipãp/ 'shadow' /tʃe**p**a/ 'forehead'	/**p**era/ 'macaw' /ma**p**i/ 'arrow'	/**p**atop/ 'rat' /a**p**e/ 'peel'	/**p**i̵ɾi̵/ 'to pierce' /a**p**ĩn/ 'cricket'
Initially **/t/** Medially	/**t**en/ 'strong/hard' /a**t**ap/ 'hair'	/**t**oap/ 'mirror' /a**t**i̵p/ 'hair'	/**t**i̵ero/ 'chicha' /se**t**e/ 'he/she'	/**t**ak/ 'hard' /to**t**o/ 'grandpa'	/**t**ip/ 'cooked' /a**t**ia/ 'pepper'
Initially **/k/** Medially	/**k**op/ 'red' /a**k**op/ 'hot'	/**k**ap/ 'leg' /pa**k**at/ 'crazy'	/**k**irẽp/ 'today/now' /ame**k**o/ 'jaguar'	/**k**opkap/ 'fire' /kia**k**op/ 'sun'	/**k**ãm/ 'long' /a**k**ek/ 'ant'

In syllable-final position, the stops are unreleased, as shown:

	Ak	Ma	Me	Tu	Wa
[p̚]	[ɛ**p**̚] 'leaf'	[ki̵**p**̚] 'tree'	[ka**p**̚] 'wasp'	[ky**p**̚] 'tree'	[ki̵**p**̚] 'tree'
[t̚]	[ɛ**t**̚] 'name'	[pi̵**t**̚] 'broken'	[poo**t**̚] 'old'	[ky**t**̚] 'child'	[ti̵**t**̚] 'machete'
[k̚]	[ɛ**k**̚] 'house'	[ɛ**k**̚] 'house'	[ɛ**k**̚] 'house'	[ɛ**k**̚] 'house'	[ta**k**̚] 'daughter'

With respect to the voiced stops, all these languages have voiced counterparts to the voiceless stops that occur syllable-initially: [b, d, g].

In Mekéns, voiced stops /b, g/ are analyzed as phonemes which never occur word-initially, but only intervocalically (Galucio 1994).

In Wayoró only /g/ is phonemic, though its "distribution is very restricted, occurring

only in intervocalic position syllable-initially" (Nogueira 2011:48). In addition, this language also has a series of pre-nasalized consonants: [mb, nd, ŋg, ŋg^{w}] that occur before oral vowels.

In Tuparí only /b/ is phonemic. See examples and distribution below. Note that the existence of [d] in Tuparí is not mentioned in Alves (2004) and according to this author, [g] only occurs at morpheme boundaries.

In Makuráp, the voiced allophones are surface forms of nasal consonants. The voiced stops occur word-initially adjacent to oral vowels, or syllable initially after nasal vowels. They vary with pre-nasalized stops.

The asterisk (*) in the table indicates that examples were not encountered in the studies analyzed for this section.

	Ak	Ma	Me	Tu	Wa
/b/	/o**b**o**b**o/ ‘bird (sp.)’	*	/ta**b**isarã/ ‘chief’	/to**b**eko/ ‘bean’	*
/d/	/**d**ap/ ‘reportative’	*	*	*	*
/g/	/po**g**a/ ‘tortoise (sp.)’	*	/pa**g**op/ ‘new’	*	/pa**g**a/ ‘to die/to get drunk’

In addition to the bilabial, alveolar and velar stops, there are also labiovelars. The labiovelars [k^{w}, g^{w}] are found in Akuntsú, Mekéns, and Wayoró. However, the contrast between /k^{w}/ and /g^{w}/ is phonemic only in Wayoró, while in Mekéns and Akuntsú there is /k^{w}/ but not /g^{w}/. Some illustrations of the forms are shown in table below.

	Ak	Ma	Me	Tu	Wa
/k^{w}/	/a**k^{w}**a/ ‘yam (sp.)’	-------	/ɨ**k^{w}**aaj/ ‘tapir’	-------	/ɨ**k^{w}**aaj/ ‘tapir’
/g^{w}/	-------	-------	-------	-------	/aɾa**g^{w}i**/ ‘peanut’

There is also a surface glottal stop [ʔ] in all the languages. Whether or not this glottal stop is phonemic varies among the analyses. Tuparí is the only language that has two underlying glottals: /ʔ/ and /h/ (Alves 2004).

	Ak	Ma	Me	Tu	Wa
/ʔ/	----------	----------	----------	/**ʔ**a/ ‘fruit’	----------
/h/	----------	----------	----------	/**h**at/ ‘snake’	----------

1.1.2 Nasals

The nasals /m, n, ŋ/ are found in all the Tuparían languages. The only nasal consonant phoneme encountered word-finally is /ŋ/ (except in Makuráp and Wayoró, where /ŋ/ occurs syllable-initially before nasal vowels). Wayoró and Mekéns are the only languages that have /ŋ^{w}/. In addition, Wayoró has another nasal phoneme, the palatal /ɲ/.

In coda position /m, n/ are unreleased.

Onset	Ak	Ma	Me	Tu	Wa
/m/	/**m**eti/ ‘inajá fruit’ /a**m**ina/ ‘knee’	/**m**ãɾak/ ‘to dry’ /ã**m**ã/ ‘aunt’	/**m**a/ ‘to make’ /a**m**eko/ ‘jaguar’	/**m**a/ ‘to plant’ /a**m**iõ/ ‘vertex’	/**m**ẽ/ ‘postposition’ /te-**m**õ-k-a-t/ ‘3-call-verblzr-t.v-past’
/n/	/nõ**m**/ ‘no’ /ana**m**/ ‘head’	/**n**ejto/ ‘wind’ /ate**n**a/ ‘to hunt’	/**n**orã/ ‘to help’ /ka**n**a/ ‘for.that’	/**n**iŋ/ ‘fish toxin’ /a**n**ɨm/ ‘brain’	/**n**õ/ ‘other’ /a**n**ĩŋ/ ‘worm’
/ŋ/	/ni**ŋ**/ ‘striped’	/**ŋ**ẽp/ ‘breast’	/ma**ŋ**a/ ‘to tell/order’	/si**ŋ**/ ‘smoke’	/**ŋ**õj/ ‘to sit’
/ŋ^{w}/	----------	----------	/**ŋ^{w}**ẽrẽp/ ‘to finish’	----------	/**ŋ^{w}**ãm/ ‘hard’
/ɲ/	----------	----------	----------	----------	/**ɲ**dʒat/ ‘2pl’

1.1.3 Affricate and Fricatives

The affricate /tʃ/ is found in almost all Tuparían languages, with the exception of Mekéns. However, in Tuparí, Alves (2004) notes that this phoneme occurs with low frequency. With respect to the fricative, Tuparí and Mekéns are the only language with the fricative /s/ in their phonological inventories. Wayoró is the only language analyzed as having a phonemic bilabial fricative /β/. Examples are shown below:

Onset position	Ak	Ma	Me	Tu	Wa
/tʃ/	/**tʃ**aʈʃakop/ 'ant (sp.)' /a**tʃ**i/ 'pain'	/**tʃ**epa/ 'forehead' /a**tʃ**i/ 'uncle'	----------	/**tʃ**aʔɨ/ 'flour' /koti**tʃ**a/ 'fish sp.'	/**tʃ**ato/ 'to finish' /a**tʃ**iãmkwa/ 'to sneeze'
/s/	----------	----------	/**s**ik/ 'sap' /a**s**isi/ 'corn'	/**s**iŋ/ 'smoke' /aw**s**a/ 'horn'	----------
/β/	----------	----------	----------	----------	/ɨ**β**oj/ 'fish'

1.1.4 Flap

There is only one liquid phoneme in these languages, the flap /ɾ/. This phoneme only occurs in onset position word-medially, as illustrated below:

	Ak	Ma	Me	Tu	Wa
/ɾ/	/a**ɾ**amĩ**ɾ**a/ 'woman'	/te**ɾ**ek/ 'light'	/pe**ɾ**a/ 'macaw'	/jõ**ɾ**õ/ 'fruit sp.'	/ŋga**ɾ**a/ 'grasshopper'

1.1.5 Approximants/glides

There are two glides in the Tuparí, Mekéns, Makuráp and Akuntsú /w/ and /j/. In Wayoró, there is none.

	Ak	Ma	Me	Tu	Wa
/w/	/**w**en/ 'to finish' /pa**w**/ 'wind'	/**w**era/ 'to pinch' /a**w**ak/ 'many'	/sa**w**ã/ 'to chew' /pa**w**at/ 'to row'	/**w**ao/ 'potato' /a**w**sa/ 'horn'	----------
/j/	/**j**ãj/ 'tooth' /ba**j**/ 'buriti palm fiber'	/**j**ẽrẽp/ 'green' /ne**j**to/ 'wind'	/**j**ẽ/ 'aux.seated' /sobo**j**/ 'to splash'	/**j**am/ 'stool' /ma**j**/ 'manioc'	----------

1.2 Vocalic phonemes

The Tuparían languages are very similar with respect to their vowel systems. All of them have a total of five underlying oral vowels and five nasal vowels; however, they differ with respect to vowel length. Wayoró and Mekéns are analyzed as having underlyingly long vowels. Nogueira (2011) opted to insert in the vocalic chart /ɛ/ rather than /e/. The tables below indicate the phonemes for each Tuparí language.

		Ak	Ma	Me	Tu	Wa
Front	High	/i/ /ĩ/	/i/ /ĩ/	/i/ /i:/ /ĩ/ /ĩ:/	/i/ /ĩ/	/i/ /i:/ /ĩ/ /ĩ:/
	Mid	/e/ /ẽ/	/e/ /ẽ/	/e/ /e:/ /ẽ/ /ẽ:/	/e/ /ẽ/	/ɛ/ /ɛ:/ /ɛ̃/ /ɛ̃:/
Central	High	/ɨ/ /ɨ̃/	/ɨ/ /ɨ̃/	/ɨ/ /ɨ:/ /ɨ̃/ /ɨ̃:/	/ɨ/ /ɨ̃/	/ɨ/ /ɨ:/ /ɨ̃/ /ɨ̃:/
	Low	/a/ /ã/	/a/ /ã/	/a/ /a:/ /ã/ /ã:/	/a/ /ã/	/a/ /a:/ /ã/ /ã:/
Back	Mid	/o/ /õ/	/o/ /õ/	/o/ /o:/ /õ/ /õ:/	/o/ /õ/	/o/ /o:/ /õ/ /õ:/

1.3 Phonetic notes on Kampé (Sɨkʷɛriat)

In this section, I present some phonetic notes on the Kampé language, spoken by only one elderly man. After living for many years in Mekéns Indigenous Area, located in Rondônia (Brazil), this man moved to Rio Branco Indigenous Area (also in Rondônia) to stay with his niece (daughter of a Kampé father and a Tuparí mother). The Kampé speaker was born near the banks of the Tanaru river (east side of Rondônia). When he was young, he and his family moved to the River Verde, a place where they met with the Mekéns people, of whom they were very afraid in the past. After the death of his people, he claims that nowadays he is the only *sɨkʷɛriat* (group of Toucans) alive. Galucio (2001) states that the languages spoken by the Kampé and Mekéns people are mutually intelligible, and she affirms that aside from lexical differences, there are also "a few syntactic differences..." (2001:19), and that further investigation needs to be done to assess the degree of kinship of Kampé and Mekéns. Galucio shows that in addition to Kampé and Mekéns, there are two other groups living in the Mekéns Indigenous Area: the Guarategayat and Guaratira, whose languages, according to Galucio (2001), are dialects of Mekéns.

In Kampé, there is a set of surface stops [p, b, t, k, g], as shown below. Note that [d] was not attested in the data available.

(1) a. [pɛ] ‘way’
b. [tabɨtˀ] ‘garden’
c. [kiakopˀ] ‘sun’
d. [pakuri] ‘moon’
e. [puga] ‘tortoise’
f. [tsebapi] ‘face’
g. [gɨɛ] ‘one’
h. [kɨbɛɨtˀ] ‘calf’

There is a set of voiceless unreleased stops, including unreleased nasals, which occur syllable-finally:

(2) a. [kɨtˀkɨpˀ] ‘neck’
b. [kemˀ kɨ] ‘breast milk’
c. [kɨbekˀ] ‘papaya’
d. [ek^{w}itˀ] ‘honey’
e. [kɨbakapˀ] ‘urucu (*Bixa orellana*)’
f. [ɛkˀ] ‘house’
g. [pitˀsikˀ] ‘cold’
h. [utatˀkatˀ] ‘firewood’
i. [aɾãpɛ] ‘embaúba tree (*Cecropia angustifolia)*’

There is a labiovelar [k^{w}] found syllable-intially and [g^{w}] word-initially:

(3) a. [k^{w}aɾitsa] ~ [g^{w}aɾitsa] ‘bat’
b. [k^{w}ajtˀpɛ] ~ [g^{w}ajtˀpɛ] ‘sky’
c. [ak^{w}a] ‘yam’
d. [atsoa k^{w}akˀ] ‘thunder’
e. [k^{w}aku] ~ [g^{w}aku] ‘sweet potato’

Examples of words with glottal stops [ʔ] were found intervocalically, as seen below:

(4) a. [k^{w}aʔi] ‘stone’
b. [k^{w}aʔẽ] ‘pan’
c. [tseʔɨtˀ] ‘his/her belly’
d. [k^{w}atsaʔɛ] ‘hummingbird’

The set of nasals found among the data collected are [m, n], and [ŋ] syllable-initially, as exemplified below:

(5) a. [konĩpu] ‘snake’
b. [kanã] ‘brazil nut’
c. [tsanoa] ‘its heart’
d. [kumãtatsu] ‘bean (big one)’

e. [mãpi kaba] ‘bamboo (of the arrow)’
f. [kʷamakopˀ] ‘mountain hen (*Tinamus major*)’
h. [piãŋga] ‘heel’
i. [anĩŋ] ‘earthworm’

In addition, there are sibilant consonants [ts, s] in this language, as shown in the examples; they occur at syllable-initial position.

(6) a. [tsakʷatˀ] ‘spine’
b. [atsuapˀ] ‘rain’
c. [batsɛ] ‘jatobá *(Hymenaea courbaril)*’
d. [apaɾatsu] ‘banana (long one)’
e. [tsiɾa] ‘aricuri palm *(Attalea phalerata)*’
f. [batsupˀ] ‘rat’
g. [atsitsi] ‘corn’
h. [piɾitsa] ‘trahira (tiger fish)’
i. [sakɨrapˀ] ‘spider-monkey’
j. [ɨtsi] ‘deer’
k. [siga] ‘genipap’
l. [tapsiɾi] ‘manioc’

The consonant [ɾ] was found syllable-initially in word-medial position only.

(7) a. [paɾupaɾu] ‘star’
b. [kʲɛɾɛɾu] ‘fish (sp.)’
c. [kʷiɾi] ‘açaí’
d. [uɾuɾu] ‘cotton’
e. [tapiɾu] ‘peach-palm’
f. [akaɾa] ‘arecaceae’
g. [ɨɾa] ‘atta’

The approximants [w, j] were encountered syllable-initially and finally, as shown below:

(8) a. [kɨbakãj] ‘land’
b. [piɾaj] ‘rubber tree’
c. [a:j] ‘cajá *(Spondias dulcis)*’
d. [kajtu] ‘butterfly (sp.)’

e. [weɾemi] ‘fly’
f. [puwpuwba] ‘owl’
g. [piwapɛ] ‘toenail’
h. [j̃ũ] ‘tongue’

With regard to the vowels, no innovations were found in its vocalic inventory, i.e., there were not any unusual vowels as compared to the set of vowels found for other Tuparí languages.

APPENDIX B

SAMPLE OF TEXTS

The following texts are examples of short narratives that were selected to provide elements that illustrate the daily life of the Akuntsú people, such as the preparation of fermented drink by the Akuntsú women (TEXT 1), with some pictures of this process shown in appendix C; and a personal narrative of the traumatic past alive in their memories, which also gives some examples of kinship terminology (TEXT 2). In text 2, some selected parts of the whole recorded narrative have not been included here.

TEXT 1 - THE PREPARATION OF THE FERMENTED DRINK

Speaker: Tʃaruj
Gender: Female
Context/notes: Tʃaruj and Aramira were preparing fermented drink from peach-palm[147]
Recorded date: January 19th 2007 (32:29)

JAN07-1A-TX-001

on	***i=jõmaj***	***tum-tum***	***ko-a***	***ko***	***ko***
1s	3s=knead	IDEO-IDEO	ingest-THV	ingest	ingest

'I knead it, I pound, I take it in many times'

JAN07-1A-TX-002

i=tʃaw	***ma***	***otʃe***	***i=tʃaw***	***i=tʃaw***	***kɨa***	***ma***
3s=chew	keep/spill/put	1PL.EXCL	3s=chew	3s=chew	peach palm	keep/spill/put

'I chew it and I spill (the chewed fruit inside the pan), we chew it, we chew it and we spill the peach palm'

JAN07-1A-TX-003

ɨki	***a***	***ɨki***	***kɨj***	***ɨki-ɨki***	***jõ***	***ka***
water	exist	water	catch	water-RED	here	go

'There is water, I catch water, plenty of water goes here'

[147] *Bactris gasipaes*.

JAN07-1A-TX-004

ki ***iki*** ***jõmaj-(k)ap*** ***jõmaj-ka*** ***ma*** ***tʃipap***

liquid water knead-NMLZ knead-RED keep/spill/put grandmother

'The liquid, grandmother kneads the kneading of water and spills (the water)'

JAN07-1A-TX-005

jõ ***en*** ***i=jõmaj-ka*** ***ma***

here 2s 3s=knead-TR keep/spill/put

'You knead and spill it here'

JAN07-1A-TX-006

tʃipap ***i=jõmaj*** ***i=ma-ɾa***

grandmother 3s=RED-knead 3s=keep/spill/put-HAB

'Grandmother kneads it and spills it as usual'

JAN07-1A-TX-007

tiɛɾo ***mo-mok^{w}a***

chicha RED-make

'She makes *chicha* (fermented drink) over and over'

JAN07-1A-TX-007

en ***o=ø-mepit-et*** ***nom*** ***tiɛɾo*** ***mok^{w}a=ɾom***

2s 1s=R-son/daughter of woman-DEF no *chicha* make=NEG

'You, my daughter, do not make *chicha*'

JAN07-1A-TX-008

on ***i=tʃaw-tʃaw*** ***ãka*** ***ãka***

1s 3s=chew-RED that.way that.way

'I chew it many times that way, that way'

JAN07-1A-TX-009

i=tʃaw-tʃaw ***ãka***

3s=chew-RED that.way

'I chew it many times that way'

JAN07-1A-TX-010

nom ***o=k^{w}iɾo*** ***ɛ̃ɛ̃h*** ***nom***

no 1s=throw up IDEO no

'And I don't vomit, I don't vomit'

JAN07-1A-TX-011

ko-a ***ma***

ingest-THV keep/spill/put

'Take in and spill! (the chewed fruit inside the pan). '

TEXT 2 - KONIBÚ (PERSONAL NARRATIVE)

Speaker: Konibú
Gender: Male
Context/notes: Konibú narrates part of his past, talking about his relatives.
Recorded date: February 2004 (54:05)

FEB04-KN-MD04-001

o=ø-tojẽpit ***babakop*** ***a***
1S=R-granddaughter Babakop exist
'There was Babakop (proper name), my granddaughter'

FEB04-KN-MD04-002

kip ***doa*** ***ẽ*** ***ʧe*** ***doo*** ***ẽ*** ***ʧe*** ***doa*** ***puɾu-ɾu-ɾu***
tree IDEO DEM coming IDEO DEM coming IDEO IDEO-RED-RED
'The tree killed, that (the tree) came killing (he shows with gestures how the tree fell)'

FEB04-KN-MD04-003

kani[148] ***ʧaɾuj*** ***ø-mepit=eɾi*** ***hĩ-hĩ*** ***ʧaɾuj=eɾi***
child tʃaruj R-son/daughter of woman=ABL IDEO-RED tʃaruj=ABL
'Because of Tʃaruj's daughter, the child, there was crying from Tʃaruj'

FEB04-KN-MD04-004

ʧokĩĩ ***petkop*** ***ʧaɾuj***
small alone Tʃaruj
'Tʃaruj was small, alone'

FEB04-KN-MD04-005

maj-a ***kʷak*** ***ʧop*** ***ẽ-ẽ*** ***ãka*** ***ẽ-ẽ-ẽ***
3s=tell-THV sound see IDEO-RED that.way IDEO-RED-RED
'See what tells, that way'

FEB04-KN-MD04-006

ʧokeee=na ***te=ko*** ***mepit*** ***te*** ***ãka***
big=TRANSL 3COR=MOV. son/daughter of woman FOC that.way
'(She) was getting bigger, the daughter was like that'

FEB04-KN-MD04-007

ẽ ***mepit*** ***at-a*** ***maj*** ***kʷak*** ***ʧop-a*** ***awtʃe***
DEM son/daughter of woman catch-THV tell sound see-THV Indian
'That caught the daughter, Indian tells'

[148] *Kani* is a Kanoê word, meaning 'child.'

FEB04-KN-MD04-008

ɑɾamira nom ɑɾamiɾa apaɾabia dow

woman no woman non.Indian IDEO

'Woman no, woman, the non-Indian shot'

FEB04-KN-MD04-009

nako at-a ãka ɨkɨ ø-ape dow apaɾabia-t

man catch-THV that.way water R-path IDEO non-Indian-DEF

'(They) caught the men, that way, the river's path, the non-Indian shot'

FEB04-KN-MD04-010

kʷatin ihĩ-ihĩ oɾẽ nom

snake IDEO-RED 1S.EM no

'The Snake (proper name) cried, I didn't'

FEB04-KN-MD04-011

at-a ãka ɨkɨ ø-ape dow

catch-THV that.way water R-path IDEO

'(They) caught men, that way, the river's path, they shot'

FEB04-KN-MD04-012

akũtʃu akũtʃu akũtʃu o=ø-ike dow

Akuntsú Akuntsú Akuntsú 1s=R-older brother IDEO

'Many Akuntsú and my older brother died'

FEB04-KN-MD04-013

akũtʃu ãka o=ø-jke ãka

Akuntsú that.way 1s=R-older brother that.way

'Akuntsú, that way, my older brother, that way'

FEB04-KN-MD04-014

kʷamoa eme õjpe fff o=jã

shaman DEM tobacco IDEO 1s=sitting

'Shaman is sniffing this' (he simulates that he was sniffing tobacco))

FEB04-KN-MD04-015

o=ø-kojẽ tʃop-a-ɾa jũũ ãka

1s=R-brother.in.law see-THV-HAB IDEO that.way

'I see my brother-in-law as usual, far away, that way'

FEB04-KN-MD04-016

akũtʃu apaɾabia dow dow-a

Akuntsú non-Indian IDEO IDEO-THV

'Akuntsú, the non-Indian shot, they shot'

FEB04-KN-MD04-017

boiw*[149]*-boiw-boiw-boiw wen-a

die-RED-RED-RED finish-THV

'They died, died, died, died, it is over'

FEB04-KN-MD04-018

o=ø-kojtpet tʃaɾu a jũũ tʃaɾu jũũ pe dow apaɾabia-t

1s=R-older sister Tʃaru exist IDEO Tʃaru IDEO path IDEO non-Indian-DEF

'My older sister, there was Tʃaru, far there, a far path, the non-Indian shot Tʃaru'

FEB04-KN-MD04-019

patʃe a ta ø-ajtʃi patʃe a at ẽ pupak

Patʃe exist DEM R-wife Patʃe exist catch DEM Pupák

'There was Patʃe, that one's wife, there was Patʃe who that one caught, Pupák'

FEB04-KN-MD04-020

kani kani ãka nako e nako e

child child that.way man ? man ?

'Children, that way, men'

FEB04-KN-MD04-021

ãka i=at pe dow kani dow nako e dow

that.way 3s=catch path IDEO child IDEO man ? IDEO

'That way, they caught them, shot the path, shot the child, shot the man'

FEB04-KN-MD04-022

kani ø-pe kani ø-pe tʃaaa mepit=eɾom

child R-path child R-path IDEO son/daughter of woman=NEG

'The child's path, the child's path, it is cleaned, there are no sons'

FEB04-KN-MD04-023

jẽɾom i=ø-ti

DEM 3s=R-mother

'His mother is there (pointing to Pupák's mother)'

FEB04-KN-MD04-024

o=ø-kojtpet uɾuɾu ø-mepit aw-aw aɾamiɾa

1s=R-older sister Ururu R-son/daughter.of.woman baby/child woman

'My older sister, Ururu's son, the child, the woman (pointing to the people)'

[149] This is a Portuguese word *morreu* '(he/she) died'

FEB04-KN-MD04-02

i=ø-ti ***te*** ***ʊɾʊɾu*** ***jẽɾom*** ***kojtpet***
3s=R-mother foc Ururu DEM older sister
'His mother is Ururu, there, it is the older sister'

FEB04-KN-MD04-025

o=ø-kojtpet ***o=ø-majkɨt*** **[...]**
1s=R-older sister 1s=R-niece
'My older sister, my niece (pointing to two different people) [...]'

APPENDIX C

PICTURES[150]

Picture 1 - One the left, Konibú was drying tobacco's leaf for preparation of snuff; on the right, a picture of *marico* basket, tucum fiber basket (2013).

Picture 2 - Labial labret and nasal labret (2014)

[150] All the pictures were taken by the author of this study.

Picture 3 - Some of the steps of the preparation of Urucu, by Ururu (May 2009).

Picture 4 - The left picture shows one of the types of arrow points (2004) and the right picture illustrates roasted grubs ready to be eaten (2007).

Picture 5 - Some of the steps described in TEXT 1 (APPENDIX B) - preparation of fermented drink (Jan. 2007).

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