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The Mako language: Vitality, Grammar and Classification

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in French

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The Mako language: Vitality, Grammar and Classification

(Monograph)

by

Jorge Emilio Rosés Labrada

Graduate Program in French Studies (Linguistics)
and
Laboratoire Dynamique Du Langage

A thesis submitted in partial fulfillment
of the requirements for the degrees of

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and

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Abstract

This dissertation focuses on the documentation and description of Mako, an indigenous language spoken in the Venezuelan Amazon by about 1,200 people and for which the only available published material at the start of this project were 38 words. The project creates a collection of annotated ethnographic texts and a grammar that could serve as a starting point for both language maintenance in the community and for further linguistic research. Additionally, the project assesses the language's vitality in the communities where it is spoken and demonstrates the relationship of Mako to the two other extant Sáliban languages, namely Piaroa and Sáliba.

This research thus includes an assessment of language vitality in the Mako communities of the Ventuari River, a comprehensive description of the Mako language—heretofore undescribed—, and an evaluation of the genetic relationship between the three Sáliban languages. The description of the language covers a wide range of topics in areas such as phonetics and phonology, nominal and verbal morphology, and syntax of both simple and complex sentences. Discourse-level morphology and discourse-organization strategies are also covered. Aside from facilitating the study of other members of the Sáliban family and the reconstruction of the common ancestral language, the description of Mako also contributes to the typology of Amazonian languages and to our understanding of the pre-history of this area of the Orinoco basin. The products of this project also have the potential to be mobilized in language literacy efforts in the Mako communities.

Keywords

Mako, Piaroa, Sáliba, Sáliban Languages, Language Description and Documentation, Amazonian Languages, Historical Linguistics, Classification, Language Vitality and Maintenance

Résumé

Le principal objet de cette thèse est la documentation et la description du mako, une langue indigène parlée en Amazonie vénézuélienne par environ 1200 personnes et pour laquelle les seules données disponibles préalablement à ce projet étaient 38 mots. Ce projet crée une collection de textes ethnographiques annotés et une grammaire qui pourra servir comme un point de départ pour d'autres projets de recherche linguistique et pour des projets de maintien de la langue dans les communautés mako. De plus, cette étude évalue la vitalité de la langue dans les communautés où elle est parlée et démontre le lien entre le mako et les autres deux langues sáliba existantes, à savoir le sáliba et le piaroa.

Cette recherche inclut donc une évaluation de la vitalité de la langue dans les communautés mako du Ventuari, une description générale de la langue—jusqu'à maintenant non-décrite—et une évaluation de la relation génétique entre les trois langues sáliba. La description du mako proposée ici aborde un vaste éventail de sujets tels que la phonétique et phonologie, la morphologie nominale et verbale, et la syntaxe des phrases simples et complexes. La morphologie associée au discours et des stratégies d'organisation du discours sont aussi abordées. Outre faciliter l'étude des autres langues de la famille sáliba et la reconstruction de la proto-langue, la description du mako contribue à la typologie des langues amazoniennes et à nos connaissances sur cette région du bassin de l'Orénoque. Les résultats de ce projet pourront aussi servir dans des projets d'alphabétisation dans les communautés mako.

Mots clés

mako, piaroa, sáliba, langues sálibas, description et documentation des langues, langues amazoniennes, linguistique historique, classification, vitalité et maintien des langues

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Dedication

A mis abuelos Ergida y Raúl

To my grandparents Ergida and Raúl

Chapter 1

1 Introduction and Literature Review

This dissertation focuses on the Mako [ISO 639-3: wpc] language of Venezuela and stems from a language documentation and description project carried out in the Mako communities of the Middle Ventuari River, Amazonas State, Venezuela between 2011 and the present. The primary objectives of the project were to:

- 1) create a documentary corpus of the language that could serve for both linguistic description and language maintenance in the community,
- 2) assess the vitality of the language in the communities where it is spoken,
- 3) offer a first description of the grammar of the language, and
- 4) demonstrate its genetic affiliation to the Sáliban language family.

The dissertation is thus organized in three parts. Part I (Chapters 2 and 3) focuses on the documentation and vitality assessment components of the project. Part II (Chapter 4 to Chapter 9) describes the grammar of the language: phonetics and phonology in Chapter 4, parts of speech in Chapter 5, nouns, noun morphology and the noun phrase in Chapter 6, verbs and verbal morphology in Chapter 7, syntax of simple and complex sentences in Chapter 8 and information structure and discourse organization in Chapter 9. Part III (Chapter 10) is a study of subject marking in the Sáliban language family and a reconstruction of the Proto-Sáliban subject markers and two verb classes. Chapter 11 concludes by looking at the “Amazonian profile” of the language.

In this chapter, I review the treatment that the Sáliban language family has received in the language classification literature and the comparative work on which these proposals

rely (§1.2) and I offer a brief typological profile of the family based on the existing descriptive work (§1.3). But before doing so, I provide a general overview of the three languages that the language classification literature generally proposes as members of this family, i.e., Sáliba [ISO 639-3: slc], Piaroa [ISO 639-3: pid], and Mako¹ and their speakers, geographic distribution, reported degrees of language endangerment, and state of documentation and description (§1.1).²

1.1 The Sáliban Languages: Their Speakers, Reported Degrees of Endangerment, and Documentation and Description

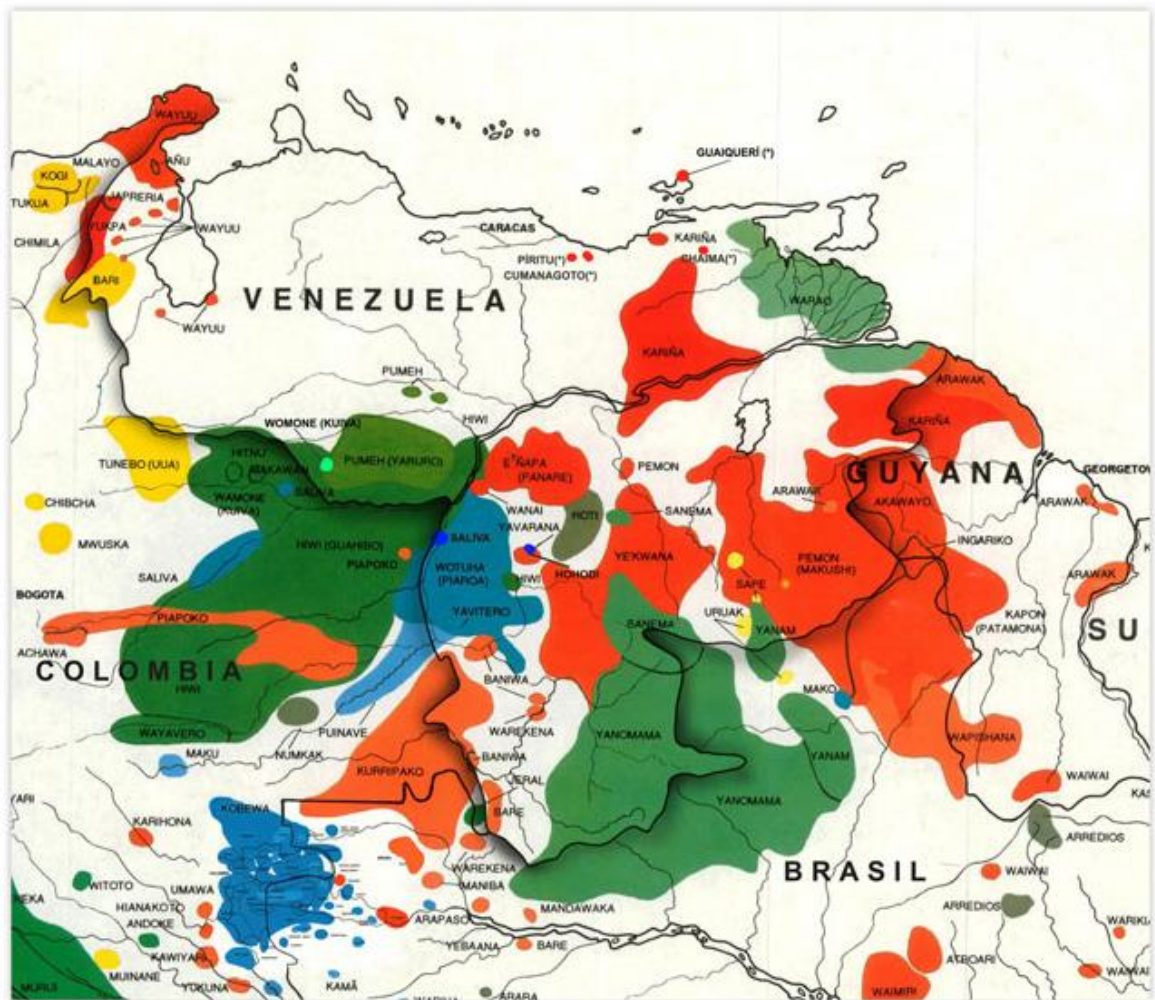
1.1.1 Geographic Distribution and Population Numbers

As the map in Figure 1 shows, Piaroa is spoken primarily in Venezuela but there is a small number of speakers living in Colombia while the opposite is true of Sáliba. Mako is spoken exclusively in Venezuela.

¹ These three languages as well as the language family are variably named in the literature and some of the names used have known multiple spellings. For Sáliba, one can find *saliva*, *sáliva*, *saliba*, *salliu*. The more widely known name for Piaroa is Piaroa but one also finds it spelled as *Piaró* or *Piáro*; *de'aruwa* and *wotiheh* are also common names for this group and their language. For Mako, there are a number of different spellings, e.g., *Maco*, *Macu*, *Maku*, *Mahku*, etc.. However, the bigger issue here is not the different spellings of the word Mako but that these names have been often used for groups in the area that are linguistically and culturally distinct (A detailed discussion can be found in Hammarström (2011:1-3) and Campbell (2012:61)). Either the word Sáliba, the word Piaroa, or a combination of both has been used for the family. Here, I use the names Sáliba, Piaroa and Mako for the languages and adopt Sáliban for the family. In §1.2, however, I retain the nomenclature used by the different authors in their proposals when referring directly to the information contained in their work.

² A previous version of this literature review has been submitted for publication to the Typology section of *Language and Linguistics Compass*. I thank two anonymous reviewers for their comments and suggestions.

FIGURE 1 Ethnolinguistic map of Venezuela (ICAS based on Lizarralde (1993))³



³ This map is an updated version of the map in Lizarralde (1993) made by the Venezuelan *Instituto Caribe de Antropología y Sociología* for their permanent exhibit in 2009. Here Mako is labeled as Hohodi. I thank Pedro Rivas for sharing the map with me and allowing its publication.

This is confirmed by Table 1 and Table 2 which provide population numbers for the three groups according to the most recent population censuses in Venezuela and Colombia.

**TABLE 1 Sáliban population in
Venezuela**

Census	Sáliba	Piaroa	Mako
1992*	79	11,103	345
2001**	265	14,494	1,130
2011***	344	18,905	1,211

*OCEI (1993) **INE (2003) ***INE (2013)

**TABLE 2 Sáliban population in
Colombia**

Census	Sáliba	Piaroa	Mako
1993*	1,488	789	—
2005**	3,035	720	—

*DANE (n.d.) **DANE (2008)

In Colombia, Sáliba is spoken in two municipalities in the Department of Casanare. In the Orocué municipality, the Sáliba live in seven *resguardos* (El Consejo, El Duya, El Médano, El Saladillo, El Suspiro, Paravare, and San Juanito) and in the Makucuana reserve. In the Hato Corozal municipality, they live in the community of Morichito, which is part of the Caño Mochuelo *resguardo*. Additionally, there are also Sáliba in Yuripialito and the Santa Rosalía *resguardo* in the Puerto Carreño municipality of the Department of Vichada. Table 3 shows the approximate population in each *resguardo* or community.

TABLE 3 Sáliba communities in Colombia*

DEPARTMENT	MUNICIPALITY	RESGUARDO OR COMMUNITY	POPULATION	YEAR
Casanare	Hato Corozal Orocué	Morichito	299	1986
		El Consejo	186	1982
		El Duya	359	1982
		El Médano	128	1992
		El Saladillo	75	1984
		El Suspiro	62	1984
		Paravare	112	1982
		San Juanito	278	1982
		Makucwana	169	1994
Vichada	Puerto Carreño	Yuripialito	165	--
		Santa Rosalía	96	1983

* Adapted from Arango Ochoa & Sánchez Gutiérrez (2004:419-445)

The few Sáliba registered in the 1992 Venezuelan census were living in San Pedro del Orinoco, Atures Municipality, State of Amazonas (González Nãñez, 2000:388). It is not clear whether the larger group registered in the 2001 census was all living in this community or whether there were multiple Sáliba communities in Venezuela at the time. According to some members of the Venezuelan Sáliba themselves (see Szeplaki (2006a)), the Venezuelan Sáliba live in several communities: Puerto Lucera, Palomo, Pijiguao, and Caicara⁴

The Piaroa in Venezuela are numerous and their communities are primarily located along the Sipapo, Parguaza, Orinoco and Ventuari rivers. The Colombian Piaroa live in thirteen communities, one in the Department of Guaviare and the other twelve in the

⁴ To this list, I would add the community of Provincial about thirty minutes north of Puerto Ayacucho.

Department of Vichada. Table 4 shows the approximate population in each of these thirteen communities.

TABLE 4 Piaroa communities in Colombia*

DEPARTMENT	MUNICIPALITY	RESGUARDO COMMUNITY	POPULATION	YEAR
Guaviare	San José del Guaviare	Piaroas del Morichal	82**	--
Vichada	Cumaribo	Atana-Pirariame		
		Atana	69	1996
		Kótsibo	18	1995
		Caño Zama		
		Pueblo Nuevo	55	1997
		San Luis de Zama	41	1997
		Márida	37	1997
		Matavén-Fruta		
		La Urbana***	52	1995
		Sarrapia	184	1996
		San Felipe	22	1995
		Berrocal-Ajota		
		Pueblo Nuevo	42	1995
		Caño Ajota	156	1997
		Laguna Anguilla-La Macarena		
		Sabanitas-Masipare	64	1997
		Cumaral		
		Cumaral	112	1997

* Adapted from Lobo-Guerrero et al. (2000:223-226)

** This community is outside the Matavén jungle so it was not included in Lobo-Guerrero et al.'s study. This population figure comes from Arango Ochoa & Sánchez Gutiérrez (2004:419-445).

*** With Puinave

The Mako communities⁵ are distributed between two municipalities of the Venezuelan State of Amazonas along the Ventuari River and some of its tributaries. Figure 2 shows the general area where the Mako communities can be found.

FIGURE 2 Mako area in the Venezuelan Amazonas State



Table 5 below lists the Mako communities along the Middle Ventuari and its tributaries. The size of the Mako communities varies, going from about 800 as in the case of Marueta to about one hundred as in the case of Santa Inés and Arena Blanca to really

⁵ More details about the sociolinguistic situation and the ethnic composition of these communities as well as a more detailed map are given in Chapter 3.

small family units as in the case of Isla Bomba and Caño Negro. Some Mako have moved to the municipal and state capitals and now live in either San Fernando de Atabapo and San Juan de Manapiare or Puerto Ayacucho.

TABLE 5 Mako communities

State	Municipality	Location	Community
Amazonas	Atabapo	Caño Yaquivapo Caño Guapuchí	Few isolated families
			Arena Blanca
			Santa Inés
			Escondido
			Pijigao
			Piña
		Río Ventuari	Canaripó
			Isla Bomba
			Fundo Chicho
			Fundo Caimán
			Porvenir II
		Caño Yureba	San José de Yureba
			Barranco Rojo
			X (unknown name)
	Manapiare	Río Ventuari	Puerto Limón
			Cerro Mosquito
			Marueta
			Yopal
			Tavi Tavi
			Morocoto
			Moriche
		Caño Parú	Parú

1.1.2 Language Endangerment

The increased awareness among linguists of the danger which linguistic diversity in our planet faces nowadays has resulted in numerous studies on the issue of language endangerment. Some of these studies focus on surveys of endangerment in different areas of the world. The scope of said studies goes from global to continent or region-specific to country-specific to language/group-specific. The large- and medium-size

works, i.e., works with global, continental, or regional scope, are generally based on the works of local linguists who have studied the endangerment situation of specific languages/groups. Table 6 shows the degree of endangerment reported for the three Sáliban languages in the literature on language endangerment and is organized according to the scope of the reports. The distinction is important here because the larger the scope of the report is, the more prone to inaccuracies the report is—due to the second (and sometimes third or fourth) hand nature of the information on which they rely and because of the sheer magnitude of the task of trying to report on the status of all the languages of the world, all the languages of South America, or all the languages in countries as multi-ethnic as Venezuela and Colombia. Unfortunately, no detailed study of language vitality has been published for any of the communities in which the Sáliban languages are spoken but see Rosés Labrada (2013c) and Chapter 3, and Estrada Ramírez (n.d.) for discussion of language vitality among the Mako and the Sáliba respectively.

TABLE 6 Reported degrees of endangerment for the Sáliban languages

	SÁLIBA	PIAROA	MAKO
Global Scope Reports			
Wurm (1996:Central America map)	moribund	not listed (so safe?)	moribund
Wurm (2001:78-79)	moribund	not listed (so safe?)	moribund
Moseley (2010:Attached global map)	severely endangered in Colombia, not listed in Venezuela	vulnerable in Venezuela, definitely endangered in Colombia	critically endangered*
ElCat (online)	threatened	vulnerable	threatened
Lewis, Simons & Fennig (2013: online)	7 (shifting)	6b (threatened)	6a (vigorous)
Continent-Region Scope Reports			
Moore (2007:44)	not mentioned in Colombia, endangered in Venezuela	not mentioned in Colombia, endangered in Venezuela	critically endangered
Crevels (2007:146, 160-1, 163-4)	endangered in Colombia, seriously endangered in Venezuela	potentially endangered in Venezuela, endangered in Colombia	endangered
Crevels (2012:196, 221)	endangered in Colombia, seriously endangered in Venezuela	endangered in Colombia, endangered in Venezuela	endangered
Country Scope Reports⁶			
González Náñez (2000:393)	in danger of going extinct**	not listed (so safe?)	in danger of going extinct**
Mosonyi (2003:122)	subject to a complete shift**	language not endangered at the	subject to a

⁶ I am not aware of any such country-wide reports for Colombia, except for the summary chart in Arango Ochoa & Sánchez Gutiérrez (2004) which is—according to the authors—based on Jon Landaburu’s work.

Villalón (2004:174)	critically endangered	moment** unsafe	complete shift** critically endangered
Arango Ochoa & Sánchez Gutiérrez (2004:227)	endangered**	not listed (so safe?)	N/A
Mattéi-Müller (2006:295)	severely endangered**	language not endangered at this moment**	severely endangered**
Villalón (2011:164)	6 severely endangered**	2 endangered**	6 severely endangered**

* This does not reflect a change in status for Mako in the Atlas but a change in the terminology used in the latest edition, which follows the endangerment scale proposed by the UNESCO ad hoc group in 2003 (See Brenzinger et al. (2003))

** My translation

According to the information in Table 6, the situation for Mako and Sáliba is dire and requires immediate attention. In the case of Sáliba, the endangerment reports are correct. The language is in fact endangered since the younger generations have already shifted to Spanish (Estrada Ramírez, 1996:xxvi) and only 537 Sálibas out of the 2000+ strong ethnic group speak their language (DANE, 2008). In the case of Mako, the situation does not seem to be as dire as previously reported since, according to my own field observations and to a language vitality study (previously reported in Rosés Labrada (2013c) and further developed in Chapter 3 below), intergenerational transmission of the language has not been interrupted. This assessment is more in line with the “vigorous” status accorded to the language in Lewis, Simons & Fennig (2014).

Piaroa has been reported as safe due to the large number of speakers; there are however concerns about the loss of cultural knowledge and special registers of the language (see for example Zent (2009) for an exposition of the loss of Traditional Ecological Knowledge among the Piaroa).

1.1.3 Description and Documentation

The Sáliban languages are documented and described to varying degrees and the existing descriptions are written under different theoretical frameworks and with varying amounts of depth. This means that, as shown in Table 7 below, the description of these languages is limited and their documentation, scarce.

TABLE 7 Summary of publications/materials on the Sáliba languages

	SÁLIBA	PIAROA	MAKO ⁷
Old Wordlists	9	6	3 (38 words)
Grammar sketches	4	4	None
Phonetics/Phonology	2	2	1
Morphosyntax	6	3	None
Dialectology	1	None	None
Sociolinguistics	1	None	None
Archived audio	None	None	None
Archived video	None	None	None
Dictionaries	4	None	None
Literacy materials	Yes	Yes	Yes

Out of the three languages, Sáliba is the one that has been documented and described the most. There are four grammatical sketches (No author, 1790b; Estrada Ramírez, 1996, 2000; Morse & Frank, 1997). A copy of No author (1790b) exists as a manuscript in the *Archivo General de Indias* and a second copy in the *Biblioteca Nacional de Colombia*⁸. This manuscript has been reprinted multiple times: first (and only in part) in Oramas (1914), then in Fabo (1911), later in M. M. Suárez (1977), and more recently online⁹ with a transcription by George Dueñas and Diego F. Gómez and with annotations by Hortensia Estrada Ramírez. The manuscript also includes a short

⁷ This does not reflect the presentations, articles, and video and audio recordings that have stemmed from my project. It can be considered a summary of the situation prior to the beginning of my fieldwork in June 2012.

⁸ The AGI manuscript is available online through the website <http://pares.mcu.es> (Search for MP-ESCRITURA_CIFRA,42; MP-ESCRITURA_CIFRA,43; and MP-ESCRITURA_CIFRA,44 to see the dictionary, the grammatical sketch and the religious texts, respectively). The copy of the grammar manuscript in the National Library of Colombia has been made available on the World Digital Library website (<http://www.wdl.org/en/item/8992/>)

⁹ Available at <http://coleccionmutis.cubun.org/BNC>

dictionary (No author, 1790a), which has been reproduced multiple times too, and a few religious texts (No Author, 1790c). Estrada Ramírez (1996) and Estrada Ramírez (2000) are largely overlapping descriptions and could be considered one sole contribution to the description of the language. There exist also a few wordlists or vocabularies (See for example Gilij (1965 [1782]:307-308), Tavera Acosta (1907:85-95), and Hervás y Panduro (1800:163, 219)) and a short Sáliba-Spanish Spanish-Sáliba dictionary (Benaissa, 1991) and a comparative dictionary of several indigenous languages of Colombia that includes Sáliba (Huber & Reed, 1992). More recently, an online dictionary has been published by the Colombian *Instituto Caro y Cuervo*¹⁰; this dictionary constitutes an important contribution to the documentation of Sáliba as it includes extensive lexical data accompanied by audio. Additionally, there are a number of articles on different aspects of the language: Benaissa (1979) and González Rátiva & Estrada Ramírez (2008) on phonetics/phonology, Estrada Ramírez (1993?, 1999, 2009, 2010, 2011) on morphosyntax, Estrada Ramírez (2005) on dialectal variation, Benaissa (1976) on the structure of the Sáliba paragraph, Estrada Ramírez (2008) on loanwords, and Estrada Ramírez (2012) on a lexical comparison with Piaroa.

Texts are an important way of assessing the level of documentation of a language, more specifically linguistically annotated texts: ten Sáliba texts are included in Morse & Frank (1997), one in Estrada Ramírez (1996, 2000),¹¹ one in Estrada Ramírez (2009)

¹⁰ http://saliba.caroycuervo.com/Página_principal

¹¹ The same text in both works.

and one was published as M. Chamarraví (1976). The reading primers and other educational materials created by SIL for Sáliba also contain several texts (see L. J. Chamarraví & Benaissa (1977), No author (1974a, 1974b, 1976, 1992)); however none of these texts are annotated and only some are translated into Spanish.

Unfortunately, there are no archived audio or video materials for the language.

However, there are a few audio recordings (seven words in a talking dictionary created as part of the Enduring Voices project¹² and some more words in Frank & Simons (2003) and a few video recordings by the NGO Shine a Light available online¹³.

Additionally, there is a DVD filmed in Venezuela that has a few minutes of spoken Sáliba¹⁴. In private collections, however, there is a considerable amount of audio recordings. For example, Hortensia Estrada Ramírez has approximately 14 one-hour long tapes with lexical material, plus roughly 30 tapes with elicitation of several aspects of the language's grammar (Estrada Ramírez, 2013, pers. comm.). It is possible that Taik Benaissa and Nancy L. Morse of SIL International also have similar materials in their private collections.

The situation for Piaroa is similar to what I have just described for Sáliba but the descriptive work for this language is even scarcer. There are a few wordlists and vocabularies, the most extensive of which is the one in Krisólogo (1976) but there are

¹² Available at: <http://talkingdictionary.swarthmore.edu/saliba/>

¹³ Available at: <http://www.shinealight.org/Saliva.html>

¹⁴ See Szeplaki (2006a)

no dictionaries. Additionally, there are two short grammars and one grammatical sketch (Krisólogo (1976) and Fedemma (1991 [ms.]), and Mosonyi (2000) respectively), and one pedagogical grammar (Remiro, 1988). Other published research on the language includes Caula (2001)—which draws from Caula (1999)—on the phonetics and phonology of the language, and Krute (1989), Mosonyi (2002), and Regúnaga (2010) on the classifier system. Krute (1989) is an important contribution to the description of the language which, in addition to offering a detailed analysis of the classifier system and the noun phrase, offers a good description of the language's phonology and a short summary of the verbal morphology. As for texts, only one annotated text has been published (Krute, 1989:247-266) but there are a number of educational materials created by New Tribes Mission with some texts (NTM 1980, 1981). These materials are, however, not easily accessible. In addition to these texts, there are texts published in anthropological works such as Anduze (1974).

No Piaroa audio or video recordings have been archived but some materials exist in private collections. Caula (2001) affirms having a corpus of 12 hours of recordings from her fieldwork¹⁵ and Lawrence Krute has several tapes in his possession from his¹⁶. The same is possibly true of (at least some of, if not all of) the anthropologists that have worked with the group such as Christian Español, Germán Freire, Alexander Mansutti

¹⁵ However, it is unclear whether copies of these materials still exist (Caula, personal communication, Nov. 2014)

¹⁶ I am indebted to Larry Krute for sending me four of these tapes and allowing me to digitize them and share them with Piaroa speakers from Puerto Ayacucho.

Rodríguez, Joanna Overing, Robin Rodd, Stanford Zent, among others. In addition, Estrada Ramírez has in her possession several tapes with lexical material from fieldwork done in 2007 among the Colombian Piaroa (Estrada Ramírez, 2013, pers. comm.). There is a DVD called *Somos Piaroa*¹⁷ that was produced in Venezuela and includes some video footage of Piaroa speakers and several other documentaries that also have Piaroa speakers performing ceremonies or talking (see for example Jean Chiappino's (1994) film *Warime* 89).

For Mako, as Table 7 shows, there has been almost no work done and only 38 words are attested in publication in three wordlists: Humboldt (1824:154-156), Koch-Grünberg (1913:468-469), and Loukotka (1949:56-57 [Vráz 1894]). The only published article on the language is Hammarström (2011), which is a general article clarifying the issue of naming and looking at the classification of the language. There is, however, a fair amount of “gray literature”¹⁸: a phonology sketch by a New Tribes Mission missionary (Gordon 2000), a writing system proposal (Gordon, n.d.), four¹⁹ reading primers (New Tribes Mission 2005a), and an MA anthropology thesis by Campoverde (2012) that

¹⁷ See Szeplaki (2006b)

¹⁸ Peter Austin in an entry posted in the EL Blog says “grey (or gray) literature [:] These are typically products that are community-oriented and locally produced in limited numbers, perhaps in an orthography that is not yet fully established, or distributed specifically as “in progress” outcomes for the speakers and others with whom the researcher has worked. These may lack bibliographic features, even to the point that identification of the author, publication date or publishing body may not be easy. Similarly, they may be laid out and formatted non-professionally, and produced cheaply (e.g., by local photocopying) with less than sturdy binding. There may be only 50 or 100 copies in existence.” (From EL Blog. URL: <http://elar-archive.org/blog/language-documentations-grey-literature/>).

¹⁹ Possibly six but I have not been able to see or obtain *Cartilla* 5 and 6.

includes some lexical data for culturally important terms. Additionally, parts of the bible have been translated into the language (New Tribes Mission 2005b).

As for Mako audio and video materials, Venezuelan anthropologists Daysi Barreto and Francisco Tapia worked with the group but recordings made by them are no longer available (Daysi Barreto and Francisco Tapia, 2013, pers. comm.). More recently, Kelina Campoverde recorded a number of interviews and narrative texts (see a list in the appendix in Campoverde (2012)). The materials, however, have not been archived to date and remain inaccessible. There is also a CD with a few phrases and words produced by New Tribes Mission (n.d.) and a DVD *Somos Mako*²⁰ where the language is used by some of the participants.

As the above discussion shows, the descriptive and documentary work on Sáliba, Piaroa and Mako is scant. It is no wonder then that almost no historical-comparative work has been carried out to date and that confusion reigns in the literature with respect to the genetic affiliation of these languages—for example, some authors prefer to treat the languages as unclassified (e.g., Mosonyi (2003:103ff)) or as isolates (e.g., Aikhenvald (2012:123)) while others give an erroneous classification for them (e.g., Storto & Demolin say Sáliba is a Guahiboan language (2012:333))—and the composition of the family itself. This is why the next section is concerned with the different grouping proposals in the literature including the comparative work on which such proposals have relied in the past and the comparative work that needs to be undertaken in the future.

²⁰ See Szplaki (2006c)

1.2 Genetic Classification and the Grouping of the Sáliban Languages

An increased interest in South American languages in the 20th century has led to a multitude of classifications. According to Kaufman (1994:46-47), language classifiers of South American languages can be divided in two groups: *original classifiers* (i.e., those who provide groupings based on first hand examination of the linguistic data) and *derivative classifiers* (i.e., those that do not report the results of personal research but base their classifications on (summaries) of earlier proposals).

Table 8 has been organized according to this schema²¹ and summarizes the treatment of the Sáliban family in the language classification literature. It shows general agreement on the existence of a language family that groups minimally Piaroa and Sáliba, with most proposals including Mako as well, either as a dialect of Piaroa or as a separate Sáliban language. A detailed review of the proposals (§1.2.1) reveals that they rely on very limited comparative work. A discussion of said comparative work follows in Section 1.2.2.

²¹ Table 8 relies on Kaufman (1994) for separating original from derivative classifications. Post-1994 classifications as well as pre-1994 classifications not include in Kaufman (1994) have been placed in either category by me using the information regarding source and methodology available in the different published classifications.

TABLE 8 Treatment of the Sáliban language family in the language classification literature

	<i>Treated languages comprise a single family</i>	<i>Treats Sáliba</i>	<i>Treats Piaroa</i>	<i>Treats Mako as</i>			<i>Other languages or groups included in the family</i>
				<i>Separate Sáliban language</i>	<i>Dialect of Piaroa</i>	<i>Not mentioned</i>	
ORIGINAL CLASSIFIERS:							
Brinton 1891 (pp. 266-267)	NO	+	+			+	Quevacus, Maritzis, Mayongcong
Chamberlain 1903 (n.p.)	NO	+	+			+	
Chamberlain 1907 (pp. 200-201)	NO	+	+			+	
Chamberlain 1913(pp. 242-243)	NO	+	+			+	
Rivet 1924 (p. 677)	YES	+	+	+			
Loukotka 1935 (p. 8)	YES	+	+	+			Pamigua†
Loukotka 1944 (p. 10)	YES	+	+	+			Pamigua†, Tinigua
Nimuendajú 1981 [1944] (map)	YES	+	+	+			
Rivet & Loukotka 1952 (p. 1139)	YES	+	+	+			
Swadesh 1959 (p. 19)	YES	does not name members					
Greenberg 1960 (p. 794)	YES*	does not name members					
Loukotka 1968 (pp. 151-152)	YES	+	+	+			Ature
Kaufman 1986 [ms.] (pp. 43-44)	YES	+	+		+		
Greenberg 1987 (p. 385)	YES*	+	+	+			
Kaufman 1990 (p. 50)	YES	does not name members					
Kaufman 1994 (p. 75)	YES	+	+		+		
Kaufman 2007 (p. 77)	YES	+	+	+ (possibly) ²²		+	

²² Kaufman lists Mako as a dialect of Piaroa but suggests that “Piaroa and Mako may be distinct languages with mutual bilingualism” and affirms that further investigation is needed (Kaufman, 2007:77).

DERIVATIVE CLASSIFIERS:						
Hervás y Panduro 1800 (p. 208)	YES	+	+		+	Atures, Cuaca?
McGee 1903 (p. 925)	NO?	+	+		+	
Mason 1950 (pp. 254-255)	YES	+	+	+		
McQuown 1955 (pp. 529, 535, 537)	YES	+†	+	+		Ature (=Adole), Quaqua (=Cuacua, Guagua, Nepoyo)
Steward & Faron 1959 (p. 22)	YES*	does not name members				
Tovar 1961 (p. 157)	YES	+	+		+	
Tax 1960 (p. 436)	YES*	+	+	+		Ature, Quaqua
Voegelin & Voegelin 1965 (p. 116)	YES	+†	+	+		Duniberrenai
Zisa 1970 (p. 11)	YES*	+†	+	+		Dunierrenai
J. Suárez 1974 (p. 108)	YES	+	+	+		
Voegelin & Voegelin 1977 (p. 131)	YES	+†	+	+		Duniberrenai
Key 1979 (p. 42)	YES*	does not name members				
Tovar & Larrucea de Tovar 1984 (p. 161)	YES	+	+		+	
Migliazza & Campbell 1988 (p. 309)	YES	+	+	+	+	Ature (Adole)
Campbell 1997 (p. 205)	YES	+	+		+	
Fabre 1998 (p. 993)	YES	+	+		+	Ature
Campbell 2012 (p. 105)	YES	+	+	+		

*Part of a larger genetic unit (more specifically, Greenberg's Equatorial)

†Listed as extinct

? The proposal's author casts doubts about the classification or is uncertain about a specific aspect of it.

1.2.1 Treatment of the Sáliban Family in the Language Classification Literature

As mentioned before, Gilij (1965 [1782]:174-175) was the first one to suggest the existence of the Sáliban language family, which he lists as the second one of his nine Orinoco basin “matrix languages”²³ claiming that it had three dialects: Piaroa, Ature, and Quaqua. And this information is repeated again in Hervás y Panduro (1800:218) but this author casts doubts on the inclusion of Quaqua in the family when he says “*conjeturo que no será dialecto de la saliva, mas de la caribe* [I surmise that it will not be a dialect of the Saliva family but rather of the Carib one]”. The first original classification of South American languages is Brinton (1891) and it also disagrees with Gilij’s proposal. Brinton, upon inspection of the available vocabularies, argues against Gilij’s proposal and suggests that Piaroa, Sáliba and Quaqua are not related (Brinton, 1891:266). Following Brinton, one early derivative classifier, namely McGee (1903:925), also suggests that Piaroa and Sáliba belong to two different stocks²⁴. A. F. Chamberlain in 1903, 1907, and 1913 also upholds this separation of the two languages but his classification was, like Brinton’s and unlike McGee’s, based on inspection of the available wordlists. In a 1910 article, the author explains his reasons for separating the two languages: regarding Piaroa he says that, thanks to the wordlist in Tavera Acosta (1907:96-107), “*la question du caractère indépendant de cette famille est mise hors de*

²³ “lenguas matrices” in the Spanish translation

²⁴ Although McGee does indicate a possible link between Sáliba and Piaroa when he writes “(Salivan?)” next to his Piaroan stock and “(Piaroan?)” next to his Salivan stock.

doute [the issue of the independent character of this family is put to rest]” (1910:196); and regarding Sáliba, he affirms that the material in Tavera Acosta (1907:85-95) allows him to “*classer la langue Saliva comme famille indépendante* [classify the Saliva language as an independent family]” (1910:198). The languages would remain separate until 1920.

The link between Sáliba and Piaroa is re-established by Paul Rivet (1920), who adds a third language to the family: Máku. Mako had not been included in the Sáliban family by Gilij or Brinton or any of the other classifiers, even though the Mako people had been contacted as early as the mid-18th century by, for instance, Caulín in 1779 and the Solano expedition in 1756-1761 (Tavera Acosta 1907:6), and both the language and the group had been mentioned in the 19th century literature on the region’s indigenous peoples (see Humboldt (1824), Codazzi (1841), and Chaffanjon (2010 [1889])) and a wordlist with ten basic lexical items had been published in Humboldt (1824:155)). It is the reappearance of the Mako and their language in the early 20th century literature (see Tavera Acosta (1907:4); Koch-Grünberg (1913, 1928)) and Koch-Grünberg’s classification of the language as a dialect of Piaroa (1913:469)²⁵ that probably prompted Rivet to include it in a single genetic unit with Sáliba and Piaroa.

Rivet’s (1920) claim²⁶ regarding the genetic relationship of Sáliba and Piaroa is based on first-hand inspection of the data available at the time but his inclusion of Mako in the

²⁵ Based on a four-item wordlist that he gathered from a Venezuelan that worked with the Mako.

²⁶ For a detailed discussion of his proposal, see §1.3.

family is not; for he leaves Mako out of his comparison due to the small amount of available data (i.e., four words²⁷). This work by Rivet and especially its inclusion in Rivet's 1924 classification of South American languages (Rivet, 1924:677) made a three-member Sáliban family more widely known and accepted, in spite of the fact that the evidence for the relationship between Sáliba and Piaroa that Rivet offers is scarce (and non-existent for the relationship of these two languages and Mako). Other subsequent classifications, original and derivative, rely primarily on this work.

Loukotka (1935:8) proposes a Piároa family with two branches: an Eastern one that includes Piároa and Mako, and a Western one that includes Sálivi and—already extinct—Pamigua. He keeps this same classification in his 1944 classification but adds the (at the time recently discovered) Tinigua language to the Western branch (1944:10). He argues for the close genetic link between the languages in his Eastern branch in 1949, when he publishes a third Mako wordlist, copied from a 1894 entry in one of E. St. Vráz's journals²⁸. Loukotka (1949) compares this 24-item wordlist with some Piaroan terms from Tavera Acosta (1907) and Koch-Grünberg (1928), and it is this comparison that allows the author to confirm the Piaroan affiliation of Mako²⁹.

²⁷ Rivet (1920) was referring to the materials in Koch-Grünberg (1913); he must not have come across the 10-item wordlist in Humboldt (1824:155).

²⁸ Loukotka explains “*la suivante petite liste de mots, ce sont des matériaux du voyageur tchèque, E. St. Vráz, qui les avait inscrits dans son journal de voyage du 11 janvier 1894 dans le petit village de Perico sur l’Orinoque* [the following little list of words comes from the materials of E. St. Vráz, the Czech explorer, who wrote it in his travel journal on January 11, 1894 in the small village of Perico on the Orinoco]” (1949:56).

²⁹ See discussion in §1.3

Probably following Loukotka, Mason (1950:255) also proposes “Sáliva (Piaróa)” as a family with two branches: Western Sáliva and Eastern Piaróa. In the Eastern branch he includes Piaróa and Macu but there is only one language in his Western branch, namely Sáliba. He also offers three different dialects for Piaroa: Ature or Adole, Piaróa, and Quaqua or Guagua.

Mason seems to not take into account Loukotka’s inclusion of Pamigua and Tinigua in the family but two years later Loukotka himself seems to have abandoned this proposal: In 1952, Rivet and Loukotka collaborate on the South American languages chapter of the second edition of *Les langues du monde* (Meillet & Cohen 1952); the authors list only Sáliba, Piaroa, and Máku as being part of the Sáliba family [their family no. LXXXIII] (Rivet & Loukotka, 1952:1139).

In spite of the fact that there seems to be a general recognition in the classification literature of the existence of the Sáliban language family in the first half of the 20th century, McQuown (1955:513) lists his Salivan family under “unclassified South American languages”, thus suggesting that there may be a relationship between Sáliban and other families of the area but that such relationship had not been explored to date. As part of his family, he includes Ature as an extinct Sáliban language (p. 517), which he also equates with Piaroa by means of a = symbol as well as with Adole (p. 515); Macu (p. 529); Piaroa (p. 535); Quaqua (p. 536), which he equates to Cuacua (p. 523)

and Guagua (p. 525) as alternate spellings but also to Nepoyo³⁰ (p. 532); and Saliva (p. 537), which he also lists as extinct³¹. This confusion is not clarified by the next original classifier, i.e., Swadesh (1959:19), since this author does not offer any information about the member languages of the Sáliban family. However, he proposes 20 minimum centuries for his Sáliba family, a number that is repeated in later classifications (see for example Kaufman (1994)).

A year after the publication of Swadesh's proposal, Greenberg makes Sáliban part of his Amerind proposal. Greenberg (1960) "lumps" almost all of the Native American languages together; but the author would not offer supporting data until 1987. In the 1960 classification, there is no mention of what specific languages are included in the families; but the author does include Sáliban as one of the families in his Equatorial stock which is part of his Andean-Equatorial phylum (1960:794). In 1987, he uses several Sáliba and Piaroa terms, one Mako word, and a few Sáliba morphemes in his mass comparisons and changes the name of the family to Piaroa [no. 6], including it in his Equatorial stock within Equatorial-Tucanoan and listing Macu, Piaroa, and Saliba as its member languages (Greenberg, 1987:151-152)³².

³⁰ I can only guess he is referring here to the Mepoyos in Hartmann's (1886) list of Venezuelan indigenous groups mentioned in Brinton (1891). See discussion of what Hartmann says and where his proposal comes from in §1.2.1. However, he could also be referring to the Nepoyo or Nepoio that are considered Arawak and now live in Trinidad and Tobago.

³¹ Adding to the "naming confusion", McQuown suggests that the family can also be called Macuan (p. 529).

³² See discussion in §1.2.2 below

Between Greenberg's proposal in 1960 and the publication of his 1987 book *Language in the Americas*, a number of other works, original and derivative, see the light. All of these new classifications retain the Sáliban languages as a single unit. Only some, however, make it part of the larger unit proposed by Greenberg (1960) while others do not.

The classifiers that embrace the Amerind proposal and make Sáliban part of a larger unit are Tax (1960), Voegelin & Voegelin (1965, 1977), Zisa (1970) and Key (1979). Tax (1960) places all of the languages in McQuown (1955) in Greenberg's 1960 Amerind proposal; therefore he lists the Sáliban family within group III of the Equatorial stock in the Andean-Equatorial phylum. He lists two subfamilies: the first one he calls just *a* and the second one he names Piaroa. In subfamily *a*, he includes only Sáliba and in the Piaroa subfamily, he includes Piaroa, Macu, Ature and Quaqua (p. 436). Voegelin & Voegelin (1965:116) and Voegelin & Voegelin (1977:131) both offer for Sáliban an Equatorial classification—Equatorial being one of the two divisions of Greenberg's 1960 Andean-Equatorial macro-phylum. The languages listed are Duniberrenai³³ [no. 14]; Macu [no. 15]; Piaroa [no. 16]; and Saliva [no. 17], which they mark as being extinct. Zisa (1970) relies primarily on the information in Voegelin & Voegelin (1965) but also on other classifications such as Greenberg (1960), Mason (1951), McQuown (1955), and Tovar (1961), among others. He classifies the Salivan language family as part of the Andean-Equatorial phylum in Greenberg's proposal and

³³ See discussion in §1.2.2 below

lists three languages: Macu, Piaroa, and Sáliva. Probably following Voegelin & Voegelin (1965), Sáliba is listed as extinct. He says that other names associated with the family are Ature, Dunierrenai³⁴ and Quaqua. As for Key (1979), the author includes Sáliban in her Andean-Equatorial stock but no discussion is offered of the member languages.

However, other classifiers do not embrace Greenberg's proposal and prefer to keep Sáliban as a single independent (i.e., not linked to other South American families) genetic unit. Tovar (1961:157) explains that Sáliva and Piaroa constitute an independent family and names Atures or Adole, Guagua or Quaqua, and Macu as Piaroa dialects. Tovar & Larrucea de Tovar (1984), however, suggest that the languages are thought to be related but are in fact very different and that their names are variably used to indicate a single family that also includes Maco, the latter only as a dialect of Piaroa based on Mosonyi (1972:390). Loukotka (1968) is published posthumously and in it, the author includes Piaroa, Maco and Ature (extinct) as Eastern languages of the Sálivan family while in the Western branch there is only Sáliba. This classification of South American languages is based on comparison of a list of 45 items but he does not have the complete data set for at least one Sáliban language: Mako. The proposal he advances in this work differs from his previous classifications in two aspects: 1) he no longer includes Pamigua and Tinigua as part of the family³⁵ and 2) he includes Ature as a

³⁴ Notice that Voegelin & Voegelin (1965) spell the name differently.

³⁵ Although he had already abandoned this by 1952 (see Rivet & Loukotka (1952)).

Sáliban language, which he lists as extinct. J. Suárez (1974:107-108) lists Sáliva-Piaroan as a single family [no. 60] and includes Maco or Macu, Piaroa, and Sáliva.

Campbell (1988) strongly criticizes Greenberg's 1987 Amerind proposal so it is no surprise that Migliazza & Campbell (1988) do not include the Sáliban family in a larger genetic unit. They include four languages, i.e., Mako, Piaroa, Ature, and Sáliva, as belonging to the Sáliban language family in a summary chart (1988:309). However, there is ambivalence about the status of Mako: first, the language is described as “*una variedad de Piaroa [a variety of Piaroa]*”³⁶ but its status as a language is restored in the summary chart. This work is probably based on Migliazza (1983) and Migliazza (1985). The simultaneous “independent Sáliban language/Piaroa dialect” status of Mako is also present there. Migliazza (1983:716-719)³⁷ affirms that the Sáliban family includes Sáliva, Piaroa and Maco and the no longer extant Ature language, adding that “*la lengua Maco [...] es mutuamente inteligible con el Piaroa* [the Mako language is mutually intelligible with Piaroa]”. However, when listing the exonyms for the Piaroa, he lists “*maco, mako o itoto*” as the names of a subgroup of the Piaroa, and Ature and Adole as other exonyms for the same group, thus contradicting the earlier language status that he gives to Mako and Ature. His 1985 book chapter is equally ambivalent

³⁶ Emphasis added

³⁷ Probably based on the 1980 manuscript that Kaufman (1990, 1994) lists but that I have not been able to obtain.

about the status of Mako as an independent language³⁸: He repeats that “the Maco language [...] is mutually intelligible with Piaroa” (1985:42) but when talking about the Piaroa language, he says that it “has at least two mutually intelligible *varieties*: a southern one called Maco [...], and a northern one, Piaroa proper [...].” (1985:43).³⁹

The classifications in Kaufman (1990) and Kaufman (1994) are largely based on a 1986 manuscript, which relies on data from the South American Indian Languages Documentation Project (SAILDP). This manuscript lists Sálivan as a family with 20 minimum centuries whose members are Sáliva and Kuakua⁴⁰ (Kaufman, 1986:43-44). In 1990 (p. 50), the author lists Salivan as his South American family number XXX but does not give any information about its member languages and in 1994 he lists a Sálivan family that includes Sáliva and Piaroa-Mako, specifying that this second language has two dialects: Mako and Piaroa. This classification, he says, “is based on conversations with Larry Krute⁴¹ in 1987” (Kaufman, 1994:75). It is on this work by Kaufman that Campbell’s 1997 classification in his *American Indian languages: the historical linguistics of Native America* book relies. As such, the latter agrees with the former in that the Sálivan family has two languages: Sáliba and Piaroa-Maco (Campbell, 1997:205).

³⁸ Migliazza’s 1983 article had been translated from English, so this is presumably the manuscript it had been translated from.

³⁹ Emphasis added

⁴⁰ He probably means Piaroa, at least the ISO code given is PID which is the one we have for Piaroa (a.k.a. Piaroa).

⁴¹ Lawrence Krute did fieldwork on Piaroa in the late 1980s. See Krute (1989).

In 2007, Kaufman publishes a new classification and in it, the author maintains the same two languages as forming the Salivan language family, i.e., Sáliva and Piaroa-Mako, but adds that “Piaroa and Mako may be distinct languages with mutual bilingualism” and affirms that further investigation is needed (Kaufman, 2007:77). Although relying primarily on Kaufman’s classifications, Campbell (2012), however, goes a step further and lists three languages as part of the family: Sáliba, Piaroa, and Mako. About Mako, Campbell (2012:105) says that it is not included in the Kaufman (2007) classification as a separate language but notes that both Ethnologue⁴² and Loukotka (1968) do list Mako as a separate language. He does not include Ature as a Sáliban language but observes that it was included in Loukotka (1968).

As can be seen in the preceding discussion and in Table 8 above, the treatment of the Sáliban family in the language classification literature varies considerably. I turn now to the main differences among the different classifications.

1.2.2 Analysis of the Differing Proposals

As shown in the previous section, there seems to be a consensus in the literature regarding the existence of a distinct South American language family that generally includes Sáliba, Piaroa, Mako, and possibly Ature (no longer extant) as its members and this family is generally called Sáliban. There are, however, a number of aspects in which the different proposals disagree with each other. In the discussion that follows, I

⁴² Presumably the most recent version of *Ethnologue: Languages of the World* at the time, i.e. the 16th edition (Lewis, 2009).

look at two major types of differences: those with respect to the family's member languages and the status of some of these languages within the family (§1.2.2.1), and those with respect to whether or not the Sáliban family is part of a larger genetic unit (§1.2.2.2).

1.2.2.1 Member Languages

The first obvious difference between the different proposals is the dialect vs. language status granted to Ature and Mako.

Ature is included in the Sáliban family by some authors (e.g., Loukotka (1968), Migliazza & Campbell (1988)) but not by others (e.g., Kaufman (1990, 1994)). Among those authors that include it, some treat it as a separate Sáliban language while others treat it as either a dialect of Piaroa or an exonym for the group. However, all authors agree that the language is extinct and that there is no data available. The Ature or Adole are mentioned early on in 18th century literature (see Caulín (1841 [1779]:65, 74) and Rivero (1883 [1736]:44)) but it is Gilij (1965 [1782]:174) who first proposes that this group is related to the Sáliba and the Piaroa. Codazzi (1841:255), possibly following Gilij, and Hartmann (1886) following Codazzi also mention the Ature and their language as being related to Piaroa. Given the lack of any data and the oft-repeated mistake of explorers and missionaries of naming groups based on place names, I am personally inclined to agree with Tavera-Acosta's explanation when he claims that the confusion stems from mistaking a place name, i.e., Ature as in the cataracts of Ature, to

name the group that lived in the area, which, he says, were Piaroa (1907:218-228).⁴³

However, whether or not Tavera-Acosta is wrong and the Ature did exist⁴⁴ and their language thus constitutes a fourth, now extinct, Sáliban language remains a question with no possible empirical answer at this time.

With respect to Mako—and putting aside those classifications that do not include it (primarily pre-1920 classifications)—, the language gets treated in two different ways: either as a dialect of Piaroa (e.g., Kaufman (1994, 2007), Campbell (1997)) or as an independent language that is closely related to Piaroa (e.g., Campbell (2012), Loukotka (1935, 1944, 1968), Rivet (1924), Voegelin & Voegelin (1965, 1977)).⁴⁵ Given the fine nature of the line between dialect and language and the lack of any phylogenetic study based on shared lexical data⁴⁶ or any mutual intelligibility research⁴⁷, the question of

⁴³ Tavera-Acosta devotes all of Chapter IX in his book to argue, in my opinion convincingly, that the Ature were never a separate group.

⁴⁴ Mansutti Rodríguez (1990) includes the Ature among the groups dwelling along the Orinoco River in colonial times. Morey & Morey (1975) and Morey (1976) mention them as a highly specialized group that relied primarily on fishing.

⁴⁵ Or as both as in Migliazza (1983, 1985) and Migliazza & Campbell (1988).

⁴⁶ A preliminary, and yet unpublished, rather conservative comparison of a 110-word wordlist in Mako and Piaroa shows a 57.3% of shared lexical items.

⁴⁷ Pending further research, I offer here my observations on the issue of Mako-Piaroa intelligibility. First, it is important to note that all of the Mako groups of which I have knowledge are in contact with Piaroa speakers while only the Piaroa speakers living in the Ventuari basin have sustained contact with Mako speakers (some communities are a mix of Piaroa and Mako families such as San José de Yureba and Fundo Chicho; others are not but still have a few members that are Mako (e.g., Picúa) or are in touch with the Mako of near-by communities) and Piaroa communities in other river basins, e.g., the Alto Cuao, have only sporadic, if any at all, contact with Mako. This has led to a situation where the Mako and the Piaroa in the Ventuari understand each other—I have witnessed interactions between Mako and Piaroa

whether Mako and Piaroa are dialects of a same language or different languages rests on how the speakers see themselves. The Mako people with which I have worked see themselves as a group related to but socio-politically distinct from the Piaroa⁴⁸; therefore, I choose to see Mako as a separate language rather than as a dialect of Piaroa.

The second difference I want to discuss is the inclusion of different languages in the family: Kuakua or Quaqua, Quevacus, Maritzis, Mayoncong, Pamigua and Tinigua, Duniberrenai and, more recently Jodi.⁴⁹

Gilij includes Quaqua (1965 [1782]:174) in his Sáliba group but Brinton (1891:266) says that “the modern Quaquas speak a dialect of the Arawak”. After Brinton did away with this inclusion of Quaqua in the Sáliban family, only McQuown (1955:536) and Tax (1960:436)—following McQuown—include it in the family but no other classifier does. However, the name has remained in the literature either as an exonym for the Piaroa or as a name for a dialect of this language. Before Gilij (1965 [1782]), the Cuacuas are

speakers in all the communities I have visited, mixed or not, and can attest to this—but the Piaroa living in other areas do not understand Mako—This has been reported to me by, for example, Piaroa speakers from two Sipapo communities and speakers from Caño Grulla. This suggests that the intelligibility is acquired (i.e. those speakers that have sustained contact with the other group have learned to accommodate the differences between the two languages) rather than inherent. A telling anecdote is the one told to me by a Piaroa man married to a Mako woman and living in a primarily Mako community along the Parú River: in November of 2013, this man told me that when he first moved there, he did not understand Mako but that after a few months, he could understand almost everything.

⁴⁸ Some Piaroa speakers that I have interviewed agree with this “distinctness” assessment.

⁴⁹ Although this last proposal comes from outside of the language classification literature in Table 8 above, it deserves to be addressed here.

mentioned in Caulín (1841 [1779]:270) but no information is given about their language. Codazzi (1841:255) says: “*los Quaquas ó Mapoyes viven sobre el Orinoco, entre el estrecho de Barraguan y el raudal de Santa Borja. Son de la misma familia que los [Atures]* [the Quaquas or Mapoyes live on the Orinoco River, between the strait of Barraguan and the Santa Borja rapids. They belong to the same family as the [Atures]] ”. Hartmann (1886:163) repeats the information in Codazzi (1841) and Tavera Acosta (1907:264) agrees that Quaquas and Mapoyes are the same group. If the Mapoyes mentioned by these authors are the present-day Mapoyo people of Venezuela and Quaqua is an alternate name for this group, then this would conflict with Brinton’s claim that the Quaquas spoke “dialect of the Arawak” (1891:266) in the late 19th century since Mapoyo is a Cariban language (see for example Mattéi-Müller (2002)). This would also justify the non-inclusion of Quaqua in the Sáliban language family, either as a dialect of Piaroa or as a separate Sáliban language.

Additionally, Brinton (1891), quoting Hartmann (1886)⁵⁰, adds three other groups that “employ” Sáliba: the Quevacus and Maritzis at the head of the Ventuari, and the Mayongcong in the Merevari. Brinton, however, seems to have misinterpreted the information in Hartmann (1886:163). The latter groups the Macos with the Piaroas in a family called Ature in which he does not include the Salivas which are left unclassified; he also gives the same family for the “Mapoyes (Quaquas)”. With respect to the Quevacu, the Maritzi and the Mayongcong, Hartmann puts them in a family called

⁵⁰ I would like to thank Kelsie E. Patillo for her help locating this reference.

Maco. This adds to the confusion because it seems to suggest the existence of either two independent families—i.e., an Ature family with two languages Piaroa and Maco, and a Maco family with three languages Quevacu, Maritzi and Mayongcong—or one single family and a Mako language with four dialects. The information in Hartmann (1886), however, is a summary of Codazzi (1841) and it is this author who first says that the Quevacu, Mavitzi and the Maiongcong speak the same language or dialect as the Piaroa or Mako. He also adds the Guainares or Guinaos (Codazzi, 1841:253). Thus, Codazzi's (1841) Sáliban group would include the Saliva, the Atures, the Quaquas or Mapoyes, the Macos and the Piaroas, and the Guainares or Guinaos, the Mavitzi, the Maioncong and the Quevacu. I have already discussed the inclusion of Ature and Quaqua in the family above and I have not been able to determine who the Quevacu⁵¹ and the Mavitzi⁵² were but they are—to the best of my knowledge—not present-day names for any Venezuelan indigenous groups. Codazzi affirms that these two groups, along with the Maiongcong, lived in the headwaters of the Ventuari and along the Merevari (1841:255). The Merevari is another name for the headwaters of the Caura river, which is settled by the Ye'kwana (Maiongcong, see below) and the headwaters of the Ventuari are settled by the Ye'kwana, the Piaroa (who moved there in the 20th century, see

⁵¹ This group is, however, mentioned in Veloz Goiticoa (1904:32) as living in the Guayana region of Venezuela.

⁵² Cocco (1988:23) says that Codazzi's Mavitzi could be “*un grupo de filiación arahuaca, vecinos de otros arahuacos que poblaron el Ocamo, el Mavaca y el Siapa* [an Arawak group, neighbour to other Arawak groups that settled the Ocamo, the Mavaca and the Siapa rivers]”. See, however, discussion below where Codazzi actually places them in the headwaters of the Ventuari and along the Merevari. (I thank an anonymous reviewer of *Language and Linguistics Compass* for bringing to my attention the mention of the Mavitzi in Cocco (1988).)

Mansutti Rodríguez (1990)), and small groups of Yabarana. The Guinaos or Guainares are most likely the Arawakan group whose language was closely related to Baré and is now considered extinct⁵³ and the Maiongcong are the present-day Ye'kwana/De'kwana and their language is unquestionably Cariban (see Cáceres (2011)); therefore, if either of these two groups employed Sáliba, it must have been as a second language or lingua franca.

Tinigua and Pamigua are two other languages that have been included in the Sáliban family (e.g., Loukotka (1944:10)). However, Castellví (1940:95), examining first-hand data, says:

[E]n el estado actual de nuestros conocimientos, el Tinigua no puede incluirse dentro de alguna de las grandes familias lingüísticas sudamericanas, pero, el parentesco [sic] del Tinigua con el Pamigua, hablado en Concepción de Arama, pueblo de los llanos de San Martín, que conocemos por un pequeño vocabulario de Ernst [1895], es evidente
[In the present state of our knowledge, the Tinigua language cannot be included in any of the major South American language families, but the relationship between Tinigua and Pamigua, spoken in Concepción de Arama, a town in the San Martín plains, and known to us thanks to a short wordlist in Ernst [1895], is evident]

Mason (1950) points this out in his classification of South American languages as the reason for his not including Pamigua and Tinigua in the Sáliban family. However, Mason himself recognizes that Igualada & Castellví (1940) considered Tinigua as “composing a third or Southern group of Sálivan”. It is hard to determine if Igualada &

⁵³ See, for example, Campbell (1997:180) for this classification.

Castellví (1940) came before Castellví (1940) and this means that Castellví had abandoned his Sáliban classification for Tinigua or whether it came after, in which case it would mean that he had other evidence that supported a link between Tinigua and that the Sáliban languages. However, in 1942-43, Castellví is still placing Tinigua within Sáliban which he says, following Loukotka, is divided into two branches. In the Eastern branch, he places Piaroa and Mako and in the Western one, he places Saliba, Aturi, Pamigua and Tinigua (Castellví, 1942:238). Regarding this supposed relationship of Tinigua and the Sáliban family, Campbell (2012:106) explains, quoting Landaburu (2000:30), that attempts to group Tinigua with Sáliban have been now abandoned; however, all Landaburu says is that Loukotka himself abandoned his earlier 1944 classification of Tinigua as Sáliban in his 1968 book⁵⁴. Thus, the possibility remains that there might be an unexplored connection between these two groups.

Voegelin & Voegelin (1965) and (1977) mention Duniberrenai as a Sáliban language. I have not encountered this language in any other classification, except for Zisa (1970) who follows Voegelin & Voegelin (1965). In the facsimile for Native American languages, Voegelin & Voegelin (1965:116) explain: “[t]he Duniberrenai in Venezuela are also listed in some sources as speaking a Salivan language, but without indication as to whether their speech represents a dialect of one of the languages listed above [i.e., Piaroa, Macu, and Saliva], or a fourth Salivan language.” A thorough search of several

⁵⁴ “*Su inserción dentro del grupo sáliba-piaroa propuesta por Loukotka (1942) [sic?] ha sido desechada por el mismo (1968)* [The inclusion of this language in the Sáliba-Piaroa group proposed by Loukotka (1942) has been rejected by himself (1968)]” (Landaburu, 2000:30).

sources, mainly writings by missionaries and explorers, has only yielded one reference to the Duniberrenai. Rivero (1736:46) says: “*Aquí, en la boca del Meta, hay otros indios repartidos en varias poblaciones y caseríos, llamados Duniberrenais, que son Salibas también* [Here, at the mouth of the Meta, there are other Indians spread over several towns and hamlets, called *Duniberrenais*, who are also Saliba]”. However, this author offers no language data so the question of whether or not the Duniberrenai were in fact a Sáliban-speaking group that lived in the area will have to remain unanswered.⁵⁵

More recently, another language has been suggested to belong to the Sáliban family: Jodí [ISO 639-3: yau], also known as Yuwana, Chicano, Chikano, Hoti, Jodi, Joti, Waruwaru, Yoana, Yuana. The language has usually been treated as an isolate or left unclassified in the language classification literature (see for example Migliazza (1985:46), Migliazza & Campbell (1988:372-373), and Kaufman (1990:50, 1994:75, 2007:77)), but some believe Jodí belongs to the Sáliban family (e.g., Coppens (1983:253), Zent & Zent (2008:503)). Mosonyi (2000:660) is perhaps the most categorical:

En el caso de la lengua hoti—del norte del Territorio Federal Amazonas—la coincidencia [of the nominal classification system] con el piaroa es prácticamente total, hecho que constituye un argumento precioso en favor del parentesco

⁵⁵ Tania Granadillo (2014, pers. comm.) suggests that this might be an Arawak group because of the use of *-nai* in its name. The suffix *-nai* is a plural suffix used in, for example, Kurripako clan names: cf. *Walipéri-dákenai* ‘Grandchildren of the Pleiades, Pleiades-people’, *Aini-dákenai* ‘Grandchildren of the Wasp, Wasp-people’ and *Häma-dákenai* ‘Grandchildren of the Tapir, Tapir-people’ (Granadillo, 2006: 43-44). However, this could also mean that Duniberrenais is an exonym given to the group by an Arawak-speaking group or groups.

genético de ambas lenguas. Según comunicación personal de la lingüista Diana Vilera—autora de una gramática hoti—hay suficientes indicios de similitud entre radicales léxicos y elementos gramaticales como para pensar seriamente en tal parentesco [As for the Hoti language—from the North of the Territorio Federal de Amazonas—the match [of the nominal classification system] with Piaroa is almost absolute, a fact that constitutes an invaluable argument in favour of a genetic relationship between the two languages. According to personal communication with linguist Diana Vilera—the author of a Hoti grammar—there is enough evidence of similarity between lexical roots and grammatical elements to consider more seriously this relationship].

But, as Mosonyi himself recognizes, there is no published comparative work for this alleged relationship between Jodí and Piaroa⁵⁶. Other comparative work has, however, suggested that Jodí could be a member of the Makú family (Henley, Mattéi-Müller & Reid, 1994). Mattéi-Müller (2012, pers. comm.) says that she now believes the Sáliban hypothesis might be more viable. This proposed Sáliban affiliation for Jodí is awaiting further research and until such a date when that research is carried out, the language should remain an isolate.

1.2.2.2 Sáliban as Part of a Larger Unit

There have been two main proposals that would include Sáliban in a larger genetic unit: Greenberg (1960, 1987) and Jolkesky (2009).⁵⁷ I will deal with each of them in turn.

⁵⁶ Jolkesky (2009) includes some Jodí data in his comparisons and reconstructions. See discussion in §1.2.2.

⁵⁷ The latter proposal is—like the Jodí proposal discussed in the previous section—not part of the language classification literature included in §1.2.2.1 but it is considered here in the interest of a thorough review of all the relevant literature.

1.2.2.2.1 Greenberg (1960, 1987)

As mentioned before, Greenberg (1960:794, 1987:385) includes Sáliban in the Equatorial stock; the latter being part of a larger genetic unit, namely the Andean-Equatorial phylum in the 1960 proposal and the Equatorial Tucanoan phylum in the 1987 proposal. This inclusion in a larger stock suggests a (distant) genetic relationship of the Sáliban languages with more widely accepted families of the region such as Arawakan, Tupi, and others. Although Greenberg's classification is far from accepted⁵⁸, a discussion of the Sáliban data included in his "megalo-comparison" (Matisoff, 1990) follows.

Greenberg (1987) presents 134 exclusively Equatorial etymologies and says that an additional 95 are to be found in his Amerind dictionary⁵⁹. 27 etymologies out of the 134 exclusively Equatorial etymologies contain Sáliban data: 12 with one Sáliba word each, three with two Sáliba words each, 10 with one Piaroa word each, one with one word from Piaroa and one from Sáliba, and one with one word from Piaroa and one from Mako; totalling 19 Sáliba words, 12 Piaroa words and one Mako word. Out of the 95 additional etymologies included in the Amerind dictionary, 20 contain Sáliban data: 10 have one Sáliba word each, one has two Sáliba words (repeated), four have one Piaroa word each, one has two Piaroa words, three have one Piaroa word and one Sáliba word

⁵⁸ Greenberg's Amerind proposal has been harshly criticized and can only be considered a hypothesis for which we lack evidence that we may never be able to obtain. See Adelaar (1989), Campbell (1988), Matisoff (1990), and Rankin (1992) for discussion and criticism of Greenberg (1987).

⁵⁹ However, at least one of them is repeated in both sections: BELLY₁.

each, and one has two Piaroa words and one Sáliba word; totalling 16 Sáliba words and 11 Piaroa words. The validity of these lexical comparisons is widely contested because of Greenberg's methodology but the author tried to provide support for the links established via his comparison of etymologies with some morphological data. Here the role of the Sáliban languages is limited to five areas of the grammar: person marking, number, nominal classifiers, sociatives, and interrogatives.

For person marking, he mentions that “[i]n Saliba (Piaroan), in the second person singular imperative, verbs with initial subject markers replace the final vowel with *-i*”. He compares this with a second person pronoun of similar form in other Equatorial languages, e.g., Cuica, Yaruro. However, although it is true that the suffix *-i* appears in second person Sáliba forms, the *-i* suffix is better analyzed as an imperative marker, which renders the comparison with a second person pronoun in some of Greenberg's Equatorial languages invalid. In other words, the use of *-i* in second person imperative forms is epiphenomenal: imperative forms are commands given to one's interlocutor and often marked as second person.

The support for an analysis of *-i* as an imperative marker is strong and comes from both Greenberg's original source and from comparative data from Piaroa and Mako.

Greenberg used as his Sáliba source the 1790 grammar reproduced by Oramas (1911). In this grammar, now available online and also reproduced in M. M. Suárez (1977), the *-i* is clearly treated as an imperative marker (See, for example, pages 28-29 in M. M. Suárez (1977) for a discussion of the formation of the imperative). This is shown in the examples in (1) through (3) below where the second person singular and plural present

forms of three verbs are given in the left column and the second person singular and plural imperative forms are given in the right column. Notice that all of the present (declarative, according to the author of the 1790 grammar) are marked with a suffix *-a* while the imperative forms are marked with a suffix *-i*.

Sáliba (1790)

PRESENT

- (1) a. *querecua* ‘you do’ (2SG)
c. *querecuado* ‘you do’ (2PL)

IMPERATIVE

- b. *querepi* ‘do!’ (2SG)
d. *querepido* ‘do!’ (2PL)

(M. M. Suárez, 1977:27, 30)

- (2) a. *cuempa* ‘you take’ (2SG)
c. *cuempado* ‘you take’ (2PL)

- b. *empi* ‘take!’ (2SG)
d. *empido* ‘take!’ (2PL)

(M. M. Suárez, 1977:33-34)

- (3) a. *cumua* ‘you want’ (2SG)
c. *comuadó* ‘you want’ (2PL)

- b. *omuí* ‘want!’ (2SG)
d. *omuído* ‘want!’ (2PL)

(M. M. Suárez, 1977:37-38)

This *-i* suffix, however, seems to be absent in modern day Sáliba, as suggested by the examples below, where the imperative is marked with an *-á* suffix.

Sáliba (present day)

- (4) *k-ukw-á*
2-eat-IMP
‘you [2SG] eat!’

- (5) *k-ukwa?-á-?do*
2-eat-IMP-PL
‘you [2PL] eat!’

(Morse & Frank, 1997:49)

However, this *-á* suffix is not exclusively an imperative marker: Estrada Ramírez (pers. comm.) affirms that—given the right intonation—these two examples could be interpreted as 1) a statement, 2) a command or 3) a question.

Although the synchronic evidence suggests that *-i* is no longer present in Sáliba, the comparative evidence confirms the older data in (1) through (3). This is shown below with a number of forms—all in second person singular—from Piaroa⁶⁰.

Piaroa

- (6) a. *hárewi* ‘play!’
b. *ijchi* ‘come!’
c. *aditi* ‘work!’
d. *emi* ‘take [smthg]!’
e. *iyi* ‘give [smthg]!’
f. *awi* ‘drink!’

(Feddema, 1991[ms]:11)

As the preceding discussion and examples show, the *-i* marker used by Greenberg as a second person marker should in fact be analyzed as an imperative marker and not a second person marker.

Regarding number in Sáliba, Greenberg says “Saliba (Piaroa) uses *ñā* (possibly < **na*) as a plural marker in demonstratives, e.g., *hi-ñā-te* ‘those’, in which *hi* is the demonstrative, *-te* is a plural used widely in the language, and *ñā* is presumably an old plural marker to which the more recent and productive one has been added, a common

⁶⁰ And as will be shown below in Chapter 7, §7.2.1.2.1.2, Mako also has an *-i* imperative suffix.

process (1987:292)”. And he argues that this form is similar to other forms used to indicate plural in languages within his Equatorial stock. The *-ña* to which Greenberg refers is probably better analyzed as a nominal classifier: Estrada Ramírez (1996:100) gives the form /hi-ja/ as being composed of the remote demonstrative /hi-/ and the nominal class marker /-ja/ used with CN.29 nouns.

Greenberg (1987:297) also talks about a masculine form *-ndi* and a feminine form *-ku* that attach to nouns and how this patterns with a vowel contrast for gender that uses *i* for masculine and *u* for feminine and which can be found in both Equatorial and Macro-Tucanoan. He also mentions a Sáliba form *mane*, meaning ‘around’, which is probably cognate with a *mena* meaning ‘with, having’ in Tucano and other Tucanoan languages (1987:303) and two interrogatives *uma-* and *eme-* as in *ume-kenai*, which he says has cognate forms in Macro-Ge and Equatorial (1987:316). I have no alternative analyses for these forms to offer at this time but notice the semantic gap between the forms *mane* (‘around’ in Sáliba) and *mena* (‘with, having’ in Tucanoan languages).

As the discussion above shows, the evidence (be it lexical or grammatical) put forward by Greenberg (1987) to support grouping the Sáliban languages with other South American language families does not exceed chance similarities because it is limited to a very small number of lexical items (with extreme semantic laxitude) and to (a maximum of) three grammatical forms, i.e., the *i/u* gender contrast, the sociative, and the interrogative forms. Therefore, the family should remain as an independent genetic unit; barring future research that would show otherwise.

1.2.2.2.2 Jokelsky (2009)

Another proposal that sees Sáliban as part of a larger unit is Jolkesky (2009). He proposes the inclusion of the Sáliban family in a hypothetical Macro-Daha stock that would also include three other Amazonian languages that have been traditionally considered isolates, namely Jodí, Tikuna [ISO 639-3: tca], and Andoke [ISO 639-3: ano]. In his proposal, Jolkesky mentions certain phonological, morphological, and syntactic similarities among these five languages.⁶¹ The shared phonological traits are the absence of a velar /ŋ/, the absence of contrastive vowel length, the presence of suprasegmental nasality or nasal vowels, and a syllable structure that is limited to open syllables. In their morphology, these languages are similar, Jolkesky argues, because they mark possession with prefixes, they mark case and grammatical relations with suffixes and they do not mark an inclusive/exclusive distinction in their verbal inflection. In the syntax, he suggests the following commonalities: postpositions, demonstratives that precede noun phrases, and negation being marked on the verb by suffixation. As can be seen, taking any of the traits in the list of similarities above as evidence for a genetic relation between the Sáliban languages and other languages would yield unwanted results and even taking them as groups of traits could, in theory, still give us false positives regarding a genetic relationship between the Sáliban languages and language X or Y. Fortunately, Jolkesky offers other evidence for his proposal, evidence that is more in line with the comparative method traditionally used

⁶¹ He does not include Mako so the five languages that enter in his comparison are Sáliba, Piaroa, Jodí, Tikuna and Andoke.

in historical linguistics. He compares the person marking on verbs and nouns, deictics, and several morphemes as well as a fairly long list of lexical items, offering reconstructions of “Proto-Macro-Daha” forms. I am not going to discuss here each of these comparisons but suffice it to say that Jolkesky’s 2009 proposal has been rejected by a group of researchers who work on three of these languages⁶² as being too a priori. Estrada Ramírez, Montes Rodríguez & Landaburu (2011) evaluate Jolkesky’s proposal and conclude that Macro-Daha should be discarded despite the partial correspondence between the singular person markers in Sáliba and Piaroa with the Tikuna ones. They argue that what Jolkesky considers as proof of a relationship are areal traits common in the region.

1.2.2.3 The Comparative Work to Date

Most historical linguists require as evidence of a genetic relationship between two or more languages the existence of regular sound correspondences that allow the reconstruction of a common protolanguage by means of the comparative method (Greenberg, 2000:162). According to Greenberg (2000:170), there is, however, a pre-sound correspondence stage that precedes the identification of sound correspondences and reconstructive work; this first stage consists of identifying common etymologies. To date, the genetic relationship between Sáliba, Piaroa, and Mako still rests primarily⁶³ on evidence from this pre-sound correspondence stage where only lexical similarities are

⁶² Estrada Ramírez works on Sáliba, Montes Rodríguez on Tikuna, and Landaburu on Andoke. They did not, however, include data from Jodí (Montes Rodríguez, pers. comm.).

⁶³ But see Rivet (1920) for some grammatical forms.

observed in a given number of proposed etymologies. I review here this work by looking at pairs of languages.

1.2.2.3.1 Mako and Sáliba

Humboldt (1824:155) lists 10 Mako words he had gathered from a young Mako man. Alongside the Mako data, he has Sáliba words for four of the items in the list and there are no matches for any of them.⁶⁴ He thus concludes:

*j'ignore si cette langue n'est qu'un dialecte du saliva, comme l'on assure assez généralement; car les idiomes que dérivent l'un de l'autre offrent quelquefois, pour les choses les plus usuelles et les plus importantes, des mots entièrement différens [sic] [I ignore if this language is just a dialect of Saliva, as it is generally claimed; because languages that are derived from one another offer sometimes, for the most common and most important things, completely different words].*⁶⁵

1.2.2.3.2 Sáliba and Piaroa

Rivet (1920) is the first investigator to show cognate lexical items between Sáliba and Piaroa. The list offered by the author contains 94 etyma in both Piaroa and Sáliba and he says that it is on this lexical comparison that his work mostly relies (p. 14). The wordlists given show evident similarities in some cases (for example Piaroa *kianá* and

⁶⁴ See below what Hammarström (2011) says about this comparison.

⁶⁵ He goes on to say “*Mais, dans les discussions sur les langues mères et les langues dérivées, ce ne sont pas les sons, les racines seules qui décident, ce sont plutôt l’organisation intérieure et les formes grammaticales* [But, in the discussion about matrix languages and derived languages, it is not the sounds or only the roots that decide; it is rather the interior organization and the grammatical forms]” (1824 :156).

Sáliba *xana* ‘pineapple’ (p. 16), and Piaroa *axuka* vs. Sáliba *čuka* ‘spider’ (p. 17)) but in other instances, it is harder to make a connection as with Piaroa *parántani* or *parhatano* vs. Sáliba *paludai* ‘needle’ (p. 16). The author recognizes that the similarities between the two languages are sometimes not self-evident and says it could be due to contact between the Sáliba and Arawak groups in the “*reducciones*”:

Si ces rapprochements ne sont pas plus nombreux, cela tient sans doute à ce que, du fait du brassage que l'établissement des missions a provoqué parmi les Sáliva, et du contact qu'il a déterminé entre eux et d'autres tribus, notamment des tribus arawak, leur langue s'est fortement altérée et a renouvelé en partie son vocabulaire [If the similarities are not more numerous, that stems without a doubt from the fact that their language has been greatly altered and has renewed a part of its vocabulary due to the intermingling that the foundation of missions brought about among the Sáliva, and to the contact between them and other tribes, notably Arawak tribes, that it entailed]. (p. 14)

The cognate lexical items identified by Rivet (1920) are an excellent first step in suggesting that Sáliba and Piaroa are related. However, it is the comparison of grammatical data that constitutes Rivet’s biggest contribution. Based on the Sáliba grammar published in Oramas (1914)⁶⁶ and on what limited grammatical information he gleaned from Piaroa in the wordlists to which he had access, he argues that the Sáliba 1SG marker on a possessed noun, namely *čV*, is similar in form to the *či* and sometimes

⁶⁶ Oramas (1914) is a partial reproduction of the 18th century Sáliba manuscript grammar with no known author (see No Author (1790b)), also reproduced in M. M. Suárez (1977). The original manuscript is at the *Archivo General de Indias* in Spain and has been made available online at my request through the website <http://pares.mcu.es> (Search for MP-ESCRITURA_CIFRA,43).

č- or *ts-* that appears in many of the words in the Piaroa vocabularies, especially on body part terms; and argues that the Piaroa form *tu-otsé* ‘hair’ is probably marked for 1PL because the prefix in this word corresponds to a *tu-* 1PL marker given by Oramas for Sáliba. He also notices similarities between the pronouns for 2SG and 2PL in his data, namely Sáliba *in-kui* and *in-kui-do* and Piaroa *u-ku* and *u-ku-tu* respectively, and between the forms for ‘with you’, i.e., Sáliba *in-kui-kui* versus Piaroa *us-ku-kó*. Additionally, Rivet reinterprets the conjugated Piaroa verbs *xukua-kua* ‘I speak’ and *xukua-ta* ‘you (SG) speak’ in Ernst (1895)⁶⁷ as instead probably meaning ‘you speak’ and ‘we speak’ given that the conjugation of the verb ‘to do/make’ as provided by Oramas (1914) is *kere-kua* for 2SG and *kere-tá* for 1PL.

As sketched in the above discussion, the evidence provided by Rivet for the genetic relationship between Sáliba and Piaroa is rather strong in spite of the fact that he has been criticized for “looking for similarities rather than systematic sound correspondences, and he does no reconstructing” (Rowe, 1954:115). The next comparative work to look at the relationship between these two languages does not come until almost 90 years later with the publication of Estrada Ramírez’s work (2008, 2012).

A discussion of Estrada Ramírez (2008, 2012) follows because of its important contribution but notice that only one of the classifications of South American languages

⁶⁷ Rivet (1920) changed the orthography of the examples in Ernst (1895:400), which were spelled as *jucua-cua* and *jucua-ta*.

in Table 8 (namely, Campbell (2012)) has seen the light after this new comparative work was published and therefore, the claim made here that most of the classifications discussed in the preceding sections rely on the comparison in Rivet (1920) still holds true.

Estrada Ramírez (2008), in her analysis of loanwords from Spanish and other indigenous languages, includes a section on lexical similarity between Sáliba and Piaroa. She divides the etymologies compared in four groups: words that are identical (n = 2), words that only differ in one vocalic sound (n = 8), words that differ in one vocalic and one consonantal sound (n = 3) and words that differ in more than two sounds but that are still “similar” (n = 8). Based on this work, Estrada Ramírez (2012) proposes correspondences between the Sáliba /x/, /s/, /l/, /g^w/, /a/, /t/, /c/ phonemes and Piaroa’s /h/, /r/, /r/, /w/, /æ/, /t^h/, /tʃ/, respectively. Although in some instances only one example of the correspondence is offered (e.g., /t/:/t^h/) and although some of the examples used are from loanwords (e.g., for the correspondence /a:/æ/, the author employs the word for “cow”, which is evidently a Spanish loan), this work constitutes a major step towards successfully establishing a relationship between Sáliba and Piaroa on grounds more solid than just perceived similarities between pairs of words in a few etymologies. Estrada Ramírez’s argument is further supported by two pieces of grammatical data: 1) the correspondence between two pairs of classifiers (namely, Sáliba *-xu* and Piaroa *-hu* for animate feminine nouns and for holes; and Sáliba *-te* and Piaroa *-te* for “parts of a whole and/or short and round elements”) and 2) similarities in the possessive prefix sets of both languages. The author does not elaborate on the latter

but two examples of possessed nouns and a summary table with all markers (reproduced below) are offered.

TABLE 9 Possessive markers (from Estrada Ramírez (2012:546))

	Singular		Plural	
Person	Piaroa	Sáliba	Piaroa	Sáliba
1	tʃ-	c-	t-	t-
2	k- ~k ^w -	k- ~k ^w -	k-...-tuku ~k ^w -...-tuku	k-...-do ~k ^w -...-do
3.MASC	Ø-	Ø-	t ^h -	h-
3.FEM	k ^h -	x-		

A look at the forms of the prefixes in Table 9 reveals that there is indeed a fair amount of common phonological content in both sets. However, the very skeptical could argue that these are very short forms (i.e., most of them only have one sound) and identity of any two forms could be due to chance⁶⁸.

1.2.2.3.3 Mako and Piaroa

Rivet (1920) only says with respect to Mako that “*les matériels pour le Makú sont tout à fait insuffisants* [The materials for the Mako language are insufficient]” (1920:13) and he refrains from including it in his comparison. The materials to which he was referring as “insufficient” were the ones in Koch-Grünberg (1913:469). They consist of a four-item wordlist⁶⁹. Koch-Grünberg had gathered this list from a Venezuelan *criollo* man

⁶⁸ A study showing that the sound correspondences between these two sets of affixes are the result of a regular sound change is provided in Chapter 10, thus dispelling this concern.

⁶⁹ He must have missed the data in Humboldt (1824).

who had worked with the Mako and the words in it are the words for ‘water’, ‘bad’, ‘horse fly’ and ‘corn’. He finds correspondences for all of them in the Piaroa wordlists he had collected. He then proposes, based on this evidence, that Mako is a dialect of Piaroa. The proposal is at best only indicative due to the paucity and source of the data; at worst it should not even be considered seriously.

The relationship between Mako and Piaroa is explored again by Loukotka (1949). His work can also be seen as another “pre-sound correspondence stage” classification in Greenberg’s (2000) terms, i.e., a classification that only points out similarities but does not apply the comparative method or reconstruct proto-forms. The author limits himself to presenting 24 Mako words alongside some Piaroa data from Koch-Grünberg (1928) and Tavera-Acosta (1907). He only shows potential cognates for 10 of the 24 words (Loukotka, 1949:57) but, nonetheless, affirms that “*la langue appartient à la famille linguistique de Piàroa* [the language belongs to the Piaroa linguistic family]”.

No more Mako wordlists would see the light after Loukotka (1949) and all subsequent claims about Mako being in the Sáliban family are based on this evidence. However, Hammarström (2011), looking at the only accessible published Mako material (i.e., 38 words⁷⁰), argues that there could be doubts regarding this relationship given that the result of the comparison between Mako and Sáliba done by Humboldt (1824:155) consists of only one match, namely the word for ‘banana’ which is also present in

⁷⁰ Hammarström erroneously lists 39 words (2011:5). His 39th word results from splitting the French gloss for the *oiseau trogon viridis* in *trogon* as the Mako word for ‘oiseau’ and then listing the actual Mako word for this bird, i.e. *tutau*, as a translation for *viridis*. Compare with Loukotka (1949:57).

Tamanaku (Carib)⁷¹, and that Loukotka (1949) “has convincing comparisons for about half of his 25 [sic] words, but, notably, there are no matches adduced for the numerals” (Hammarström, 2011:5). He recognizes that, in spite of this, many other authors have classified Mako as a dialect of Piaroa and tries to solve this apparent “paradox” (p. 5) by comparing the old Mako data with new Piaroa data from Krute (1989).

By taking into account the fact that the Piaroa numerals vary for animate vs. inanimate nouns and that the numerals for inanimate incorporate a classifier, he succeeds in showing a slight resemblance between the Mako numerals ‘1’ and ‘2’ in Humboldt (1824) and Loukotka (1949) and the Piaroa numerals ‘1’ and ‘2’ for animate masculine nouns. He argues, however, that he has found no parallels for ‘3’ and ‘4’ and that, since Sáliba and Piaroa only have cognates for ‘1’ and ‘2’, it is likely that the ancestor language only had those two numerals. Hammarström concludes that “there are no good reasons for doubting the Piaroan affiliation of Mako” (2011:7).

If this is all there is to go on, however, there is reason to doubt this affiliation, given that the correspondences presented are limited to resemblances and no regular sound changes have been identified. The Mako numerals make an animate vs. inanimate distinction and, in the numerals for inanimate nouns, they also incorporate a classifier, like the Piaroa numerals. In columns two to five of Table 10, I reproduce the data shown in Hammarström (2011) alongside the Mako data that I have collected for

⁷¹ Humboldt (1824) does not give the Sáliba form, however; he only gives the Tamanaku word. I am not certain then that even this one match adduced by Hammarström was actually present in the former author’s comparison.

numerals and that is publicly accessible in Chan (2013). The comparison of the data shows that there is in fact a resemblance between the forms for ‘2’; however, the Mako numeral ‘2’ seems to be a composite form of the Piaroa animate and inanimate ‘2’ numerals⁷². More importantly, there is no resemblance at all between the Mako numeral ‘1’ and the forms for ‘1’ given by Hammarström, be they the older Mako forms or the Piaroa inanimate and animate forms, but there is a resemblance in the forms for ‘3’.

⁷² As will be shown in Chapter 10, there is a sound correspondence between Piaroa *t* and Mako *d*. There is also evidence for a correspondence between Piaroa *r* and Mako *l*. I am relatively confident that the first part of the inanimate numeral ‘2’ in Mako, namely *d-CL-la-*, is a reflex of the inanimate numeral in Piaroa. It is harder to argue for the second half being a reflex of the Piaroa animate numeral given the t:d correspondence mentioned.

TABLE 10 Comparison of the Mako and Piaroa numerals (partly from Hammarström (2011:6))

Maco-Ventuari		Piaroa		Mako (my data)	
Humboldt 1822 ⁷³	Loukotka 1949	Inanimate (Krute 1988[sic] ⁷⁴ :150)	Animate masc. Krute (1988:155)	Inanimate	Animate
‘1’	<i>nianti</i>	<i>niareti</i>	<i>yo- -tetæ</i> <i>hi- -tetæ</i>	<i>ñatētæ</i>	<i>bak^w-CL</i> <i>bak^w-ō (CL:MASC)</i> <i>bak^w-uhu (CL:FEM)</i>
‘2’	<i>tajus</i>	<i>tagús</i>	<i>to- -re</i> <i>ta- -re</i>	<i>tahũ</i>	<i>d-CL-latahi</i> <i>dũhũtaha</i>
‘3’	<i>percotahuja</i>	<i>perkotahuya</i>	<i>wæbo- -tuk^wæ</i> <i>wæbo- -tuk^wæ</i>	<i>wæmetuk^wæ</i>	<i>wāp-CL-k^wa</i> <i>wāmeduk^wa</i>
‘4’	<i>imontegroa</i>	<i>imontegua</i>	<i>pahak^wæ(hæ)nia-</i> <i>pahak^wæ(hæ)nio-</i>	<i>pahak^wænt</i> [sic] ⁷⁵	<i>i[?]wehemu</i> <i>haw-CL</i> --- ⁷⁶

⁷³ The edition of Humboldt I have had access to is from 1824 and was published by J. Smith. This is the edition that I cite in the text of this chapter and in the references section.

⁷⁴ Publication year is erroneous.

⁷⁵ The form given by Krute (1989:155) is *pahak^wænitĩ*.

⁷⁶ For numerals ‘3’ and above often the Spanish numerals are used.

1.2.3 Summary

Summing up, proposals for the classification of South American languages in the literature agree on the existence of a Sáliban language family that should include minimally Sáliba, Piaroa and Mako but they also disagree on 1) whether other languages should be included in the Sáliban family and on 2) whether the family is part of a larger genetic unit. The discussion above argues in favour of a Sáliban family that—for the time being—only includes three member languages: Sáliba, Piaroa and Mako. The evidence for the genetic relationship of these languages, however, is limited to “resemblances” identified in certain lexical items between pairs of languages but no work has thus far included all three languages.

Having now addressed the issue of the composition of the Sáliban family, I turn to a typological overview of the family based on the existing descriptions of Sáliba, Piaroa and Mako.

1.3 The Sáliban Languages and their Typology

Recent years have seen an increase on the publication of typologically-oriented works with a focus on the languages of the Amazon (see for example Aikhenvald (2012), Dixon & Aikhenvald (1999), Gildea & Queixalós (2010), Payne (1990), *inter alia*). The Sáliban languages have been largely absent from this literature. The goal of this

section⁷⁷ is thus to offer a typological overview of the family based on the extant descriptive literature and at the same time highlight areas that call for more substantive research and questions that still need to be answered. Given the lack of any published morphosyntactic research on Mako, the second half of this section (§1.3.2) only includes data from Piaroa and Sáliba. This initial lack of Mako data, however, will be remedied in subsequent chapters.

1.3.1 Phonology

This section draws on published work on Piaroa and Sáliba and on the description of the phonological inventory of Mako given by Gordon (2000).⁷⁸ A more in-depth study—informed by this discussion—of Mako phonology is provided in Chapter 4.

1.3.1.1 Vowel Systems

The three vowel systems differ in the number of phonemes based on vowel quality. Sáliba has been described as having a five vowel system while Piaroa is said to have seven. Mako, on the other hand, has been described as having seven vowels (but not the same seven as Piaroa). The Mako /ə/ vowel, however, is restricted to only a very specific context: it occurs in only one morpheme in the language (Gordon, 2000:13).

⁷⁷All the examples in this section come from published sources. In all instances, I have maintained the grammatical glosses offered by the original authors. I have, however, translated the Spanish glosses and translations given by them.

⁷⁸ Notice that I was not able to obtain a copy of Gordon (2000) until after my second fieldwork trip (Fall 2012). I thank Francisco Tiapa for having given me access to this publication as well as to the other publications by NTM mentioned above in §1.1.3.

TABLE 11 Sáliba (Estrada Ramírez, 1996:12)

	front	central	back
high	i		u
mid	e		o
low		a	

TABLE 12 Piaroa (Mosonyi, 2000:657)

	front	central	back
high	i	ɨ	u
mid	e		ɤ
low	æ		ɑ

TABLE 13 Mako (Gordon, 2000:14)

	front	central	back
high	i	ɨ	u
mid	e	(ə)	o
low		a	

The five vowel system in Sáliba is likely to be the result of sustained contact with Spanish since the XVII century and to the high degree of bilingualism of the remaining speakers. It is very possible that the language initially had a high central vowel /ɨ/ as well. The difference in the number of low vowels between Piaroa and Mako, which are so similar in so many other respects, requires a vowel-plotting phonetic study of the Piaroa vowel space, similar to the one carried out for Mako (reported in Rosés Labrada (2013a), see also Chapter 4) which showed the existence of only one such vowel.

In addition to the oral vowels in Tables 11, 12, and 13, each of the languages has a number of phonemic nasal vowels: Sáliba has /ã, ĕ, ĭ, õ, ũ/, Piaroa /ã, æ̃, ĕ̃, ĭ̃, ɤ̃, ũ̃/, and Mako has /ã, ĕ̃, ĭ̃, ɤ̃, õ̃, ũ̃/.

A recent acoustic study of Sáliba (González Rátiva & Estrada Ramírez, 2008) additionally proposes contrastive glottalized vowels and contrastive long vowels for

Sáliba, which makes the 10 vowel system (five oral and five nasal) a 20 vowel system. Neither long nor glottalized vowels have been reported for either Piaroa or Mako.

1.3.1.2 Consonant Systems

Table 14 represents the most recent description of the consonant system for Sáliba and is based on Estrada Ramírez's work. However, there are a number of discrepancies with the work of other authors. Benaissa (1979) differs from Estrada Ramírez in a number of points. Firstly, the author includes in her description two affricate stops, one voiced and one voiceless, whose point of articulation is alveopalatal. This goes against Estrada Ramírez's description of these sounds as palatal stops. Additionally, Benaissa (1979) lists a voiced bilabial fricative, a glottal stop and two different kinds of vibrant *r*, one simple and one multiple, as phones. She offers minimal pairs for the glottal stop (*péhe* 'here' vs. *péʔe* 'cassava' p. 92), and the *r* "multiple" (*ále* 'sugar cane joints' vs. *áṛe* 'tobacco' p. 93). The bilabial voiced fricative, she says, is an allophone of the semivowel /w/ but she does not say anything regarding the *r* "simple". Although some of the differences might be dialectal⁷⁹, at least it is reasonable to posit one more phoneme: a glottal stop. This view is espoused by Morse & Frank (1997:30) who list /ʔ/ as a phoneme. Additionally, they list /r/ as a phoneme. Furthermore, these authors agree with Benaissa in saying that there are two affricates: one voiced /dʒ/ and one voiceless /tʃ/. The issue regarding the manner and point of articulation of the affricates/palatal stops will require a phonetic study.

⁷⁹ Benaissa worked with Morichito speakers and Estrada Ramírez worked primarily with Orocué speakers.

TABLE 14 Sáliba (Estrada Ramírez, 2000:683)

	bilabial	alveolar	palatal	velar	labiovelar	glottal
voiceless stops	p	t	c	k	k ^w	(ʔ)*
voiced stops	b	d	ɟ	g	g ^w	
fricatives	ɸ	s		x	h ^w	h
nasals	m	n	ɲ			
liquids		l/r				
		(r)*				

* Not included in Estrada Ramírez (2000) but argued for by Benaissa (1979) and Morse & Frank (1997)

Table 15 gives the Piaroa consonant system as described by Mosonyi (2000). The main difference between the consonant system of Piaroa and the Sáliba one lies in the stop series, Piaroa having an aspirated and a glottalized series of voiceless stops in addition to the plain series. The exact meaning of “glottalized” in the description of the voiceless stop series is to be determined. Michael, Stark & Chang (2012) say “[i]t is uncertain whether the segments described as ‘glottalized’ are ejective stops or plain stops with associated creakiness realized on the following vowel.” Krute (1989:43), however, affirms that they are ejectives while Caula (2001) has both ejective consonants and intervocalic preglottalized realizations of the voiceless bilabial and alveodental voiceless (and the alveopalatal affricate as well). A phonetic study of the acoustic and articulatory characteristics of these sounds is thus much needed.

TABLE 15 Piaroa (Mosonyi, 2000:657)

	bilabial	dental	alveolar & palatal	velar	labiovelar	glottal
voiceless stops	p	t	tʃ	k	kʷ	ʔ
aspirated stops & fricatives	pʰ	tʰ	s	kʰ	hʷ	h
glottalized stops	pʔ	tʔ	tsʔ	kʔ	kʷʔ	
voiced stops	b	d				
nasals	m		n			
vibrants		r				
semivowels	w		j			

Mosonyi explains that there are several phonetic processes that affect the realization of the consonants in Table 15: palatalization of velar consonants /k/, /kʰ/, /kʔ/ and of glottal /h/ when followed by /æ/, /e/ or /i/ and nasalization of /b/, /d/, /h/, /hʷ/, /r/, and /j/ when followed by nasal vowels. There is also a large amount of “free” variation for other phonemes: /tʃ/ is pronounced as [tʃ] or [ts], /pʰ/ as [pʰ] or [ɸ], /r/ as [r] or [ɹ], and /s/ as [sʰ] or [tsʰ]. Investigation of this “free” variation would be enlightening in several respects: is there a particular phonological context that favours one or the other allophone? Or are there sociolinguistic variables that determine the use of one or the other allophone (e.g., gender, age, proficiency in Spanish, etc.)?

There are two other issues that require further investigation. The first one is the distribution of [ts] as an allophone of both /tʃ/ and /s/. Mosonyi (2000:658) says of both instances of [ts] that “it is losing ground in spite of being the original pronunciation”. If [ts] was the original pronunciation of both /tʃ/ and /s/, is this a split in progress? Or were there two independent phonemes /tʃ/ and /ts/ or /s/ in Proto-Sáliban—as a comparison with the Sáliba and Mako consonant systems would suggest—and the realization of /tʃ/

as [ts] needs to be reconsidered? The second issue is the realization of the voiced stops /d/ and /b/. Mosonyi (2000:658) says that they are both realized as preglottalized consonants: [ʔd] and [ʔb] respectively. If this is their realization 100% of the time should they not be phonemically preglottalized as Caula (1999, 2001) proposes? A look at Krute (1989) suggests that they are not always realized as [ʔd] and [ʔb]. He says: “both stops may be optionally but nearly automatically “pre-glottalized;” that is, there will be simultaneous (or nearly so) glottal and oral closures with a non-nasal voiced release, following a vowel (thus, not word-initially).”

Table 16 shows the Mako consonant inventory given by Gordon (2000). According to this author, Mako, like Piaroa, has a plain and an aspirated voiceless stop series but the aspirated series is missing the velar voiceless consonant /k^h/. The language differs from Piaroa, however, in that there is no glottalized voiceless stop series and in that the preglottalized voiced stops /ʔb/ and /ʔd/—which she calls implosives—have phonemic plain (i.e., non-pre-glottalized) counterparts. The phonemic distribution of these two voiced stop series could perhaps shed some light on the question of the distribution of Piaroa [ʔb] and [ʔd] but more research is needed there. There are also two preglottalized approximants: /ʔw/ and /ʔj/. The other interesting sound is the voiceless labiovelar approximant /W/. Remember, however, that both Sáliba and Piaroa had been described as having a labialized velar fricative /h^w/.

TABLE 16 Mako (Gordon, 2000:14)

		bilabial	alveolar	alveo-palatal	palatal	velar	glottal
Stops	aspirated	p ^h	t ^h				
	unaspirated	p	t			k	ʔ
	voiced	b	d				
	labialized					k ^w	
	implosive	ʔb	ʔd				
fricatives							h
affricates			ts	tʃ			
laterals			l				
nasals		m	n				
semivowels	voiceless	W					
	voiced	w		j			
	pre-glottalized	ʔw		ʔj			

1.3.1.3 Nasalization

Nasalization acts on three different levels: phonetic, phonemic, and suprasegmental. In Piaroa, for example, consonants often have phonetic nasal allophones when followed by a nasal vowel (see /j/ realized as [ɲ] in (7)b below from Krute (1989:63)). As mentioned above, all the vowels have phonemic nasal counterparts in all three languages.

Additionally, there is a suprasegmental nasality feature that behaves morphophonemically. For example, in Piaroa, nasalization of all the vowels in a given nominal root results in a diminutive interpretation of the noun:

- | | | |
|-----|--------------------------------|---|
| | | <u>Diminutive</u> |
| (7) | a. [ow ^h o] ‘tapir’ | b. [õw ^h õ] ‘small, young tapir’ |
| | c. [kæĩɾiyuwæ] ‘rodent sp?’ | d. [kæĩɾɲũwã] ‘small, young rodent sp?’ |
| | e. [hikĩčawa] ‘child’ | f. [hĩkĩčãwã] ‘small child (for its age)’ |

(Krute, 1989:63)

1.3.1.4 Syllable Structure

For Sáliba, Estrada Ramírez (1996:1-2) argues that the syllable structure is (C)V(V), where the second V can only be an /i/ that occurs after /a/, /o/ or /u/ as shown in the examples below. This, however, changes if there are in fact long vowels in Sáliba as posited in González Rátiva & Estrada Ramírez (2008).

(8)	word-initially	word-medially	word-final
V	/u.mo/	/se.i.na/	/ma.pe.o/
CV	/se.se/	/a.ci.to/	/ba.lu/
VV	/oi.xu/	/no.ai.de/	---
CVV	/kai.to/	/de.lai.te/	/te.sia/

(Estrada Ramírez, 1996:1-2)

For Piaroa, Mosonyi (2000:659) affirms that the syllable structure is (C)V and this is the case also in Mako according to the distribution of the different phonemes offered by Gordon (2000:15).

1.3.1.5 Stress

Stress is generally said to be contrastive and not fixed. Estrada Ramírez (1996:3) offers a few minimal pairs for Sáliba; and Krute (1989:40), for Piaroa.

Sáliba

- | | | | | |
|-----|----|---|----|--|
| (9) | a. | /l ¹ dea/ ‘meat’ | b. | /de ¹ a/ ‘white’ |
| | c. | /l ¹ oxo/ ‘leaf’ | d. | /o ¹ xo/ ‘rain’ |
| | e. | /l ¹ dadaga/ ‘I killed myself’ | f. | /dada ¹ ga/ ‘I broke [smthg]’ |

(Estrada Ramírez, 1996:3)

Piaroa

- (10) a. *'mahari* ‘nocturnal flying insect sp?’ b. *ma'hariu* ‘missionary, Evangelical’
c. *'ærae* ‘yucca press’ d. *æ'rae* ‘blue and yellow parrot’
e. *pa're* ‘eagle sp?’ f. *'pare* ‘Roman Catholic, padre’

(Krute, 1989:63)

Krute (1989) says, however, that “stress is overwhelmingly second-syllable and thus generally demarcative”. Mosonyi (2000:658) says, on the other hand, that stress falls on the even non-final syllables (counting from left to right) but he also says that there are a number of words in which the stress does not fall on even syllables. More research in general is needed in this area.

1.3.2 Morphosyntax

This section provides a comparative overview of the morphosyntax of noun phrases (§1.3.2.1) and the verb phrase (§1.3.2.2) as well as preferred word order in simple clauses (§1.3.2.3) and one strategy for combining clauses into complex sentences (§1.3.2.4).⁸⁰

1.3.2.1 The Noun Phrase

The following sections focus on the morphosyntax of the noun phrase in Sáliba with respect to nominal classification (§1.3.2.1.1) and possession (§1.3.2.1.2).

⁸⁰ Glosses in this section differ from those of later chapters as they are the ones given by the original authors of the works being cited. Presentation of examples is also done as they appear in the original. I have, however, translated the lexical items in the gloss line from Spanish into English and provided an English translation.

1.3.2.1.1 System of Nominal Classification

A salient common feature of the Sáliban languages' morphosyntax is the presence of a system of nominal classification. Both Sáliba and Piaroa have been described as having masculine and feminine gender for human animates and a small subset of non-human animates while all other non-human animates and all inanimates are part of a system of nominal classification. Krute (1989) proposes 107 distinct noun classes for Piaroa and Estrada Ramírez (2000) proposes 30 for Sáliba. The former places nouns with markers of similar phonological form but for which he cannot find a semantic relationship in different independent classes (see the examples in (11)); the latter does not, and in fact, lumps together markers with very different phonological forms according to potential semantic links between them (see the examples in (12)). Therefore, the number of classes in the two languages may be closer to each other than the work of these two researchers suggests.

Piaroa

(11) -*p^ha*

- a. 28. smoke, wind, foam:
 - *æwio^ha* 'spider's web';
 - *k^hærik'o^ha* 'wind, air'
- b. 29. small sack:
 - *dæruæ^ha* 'small round basket, flexible, loose weave'
 - *pæhuæ^ha* 'wasp nest'
- c. 30. soft, rotted, hanging, flexible (no internal support)
 - *iwirip^ha* 'tail as of some dogs, jaguars, cats, lizards, and so on'
 - *ihẽ^ha* 'rotted, soft, disgusting skin or peel'

(Krute, 1989:277-278)

Sáliba

(12) CN.30 /-a/ “collective”

Allomorphs: /-ca/, /-ja/, /-ha/, /-ana/, /-o/, /-ju/, /-cu/, /-be/, /-pe(a)/, /-pu/,
/-baju/, /-i/

(Estrada Ramírez, 2000:688)

As in many other Amazonian languages (Aikhenvald, 2012:292), the Sáliba and Piaroa classifiers can occur in multiple environments: they occur with numerals (see Table 17 below for Sáliba; Table 10 above for Piaroa and Mako), demonstratives (13)-(16), stative verbs (18) (19), and nouns (13)-(21).

TABLE 17 Sáliba numerals (from Estrada-Ramírez, 1996:106-107)

Animate		Inanimate
<i>Masculine</i>	<i>Feminine</i>	
‘1’ <i>hoto-be</i> one-CN.1a	<i>hoto-bo</i> one-CN.2b	<i>hi-CL</i> (allomorphs: hi – hĩ – jo – je)
‘2’ <i>tuxũ-du</i> two-CN.3a		<i>to/tõ-CL-sa</i> two-CL-two
‘3’ <i>xedoba-du</i> three-CN.3a		<i>xe-CL-badi</i> three-CL-three

Sáliba

(13) *pi-tu* *ja-tu*
/DEMONST-CN.3a woman-CN.3a/
‘these women’

(14) *pi-pũ* *de-a*
/DEMONST-CN.30 meat-CN.30/
‘this meat’

(Estrada Ramírez, 1996:152)

Piaroa

- (15) *pide ubɣ*
‘this man’

- (16) *pik^ʔa 'woik^ʔa*
‘this canoe’

(Mosonyi, 2000:660)

Sáliba

- (17) *kai-to dia-to*
/water-CN.7 cold-CN.7/
‘the water got/gets cold’
‘the water is/was cold’

(Estrada Ramírez, 1996:168)

Piaroa

- (18) *nawɣdæ hareɣdæ*
‘the knife is new’

- (19) *nãwãræ hãrẽãræ*
‘the pocket knife is new’

(Mosonyi, 2000:660)

Possessive classifiers only seem to be present in Sáliba, however. In Piaroa, possession does not require a classifier as shown in the next subsection.

According to Estrada Ramírez (2000), both alienably and inalienably possessed nouns can form an NP with a possessive prefix plus epenthetic vowel plus classifier and then the noun.

Sáliba

- (20) *c-o-o i-ɟu*
/P1S-V-CN.18 head.CN.18/
‘my head’

- (21) *c-o-de* *bate-de*
 /P1S-V-CN.8 washbowl.CN.8/
 ‘my washbowl’

(Estrada Ramírez, 2000:689)

1.3.2.1.2 Possession

Another morphological trait both Sáliba and Piaroa have in common is inalienable and alienable possession.

Inalienably possessed nouns take a person prefix in both languages.

Sáliba

- (22) *c-omaidi*
 /P1S-heart/
 ‘my heart’

(Estrada Ramírez, 2000:689)

Piaroa

- (23) *ʃi-ĩtʰĩ*
 ‘my son’

(Mosonyi 2000:661)

Alienably possessed nouns differ in their treatment. In Sáliba, the prefix goes on the classifier as shown in (20) and (21) above. In Piaroa, however, possessive prefixes attach to the alienably possessed noun as shown for the Piaroa noun *nawɾdæ* ‘knife’.

Piaroa

- (24) *ʃi-nawɾdæ*
 ‘my knife’

(Mosonyi 2000:661)

Another way of marking possession is just the juxtaposition of the possessor and the possessed nouns; the possessor can be a full noun or a pronoun.

1.3.2.2 The Verb Phrase

In this section, I present the two main classes of verbs present in Sáliba and Piaroa (§1.3.2.2.1) and the animate subject markers that occur with each class (§1.3.2.2.2).

Section 1.3.2.2.3 discusses negation marking on the verb.

1.3.2.2.1 Verb Classes

Both Sáliba and Piaroa have two distinct verb classes: Class I and Class II.⁸¹ The difference between both classes lies in whether the verb takes a person prefix or a person suffix to encode the (animate) subject. The examples below show how the position of the affix that marks a third person singular feminine subject varies depending on the verb in both Sáliba and Piaroa.

Sáliba

Class I

- (25) *(hi-xu)* *x-í-a*
/DEMONST-CN.2a) P3SF-burn-REAL/
‘she burned herself’
(Estrada Ramírez, 1996:167)

Class II

- (26) *(hi-xu)* *deo-x-in-a*
/DEMONST-CN.2a fat-P3SF-DUR-REAL/
‘she is getting fat’
(Estrada Ramírez, 2000:694)

⁸¹ For an in-depth discussion of verb classes in all three Sáliban languages, see Chapter 10.

Piaroa

Class I

(27) *k^h-adit-æk^wa-hu*

‘she will work’

(Mosonyi 2000:662)

Class II

(28) *pæ-h-æ'k^wa-hu*

‘she will say’

(Mosonyi 2000:663)

1.3.2.2.2 Person Marking

There is disagreement regarding the number of verbal person affixes and their phonological form both *within* Estrada Ramírez’s work (i.e., some affixes are included in some articles but left out other times) and *between* this work and the work of Morse & Frank (1997). However, there seems to be a core number of affixes that are uncontroversial. These are given in Table 18. The markers for Piaroa are given in Table 19. In both tables, the forms listed under Set I correspond to the prefixes that attach to Class I verbs and those under Set II, to the suffixes that attach to Class II verbs. The use of these two sets of person markers in Piaroa is restricted to future tense forms according to Mosonyi (2000). More research into person marking in other tenses in Piaroa is needed.

TABLE 18 Person markers in Sáliba

Person	Singular		Plural	
	Set I	Set II	Set I	Set II
1	c-	-d	t-	-t
2	k ^w -/k-	-k ^w	-k ^w /-k...-do	-k ^w ...-do
3.MASC	Ø-	-Ø	h-	-h
3.FEM	x-	-x		

TABLE 19 Piaroa future tense person markers*

Person	Singular		Plural	
	Set I	Set II	Set I	Set II
1	tʃ-	-d	t-	-t
2	kʷ-	-kʷ	kʷ-	-kʷ
3.MASC	Ø-	-ʔ	tʰ-	-tʰ
3.FEM	kʰ-	-h		

* From paradigms given in Mosonyi (2000)

1.3.2.2.3 Negation

Negation of verbal predicates is accomplished in both Sáliba and Piaroa by means of a verbal suffix. However, the form of the suffix is radically different, which suggests that one of the two might be an innovative way of negating that does not stem from Proto-Sáliban. Examples (29) through (32) illustrate how negation is accomplished in Sáliba; examples (33) through (36) illustrate negation in Piaroa.

Sáliba

- (29) *maɲu-x-a-a*
work-P3S.F-?-REAL
‘she works/worked’
- (30) *maɲu-x-a-di-a*
work-P3S.F-?-NEG-REAL
‘she does not work/did not work’
- (31) *maɲu-x-a-ga*
work-P3S.F-?-VIRT
‘she works/will work’

- (32) *maɲu-x-a-di-ga*
 work-P3S.F-?-NEG-VIRT
 ‘she will not work’⁸²

(Estrada Ramírez, 1996:135)

Piaroa

- (33) *aditæ'tihã*
aditĩ-ætihã
 ‘you (PL) work’ (lit. you (PL) are the ones that work)
- (34) *aditɣkɣ'tihã*
aditĩ-ɣk-ætihã
 ‘you (PL) do not work’ (lit. you (PL) are not the ones that work)
- (35) *adi'tætĩ*
aditĩ-ætĩ
 ‘they work’ (lit. they are the ones that work)
- (36) *aditɣ'kɣtĩ*
aditĩ-ɣk-ætĩ
 ‘they do not work’ (lit. they are not the ones that work)

(Mosonyi, 2000:662)

1.3.2.3 Simple Clauses: Preferred Word Order

As for the Sáliban languages’ syntax, most published works only cover this aspect of their grammar at a very basic level, which means that more in-depth research is needed. Nonetheless, the extant literature allows for the identification of the preferred word order in simple clauses. Both Sáliba and Piaroa prefer SOV order as shown in the examples in (37) through (39) below:

⁸² If the affirmative in (31) is glossed as ‘she works/will work’, one would expect the negative in (32) to be glossed as ‘she does not work/will not work’. However, Estrada Ramírez only gives for the example in (32) the Spanish translation *ella no trabajará* while she gives *ella trabaja/trabajará* for (31).

Piaroa

- | | S | O | V |
|------|---------------------|-----------------|----------------|
| (37) | <i>ubo-mä</i> | <i>äwiri-rü</i> | <i>kjünärü</i> |
| | man-PONDERATIVO | dog-OBJETO | have |
| | ‘the man has a dog’ | | |

(Mosonyi, 2002:84)

Sáliba

- | | S | O | V |
|------|---|----------------|-----------------------|
| (38) | <i>hĩsi</i> | <i>misi-di</i> | <i>c-ĩt-ã-di</i> |
| | /P1S/ | /cat-DATIV/ | /P1S-look-REAL-P3S.M/ |
| | ‘I look at the cat’ (I at the cat look) | | |

- | | S | O | V |
|------|-------------------|----------------|-----------------------|
| (39) | <i>hĩsi</i> | <i>nama-di</i> | <i>da-d-ã-di</i> |
| | /P1S/ | /deer-DATIV/ | /kill-P1S-REAL-P3S.M/ |
| | ‘I killed a deer’ | | |

(Estrada Ramírez, 1996:122)

1.3.2.4 Complex Clauses

Complex clauses such as complement clauses, subordinate clauses, temporal clauses and conditional clauses have received very little attention thus far in both Sáliba and Piaroa and require further research. There are, however, two very short treatments of the syntax of complex clauses in the literature: four pages in Morse & Frank (1997:56-59) for Sáliba and four paragraphs in Mosonyi (2000:663) for Piaroa. The most interesting aspect of both descriptions seems to be the similarity between the two markers of complement clauses: *-áhaʔa* in Sáliba (40) (41) and *-aʔa* in Piaroa (42).

Sáliba

- | | | | |
|------|----------------------|---------------------|--------------------|
| (40) | <i>ǫóhoʔo</i> | <i>ǫjéʔ-g-iʔ-ǎ</i> | <i>maqnu-áhaʔa</i> |
| | he | start-REFL-TERM-IND | work-SUB |
| | ‘he started working’ | | |

- (41) *ǫ́óhoʔo hóweda-ʔg-ǎ maŋu-ǎhaʔa*
 he finish-REFL-IND work-SUB
 ‘he finished working’

(Morse & Frank, 1997:57)

- Piaroa
 (42) *hãũrũ uk^wʔk^waʔa ʔtopu*
 him speaking see
 ‘he sees him speaking’

(Mosonyi, 2000:663)

1.4 Discussion

The treatment of the Sáliban language family in the classification literature varies considerably from one researcher to another, with the main differences being the member languages and whether or not the family is part of a larger genetic unit. I have showed in this chapter that some of the languages suggested for the family need not be included (e.g., Quaqua, Ye’kwana, Guinau) and that the inclusion of others awaits further research (e.g., Jodí); and that the two proposals for the inclusion of the Sáliban family in a larger genetic unit lack empirical bases. I thus propose that the family remain for the time being an independent South American family that includes Sáliba, Piaroa and Mako as its only member languages.

Nonetheless, the existing evidence for the relationship between these three languages is scarce; the most solid pieces of evidence coming from Rivet (1920) and Estrada Ramírez (2008, 2012) who only point out lexical resemblances (which sometimes are

not self-evident) and do not propose regular sound changes or do any reconstruction⁸³.

The relationship between these languages, thus, requires further evidence. However, the time is now ripe to carry out this research since the last 40 years have seen a number of descriptions being published for both Sáliba and Piaroa.

Said descriptions of Sáliba and Piaroa (and the documentation from which they stem) constitute a significant start but at the same time underscore the major needs in terms of documentation and description:

- 1) None of the grammatical sketches published to date for either language approaches the depth and breadth of modern contemporary descriptive grammars. A reference grammar for each of these two languages is greatly needed.
- 2) There are no dictionaries for Piaroa and the ones for Sáliba are fairly short; thus creating a Piaroa dictionary and updating the Sáliba ones should be a priority.
- 3) Thirteen annotated texts have been published for Sáliba and only one for Piaroa; therefore, two corpora of annotated texts (one in each language) would constitute an important contribution to the documentation of the family.

Mako, on the other hand, is in urgent need of being both documented and described.

More research on these languages will not only shed light on the pre-history of this little known Amazonian language family but will also enhance our understanding of

⁸³ In spite of this, Campbell (2012) includes Sáliba in his list of “uncontroversial language families” (2012:69).

linguistic phenomena such as glottalization, suprasegmental nasalization, and systems of nominal classification, all of which are present in these languages.

1.5 Conclusions

Based on a review of the published literature, this chapter provides an in-depth overview and analysis of the extant literature on the Sáliban languages, with special attention to 1) the vitality and the state of documentation and description of these languages, 2) the treatment the Sáliban language family has received in the classification literature, and 3) the typological profile of the family drawing primarily on data from Piaroa and Sáliba. This overview will be of use to the reader in the chapters to come where I provide an assessment of language vitality for Mako based on primary data (Chapter 3), offer an in-depth description of the grammar of the language (Chapter 4 through Chapter 9) and provide morphological and lexical evidence that supports the genetic relationship between Mako, Piaroa and Sáliba (Chapter 10).

Chapter 2

2 Methodology

The Mako Documentation and Description Project on which I have worked since 2011—and which I describe in the second half of this chapter (see §2.2)—sought to combine language documentation and language description and draws from both language documentation and description methodologies and best practices. This is why Section 2.1 below discusses the relevant theoretical work on language documentation and description and considers the advantages of combining both for projects that, like mine, focus on minority languages.

2.1 Language Description and Language Documentation: An Introduction to this Project

It is not entirely clear what the number of languages in the world is at present but most estimates agree in that it exceeds 6,000 languages. Our knowledge of the world's ~6,000 languages is unfortunately extremely limited. According to Lehmann (1999:5), there is no reliable way of knowing how many language descriptions there are but his educated guess is that around half of the world's languages are only known by name and that, out of the other half, only a thousand are represented by descriptions that comprise a grammar.

The documentation and description of all these languages would not be a pressing matter were it not for the endangerment situation that most of these languages are in nowadays. The dire situation of the world's languages has gained a lot of attention since the grim prediction about the extinction of half of them by the end of this [twenty-first]

century (Krauss, 1992:6) and numerous studies (e.g., Crystal (2000), Evans (2010), Hagege (2000), Harrison (2007), *inter alia*) have examined the factors that lead to—as well as the processes that result in—the disappearance of a language. It is this increased awareness of the possibility of losing forever the world’s linguistic diversity, coupled with many technological advances such as portable computers, digital recorders, etc., that has led to the (re)blossoming of language description (from now on LDesc) and language documentation (from now on LDoc) in the last two decades.

LDoc and LDesc are of course not new (Woodbury, 2003:35); they have been around in the field of linguistics since (at least) the times of Franz Boas, when it was expected that linguists working on “exotic” languages would produce a grammar, a dictionary and a collection of texts at the end of long periods of fieldwork.⁸⁴ What constitutes a recent development is the theorizing of both subfields in the last 17 or so years, most notably with the seminal work of Lehmann (1999, 2001) and that of Himmelmann (1998, 2006) but see also Woodbury (2003, 2011), Austin & Grenoble (2007) and Austin (2010) as well as the other works included in the journals *Language Documentation and Description* and *Language Documentation and Conservation* and in the volumes edited by Gippert, Himmelmann, & Mosel (2006), Grenoble & Furbee (2010), and Haig, Nau, Schnell & Wegener (2011).

⁸⁴ This has come to be known as the Boasian trilogy. This trilogy, however, was already common in the work of missionaries and explorers from previous centuries; see for example the Sáliba grammar published in the 18th century (No author, 1790b) and the work of Marbán (1702) on Mojeño which included a grammar, a dictionary and texts (I thank Françoise Rose for this reference).

LDoc and LDesc have often been equated in the past (Woodbury, 2003:39) due to the overlap between them: a language documentation⁸⁵ constitutes the first step to writing a language description since the data needs to be gathered, transcribed and translated; and every language documentation requires a minimum amount of description since segmenting language and determining terms for glosses necessarily involve a certain degree of analysis. However, the emphasis in seminal theoretical works (i.e., Lehmann (1999, 2001) and Himmelmann (1998, 2006)) has been on the differences between both activities. Although the points of view of both these authors regarding LDoc and LDesc do not agree completely,⁸⁶ they agree on the distinctiveness of each subfield. This distinctiveness stems primarily from the differences between the subfield-specific goal(s) and methodologies, among other aspects—as shown below (§2.1.1)—and, thus, their applicability to the study of endangered or minority languages will have very specific and differing advantages and disadvantages (§2.1.2).

2.1.1 Differences between Language Documentation and Language Description

For Himmelmann (1998:2), recording a language involves two main activities: 1) collection, transcription and translation of primary language data and 2) a low-level (i.e., descriptive) analysis of the primary data. He terms the former the **documentary activity**, its result a **language documentation**, and the field **documentary linguistics** while he refers to the latter as the **descriptive activity**, its result a **language description** and its

⁸⁵ Language documentation used as a count noun (i.e. with a preceding ‘a’) can be read as short-hand for both a language documentation project and a language documentation corpus.

⁸⁶ Himmelmann (1998) argues for their separation while Lehmann (1999) argues against such a divide.

associated field **descriptive linguistics**. He recognizes that both are interrelated but still argues for their separation based on the following grounds:

1. There is no infallible way to derive an analysis from a set of primary data, i.e., more than one descriptive analysis is possible for a particular set of data.
2. Descriptive is not the only kind of analysis that can be applied to language data, i.e., it could be of use to other fields such as anthropology, discourse analysis or oral history.
3. As long as both activities are considered part of a single effort, it is very likely that the methods for data collection and representation will be neglected or that they will only receive little attention.

Lehmann (1999), however, argues for the non-separation of LDoc and LDesc. For him, a **language documentation** is the activity (and derivatively its result) that seeks to record data that is representative of the structures of a particular language and their use and function while a **language description** is the activity (and derivatively its results) that attempts to identify and represent the patterns underlying the data (Lehman, 1999:11). He argues that a LDoc concerns itself with specific objects (e.g., utterances, words, etc.) and is, therefore, concrete while a LDesc attempts to generalize over the specific objects and is (more) abstract. These differences, however, do not mean that both activities should be independent for, the author argues, they are mutually dependent and it is not feasible nor advisable to separate them: every language documentation involves at least low-level analysis (paradigms, elicitation, translation) and every language description involves at least some examples that can be considered as documentation.

Despite their difference of opinion with respect to the separation/non-separation issue, the definitions of LDoc and LDesc offered by these two authors agree in that the two subfields are intrinsically different with regards to their object of study and their results. A discussion of other differences follows. This discussion should be understood in terms of (relative) focus rather than in terms of (apparent) absolute contrasts.⁸⁷

2.1.1.1 Methods and Methodological Issues

According to Himmelman (1998:5), the methods used for LDoc are recording, elicitation, transcription and translation while those used in LDesc are phonetic-phonological, morphological, syntactic and semantic analyses by means of spectrograms, distributional tests, etc. Therefore, the methodological issues that arise in both are also different: in LDoc these concern sampling, naturalness, and representativeness of the data while the ones involved in LDesc are the selection of appropriate terminology for a given phenomenon, levels of representation and justification (i.e., adequacy) of the analyses (Himmelman, 1998:5).

2.1.1.2 Concrete Results

The results of LDoc are a corpus of recordings, transcriptions, and annotations of and/or about words and utterances while the result of LDesc is a descriptive statement about a set of primary data illustrated by one or two examples (Himmelman, 1998:5). What a

⁸⁷ For example, in Figure 3 (page 84) in the discussion of workflows the final activities for LDesc and LDoc are “presented, published” and “archived, mobilised”. However, lists and analyses (in the form of articles, grammar, etc.) can be archived and mobilised and transcriptions and annotation can be presented and published (as text collections, for example).

LDoc corpus should include is debatable but it is usually understood that it will comprise audio and video recordings of varied speech events as well as elicitation notes, paradigms, wordlists, etc.⁸⁸ The results of a LDesc project are traditionally presented in the form of the Boasian trilogy.

2.1.1.3 Aim

The aim of a LDoc is to leave a record for posterity that is representative of the structures of a particular language and their use in different linguistic contexts, i.e., different speech events, that can be accessible by a multitude of potential users such as speech community members, anthropologists and people involved in the development of educational materials or language planning⁸⁹ and put to different uses. The aim of a LDesc has traditionally been to further linguistic knowledge about what is possible in human languages.

2.1.1.4 Uses and Users

The uses of a LDoc are multiple; they can include, but are not limited to, linguistic analyses, ethnography, oral history, educational material development, language maintenance and/or revitalization, raising awareness among non-speakers about the language in question, among many others, and its potential users are, as mentioned before, linguists, anthropologists, community members, etc. The uses of a LDesc have

⁸⁸ For the general characteristics of a language documentation corpus, see Woodbury (2003:46-48).

⁸⁹ And other linguists, of course.

typically been linguistic theory, historical linguistics and linguistic typology⁹⁰ and their audience has primarily been the scholarly/scientific community.

2.1.1.5 Inter- (or Multi-) disciplinarity

LDesc has typically been the result of the efforts of a linguist or group of linguists working with one or several speakers of a language; in LDoc, however, interdisciplinarity is essential (Himmelman, 2006:15). A good LDoc involves not only linguists and speakers but also anthropologists, archivists, IT specialists, applied linguists, and many others.⁹¹

2.1.1.6 Speech-Community Involvement

In LDoc, the involvement of the speech community is greater⁹² because they often become part of the research team; in traditional LDesc projects, however, speakers and community members are usually perceived as “data generators” (see for example description of speakers’ roles in Samarin (1967) and Kibrik (1977)).

2.1.1.7 Attention to the Record

Another difference between LDoc and LDesc is the attention that is paid to the record. In LDoc, there is a concern for long-term storage of the record (Austin, 2010:13) which

⁹⁰ A notable exception is, of course, a dictionary which, while being traditionally thought of as the product of LDesc, can be used for language learning and teaching.

⁹¹ Or knowledge of all of these disciplines, which is obviously very difficult to ask of a single individual (See Nagy (2000) for the use of the metaphor of *hats* to describe the roles that a single linguistic fieldworker must don, and the difficulty of attempting to do so.).

⁹² See notably Yamada (2007, 2011) for a success story in Latin America but also Dwyer (2006), Rice (2006a, 2011) and Czaykowska-Higgins (2009) for reasons and advantages of doing so.

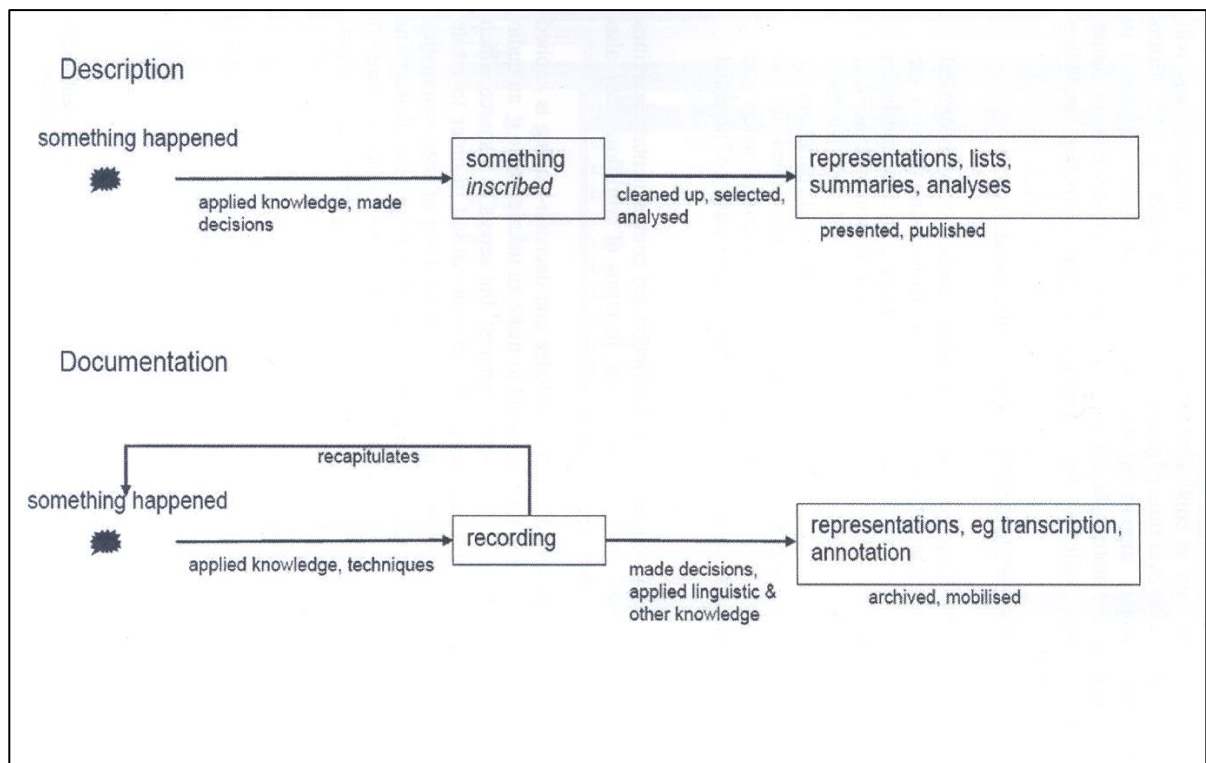
is not typically present in LDesc (Woodbury, 2003:40).⁹³ There is also a concern for the presentation and accessibility of the record in LDoc that has not been traditionally shared by LDesc.

2.1.1.8 Workflows

As shown in Figure 3 below, the workflow of a LDoc and that of a LDesc also differ (Austin, 2010:23-25). In LDesc, something happens, i.e., a speech event takes place, and the linguist applies their knowledge to it and makes decisions that lead to something being inscribed, then the material inscribed is cleaned up, selected and analyzed, which leads to its possible representations (i.e., lists, summaries, and analyses) that are subsequently presented at conferences or talks and published. In LDoc, on the other hand, something happens and the linguist applies their knowledge and different techniques (recording, for example) to that event, which produces a record of the event to which s/he can then go back if necessary before making decisions and applying their linguistic (and other) knowledge that would lead to representations of the event (i.e., audio and video recordings, transcriptions, and translations) which can be subsequently archived and mobilized for language maintenance and/or revitalization.

⁹³ Many field notes and field tapes gathered during fieldwork undertaken in the past for LDesc have been left to gather dust in people's offices.

FIGURE 3 Workflow in description and documentation (from Austin, 2010:24)



It is as a result of these differences in terms of their results, methodologies, etc. that LDoc and LDesc have each very specific advantages and disadvantages for research in small minority language communities,⁹⁴ which is what I explore in the next section.

2.1.2 Disadvantages and Advantages of Language Documentation and Language Description for Small Minority Languages

As mentioned above, many of the world's languages are in danger of becoming extinct by the end of this century and most of the ones that will be left at that point will be seriously endangered (Krauss, 1992:6). Many linguists and speech community members

⁹⁴ It is usually small minority languages that are in danger of disappearing: as shown in Whalen & Simmons (2012:164) there seems to be a correlation between the size of the community/group and the degree of endangerment of their language.

are now aware of this situation and have decided to engage in a “race against time” to document and describe these languages and, in cases where the shift has already taken place or is in progress, revitalize or revive these languages.⁹⁵ The reasons for this involvement vary: they may be purely scientific, e.g., to secure data for the field of linguistics (Lehmann, 1999:84), or they can be more noble and altruistic, e.g., to preserve unique world views and/or help ethnic groups to retain or regain their ethnic identity. In both cases, however, it is important to think about the best way to carry out a successful language documentation and/or description project or a language maintenance and/or revitalization one.⁹⁶ Figure 4 below presents a summary of the advantages and disadvantages of LDoc and LDesc; these are discussed below in more details.

⁹⁵ The latter is true mostly of North America and Australia but there are examples in other parts of the world: Maori in New Zealand, Hawaiian in Hawai’i, or Karin’ja in Suriname (Yamada 2007, 2011).

⁹⁶ In the subsections that follow, my discussion draws primarily from the work of Amery (2009) and Himmelman (2006) but also from other published works as well as from the many discussions I have had over the last five years (2010-2015) with other linguists, linguistics students, and indigenous community members involved in language documentation, language description, and language revitalization.

FIGURE 4 Summary of the advantages and disadvantages of LDoc and LDesc

	LDoc	LDesc
NEGATIVE	<ul style="list-style-type: none"> - recordings are hard/impossible to decipher without (minimal) description - data is “messier”: different registers, dialects, individual idiosyncrasies included - can lead to the demise of particular historical, traditional and cultural practices, e.g., male/female speech 	<ul style="list-style-type: none"> - narrow scope of grammars which sometimes only describe one aspect of the language (e.g., morphosyntax) - grammars focus on structure and often leave out language use and functions - speech formulae not included - hard-to-decipher terminology - examples are scarce and out of context - language is often “pure” (i.e., edited) - texts deal mostly with traditional knowledge
POSITIVE	<ul style="list-style-type: none"> - data can be mobilized for creation of teaching materials - greater variety of language is represented - data is more natural (or at least “naturalistic”) 	<ul style="list-style-type: none"> - use of grammars/dictionaries in language teaching - can improve the status of a language - important for linguistic theory/typology

2.1.2.1 Disadvantages and Advantages of Language Description⁹⁷

Academic grammars often focus on only one aspect of language, be it its phonology, morphology or syntax. Such an incomplete record can only be of limited use to minority language communities. In the best-case scenario, the grammar will deal with all three

⁹⁷ As mentioned before, the products of a LDesc are ideally a grammar, a dictionary and a collection of texts but it is often the case, that at best just a grammar or a dictionary will result from such work. The values of each of these for a minority language community differ so I will try to be specific when referring to their respective advantages and/or disadvantages.

aspects but even then, their use in language maintenance or revitalization continues to be limited. Firstly, academic grammars focus on language structures and often neglect language use or language function of these structures; rarely will you find common speech formulas such as greetings or farewells in an academic grammar (Amery, 2009:139). Secondly, the terminology used in academic grammars makes its content inaccessible to a wider audience: not everyone is familiar with terms such as phoneme, applicative morpheme or ergativity.⁹⁸ Thirdly, examples in a grammar can be scarce and used out of context.

Another problem of LDesc is that the language is often “pure” (Amery, 2009:139). There is a lot of editing and cleaning up of the data involved in writing a grammar or compiling a dictionary. Often neologisms or borrowings will be left out. The same problem arises when preparing a collection of texts for publication; what is appropriate (and typical) of oral language may not be deemed so in written form, i.e., hesitations, self-corrections, etc. will often be edited out of the final product.

Yet another difficulty arises when dealing with texts. In the past, they have usually dealt with traditional knowledge or culture and, therefore, innovative uses of language, like neologisms and borrowings for example, are underrepresented in a collection of texts. This, of course, means that a community that only has access to such a collection will find it hard to bring back their language to non-traditional domains (Amery, 2009:139).

⁹⁸ Not to mention works that are written within a particular research tradition, like tagmemic grammars from the past century (Rice, 2006b), which may make the content inaccessible even to other linguists.

Some of the advantages of LDesc reside in the use that one can make of grammars and dictionaries in language teaching/learning. The value of a dictionary in second or foreign language teaching/learning needs not be explained here because of its extensive use and proven effectiveness in such settings. The value of the grammar resides in the generalizations that it contains. Rules in a grammar will save the learner time: it is easier to learn regular patterns by means of generalizations like “the past in English ends in *-ed*” and then learn the exceptions to the rule(s) than to have to learn every instance of a phenomenon inductively through exposure to a large amount of naturalistic input as in first language acquisition.

2.1.2.2 Disadvantages and Advantages of Language Documentation

A collection of audio and/or video recordings and field notes without a (at least minimal) description will make no sense to a non-speaker of the language who is trying to learn it but has no access to a speaker/group of speakers. Also the data in a LDoc is “messier” because it may represent different registers or dialects or individual idiosyncrasies (such as speech defects) which, without a proper generalization like the ones that come from LDesc, will limit the uses of such data. In a “worst case scenario” situation, the documentation of a particular historical, traditional or cultural practice may lead to the demise of said practice (Himmelmann, 2006:17) especially when it

concerns knowledge that is usually restricted to a group within the community or variation such as that represented in male or female language.⁹⁹

The data contained in a LDoc can be very effective for language teaching/learning: Most second language or foreign language teaching/learning methods nowadays follow a functional approach and the LDocs are organized according to language functions or speech events (Himmelmann, 2006:7). Also there is a greater variety of language represented than in LDesc; by recording as many speech events as possible the LDoc can capture language use in domains such as parent-child interactions that can be very useful for language maintenance and revitalization. The data in a LDoc is also more natural; Himmelmann (2006:7) says that records need to be done of “specimens of actual linguistic behavior, i.e., examples of how people communicate with each other” which means that a better picture of the language can be available to the endangered language community members and other parties interested in preserving the language. One other advantage is that videos and audio recordings made during a LDoc can be put to use in classroom settings with minimal editing to expose students to actual language. More generally, a LDoc of an endangered language can serve for a future description of said language but, unfortunately, the same cannot be said of a LDesc, a reality that should tip the balance in favour of LDoc in cases of extreme urgency where there is only a handful of speakers left.

⁹⁹ Of course, this potential effect can be minimized if proper access measures are put in place in the archives. These measures are already in place in most archives, e.g., ELAR and AILLA have already adopted a graded access model, i.e. full access vs. partial access vs. completely restricted materials.

2.1.3 Summary

Summing up, the preceding discussion shows that there are many differences between LDoc and LDesc as well as some similarities and that each has its own advantages and disadvantages for the study of small minority languages. More importantly, I hope to have also shown that although both activities are different from each other, they are also complementary and that language researchers and community members will benefit the most from work that involves both LDoc and LDesc. I also hope to have shown that there are good reasons to do LDoc in addition to LDesc. The primary contributions of LDoc to LDesc include, but are not limited to, fostering the discussion of ethical language research, developing best practices in archiving, and developing best practices in data collection and audio/video recording (e.g., E-MELD (2006)). Additionally, engaging in LDoc increases accessibility/recoverability of the data in the long term and accountability of the linguistic analyses advanced by a researcher or group of researchers. This is why the Mako documentation and description on which I have worked since 2011—and which I describe in the second half of this chapter—sought to combine LDoc and LDesc.

2.2 Project Meta-documentation

Austin (2013:6) argues in favour of meta-documentation or “the documentation of the documentation research itself” as an integral part of documentary linguistics. Gawne et al. (2015) also encourage the inclusion of methodology to increase reproducibility and transparency in descriptive research. In the sections that follow, I attempt to provide a biography of the project from which this dissertation stems. This will help the reader understand the antecedents of the project (§2.2.1), the different trips to the field

(§2.2.2), the participants (§2.2.3), the methodology (§2.2.4) and the equipment (§2.2.5) employed for data collection, and the outcomes of the project (§2.2.6).

2.2.1 Planning and Beginning the Mako Documentation and Description Project

The first stage of this project consisted of two main tasks: 1) establish connections in Venezuela with the *Universidad Central de Venezuela* (UCV) and with the Mako communities, and 2) conduct an in-depth study of all the documentation of the Sáliban language family, including Jodĩ, up to the present.

Institutional connections in Venezuela were greatly facilitated by Dr. Tania Granadillo through a Memorandum of Understanding signed between the *Departamento de Lingüística y Antropolingüística* (DLA) at the School of Anthropology of the Universidad Central de Venezuela and the UWO Department of Anthropology in 2011. The DLA and UCV would after that and for the next four years become the Venezuelan home for my Mako documentation project, which was to be a part of a larger documentation project led by Granadillo. In 2011, Granadillo travelled to Venezuela to contact several Piaroa, Jodĩ and Mako communities to discuss her documentation project; I joined her there for the last part of her trip and we travelled together (see §2.2.2 for details of this initial trip) to the Mako communities of Marueta, San José de Yureba, Arena Blanca and Santa Inés—with a brief stop in Porvenir II. During this first trip, permission was granted by the communities of San José de Yureba and Arena Blanca for me to come and stay with them and work on documenting their language.

The systematic study and comparison of all the previous literature on Sáliban languages (and most of the general ethnographic literature on the groups as well) started before this first trip to the field and permitted an initial identification of the areas of the grammar of these languages on which there was already some work, the depth of such work, and the areas about which there was very little or no data. This review of the literature also contributed to the elaboration of a brief typological sketch of the Sáliban language family on which to base further linguistic research of this language family (see Chapter 1, §1.3 above) and which informed the description component of this project.

The second stage of the project consisted of securing funding and making several trips to the Mako communities of the Ventuari River to work on the creation of an annotated corpus of linguistic and ethnographic data.

2.2.2 Multiple Trips to the Field

In August 2011, Tania Granadillo and I travelled to five different Mako communities along the Ventuari River. We presented the project to three different communities (Marueta, San José de Yureba, and Arena Blanca) in a general meeting and talked to the schoolteacher of Porvenir II and the *promotor*¹⁰⁰ of Santa Inés. In the latter two communities, we could not have a community meeting because one community was having a celebration when we came to visit (Porvenir II) and the leadership of one community was not present at the time in the community (Santa Inés). Both San José de Yureba and Arena Blanca agreed to participate in the project and the Porvenir II

¹⁰⁰ Name of community leader that works as liaison/representative of the state government.

schoolteacher and the Santa Inés *promotor*—whom we ran into in Atabapo—expressed interest in a follow-up visit to present the project to their communities.

The following subsections briefly summarize my different trips to the Mako communities after this initial trip. Each trip was preceded by an initial stay of several days in Caracas where I both prepared for the upcoming trip and presented some of my research at the Universidad Central de Venezuela. In addition to the time spent in Caracas, I had to spend time in Puerto Ayacucho before each trip gathering food supplies, arranging transportation to the communities, and asking for permission from the military to travel downriver to the Mako area. These two last activities proved to be both time-consuming and complex each time and had a real impact on the time I was able to spend in the communities. Table 20 offers a timeline for each of the trips that I have made to the Mako communities over the last three years and the exploratory trip taken in July 2011. Each trip is discussed more in-depth in the following sections.

TABLE 20 Timeline of the different field trips

Locations	Summer 2011	Summer 2012	Fall 2012	Fall 2013	Fall 2014
Caracas	8/Aug	11-22/Jun	16-21/Oct	19-30/Sep	7-23/Nov
Pto Ayacucho	8-13/Aug	22/Jun-12/Jul	21-29/Oct	30/Sep-27/Oct	23/Nov-10/Dec
Communities	13-21/Aug	13-31/Jul	30/Oct-12/Nov	27/Oct-25/Nov	10-17/Dec
Pto Ayacucho	22-25/Aug	3/Aug-2/Sep	15/Nov-3/Dec	26-28/Nov	17-19/Dec
Caracas	25-30/Aug	2-5/Sep	3-5/Dec	28/Nov-6/Dec	19-23/Dec

2.2.2.1 Summer and Fall 2012 Trips

In 2012, I made two trips to Venezuela—the first one from June to early September, the second one from October to December—to work in the community of Arena Blanca.

The decision of working in Arena Blanca rather than San José de Yureba stemmed from the composition of the communities: while San José de Yureba is a mixed Mako-Piaroa

community, Arena Blanca is almost exclusively composed of Mako speakers. Not having any previous experience with any of the two languages but knowing that they had been reported to be very close, I sought an environment in which I could be sure that my data was from the language variety I was documenting.

During these two trips, I worked on carrying out a census of Arena Blanca (see Chapter 3) and on data collection by recording and transcribing/analysing Observed Communicative Events (OCEs) and Staged Communicative Events (SCEs) (Himmelmann (2006), see §2.2.4 below). Elicitation was limited to an initial wordlist and a paradigm for the verb ‘to eat’. In the July-September trip, I also translated and glossed the reading primers published by NTM (see NTM (2005a). This served as training for my primary Arena Blanca consultant Eliseo González¹⁰¹ and as practice for me helping me get used to the sounds of the language. During the October-December trip, I also had the opportunity of visiting the community of Isla Bomba, presenting my project to them and carrying out a census of the community. Both the summer and the fall 2012 trips were spent partly in the community and partly in Puerto Ayacucho (see Table 20 above and compare the duration of the post-community visit stay in Puerto Ayacucho between these two trips and the 2013 and 2014 trips). During this time in Puerto Ayacucho, Eliseo González, who accompanied me to town, and I worked primarily on transcription and translation but also on text collection.

¹⁰¹ See §2.2.3 below

During the summer of 2012 trip, I recorded 7:18:19 hours of SCEs + OCEs (of which, 4:19:03 hours were filmed) and 3:08:49 hours of elicitation. Out of the 7:18:19 hours of SCEs + OCEs, 5:10:10 hours have been transcribed/translated; this resulted in 100:32:40 hours of recorded text analysis. During this trip, I also recorded the materials in the NTM reading primers by asking a speaker to read each page, which totalled 0:59:28 hours. The translation/transcription of said primers produced 20:16:30 hours of recording. Neither of these recordings or materials have been taken into account in the description of the language provided in Chapters 4 through 9.

During the fall of 2012 trip, the SCEs and OCEs recorded amounted to 38:04:52 hours (of which, 11:59:01 hours were filmed) and 2:29:41 hours of elicitation. Of the 38:04:52 hours of SCEs + OCEs, 3:53:08 have been analyzed and this resulted in 52:48:17 hours of recorded text analysis.

2.2.2.2 Fall 2013 Trip

In 2013, I returned to Venezuela from mid-September to early December hoping to continue my work in Arena Blanca. However, when I arrived to the community in late October, I found it almost deserted (only one family was present at the time). So I decided to take a chance and go to Porvenir II. When I arrived to Porvenir II, I waited for the schoolteacher to come back from fishing and we met and then he introduced me to his brother (the community pastor) who said they would organize a community meeting so I could present my project. At the meeting, the community agreed to participate in the project and I stayed there for the remainder of my trip. Working in Porvenir II had the drawback of no longer having a consultant who was trained in

recording and transcription but had multiple advantages: 1) I had the opportunity to train and work with Nepo Camico who proved to be an exceptional interviewer, 2) through the community pastor, I had the opportunity of working with three Marueta speakers who had been involved in the creation of the NTM reading primers, and 3) I was in a more central location which made it easier to access other communities.

During my stay in Porvenir II in the fall of 2013, I visited and recorded speakers in San José de Yureba and Fundo Chicho and at the end of my trip, I carried out a survey trip of the different Mako communities on the Ventuari River (see Chapter 3). Overall, during this trip I recorded 9:17:35 hours of SCEs + OCEs (of which 6:47:03 hours were video-filmed) and 5:56:20 hours of elicitation. Out of the 9:17:35 hours of SCEs + OCEs, I analyzed 1:52:19 hours, this resulted in 25:21:17 hours of recorded text analysis.

2.2.2.3 Fall 2014 Trip

In 2014, I returned to Venezuela from early November to late December but was only able to spend a week in the Mako area, more specifically in Porvenir II, due to transportation issues. This week was spent on elicitation to clarify certain grammatical points of the data on my corpus (e.g., classifiers). During this trip, I also had the opportunity to work on editing the animal stories I had recorded in the fall of 2013 (see §2.2.6.3). While waiting to travel to the community, I was able to work with a speaker from Marueta on elicitation of some grammatical points. Overall, during this trip I recorded 8:26:56 hours of elicitation.

2.2.3 Participants

In this section, I discuss two types of participants. The first type of participant are those speakers from whom speech data was collected, the second type of participant are the two school teachers on whom I relied for data transcription and translation, interviewing, analysis, etc.

Data collection took place in five different Mako communities, namely Arena Blanca, Isla Bomba, Porvenir II, San José de Yureba and Fundo Chicho, and also in Puerto Ayacucho. In Isla Bomba, data was only collected during the census from primarily the head of the community, although conversations were going on in the background among some of the other speakers present. In San José de Yureba, data was collected primarily from one female speaker (although two other speakers—one male and one female—also participated) and in Fundo Chicho, one male speaker was interviewed and a female speaker offered a few procedural texts. In Arena Blanca, data was collected from 17 speakers (12 male, 5 female). However, most adult speakers participated in the community meetings that were recorded as OCEs so data from this community comes from all the adult speakers and school-aged children. The latter were recorded with the consent of their parents during in-school class observations. In Porvenir II, most adult speakers were present during the community meeting recorded as an OCE so data was gathered from a representative number of adults. Other data was collected from 10 speakers (8 male, 2 female). In addition to the speakers discussed above, data was collected from four additional speakers from Marueta: three (two male, one female) speakers came to see me at the request of the Porvenir II pastor and worked with me on verb paradigms during my fall 2013 trip; one male speaker was contacted in Puerto

Ayacucho during my last trip to Venezuela and I worked with him on elicitation of syntax structures (e.g., question formation, complementation, etc.).

The two schoolteachers that participated in the project were Eliseo González of Arena Blanca and Nepo Camico of Porvenir II.¹⁰²

Eliseo González is a native Mako speaker from the Guapuchí River area who also speaks Spanish and Piaroa. His parents are both Mako and he is married to a Mako-Piaroa bilingual speaker. Eliseo was my right hand during my summer and fall 2012 trips to Arena Blanca and accompanied me to Puerto Ayacucho at the end of each trip to work on transcription/translation. He was a very patient teacher who proved to be extremely skillful at collecting data from other speakers using video stimuli, building verb paradigms and segmenting words into syllables. Nepo Camico is a native Mako speaker from the Ventuari River area who is also bilingual in Spanish and a passive bilingual in Kurripako and Piaroa. Both his parents are Mako and his wife is Kurripako. Nepo Camico worked tirelessly with me during my 2013 and 2014 trips. He proved to be a gifted interviewer who also enjoyed telling stories and transcribing in ELAN. His help was invaluable in the creation of the booklet of animal stories where he was storyteller, transcriber/translator, and co-editor.

¹⁰² I take this opportunity to reiterate that the work on which this dissertation relies would not have been possible without these two individuals and that I am forever indebted to them for their generosity and their time.

2.2.4 Methodology for Data Collection

The data used for the grammatical description of Mako presented here in Chapters 4 through 9 was collected by means of three different methods: observed communicative events (OCEs), staged communicative events (SCEs), and elicitations (Es) (Himmelmann, 1998:27). Although all three of these are necessary, since they do not yield equivalent data and a diverse corpus is necessary (Woodbury, 2003:46), my corpus relies heavily on OCE and SCE data.

The OCEs recorded included a number of village meetings at both Arena Blanca and Porvenir II, the visit of the state governor to the community of Arena Blanca in 2013, and several school classes. My participation in these events was limited to the recording of the event, the only exception being a village meeting in Arena Blanca where I discussed archiving for 30 minutes with the community.

The SCEs were planned around both elicitation stimuli consisting of pictures or videos (e.g., video clips in the “Reciprocal Constructions and Situation Type” task by Evans et al. (2004) or the Event Complexity Task by Bohnemeyer & Caelen (1999) in the Max Planck Institute’s L&C Field Manuals and Stimulus Materials¹⁰³) and culturally relevant prompts like pictures of cassava preparation and village photos. These were particularly important for this project because they allowed me to gather data that was both naturalistic and controlled. The stimuli-based SCEs recorded were of two types: 1) with one speaker at a time (e.g., ECOM Task) and 2) with multiple speakers at a time (e.g.,

¹⁰³ <http://fieldmanuals.mpi.nl/>

Reciprocals). The latter type of stimuli-based SCE proved to be a rich source of conversational data that was relatively more manageable than the conversational data from OCEs due to the lower number of speakers. Other types of SCEs also constituted rich sources of data: census interviews (always with multiple speakers present), procedural texts, narration of past events, explanations of different taboos, interviews with elders (carried out by a speaker), and the animal stories for the reading primer.

Elicitation, defined here as translation elicitation Spanish-Mako or as gathering speaker's judgements on sentences constructed by me, was done very sporadically during the first three trips and then more intensively during the last trip.

2.2.5 Equipment

This section will be divided into 1) audio recording equipment, 2) video recording equipment, and 3) solar power equipment.

2.2.5.1 Audio Recording Equipment

For this project, I used two Zoom H4n recorders to do all the audio-recording. Two recorders were needed because during elicitation sessions, I played back the recording in one recorder while the other one was recording the elicitation session itself. Two microphones were also used: an Audio-Technica AT8010 Omnidirectional microphone and a Sony ECM-44B Lavalier microphone. The microphones connect to the Zoom by means of an XLR-25 cable. The Zoom H4n recorders are easy to use and portable, and produce good quality audio compliant with archival requirements. The Zoom H4n also has two onboard X/Y stereo condenser microphones that could be used in case of necessity.

2.2.5.2 Video Recording Equipment

Video of both OCEs and SCEs was shot whenever possible. An audio recording with a Zoom H4n was typically made for any given event filmed, although there were times when this was not possible (e.g., visit of the State governor to the community of Arena Blanca). The audio recordings served as a back-up and a source of smaller, easier to process files. The video camera used was a Sony HXR-NX70U NXCAM Compact Camcorder, which both met archival requirements for video and was resistant to high humidity and high temperatures.¹⁰⁴ The camera also has both manual and automatic settings. Additionally, this camera comes with a 96GB Embedded Flash Memory and its own XLR adapter and shotgun microphone. The video equipment was completed with a Manfrotto tripod.

2.2.5.3 Solar Power Equipment

During my first field trip (August 2011), I realized that realistically the use of a computer in the communities would be very limited without a solar power system. There was no power in two of the four communities where I was hoping to work (Arena Blanca and Santa Inés); and the other two communities had power only for 3 to 4 hours at night and the power was very unstable and weak.

These are the basic components of the field solar power system I used:

- 1) Solar Panel: I used a polycrystalline panel because these are light, flexible, and not very fragile which makes them easy to transport. Because I was hoping to

¹⁰⁴ This camera recorder is rain and dust proof and can work in temperatures of up to 40 degrees Celsius.

use my computer on average 3-4 hours a day, I decided to go with a panel that could give me ~50W or more. I chose a Sunlinq 62 Watt 12V Foldable Solar Panel.

- 2) Charge Controller: A charge controller is absolutely necessary because it makes sure the battery does not overcharge and also that the battery does not discharge into the panel under conditions of low light. The Morningstar SunGuard 4.5A, 12V PWM Charge Controller was an inexpensive surge protector that worked perfectly with this set-up.
- 3) Inverter: An inverter to turn the 12V DC from the battery into 110V AC and for this purpose, I used the Go Power 300W SW300-12.
- 4) Battery: I bought a deep-cycle battery in Puerto Ayacucho.

This set-up proved to be very efficient in powering my computer and my other equipment.

2.2.6 Outcomes of the Project

This project has resulted in:

- 1) a documentary corpus of the language that includes both audio and video recordings of natural occurring speech and staged communicative events,
- 2) two native speakers trained in language documentation techniques,
- 3) a story book,
- 4) an assessment of language vitality, and
- 5) a grammar

Each of these is discussed in turn.

2.2.6.1 Documentary Corpus

The documentary corpus gathered to date includes audio and video recordings of a range of elicited and observed communicative events and elicitations (see Appendix 1 for a full list of recordings and Appendix 6 for a selection of translated and transcribed texts). In total, I collected 54:40:46 hours of audio and 23:05:07 hours of video of OCEs and SCEs. Out of the 54:40:46 hours of audio collected, 10:55:37 hours have been transcribed and translated, the text transcription and analysis of these 10+ hours produced 178:42:14 hours of audio recordings. In addition to these recordings, there are 20:01:46 hours of recorded elicitation. Although at this time the video is largely unprocessed, I hope that by creating a documentary corpus with video I have increased the usability of the data, which will hopefully be of use to other researchers such as ethnographers and historians. The video recordings can also be used for teaching purposes in the Mako schools and for the production of pedagogical materials.

In addition to the audio and video recordings that lie at the core of the corpus, other materials collected during the project complement the recordings. First and foremost, there is the metadata collected for the audio and video recordings. For each record (audio or video recording or picture), I have gathered the following information: 1) filename, 2) path in my hard drive, 3) unique identifier, 4) title, 5) alternative title, 6) topic(s), 7) genre(s), 8) participant(s), 9) length (for audio and video), 10) language(s) used in the record, 11) date the record was collected, 12) location where the record was collected, 13) device used, 14) a brief description and 15) any restrictions regarding access. Second, there are numerous pictures taken at different moments during the fieldwork. Finally, there are 1,190 pages (23.5 cm x 18.4 cm) of hand-written notes.

Different audio files are at different stages of processing with some being fully transcribed and translated (e.g., Pear Story, different census interviews from Arena Blanca) and others awaiting transcription and analysis. The archiving of the corpus is also in progress. Initial arrangements were made with the Endangered Languages Archive (ELAR) at SOAS, the Archive for the Indigenous Languages of Latin America (AILLA) at the University of Texas at Austin and the *Departamento de Lingüística y Antropolingüística* (DLA) at the Universidad Central de Venezuela to archive the materials stemming from this project. I have made a sample deposit¹⁰⁵ with both ELAR and AILLA of the audio of one story—namely, Eliseo007—and the DLA at the Universidad Central de Venezuela has received eleven stories—the one mentioned above and the ten animal stories included in the booklet. I hope to continue curating the corpus and keep adding to these collections. DVDs of some events were given to the communities of Arena Blanca and Isla Bomba; in future trips, I hope to be able to give copies of all the materials to the communities.

2.2.6.2 Training

Two native speakers were trained in language documentation techniques and grammatical analysis of Mako. They took part in audio and video recordings of community activities and in the transcription of all the materials.

¹⁰⁵ These sample deposits (and more specifically screenshots of the collection on the archive websites) allowed me to contextualize the second discussion on archiving I had with the community of Arena Blanca and a similar discussion in Porvenir II.

2.2.6.3 Story Book

The Mako communities with which I worked expressed interest in pedagogical materials for their schools very early on. It was agreed during the meetings held in August 2011 that such materials could take the form of reading primers dealing with culturally-relevant semantic fields such as birds, fish, jungle animals, plants, etc.

As part of this work, Nepo Camico and I developed a small booklet of animal stories describing the physical characteristics and customs of—as well as cultural knowledge associated to—ten different jungle mammals. These stories were initially recorded in Mako with a free translation in Spanish. The Mako version was subsequently transcribed and translated by Nepo Camico and me. During my last field visit, the stories were edited but I was not able to present them to the community for consultation and approval. I hope to be able to do this in July 2015.

2.2.6.4 Sociolinguistic Study of Language Vitality

One of the questions that my project sought to answer was what the vitality of Mako in the communities where the language is spoken was. A language vitality assessment was carried out based on sociolinguistic interviews with the head of each household in the communities of Arena Blanca and Isla Bomba; these were complemented with qualitative observations of language use throughout the course of this project and with information gathered during my survey trip along the Yureba and Ventuari Rivers in November 2013. For a more detailed description of this study, see Chapter 3.

2.2.6.5 Grammar

The documentary corpus gathered over the course of this project constitutes the basis for the grammar presented in Part II of this dissertation. The grammar follows the traditional organization of discussing first the phonetics and phonology of the language (Chapter 4), then moving on to parts of speech (Chapter 5) and nominal and verbal morphology (Chapters 6 and 7 respectively), and finally exploring syntax (Chapter 8) and discourse (Chapter 9). While the first four chapters are “form-driven”, the last two are “function-driven” (see Payne (2014) for this distinction).

2.3 Conclusions

It is my hope that by offering here a detailed discussion of the literature that shaped the development of this project (§2.1) and a biography of said project (§2.2), I have helped contextualize the research presented in the chapters that follow as well as offered future researchers or community members a way to make sense of the project, its history and its context.

Chapter 3

3 Language Vitality Assessment

This vitality assessment stems from the need to clarify the reported “seriously endangered” status of Mako: My impression during my first visit to several Mako communities in August 2011 was that the language was still being acquired by all the children as their first language; however, all the different reports of language endangerment that mention Mako (see §3.1)—except for Lewis, Simons & Fennig (2014), which was published after my first visit—agree that the situation of the language is dire. In order to understand the mismatch between previous reports and the observed situation “on the ground”, I decided to do as comprehensive a vitality study as possible. My assessment is presented in this chapter and is based on data gathered during my different field trips (August 2011, June-August 2012, October-December 2012, and November-December 2013) to the Mako region. The chapter is organized as follows: Section 3.1 summarizes previous reports of language endangerment for Mako and Section 3.2 offers a brief summary of the different metrics developed to assess language vitality, a rationale for picking the UNESCO tool, and a description of the methodology used for this study. Section 3.3 consists of the vitality assessment itself and Section 3.4 reviews the issues encountered during the assessment and argues for the importance of including participant observation in our assessments of language vitality. Section 3.5 concludes this chapter.

3.1 Previous Reports of Mako Language Vitality

Table 21 below (repeated from Table 6 on page 10) summarizes previous reports of Mako language vitality. The reports are divided into three different categories depending on their scope¹⁰⁶.

TABLE 21 Previous reports of Mako language endangerment

	Degree of Endangerment Reported
Global Scope Reports	
Wurm (1996: Central America map)	<i>moribund</i>
Wurm (2001:78-79)	<i>moribund</i>
Moseley (2010: Attached global map)	<i>critically endangered</i> ¹⁰⁷
ELCat (2012)	<i>threatened</i>
Lewis, Simons & Fennig (2014)	<i>vigorous 6a</i>
Continental-Regional Scope Reports	
Moore (2007:44)	<i>critically endangered</i>
Crevels (2007:146)	<i>endangered</i>
Crevels (2012:221)	<i>endangered</i>
Country-wide Scope Reports	
González Náñez (2000:393)	<i>“en peligro de extinción”</i> ¹⁰⁸
Mosonyi (2003:122)	<i>“lengua expuesta a un desplazamiento total”</i>
Villalón (2004:174)	<i>“severamente amenazada”</i>
Mattéi-Müller (2006:295)	<i>“lengua severamente amenazada”</i>
Villalón (2011:164)	<i>“lengua severamente amenazada”</i>

¹⁰⁶ As discussed above in Chapter 1 and as will be shown below in §3.4, the scope of a given report often correlates with what kind of information was used to do an assessment: the wider the scope, the more likely the information is to be non-firsthand.

¹⁰⁷ As mentioned above, this does not reflect a change in status for Mako in the Atlas but a change in the terminology used in the latest edition, which follows the endangerment scale proposed by the UNESCO ad hoc group in 2003 (see Brenzinger et al. (2003)).

¹⁰⁸ My translations: “in danger of extinction”, “language exposed to a total shift”, “severely threatened”, “severely threatened language”, and “severely threatened language”

As the table above shows, there seems to be a consensus in the literature regarding the endangerment status of Mako: according to these reports, the situation of the language is dire. The only report that does not agree with this assessment is the one in Ethnologue (Lewis, Simons & Fennig, 2014), which places Mako in the *vigorous 6a* category. Given that this category was used as a default in many cases (Simons & Lewis, 2013:8), it is unclear whether the assessment given is based on an analysis of previous reports or just given as a default. All these reports are based on non-first-hand information: reports with global, continental, or regional scope are based on smaller reports with country-wide scope; the latter are generally based on self-reported census information rather than on fieldwork. As suggested in the introduction to this chapter, the assessment of Mako as a critically endangered language does not match with my observations in the Mako communities I have visited over the course of the last four years. This is why I undertook this study of language vitality, the methodology of which is discussed in the next section.

3.2 Methodology

This section briefly discusses the methodology and tools employed for this study (§3.2.2) and its shortcomings (§3.2.2.1) but before doing so, I discuss three different language vitality assessment tools and give a rationale for picking the UNESCO nine-factors tool (§3.2.1). The discussion of shortcomings in Section 3.2.2.1 will be expanded in Section 3.4 below.

3.2.1 Tools for Language Vitality Assessment

Assessing language vitality and reporting the degree of endangerment of a language or group of languages has been a priority of linguists since awareness of the threat to language diversity increased in the early 1990s. A number of assessment tools have been developed; three of the most influential are Fishman's (1991) Graded Intergenerational Disruption Scale (GIDS), Brenzinger et al.'s (2003) "nine factors" (a.k.a. the UNESCO assessment), and Simons & Lewis's (2010) Extended Graded Intergenerational Disruption Scale (EGIDS) (see discussion in Dwyer (2011)). Each of these is discussed in turn below.

3.2.1.1 GIDS

In his 1990 article *What Is Reversing Language Shift (RLS) and How Can It Succeed?*, Fishman proposes an alternative planning theory, namely the Graded Intergenerational Disruption Scale, that addresses the intergenerational transmission of threatened languages. Although this theory has been further revised (cf. Fishman (1991) and Fishman (2001)), its focus on intergenerational transmission and domains of language use has remained the same. Table 22 shows Fishman's model as summarized by Malone (2004:14).

TABLE 22 GIDS stages

Weak side			
Stage 8	Stage 7	Stage 6	Stage 5
So few fluent speakers that the community needs to re-establish language norms; requires outside experts (e.g., linguists).	Older generation uses the language enthusiastically but children are not learning it.	Language and identity socialization of children takes place in home, community.	Language socialization involves extensive literacy, usually including L1 schooling.
Strong side			
Stage 4	Stage 3	Stage 2	Stage 1
L1 used in children's formal education in conjunction with national or official language.	L1 is used in workplaces of larger society, beyond normal L1 boundaries.	Lower governmental services and local mass media are open to L1.	"cultural autonomy is recognized and implemented" (Fishman 1990, p. 18); L1 used at upper government level.

The principles and rationale behind GIDS constitute a useful tool for those researchers who want to assess the threat to a particular language in a given community (see, for example, Malone (2004), also Hornberger & King (2001)). However, as other researchers have pointed out (e.g., Dwyer (2011)), GIDS overlooks the importance of other factors that are key for language maintenance such as community attitudes and amount and quantity of documentation. These two factors, however, are included in the UNESCO's document on language vitality assessments discussed in the next section.

3.2.1.2 UNESCO Factors¹⁰⁹

UNESCO’s “nine factors” language vitality assessment stems from the work of a group of experts on endangered languages and proposes that nine different factors be taken into account when assessing the vitality of a particular language (Brenzinger et al, 2003:7). These factors are summarized in Table 23 below.

TABLE 23 Summary of UNESCO nine factors

Factor	Focus
1	Intergenerational Language Transmission
2	Absolute number of speakers
3	Proportion of Speakers within the Total Population
4	Trends in Existing Language Domains
5	Response to New Domains and Media
6	Materials for Language Education and Literacy
7	Governmental & Institutional Languages and Policies including Official Status and Use
8	Community Members’ Attitudes toward their Own Language
9	Amount and Quality of Documentation

Except for “Absolute number of speakers”, all the other factors are graded on a 0 to 5 scale and a definition is given for each of the levels in each particular factor. The grades are then correlated with a level of endangerment: *safe* (5), *unsafe* (4), *definitely endangered* (3), *severely endangered* (2), *critically endangered* (1) and *extinct* (0). For some factors, however, the levels of endangerment are different as illustrated in Table 24 for Factor 5 “Response to new domains and media”.

¹⁰⁹ The different grades for each of the UNESCO factors are given in Appendix 2. This should help the reader understand the choices of grade and level of endangerment in each of the different categories discussed in §3.3. When a long description for the different levels in a given factor was available, I have chosen to include this; if no such description was available, I have included the summary tables in the document.

TABLE 24 Degrees of endangerment and grades for Factor #5 (Brenzinger et al., 2003:11)

Degree of endangerment	Grade	New Domains and Media Accepted by the Endangered Language
<i>dynamic</i>	5	The language is used in all domains.
<i>robust/active</i>	4	The language is used in most new domains.
<i>receptive</i>	3	The language is used in many domains.
<i>coping</i>	2	The language is used in some new domains.
<i>minimal</i>	1	The language is used only in a few new domains.
<i>inactive</i>	0	The language is not used in any new domains.

This system, however, is not fine-grained enough at both ends of the scale, i.e., the safe and extinct categories, as pointed out by Simons & Lewis (2010), since these two grades would include too many languages in starkly different situations. This is why these authors developed a new scale based on Fishman’s GIDS, the UNESCO “nine factors”, and the scale that had been in use by the Ethnologue language catalogue (Simons & Lewis, 2010:103). This new scale is discussed in the next section.

3.2.1.3 EGIDS

The Simons & Lewis (2010) scale builds on the two scales previously discussed in this chapter and it is shown in Table 25 below. The Expanded Graded Intergenerational Disruption Scale (EGIDS), like its predecessor, the GIDS focuses on intergenerational transmission and domains of language use. Its main contribution is that it expands the “safe” and “extinct” categories of Brenzinger et al.’s proposal. The “safe” category is expanded to six levels (levels 0 to 6) and it takes into account the scope of use of the language deemed safe while the “extinct” category is divided into two to allow for a distinction between extinct languages that still have an ethnic population that still identifies with it and those for which there is no ethnic population.

TABLE 25 EGIDS (from Simons & Lewis (2010))

Level	Label	Description	UNESCO
0	International	The language is used internationally for a broad range of functions.	Safe
1	National	The language is used in education, work, mass media, government at the nationwide level.	Safe
2	Regional	The language is used for local and regional mass media and government services.	Safe
3	Trade	The language is used for local and regional work by both insiders and outsiders.	Safe
4	Educational	Literacy in the language is being transmitted through a system of public education.	Safe
5	Written	The language is used orally by all generations and is effectively used in written form in parts of the community.	Safe
6a	Vigorous	The language is used orally by all generations and is being learned by children as their first language.	Safe
6b	Threatened	The language is used orally by all generations but only some of the child-bearing generation are transmitting it to their children.	Vulnerable
7	Shifting	The child-bearing generation knows the language well enough to use it among themselves but none are transmitting it to their children.	Definitely Endangered
8a	Moribund	The only remaining speakers of the language are members of the grandparent generation.	Severely Endangerment
8b	Nearly Extinct	The only remaining speakers of the language are members of the grandparent generation or older who have little opportunity to use the language.	Critically Endangerment
9	Dormant	The language serves as a reminder of heritage identity for an ethnic community. No one has more than symbolic proficiency.	Extinct
10	Extinct	No one retains a sense of ethnic identity associated with the language, even for symbolic purposes.	Extinct

Although a useful tool, EGIDS overlooks two factors of the utmost importance to language maintenance, namely “number of speakers” and “institutional support”, and, as Dwyer (2011) shows, it can be misleading for languages classified in the *Vigorous 6a*

level; that is, languages that are being transmitted (which is the case of Mako as will be shown below) because it does not take into account factors that point to an imminent level of endangerment.

3.2.1.4 Summary

This section provided a summary of three different scales for assessing a language's vitality: Fishman's GIDS, the UNESCO "nine factors", and Lewis & Simons' EGIDS. Because of its granularity and the attention it pays to a group of factors that has repeatedly been shown to impact language vitality, the assessment of Mako language vitality that I attempt in this chapter will make use of the UNESCO "nine factors".

3.2.2 Methodology and Tools

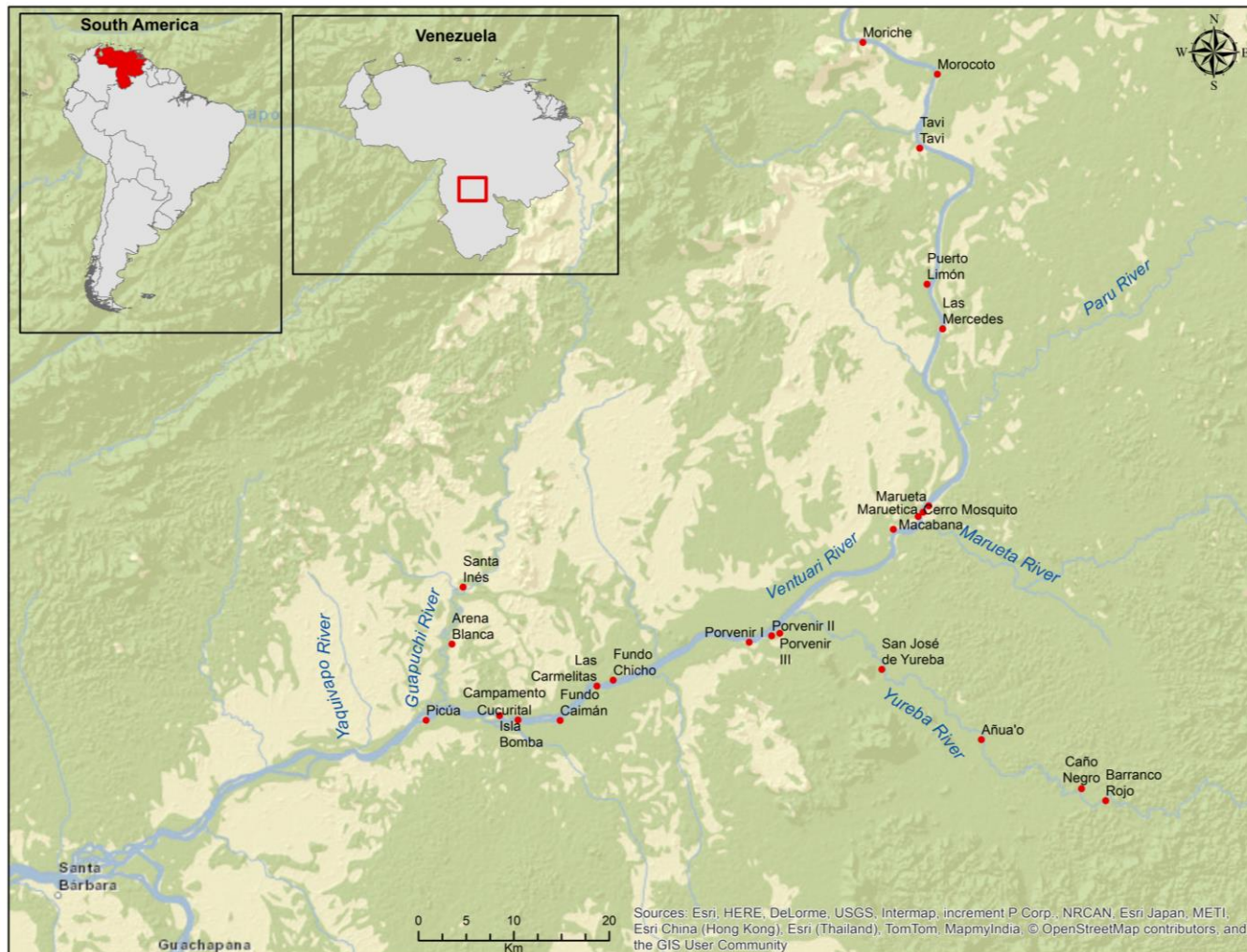
The methodology of this study of language vitality in the Mako communities of the Middle Ventuari region is best described as both qualitative and quantitative because of the different tools employed. The study draws on general field observations and unstructured interviews in the Mako communities of the Ventuari, Guapuchí and Yureba rivers. This represents a total of 20 communities as shown in Table 26. Of these 20 communities, I have personally visited 18; the two communities included in the study but not visited are Pijiguao and Escondido in the Guapuchí River. The information for these two communities was reported by members of these communities when they visited Arena Blanca. This study does not include the communities in the Yaquivapo River or the one in the Parú River as I have not been able to visit those communities nor have I been able to obtain information from members of these communities. Figure 5 (page 120) shows the location of majority of the communities included in the study.

TABLE 26 Mako communities in the Middle Ventuari River area

Municipality	River	Comunnity	Included in the Assessment
Atabapo	Caño Yaquivapo	Some family units	No
		Caño Guapuchí	Yes
	Río Ventuari	Santa Inés	Yes
		Escondido	Yes
		Pijiguao	Yes
		Piña	No
		Canaripó	Yes
		Isla Bomba	Yes
		Fundo Chicho	Yes
		Fundo Caimán	Yes
		Porvenir II	Yes
		San José de Yureba	Yes
	Caño Yureba	Barranco Rojo	Yes
		X (unknown name)	Yes
		Caño Negro	Yes
Manapiare	Río Ventuari	Puerto Limón	Yes
		Cerro Mosquito	Yes
		Marueta	Yes
		Yopal	Yes
		Tavi Tavi	Yes
		Morocoto	Yes
		Moriche	Yes
		Caño Parú	No
		Parú	No

Structured group and individual interviews as part of a local census were also carried out in Arena Blanca and Isla Bomba following the questionnaire in Appendix 2. These structured interviews sought to gather biographical data on all the inhabitants of a given community; e.g., age, gender, relation to other members of the household, etc.; and linguistic data; e.g., languages spoken, frequency with which they are spoken, domains of language use, and age of acquisition. Long-term observations of language use complemented the structured interviews in Arena Blanca. In addition to the local census data, I employ data from the national Venezuelan censuses of 1985, 1992, 2001 and 2011. Although less reliable (see discussion below), the national census data offers valuable information on the number of Mako people and speakers.

FIGURE 5 Communities visited in the Middle Ventuari River area



3.2.2.1 Shortcomings

The first shortcoming of this study is that structured interviews were only carried out in two communities. In addition, there was a one-year span of lapsed time between the two rounds of interviews in Arena Blanca (August 2011 vs. August 2012).¹¹⁰ Another shortcoming was that there was no formal testing of Spanish proficiency and, as will be shown below, proficiency in Spanish and other indigenous languages relies on self-reports. Lastly, my lack of knowledge of Piaroa and my initial lack of knowledge of Mako may have prevented me from observing more Piaroa language use.

3.3 Assessment of Language Vitality

Using the UNESCO “nine factors”, I attempt in this section to assess the degree of language vitality for Mako. A caveat is in order: an assessment of language vitality for the Mako language as a whole overlooks the issue of inter-community differences. In other words, each community being different with respect to some of the factors like languages spoken or access to educational materials, language vitality could be different in each community. To counteract this issue, I offer here in Table 27 (page 124) a summary of each community attending to the factors that I deem relevant for the discussion that follows and in the next few sections, I make reference to specific communities when illustrating specific points.

¹¹⁰ However, this revealed interesting contrasts between explicit and implicit knowledge reporting (see §3.4 below).

3.3.1 Intergenerational Language Transmission

As can be gleaned from Table 27, intergenerational transmission has not been interrupted in the Mako communities of the Middle Ventuari River. In fact, all children grow up speaking Mako and it is not until they enter the school system at ages 4 to 5 that they start learning Spanish and even during the first few years of schooling, the children are still not speaking Spanish. This is clearly evidenced by inspection of the census data for Arena Blanca reported in Table 30 below where only one child in the 5 to 9 age category is reported as having some (passive) knowledge of Spanish. This particular child, however, is the child of a Mako woman with a *criollo* man and she lived outside of her community for a number of years before moving back to the community. This reaffirms the little influence that formal schooling has on children during their first few years learning Spanish. The only Mako child in this region who can be said to not speak Mako is the son of a *criollo* man and a Mako woman who was sent to town for a few years and upon his return continues to speak Spanish with his father and only shows some passive knowledge of Mako (he understands his mother and I have heard him speak Mako on occasion). However, as will be shown below, there is census data showing that a small number of ethnically Mako people do not speak their language: 1 in the 1992 census (OCEI, 1992), 13 in the 2001 census (Mattéi-Müller, 2006), and 9 in the 2011 census (Mattéi-Müller, pers. comm.).

For this factor, I would classify Mako as being in the *stable yet threatened* (5-) category: Mako is spoken by all generations, yet—as will be shown below—there is bilingualism in Spanish and Piaroa, both larger languages than Mako and Spanish is the

language of government and the “unofficial” goal of the educational system, and, therefore, is likely to usurp certain communication contexts.

TABLE 27 Summary of characteristics for each Mako community included in the assessment

		Atabapo Municipality												Manapiare Municipality							
		Caño Guapuchí				Río Ventuari				Caño Yureba			Caño Negro	Río Ventuari							
		AB	SI	Es	Pi	Ca	IB	FC	FCa	Po	SJY	BR	NN	CN	PL	CM	Ma	Yo	TT	Mo	Mor
Population		110	≈ 150	≈ 15	?	≈ 12	13	?	≈ 12	≈ 200	≈ 124	≈ 6	?	11	≈ 150	≈ 11	≈ 800	≈ 70	≈ 150	≈ 80	≈ 149
Houses		14	≈ 13	3	?	3	2	?	3	≈ 22	16	2	2	1	?	6	≈ 120	?	?	9	?
Monolingual children		Yes	Yes	Yes	Yes?	Yes	Yes	Yes?	Yes?	Yes	Yes	Yes?	Yes?	Yes	Yes?	Yes?	Yes	Yes?	Yes?	Yes	Yes
Church		No	Yes	No	No	No	No	?	?	Yes	No	No	No	No	No	No	Yes	?	Yes	No	Yes
Number of Piaroa Families		0	1	0	?	0	0	?	?	?	3	?	?	0	?	?	?	?	1?	0	?
Leadership		Mako	Piaroa	Mako	?	Mako	Mako	?	?	?	Piaroa	?	?	Mako	?	Mako	Mako	?	Mako	Mako	?
Available schooling	Kinder	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	?	Yes	No	?
	Primary School	Yes	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes	No	Yes
Literacy materials		No	Yes	?	?	?	?	?	?	No	No	?	?	?	?	?	Yes	?	?	?	?
Teacher		Mako	Kurripako	-	-	-	-	Piaroa-Mako	-	Mako	Piaroa	-	-	-	-	-	Mako?	?	6 teachers (2 Mako)	-	Mako
Access		River	River	River	River	River	River	River	River	Air/River	River	River	River	River	River	River	Air/River	River	River	River	River

ABBREVIATIONS: AB=Arena Blanca, SI= Santa Inés, Es=Escondido, Pi=Pijiguao, Ca=Canaripó, IB= Isla Bomba, FC=Fundo Chicho, FCa=Fundo Caimán, Po=Porvenir II, SJY=San José de Yureba, BR= Barranco Rojo, NN = No name (Yureba river), CN = Caño Negro, PL = Puerto Limón, CM= Cerro Mosquito, Ma= Marueta, Yo = Yopal, TT = Tavi Tavi, Mo = Morocoto, Mor = Moriche.

GREY SHADOWING indicates communities where a local census was carried out; DIAGONAL SHADOWING, where long-term participant observation was carried out.

3.3.2 Absolute Number of Speakers

Although this section focuses on the number of speakers, I first discuss population numbers for two reasons: 1) number of speaker figures are not available for some national censuses and 2) population numbers will serve as a point of reference in my calculations of percentage of speakers out of the total population (see §3.3.3).

Reports regarding the size of the Mako population only go back to 1985 when for the first time, the Mako were considered in the national census as a separate group. Before that, they had been considered as part of the Piaroa and their numbers reported as part of the latter. The census data regarding the Mako population is summarized in Table 28.

TABLE 28 Mako population in Venezuela

Census	Mako
1985*	130
1992**	345
2001***	1,130
2011****	1,211

*Migliazza (1985), **OCEI (1993), ***INE (2003), ****INE (2013)

As the data show, the first two reports have the group as being below 400 speakers, while the last two have it as being over 1,000 speakers. This apparent rapid growth between 1992 and 2001 could be explained as perhaps the result of a more thorough census that attempted to include all of the indigenous communities in the country or a newfound interest among indigenous populations in self-identifying as indigenous due to the changes brought about by the 1999 Constitution (see below). A comparison of the data from the 2001 census with that from the 2011 one shows that the size of the group has remained relatively stable. My personal estimate, however, puts the Mako

community around over 1,500 people.¹¹¹ This discrepancy could be the result of underreporting, some communities not being included in the census, or some Mako speakers reporting themselves as being Piaroa (most likely in the case of mixed communities). Whatever the real number may be, it still remains true that the Mako constitute a very small group.

Data reported in the 1992 Venezuelan Indigenous Census (OCEI, 1993:92) for the population age 5 and older (n = 267) is as follows:

TABLE 29 Number of monolingual and bilingual speakers in 1991

Age Groups	Population Total	Bilinguals	Mako Monolinguals	Spanish Monolinguals
5-9	58	2	56	0
10-14	35	14	20	1
14-19	44	19	25	0
20-29	46	27	19	0
30-39	41	24	17	0
40-54	27	10	17	0
55 +	16	1	15	0
Total	267	97	169	1

Table 29 above shows 267 Mako speakers above the age of 5 in 1991. Unfortunately, the 2002 indigenous census does not include data regarding language. Mattéi-Müller (2006:290), however, gives some figures regarding the number of speakers in the 2001

¹¹¹ The sum of the population numbers of the villages included in Table 27 is 2,133 people but the Piaroa speakers living with the Mako need to be discounted from this figure. However, to this number we need to add the speakers in the Yaquivapo and Parú rivers. 1,500 is a conservative figure. This estimate still comes short of the 2,350 inhabitants that the 2011 census growth rate of 7.6% for the Amazonas State would predict.

census¹¹²: 991 Makos above the age of 3, out of which 974 speak their language, 13 do not speak it, and four did not declare. There is, however, no information regarding the number of Spanish-Mako bilinguals. Mattéi-Müller (personal communication) reports that, out of the 1,211 Makos identified in the 2011 census, 1,078 reported speaking their language while only nine reported not speaking it.

3.3.3 Proportion of Speakers within the Total Population

Figure 6 through Figure 8 below show the percentage of Mako speakers within the total population. For the 1992 census, the percentage is only of the population age 5 and above and for the 2001 census for the population age 3 and above; for the 2011, however, the percentage was calculated based on the entire reported population. Given that nearly all of the Mako population speaks Mako, I would categorize the language as *unsafe* (4).¹¹³

¹¹² Mattéi-Müller (pers. comm.) reports having obtained the figures from unpublished census reports she had access to as member of the census commission.

¹¹³ The UNESCO scale is unclear on this point: does “all” mean 100% of the ethnic population? This is unlikely even for major world languages like English or Spanish. And what does “nearly all” mean? 95%? 90%?

FIGURE 6 Percentage of Mako speakers (age 5+) in 1992

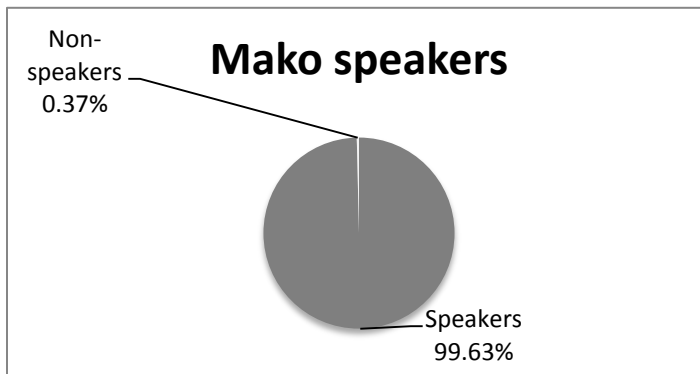


FIGURE 7 Percentage of Mako speakers (age 3+) in 2001

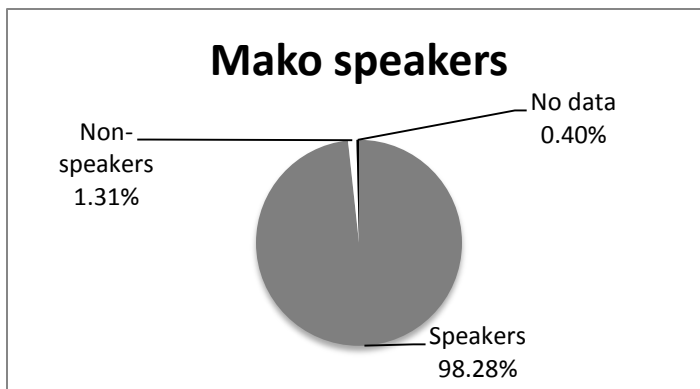
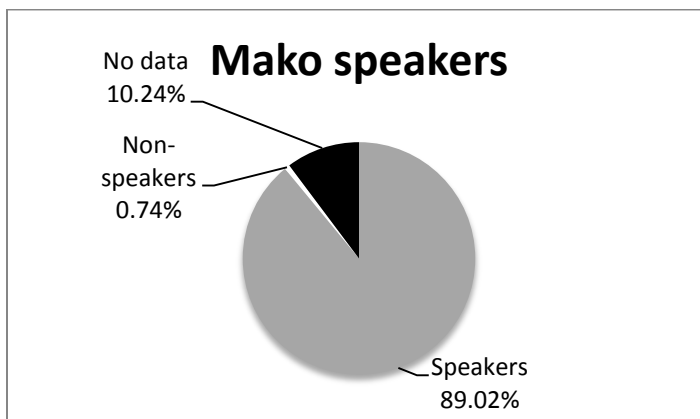


FIGURE 8 Percentage of Mako speakers in 2011



3.3.4 Trends in Existing Language Domains

There are three main languages that are spoken in the Mako communities of the Middle Ventuari: Mako, Spanish and Piaroa. Each of these is discussed separately below.

3.3.4.1 Mako

Mako remains the language used for everyday interaction with other Mako people both at home and in socialization spaces. Mako is also the language of shamanism, where that practice is still active, and the language of government inside the communities. Village meetings regarding elections, for example, are fully conducted in Mako in both Arena Blanca and Porvenir II.¹¹⁴

3.3.4.2 Spanish

Spanish is primarily used only in situations involving the presence of *criollos* (e.g., visit of the State governor to Arena Blanca in 2012 or the visit of the candidates to the municipal elections to Porvenir II at the end of 2013); although Mako is often also used in these situations by the monolingual speakers. It is also used in schools (see discussion in §3.3.5).

In Arena Blanca, all the Spanish-Mako bilinguals speak to each other in Mako, except for one young man who has been observed using Spanish with other bilinguals and some Mako monolinguals. When asked about their Spanish use within the community, most bilingual census interviewees responded that they sometimes use it with this particular young man.

Spanish is also used in communicating to outsider non-Piaroa men who have married into the community, e.g., Jivi man in Arena Blanca.

¹¹⁴ Other domains of use where Mako is present, e.g., schools and church services, are discussed in §3.3.5 below.

3.3.4.3 Piaroa

The use of Piaroa differs from community to community; it positively correlates with the number of Piaroa speakers in any given village. For example, San José de Yureba has 47 Piaroa speakers and 77 Mako speakers. Other villages also have a large percentage of Piaroa speakers and presumably a corresponding rate of Piaroa usage: Moriche, Morocoto, and Fundo Chicho. In these communities, the use of Piaroa is likely to be more generalized since a large percentage of the community are first-language speakers of Piaroa. There are, however, communities that are more homogeneously Mako such as Arena Blanca, Santa Inés and Porvenir II and the use of Piaroa in these communities is likely to be more restricted than in communities with a larger number of Piaroa speakers. This seems to be confirmed by my long-term observations in Arena Blanca. In this community, there are three Mako-Piaroa couples (in all three the men are Piaroa). These Piaroa men said they speak Piaroa with each other and one of them said his wife speaks Piaroa to him but he does not speak Mako. The one Piaroa who said he could speak Mako was observed using Piaroa in a village meeting (see §3.4.2.3 below). A Mako grandmother from Arena Blanca was observed speaking Piaroa to her small granddaughter during a village meeting. The granddaughter has a Piaroa father and a Mako mother but lives in a Piaroa village. However, observations of Piaroa use in this community are limited to these few people and instances¹¹⁵.

¹¹⁵ Mako-Piaroa interactions are possible due to the fact that the Mako and Piaroa speakers in the region understand each other. This intelligibility seems to be acquired rather than inherent as Piaroa speakers from other areas (e.g., from the Cataniapo River) who are not in contact with Mako report not understanding this language. There is, however, no real bilingualism according to my observations. If there is in fact some bilingualism, it seems to be the case that the Mako speakers learn Piaroa rather than

3.3.4.4 Community Census Results and Multilingualism

The census data from the Venezuelan national censuses provided above in Section 3.3.2 does not include data on Spanish-Mako bilingualism (except for the 1992 census) or on other types of bilingualism (e.g., Mako-Piaroa) or multilingualism present in the communities under discussion here. Because of the poverty of the data from the national censuses with respect to multilingualism, I present here the results of two different local censuses; one carried out in Arena Blanca, the other one, in Isla Bomba. These results also shed light on sustained language transmission.

3.3.4.4.1 Arena Blanca Census

The results of the Arena Blanca local census are summarized in Table 30 below. This census showed that:

- no ethnically-Mako monolingual Spanish speakers live in the community. The only monolingual Spanish speaker is a *criollo* who married into the community.
- most children under the age of 10 are monolinguals in the vernacular. The only one reported as having any knowledge of Spanish, as mentioned above, is a child who was born of a *criollo* man, and who lived outside the village during the first years of her life.

the Piaroa speakers learning Mako (for example, what I said in a village meeting in Moriche in Spanish had to be translated to both Mako and Piaroa so that everyone present could understand).

- men are more likely to have knowledge of Spanish than women and this difference is statistically significant: $\chi^2 (1, N=77) = 10.372, p = .001$. This is highly beneficial for language transmission since it is mothers and older sisters who take care of young children in the community.

TABLE 30 Community census results: Arena Blanca

		Languages		Mako monolinguals		Mako bilinguals (L2 Spanish)						Mako bilinguals (L2 Piaroa)		Mako bilinguals (L2 Jivi)		Jivi bilinguals (L2 Spanish)		Piaroa Bilinguals (L2 Spanish)		Trilinguals Mako/Piaroa/ Spanish		No info available		Spanish monolinguals
		Level of proficiency				Speaks the L2		Speaks the L2 a little		Understands the L2 but does not speak it		Speaks the L2		Speaks the L2										
Age groups	Gender	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Male
0-4	22	9	13	9	13	–	–	–	–	–	–	–	–	–	–	–	–	-	-	–	–	–	–	–
5-9	15	9	6	9	5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10-14	14	4	10	4	8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-19	18	7	11	1	8	4	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
20-29	15	10	5	0	3	8	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0
30-39	10	4	6	0	3	1	0	1	0	0	2	0	1	0	0	0	0	0	0	2	0	0	0	0
40-54	11	5	6	1	5	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55 +	3	2	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No info available	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTALS	110	52	58	15	33	13	4	7	2	0	3	0	1	0	1	1	0	2	0	2	0	2	1	1

TABLE 31 Community census results: Isla Bomba

		Languages		Mako monolinguals		Mako bilinguals (L2 Spanish)						Mako bilinguals (L2 Piaroa)		Trilinguals Mako/Piaroa/Spanish		Spanish monolinguals
		Level of proficiency				Speaks the L2		Speaks the L2 a little		Understands the L2 but does not speak it		Speaks the L2				
Age groups	Gender	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Males or females
0-4	3	0	3	–	–	–	–	–	–	–	–	–	–	–	–	–
5-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-14	2	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
15-19	3	2	1	0	0	0	0	0	0	0	0	1	1	1	0	0
20-29	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
30-39	2	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0
40-54	2	1	1	0	0	0	0	0	1	0	0	0	1	1	0	0
55 +	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	13	6	7	0	0	0	0	0	0	0	0	2	4	4	0	0

3.3.4.4.2 Isla Bomba

The results of the local census carried out in Isla Bomba are presented in Table 31 above. This census showed that:

- there are no Spanish monolinguals.
- in this community everyone speaks Piaroa and Mako. This might be the result of the couple who founded the community being composed of a Piaroa man and a Mako woman.
- men are more likely to have some knowledge of Spanish and that this difference is again significant: $\chi^2 (1, N=10) = 4.444, p = .035$. As discussed above, this is highly beneficial for language transmission of Mako.

3.3.4.5 Summary

Given that Spanish is the language of government, public offices and educational institutions (see next section) but Mako and Piaroa remain the languages of everyday communication in the Mako-Piaroa villages and Mako, in the homogenously Mako villages; I would classify Mako as being in the *multilingual parity (4)* point of the UNESCO scale.

3.3.5 Response to New Domains and Media

This section discusses the use of Mako in new language domains: schools, religion, commerce and government, and new media. Introduced religion, and commerce and government are considered here as new domains because they refer to new practices in the Mako communities: Christianity, commerce with *criollos*, and government as

modeled by the larger Venezuelan society are only recent introductions to the communities analyzed here.

3.3.5.1 Schools

There are no schools in Caño Yaquivapo to the best of my knowledge, and there are no schools in nine of the communities studied: Pijiguao, Escondido, Canaripó, Isla Bomba, Fundo Caimán, Barranco Rojo, Caño Negro, the other small community on the margins of the Yureba River whose name I do not know, and Cerro Mosquito (see Table 27). However, the children of these communities go to school in neighbouring communities: for example, Escondido children go to school in Arena Blanca and children from Isla Bomba in Picúa (a Piaroa community). Children from Fundo Caimán go to school in Fundo Chicho; the ones from Cerro Mosquito, in Marueta.

Out of the other 11 communities included in this study, five have primary schools that go to grade 6 and include kindergarten (Porvenir II, Fundo Chicho, San José de Yureba, Marueta, and Tavi Tavi) while two only have schools that go to grade 4 and that do not include kindergarten (Santa Inés and Arena Blanca). It is unclear at this point to what grade the schools in Puerto Limón, Morocoto, Moriche and Yopal go or whether they include kindergarten or not. Until very recently, there were no high schools in any of the Mako communities; children wanting to continue their studies would either go to La Esmeralda or to San Fernando de Atabapo. However, a high school was recently (2013-2014) built in Marueta and is now open.

Classroom observations in Arena Blanca and Porvenir II showed that Mako is used frequently in class with children of all grades, in spite of the fact that schooling is

generally in Spanish (see discussion in §3.3.7.2). These interactions in Mako between students and teacher, however, are only possible because the school teachers observed are Mako. However, in many other cases, the teachers are not Mako. For example, a look at Table 27 will reveal that the two teachers in San José de Yureba are Piaroa, the one in Fundo Chicho is Mako-Piara, the one in Santa Inés in 2012 was Kurripako, two teachers in Puerto Limón are Piara and out of six teachers in Tavi Tavi, only two are Mako. No information is available for Marueta or Yopal.

Despite evidence of use of Mako in the classroom in some communities, acquiring Spanish is a major goal of the education system. This, however, only has partial success as the figures for Arena Blanca in Table 30 above shows: children between ages 5-9 are reported as Mako monolinguals. Having taught in the school for a week in 2012, I can attest to the children's very limited understanding of Spanish, even the older children (Grade 4).

3.3.5.2 Religion

New Tribes Missions introduced evangelical Christianity to Marueta and this has spread to most Mako communities. Although the NTM missionaries are now no longer allowed to live in indigenous communities, evangelical religious practices continue. Religion can be seen as a positive factor here because it has promoted Mako literacy. However, it also has led to the demise of traditional cultural practices. There are churches and church services in Marueta, Porvenir II, Fundo Chicho, Tavi Tavi, and Moriche (see Table 27). Some of these churches are also attended by members of other communities: for example, people from Cerro Mosquito and Puerto Limón go to church in Marueta. I

have, however, not had a chance to observe these services. Reportedly, the service in Porvenir II is carried out in Mako. However, in Arena Blanca, Spanish is used in this domain. Observations during family meals show that prayer is said before each meal in Spanish in one family unit. The same person saying prayer has been observed reading from the bible in Spanish to other members of the community, regardless of their ability to speak Spanish.

3.3.5.3 Commerce and Government

The Mako are self-sufficient agriculturalists but contact with the Venezuelan *criollo* society has led to an increase in trading (both selling and buying). Selling manioc flour, cassava and game meat in San Fernando de Atabapo is mostly done by the men through the means of Spanish. During these trips, there is contact with both Colombian and Venezuelan Spanish. Older men rely on the knowledge of younger more proficient male Spanish-Mako bilinguals to sell their merchandise. Trips to Atabapo or Ayacucho to meet with the municipal and state authorities are also common; all interactions with outsiders are in Spanish. Women and small children often accompany the men in these trips but do not interact much with the *criollos*. Some, however, have been observed using their (mostly passive) knowledge of Spanish to communicate when the men are not around.

3.3.5.4 New Media

There is no Mako presence in local or national TV or radio stations. CDs and DVDs of movies and TV shows in Spanish are common in most communities I have visited and a few households in some of the communities have access to satellite TV. No texting in

Mako has been observed, but oral Mako phone conversations are frequent when the Mako travel to the city (there is no phone reception in the Middle Ventuari region). No emailing or use of Mako in computers/Internet has been observed. The last two observations might be related to the lack of Mako literacy as well as the lack of access to Internet in any language.

3.3.5.5 Summary

As the above discussion shows, Mako use in new domains is very limited, which makes me classify the language as being in the *minimal* (*I*) category of the UNESCO scale.

3.3.6 Materials for Language Education and Literacy

The amount of literacy materials available to date is limited to four *Cartillas*¹¹⁶ (New Tribes Mission, 2005a). These start with syllables and words to introduce the orthography designed by the New Tribes missionary Phyllis Gordon (see Gordon (n.d.)). However, these reading primers are not employed in the schools as far as I know; neither are they available in all the communities. As far as I know, in the past they have only been used in Marueta and Porvenir II. However, in fall 2012 several workshops using these primers were given in Santa Inés (one week every month). These workshops were also organized by evangelical missionaries and had literacy as a goal.

¹¹⁶ reading primers [my translation]

Apart from the reading primers, the only other reading material available is the bible (NTM 2005b).¹¹⁷

Given that 1) there is a practical orthography, 2) some materials have been written but remain largely inaccessible to most communities, and 3) Mako literacy education is not part of the school curriculum; I would classify Mako as being in category 2 of the UNESCO scale.

3.3.7 Governmental and Institutional Languages and Policies Including Official Status and Use

This section builds on González Náñez (2000) and Villalón (2012) to examine the legal framework that gives Mako official status (as of 2008) and that guarantees the Mako people's right to education in their language. It is organized around the three main aspects of language planning: status planning, acquisition planning and corpus planning.

3.3.7.1 Status Planning: Official Recognition of Indigenous Languages

The 1947 Venezuelan Constitution included no provision regarding the official language or languages of the country. The 1961 Constitution, however, in its Article 6 declares that Spanish is the official language of the country. This would not change until 1999 when the new constitution added mention of the indigenous languages of the country in its Article 9. Although Spanish remained the official language of the country, the 1999

¹¹⁷ As part of my documentation project, literacy materials have been created (see Chapter 2, §2.2.6.3). These materials, once accepted by community members and schools, would come to increase the amount of materials available to the Mako communities.

Constitution declares the indigenous languages of “official use” for the country’s indigenous peoples and adds that they must be respected in all of the country’s territory since they are a cultural patrimony. Additionally, in its Chapter VIII, the Constitution declares that the State must recognize the indigenous peoples’ cultures and languages.

Although the contribution of the 1999 Constitution to the status of the indigenous languages may seem minimal, it was this Constitution that provided the legal framework for other laws and decrees concerning indigenous peoples’ rights that would come over the next decade. In 2002, for example, two Presidential Decrees were passed. The first one, Decree 1.795, established the obligatory use of indigenous languages in the schools in indigenous areas or in urban areas inhabited by members of indigenous groups. The second one, Decree 1.796, declared the creation of the *Consejo Nacional de Educación, Cultura e Idiomas indígenas*¹¹⁸, which was to serve the Executive Committee in an advisory capacity regarding language planning. In 2005, the *Ley Orgánica de Pueblos y Comunidades Indígenas*¹¹⁹ (LOPCI) was passed and it included a chapter with three articles regulating the status and use of the country’s indigenous languages. The first article, Article 94, reaffirms the text of the 1999 Constitution regarding the official status of the indigenous languages for indigenous peoples. Article 95 lists the different contexts where use of indigenous languages should be guaranteed by the State: 1) main pieces of legislation, state constitutions, and any other official document that affects

¹¹⁸ National Council for Indigenous Education, Cultures and Languages [my translation]

¹¹⁹ Organic Law of Indigenous Peoples and Communities [my translation]

indigenous peoples, 2) judicial and administrative processes involving indigenous persons through bilingual interpreters, 3) official public ceremonies in states with indigenous populations, and 4) health services and programs directed to indigenous peoples. It also encourages the use and register of indigenous toponomy, the publication of school texts and other teaching materials, the edition and publication of bibliographic and audiovisual materials in each of the indigenous languages. Last, Article 96 states that the State, jointly with the indigenous communities and peoples, should promote publications and broadcasting in indigenous languages.

In 2008, the *Ley de Idiomas Indígenas*¹²⁰ was approved. This law built on the 1999 Constitution and the 2005 LOPCI. With the goal of regulating, promoting, and strengthening the use, preservation, defense and development of indigenous languages, the key contribution of this law was the fact that it finally made the country's indigenous languages official, not only for the indigenous peoples but for the country (Article 4). This law also makes provisions for the revitalization and promotion of the indigenous languages and places on the State the obligation of guaranteeing the necessary resources for such a task. Priority should be given to languages at risk of extinction (Article 36) and the law suggests language nests as a means of revitalizing and promoting the use of indigenous languages in those communities where they are no longer used or where their use is dwindling (Article 37). The law also reaffirms the obligatory use of indigenous languages as the main language of schooling in the schools

¹²⁰ Indigenous Languages Law [my translation]

in indigenous territories (Article 31) and stipulates that indigenous communities should be given the right to participate in the elaboration of alphabets, grammars and dictionaries (Article 29). It also encourages research on indigenous languages under the supervision of the *Instituto Nacional de Idiomas Indígenas*¹²¹ (Article 39). The INII is in fact “created” in Title 3 of the *Ley de Idiomas Indígenas*, where its goal, competencies, and organizational structure are established. This institute was to be the force behind the implementation of what was stipulated in the law. However, this institute was not created until October 2014.¹²² This promising development will hopefully serve to promote what has been established in the 2008 *Ley de Idiomas Indígenas* but also in the laws and bills that regulate the system of intercultural bilingual education, discussed in the next section.

3.3.7.2 Acquisition Planning: *Régimen de Educación Intercultural Bilingüe*

According to González Nández (2000), Decree 283 of 1979 created a system of *Educación Intercultural Bilingüe* or EIB.¹²³ A year later, the Organic Education Law (1980) was passed and in 1986, the Organic Education Regulation Law. Both prescribed the preservation and valorization of the indigenous cultures of the country. However, language was not part of either of them. It was in 1982 that, thanks to the Ministry of

¹²¹ National Institute of Indigenous Languages [my translation]

¹²² <http://www.avn.info.ve/contenido/diputado-gonzález-15-años-revolución-comunidad-indígena-goza-participación-protagónica>

¹²³ Intercultural bilingual education [my translation]

Education Resolution 83, explicit use of indigenous languages as part of the EIB system was sanctioned but this resolution only included a small number of indigenous languages: Guahibo, Guajiro, Kariña, Pemón, Warao, Yanomami, Yaruro, Ye'kwana and Yukpa. In 1992, Resolution 453 added a number of other languages to the EIB system: Kurripako, Piapoko, Baniva, Yavarana, Piaroa, and Guahibo. 1992 would also see two other resolutions (namely, Resolutions 952 and 954) that concerned the EIB: The first one created pilot centers for the training of indigenous teachers in the EIB system; the other one extended EIB to pre-school education through the establishment of language nests.

The EIB system was also further developed and regulated by the *Ley Orgánica de Pueblos y Comunidades Indígenas* (2005) and the *Ley de Idiomas Indígenas* (2008) discussed in the previous section. The EIB system was further regulated by the *Ley Orgánica de Educación*¹²⁴ (2009). This law establishes that education is, among other things, “pluricultural, multiethnic, intercultural and plurilingual” (Article 3). This recognition of education as “plurilingual” is a step forward in recognizing that many indigenous communities are indeed composed of more than one indigenous people and, therefore, more than two languages (i.e., Spanish and one indigenous language) may be spoken in any one given community. However, the law continues to talk about “intercultural bilingual education” (e.g., Article 26 and 27). Article 27 also stipulates that there should be a law specifically for the EIB system.

¹²⁴ Organic Education Law [my translation]

Such a law, however, has not seen the light yet but a new bill for a *Ley de Educación de los Pueblos Indígenas*¹²⁵ is currently under discussion in the country.¹²⁶ This new law aims at developing the EIB system. It defines EIB as a modality of the national education system “based on the cultures of each indigenous people and community, that is taught in the aboriginal languages” (Article 5). The bill also states that the State recognizes and guarantees the right of the country’s indigenous peoples to their own education as a mechanism of teaching their languages, values, etc. (Article 3) and that one of its goals is “to reaffirm the identity and the cultural and linguistic diversity of the indigenous peoples and communities” (Article 4). Unlike previous laws, this one recognizes the existence of multiethnic (and therefore multilingual) communities (Article 17); in such cases, the law guarantees the right of each people in a multiethnic community to have “their own time, space, teachers and teaching materials for the teaching and learning of their own language and culture”. Other improvements of this new bill over preceding legal instruments to regulate the Venezuelan EIB system are that it recognizes that the indigenous languages should be the means of instruction “for cultural, psychosocial and pedagogical reasons” (Article 18). Although the law affirms that Spanish should be taught from year one, it suggests that it must be done in a balanced way with the indigenous languages without causing subordination and

¹²⁵ Law of Education for Indigenous Peoples [my translation]

¹²⁶ At the time of this writing (October 17, 2014), the bill for this new law has been approved by the *Comisión Permanente de Pueblos Indígenas* (Permanent Commission for Indigenous Peoples [my translation]) after the first draft was approved in the National Assembly in 2013. The bill is now to be discussed a second time in the Assembly (<http://www.aporrea.org/educacion/n254158.html>).

displacement of the latter. This bill also regulates the selection of indigenous teachers; it argues that their linguistic competence (both oral and written) in the language of the community where they will work must be taken into account. It also favours teachers that belong to the people and community where they will work and makes provisions for the inclusion of elders as teachers to teach classes on cultural heritage and ancestral and traditional knowledge.

In spite of the progress this new bill makes in the field of EIB, it overlooks a number of important points. First, it makes no provisions for communities without speakers (for example, there is no mention of revitalization initiatives like language nests) or for communities without a writing system or where many different writing systems exist. Second, the provisions for multiethnic communities seem to be overly optimistic. In many cases, there is only one school in each community with one room so a lot of resources would need to be employed if each indigenous group in a community is to have its own space and teacher. Third, there is no mention of dialectal variation and what to do for languages with multiple dialects. Lastly, and most importantly, there are no provisions for corpus planning and development, which as the next section illustrates is badly needed.

3.3.7.3 Corpus Planning

Generally speaking, we can say that there has been almost no official effort at corpus planning in Venezuela. As far as I am aware, there have been no attempts at standardizing or modernizing the indigenous languages of the country; the only efforts at corpus planning so far involve graphization, i.e., the creation of alphabets. For

example, there were official attempts at creating orthographies for 12 indigenous languages in the 1980s, using the document *Caracterización del sistema sonoro de las lenguas indígenas venezolanas*¹²⁷ as a starting point (González Nájuez, 2000:407). According to this same author (2000:407), the official orthographies, however, are imprecise and do not fully represent the phonological system of the languages they aim to represent.

3.3.7.4 Summary

The legal framework and instruments to promote the use of Mako in the indigenous communities where the language is spoken and in the education system exist; however, many of these policies remain unimplemented. The reasons for this may be argued to go from lack of political will to obliviousness regarding how important it is to support indigenous languages (Villalón, 2012:33) or perhaps they can be seen as stemming from the flaws of the policies themselves (e.g., lack of awareness of dialect differences or of the problems with multiple orthographies to the development of materials). What seems clear is that Mako is explicitly protected by the Venezuelan government, and that language use and maintenance are encouraged in the country; this qualifies Mako to be in the *differentiated support (4)* category of the UNESCO scale. Should the policies in place be implemented in the near future thanks to the newly created *Instituto de Idiomas Indígenas*, Mako could be placed in the *equal support (5)* category.

¹²⁷ Caracterization of the sound system of the Venezuelan indigenous languages [my translation]

3.3.8 Community Member's Attitudes toward their Own Language

The Mako people whom I know and with whom I have interacted over the last three years are most definitely not ashamed of using their language—for example, they use it overtly amongst themselves while in the cities—and, in fact, seem to see it as essential to their community and their identity. It is impossible to guarantee that *all* the members of *all* the Mako communities value their language and wish to see it promoted but I think it safe to affirm that *most* members of the communities with whom I have worked or those I have just visited support language maintenance. Question 8.2 of the structured interviews I carried out in Arena Blanca and Isla Bomba (see Appendix 2 below) asked if the interviewees considered important for the children to learn how to speak, read and write in Mako and in every case, the answer was yes. However, this is reported information and, therefore, problematic (see §3.4 below). For all of the above considerations, I give Mako a 4 in the UNESCO scale for Factor 8.

3.3.9 Amount and Quality of Documentation^{128,129}

The amount of published Mako data to date is limited to three wordlists totalling 38 words: Humboldt (1824:V7:154-156), Koch-Grünberg (1913:468-469), and Loukotka (1949:56-57 [Vrás 1894]), with varying degrees of transcription accuracy. Additionally, there is one general article (i.e., Hammarström (2011)) that reprints the three available

¹²⁸ See more in-depth discussion of available Mako documentation and published materials in Chapter 1, §1.1.3.

¹²⁹ The grade given here reflects the status of Mako documentation prior to the start of my project. As a result of the project, the grade should change to *fair* (3).

wordlists. These materials are inaccessible to community members because 1) they are written in French, German and English and 2) there is no easy access to libraries that hold these materials or their Spanish translations were the speakers already familiar with their existence.

There are also a number of other materials that have been locally published or not yet published: a phonology sketch (i.e., Gordon (2000)), parts of the bible translated into the language (i.e., New Tribes Mission (2005b)), and an MA anthropology thesis (i.e., Campoverde (2012)) with about 200 hundred words. Apart from this, there is a CD available with several words and short phrases (i.e., New Tribes Mission (n.d.)) but these are almost completely inaccessible to community members. The scarcity of appropriate documentation places Mako in the lowest end of the UNESCO scale: *inadequate (1)*.

3.3.10 Summary and Discussion

According to the factors outlined in Brenzinger et al. (2003) and as follows from the discussion in the preceding subsections, Mako scores in the different factors of the UNESCO scale are:

TABLE 32 Summary of UNESCO factors for Mako

	Factor	Values	Label
1	Intergenerational Language Transmission	5-	Stable yet threatened
2	Absolute number of speakers		~1078 (in 2011)
3	Proportion of Speakers within the Total Population	4	unsafe
4	Trends in Existing Language Domains	4	multilingual parity
5	Response to New Domains and Media	1	minimal
6	Materials for Language Education and Literacy	2	
7	Governmental & Institutional Languages and Policies including Official Status and Use	4/5	differentiated support
8	Community Members' Attitudes toward their Own Language	4	
9	Amount and Quality of Documentation	1	inadequate

Contrary to what the literature on language vitality has previously reported for Mako, I have shown in the preceding sections that language transmission has not been interrupted in the Mako communities of the Middle Ventuari River. This, paired with the uniquely favourable legal framework for protection of indigenous languages in place in Venezuela and the provisions for an EIB system, definitely places Mako on the “safe” end of the UNESCO scale. However, the small size of the population (see Whalen & Simons (2012) for a correlation between size and endangerment), the ever-growing encroaching presence of Spanish and Piaroa in some of the communities, the increased contact with mainstream Venezuelan society, the lack of any media and the scarcity of literacy materials, and the little available documentation of the language make Mako vulnerable for maintenance in the long-term.

Attention should be then given to those factors where Mako scores more weakly in the UNESCO scale: Factor 5 Response to New Domains and Media, Factor 6 Materials for Language Education and Literacy, and Factor 9 Amount and Quality of Documentation.

The documentation project of which this vitality assessment is a part has aimed to

address Factors 6 and 9. I hope it will also contribute to increased literacy and that said increased literacy will result in Mako gaining more domains of use in the future. The recent creation of the *Instituto de Idiomas Indígenas* in Venezuela is also likely to result in positive measures to strengthen Mako in the communities of the Middle Ventuari River.

3.4 Self-critique of this Assessment and the Importance of Long-term Participant Observation in Assessments of Language Vitality

The primary goal of this section is to show the benefits of using long-term participant observation as a methodology in our assessments of linguistic vitality. Participant observation is defined here as “a way to collect data in naturalistic settings by ethnographers who observe and/or take part in the common and uncommon activities of the people being studied” (DeWalt & DeWalt, 2011:2). I argue that, since participant observation allows the researcher to gather information about both *explicit knowledge*—what people can articulate about themselves with relative ease—and *tacit knowledge*—what is beyond people’s awareness or consciousness—(DeWalt & DeWalt, 2011:1), it is superior to traditional methods of acquiring data for language vitality assessments such as questionnaires and structured and non-structured interviews. A secondary goal of this section is to critically examine the methodology employed in my assessment of language vitality in the Mako communities of the Middle Ventuari region presented in this chapter.

3.4.1 Reporting and Assessing Linguistic Vitality: First-, Second- and Third-hand Reports and their Sources of Data

Reports with a wide scope are usually not based on first-hand field data. For example, the *Atlas of the World's Languages in Danger of Disappearing* is a report with global scope as is the *Endangered Languages Catalogue*; both rely on medium-sized reports of language endangerment for specific areas of the world or for specific countries. These medium-sized reports may have continental/regional, e.g., Moore (2007), Crevels (2007), and Crevels (2012) for (lowland) South America; or country-wide scope, e.g., González Náñez (2000), Mosonyi (2003), and Mattéi-Müller (2006) for Venezuela. As discussed above, these large- and medium-size reports of language endangerment are generally based on national census data and/or the research of local linguists who work with specific languages/groups and usually contain only self-reported information and/or second-hand—and sometimes third- or fourth-hand—information. They are thus prone to inaccuracies because of the nature of the data used and because of the sheer magnitude of the task of trying to report on the status of all the languages of the world, the languages of a whole continent (e.g., South America), or the languages of a country as multiethnic as Venezuela.

First-hand reports tend to focus on a given language or group of languages (for example, all the languages spoken in a particular community) and are usually based on first-hand assessments of linguistic vitality that are (in my personal experience) largely dependent on questionnaire data and to a smaller degree on informal interviewing and

observational data. To verify what kind of methodologies are used in first-hand vitality assessments and what their distribution is, I examined a sample¹³⁰ of published vitality reports in the SILESR¹³¹ website and confirmed that most of them rely mostly on questionnaire data, as shown in Table 33.

TABLE 33 Sample of language surveys from SILESR

Year	Total Surveys	Analyzed Surveys	Methods Used	
			Questionnaires	Interviews
2008	23	6	5/6	1/6
2010	27	7	6/6	3/6
2012	42	10	10/10	5/10

There is, however, some use of observational data as Table 34 reveals. A closer look at what the observations consisted of shows that 1) it is only in the newer (i.e., the 2012) reports that participant observation is used, 2) that the time spent on surveys is relatively short, the longest time spent on a survey being four to six weeks. However, said survey encompassed 16 communities; this translates as 2.62 days on average spent in each community.

¹³⁰ Sampling was done in early 2013. I focused on five years prior (2008-2012) and sampled every other year (i.e., 2008, 2010, and 2012). Out of each of the reports published in a given year, I aimed for a sample of +25% (The sample for 2012 came short of this goal at 23% but it included more papers). To select the reports to include, I chose the even number reports starting from zero. So in 2008, I looked at reports 002, 004, etc. For 2012, I tried to space out my sampling more because the number of reports was larger so I sampled one out of four reports.

¹³¹ <http://www.sil.org/silestr/>

TABLE 34 Observations used in 5 surveys from 2012

Report #	Type of observations	Time spent on survey	# of villages visited
2012-002	Language use (Hindi)	3 weeks	16 communities
2012-012	Language use at a Moms & Tots	~1 month	N/A
2012-014	Not reported	4-6 weeks	16 communities
2012-018	Language use during interviews	17 days	20 villages
2012-038	Language use in the community	2 weeks	11 villages

The importance of a longer stay in the community is highlighted by one of the authors of the reports above who writes:

The findings of this survey could be further validated by a researcher staying longer in the village and spending more time for observation, informal conversations and participation in the lives of the Kachok people and their activities. This would provide more opportunities to observe language use and attitudes of the people to verify the questionnaire results. A longer ethnographic study is therefore, recommended. (Magaspag, 2012: xix)

3.4.2 Case Study: “Problematic” Self-reported Data from Arena Blanca

The language vitality assessment presented above started with a census in Arena Blanca. During this census, data was collected using semi-structured group interviews in several households. As I show in this section, however, the self-reported nature of this type of data makes it highly unreliable. The discussion centers about self-reported age, languages spoken and level of proficiency, and Piaroa language use.

3.4.2.1 Age Groups

The Venezuelan national census has a number of age groups: 0-4, 5-9, 10-14, 15-19, 20-29, 30-39, 40-54, 55 + . Previous reports of language endangerment for Mako and other

Venezuelan languages take into account this data (see, for example, González Náñez (2000)), and for comparison purposes with previous reports, information from my censuses in Arena Blanca and Isla Bomba was presented above according to this age grouping. However, the second round of interviews carried out in Arena Blanca in 2012 revealed that the age data gathered in 2011 was not accurate. This is clearly shown below in Table 35 for the members of three different households. Each household is represented with the letter H and a number, the members of each household are represented with the letter M and a number.

TABLE 35 Age discrepancies between data collected in July 2011 and July 2012 in Arena Blanca

	Age reported in July 2011	Age reported in July 2012
H2.M1	36	32
H2.M2	37	34
H2.M3	17	18
H2.M4	15	16
H2.M5	11	12
H2.M6	5	6
H2.M7	5 (days)	1
H3.M1	50	39-40
H3.M2	40	40-41
H3.M3	17	19
H3.M4	10	12
H3.M5	8	8
H10.M1	48	46
H10.M2	42	42
H10.M3	12	12
H10.M4	11	15
H10.M5	10	13
H10.M6	8	11
H10.M7	5	6

As can be seen in the table above, some times people's age decreased in 2012 with respect to 2011 (for example, H2.M1, H2.M2, H3.M1, and H10.M1, the most significant difference being of almost 10 years in the case of H3.M1) while other times the expected increase in age was larger than the one year that had passed between the two rounds of interviews (for example, H10.M4, H10.M5, and H10.M6) or it stayed the same (for example, H10.M2 and H10.M3). What this suggests is that age as counted in years in the Western world is only partially relevant for Mako speakers and that a different age grouping is needed if we want to understand the intergenerational distribution of speakers; and that the data provided for the national census are (possibly) equally unreliable.

3.4.2.2 Multilingualism and Levels of Proficiency

During the initial census interviews in Arena Blanca, I collected data on languages spoken in the home and on (self-assessed) proficiency. The results of this part of the interviews are summarized in the second column of Table 36. However, observations of everyday interactions—in the third column—among members of the different households and between community members and the researcher showed that the self-reported data was not entirely accurate.

TABLE 36 Differences between reported and observed language proficiency

Household	Reported information	Observed information
<u>Household #1</u>	everyone speaks Mako; M3 & M5 speak Spanish; M1 understands Spanish but does not speak it well; M2 & M4 speak a little Piaroa	M4 can communicate well in Piaroa in different contexts
<u>Household #2</u>	everyone speaks Mako; M1, M3 & M4 speak Spanish; M2 understands Spanish but cannot speak it; M1 speaks Piaroa	the levels of proficiency of M1, M4 & M8 are very different; M1 understands Spanish but cannot speak it while M3 & M4 speak Spanish fluently
<u>Household #4</u>	everyone speaks Mako; M1, M7 & M12 speak Spanish	the levels of proficiency of M1, M7 & M12 are different; M1 understands Spanish but can't speak it while M7 & M12 can speak it but not fluently (i.e., their level is different from H2's M3 & M4)
<u>Household #8</u>	everyone speaks Mako; only M1 speaks Spanish	M1 speaks Spanish fluently but M3 also speaks it (although less proficiently)
<u>Household #10</u>	everyone speaks Mako; M1, M4 & M8 speak Spanish	M1 can understand Spanish but doesn't speak it very well; M4 understands just a little and can't speak at all; and M8 speaks Spanish fluently

The question is then how to interpret the discrepancies between reported and observed data regarding spoken languages and proficiency. The first conclusion seems to be that “to speak a language” can mean different things to different people (i.e., it is subjective) and should be therefore measured objectively (see for example the procedures outlined in Florey (2007)). The second one is that only spending a long period of time in a given community can shed light on actual language use practices: e.g., I did not find out that

H8.M3 could speak Spanish until day 20 of my second field trip when he came by my house and we had a short chat.

3.4.2.3 Piaroa Self-reported Language Use Domains vs. Observed Language Use Domains

Another area where self-reported data and observed data do not coincide is in the use of Piaroa in the community of Arena Blanca. Five non-Mako men have married into the community of Arena Blanca: one Jivi, one *criollo* and three Piaroa. Two of the Piaroa men admitted not speaking Mako but the oldest of the three said he does speak it. When asked with whom he uses Piaroa in the community, he said he spoke it with the other two Piaroa men. He, however, seems to use it with others too as the following transcript from a recording of a village meeting shows:

- | | |
|-----------------|--|
| Mako speaker: | <i>waeɕa / hobema okohwinida</i>
‘I don’t know; everyone is there’ |
| Piaroa speaker: | <i>waeɕoʔo / ukwuoni rakwopo pakwokoʔoma / rakwopi</i>
<i>hwiɕopeʔe / hwiɕopeʔe wekōkoʔotʰima</i>

‘no one knows; if you don’t want to be on TV, if you don’t want to be on TV, if you don’t want to be there, you can’t give your permission.’ |

It is unclear that the Piaroa speaker in the transcript above is speaking Piaroa.

Nonetheless, inspection of the two stretches of text above, even if cursory, will show that if he is indeed speaking Mako and not Piaroa, the “Mako” of this Piaroa speaker differs from the Mako spoken by the Mako speaker; compare for example the different endings on the form *waeɕ-* with which both speakers start their speech turn.

3.4.2.4 Summary

Summing up, there are a number of inconsistencies between the self-reported questionnaire data and observed language use data. Were the members of the communities I work in consciously reporting information that was either false or inaccurate? The answer to this question is a plain no. Where do these inconsistencies stem from then? The answer to this second question is that the speakers were simply reporting only *explicit knowledge* (in the sense of DeWalt & DeWalt (2011:1)) while *tacit knowledge* is just not accessible to them.

3.4.3 Discussion and Recommendations

This self-critique shows that census statistics and questionnaire data can be inaccurate (and therefore unreliable) for two main reasons: 1) they are often designed based on the assumption of shared cultural practices for different groups (e.g., age), and 2) they only allow us to gather self-reported data that gets at explicit knowledge but not at tacit knowledge. The question is then what to do so as to avoid the pitfalls of relying solely on census/questionnaire data. The answer seems to be that we need to complement census and questionnaire data with information obtained by means of long-term participant observation in the communities where we work. My concrete suggestions on how to do so for linguists who are assessing language vitality are to actively participate in a wide range of activities in the community, including but not limited to fishing/hunting trips, trips to the plantations, village meetings, and daily meals; and to engage people in everyday conversation and use this as an opportunity for unstructured interviewing. In other words, in order to gain a deeper understanding of language shift

and language death but also of language maintenance and vitality in a given community, we should include tacit knowledge from participant observation alongside explicit knowledge in our language vitality assessments.

3.5 Conclusions

In this chapter, I have provided an overview of language vitality in the Mako communities of the Ventuari River region. Using both qualitative and quantitative data, I have shown that Mako is not in as dire a situation as previously reported by other authors. Rather, the language is very vital in its local context but its position within the regional and national contexts put it in a vulnerable position. I have suggested that, in order for the language to continue to be vital, steps should be taken that ensure its presence in new domains of use such as the schools, the government, and the media. This chapter also offered a short critique of questionnaire-based language vitality assessments and emphasized the importance of using participant observation to corroborate reported information, especially on language use and language proficiency.

Chapter 4

4 Phonetics and Phonology

This chapter presents a first description of the phonetics and phonology of the Mako vowel and consonant inventories. In establishing and presenting the inventories, I have tried my best to discuss the phonemic vs. allophonic character of all Mako sounds. To do this, I have relied primarily on minimal pairs and complementary distribution. In some cases, however, I have also relied on acoustic analysis of the sound in question (e.g., /ə/ in §4.1.2).

The chapter is organized as follows. Vowels are presented in Section 4.1 and consonants are presented in Section 4.2. In both cases, natural sound classes are discussed separately (e.g., oral vs. nasal vowels and stops vs. fricatives). In both cases also, I discuss the main phonological processes that affect vowels and consonants. Section 4.3 briefly explores word-level stress and Section 4.4, the language's syllable structure. Section 4.5 concludes this chapter. A discussion of intonation is reserved for Chapter 8, Section 8.2 where I discuss the different kinds of intonation contours associated with the different kinds of sentence mood (e.g., declarative vs. interrogative).

4.1 The Vowel System

This section focuses on the Mako vowel system presenting the relevant characteristics of the different kinds of vowels, namely oral (§4.1.1) and nasal (§4.1.3), as well as the phonological processes that affect vowels (§4.1.4). In Section 4.1.2, I present a preliminary study of the acoustic properties of the vowel in the past suffix /tə/.

4.1.1 Oral Vowels

Mako has seven oral vowels. The system consists of two front vowels /i/ and /e/, two central vowels /ɨ/ and /a/ and two back vowels /u/ and /o/ and a mid-central vowel /ə/ as shown in Table 37 below. The following discussion focuses on the two front, two back and the high central and low central vowels, discussion of /ə/ is reserved for Section 4.1.2.

TABLE 37 Mako vowels

	front	central	back
high	i	ɨ	u
mid	e	ə	o
low		a	

The phonemic value of these vowels is easy to establish, as there are many minimal pairs distinguished by a change of vowel quality. This is due to the fact that many verbal suffixes are of the form -V. For example, in (1) we have a four-way contrast between the non-finite, the imperative, a present, and a future form for the verbs ‘come’, ‘grab’, and ‘think’.

	<u>NON-FINITE</u>	<u>IMPERATIVE</u>	<u>FINITE PRESENT</u>	<u>FUTURE</u>	GLOSS
(1) a.	<i>itf-ɨ</i>	<i>itf-i</i>	<i>itf-a</i>	<i>itf-o</i>	‘come’
b.	<i>em-ɨ</i>	<i>em-i</i>	<i>em-a</i>	<i>em-o</i>	‘grab’
c.	<i>omuk^{wat}-ɨ</i>	<i>omuk^{wat}-i</i>	<i>omuk^{wat}-a</i>	<i>omuk^{wat}-o</i>	‘think’

The past forms—with the suffix *-ih* ‘PST’—in (2) show the contrast between /a/ and /e/.

	<u><i>-ih-a</i></u>	<u><i>-ih-e</i></u>	GLOSS
(2) a.	<i>itf-ih-a</i>	<i>itf-ih-e</i>	‘come’
b.	<i>em-ih-a</i>	<i>em-ih-e</i>	‘grab’
c.	<i>omuk^{wat}-ih-a</i>	<i>omuk^{wat}-ih-e</i>	‘think’

The vowel /u/ not being a verbal suffix, it is harder to find as many minimal pairs as for the other five vowels but they exist nonetheless. In (3) and (4), I give some minimal pairs in classifiers. In the examples, they are attached to the proximate demonstrative root *b-*.

- (3) a. *bipo* ‘this (round)’
b. *bipu* ‘this (cucurito shell)’
- (4) a. *biɕo* ‘this (cloud)’
b. *biɕu* ‘this (head)’
c. *biɕa* ‘this (mouth)’

The minimal quintuplet in (5) and the minimal sextuplet in (6) provide further support for the phonemic status of the six oral vowels discussed above.

- (5) a. [?]*dabi* ‘to hit one’s hand with a board when working’
b. [?]*debi* ‘to crack fruits open with mouth’
c. [?]*dibi* ‘to be hard (to break, in consistency)’
d. [?]*ɖibi* ‘to break’
e. [?]*dobi* ‘to hit’
- (6) a. *wali* ‘to paddle’
b. *weli* ‘to mix (a drink)’
c. *wili* ‘to break’
d. *wɪli* ‘to crank (handle in a manual meat grinder)’
d. *woli* ‘to enchant’
e. *wuli* ‘to cut’

The phonetic distribution of these vowels across the vowel space was confirmed by an acoustic vowel-plotting study conducted in 2013.¹³² The data used in this study came from a 26-year-old male, Mako-Spanish bilingual speaker from Arena Blanca, whose first and dominant language is Mako. The recordings were made with a Zoom H4n at a sampling rate and depth of 48KHz and 24-bit respectively. The wordlist used was compiled from texts gathered during fieldwork in 2012 and the speaker was asked to repeat each token word three times in isolation (i.e., no carrier sentence was used).

Using Praat (Boersma & Weenink, 2012), I then selected the oral monophthongs that occurred in the data, either word-initially or following a consonant. I coded each vowel for its position within the word: e.g., **a1** would be an /a/ that occurred in the first syllable of a word, **a2** would be the same sound in the second syllable of a word and so on. **#** means that the vowel occurred in word-final position. I extracted the vowel information with a Praat script at the vowel midpoint. Subsequently, F1 and F2 were plotted using version 1.2 of the R package for vowels (Kendall & Thomas, 2012).

As can be seen in the scattered plot in Figure 9, where all tokens are represented, and in Figure 10, where only the means value and one standard deviation are presented, the distribution of the vowels produced by this speaker supports the distinction between the six oral vowels discussed above.

¹³² My thanks go to Tyler Kendall (University of Oregon) for help with this study, especially for sharing his Praat script and for creating the vowel plots in Figure 9 and Figure 10. Results from this study were presented at the University of Utah's Conference on Endangered Languages and Cultures of Native America (CELCNA) in 2013 (see Rosés Labrada (2013a)).

FIGURE 9 Scattered vowel plot for Arena Blanca male speaker

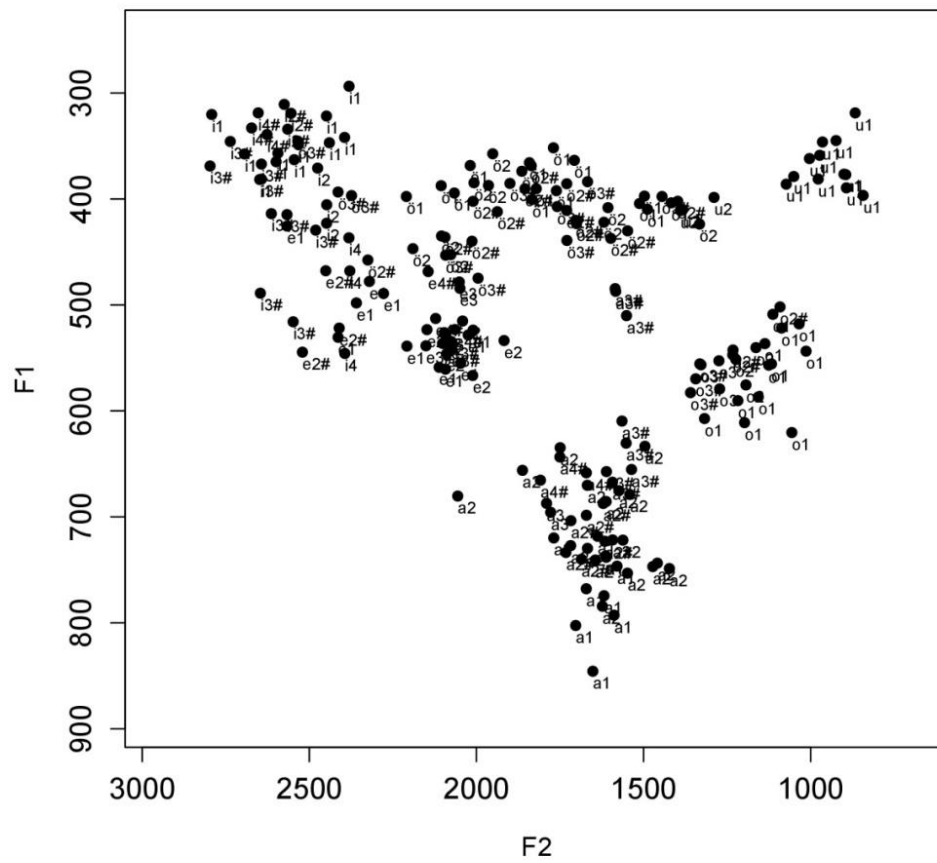
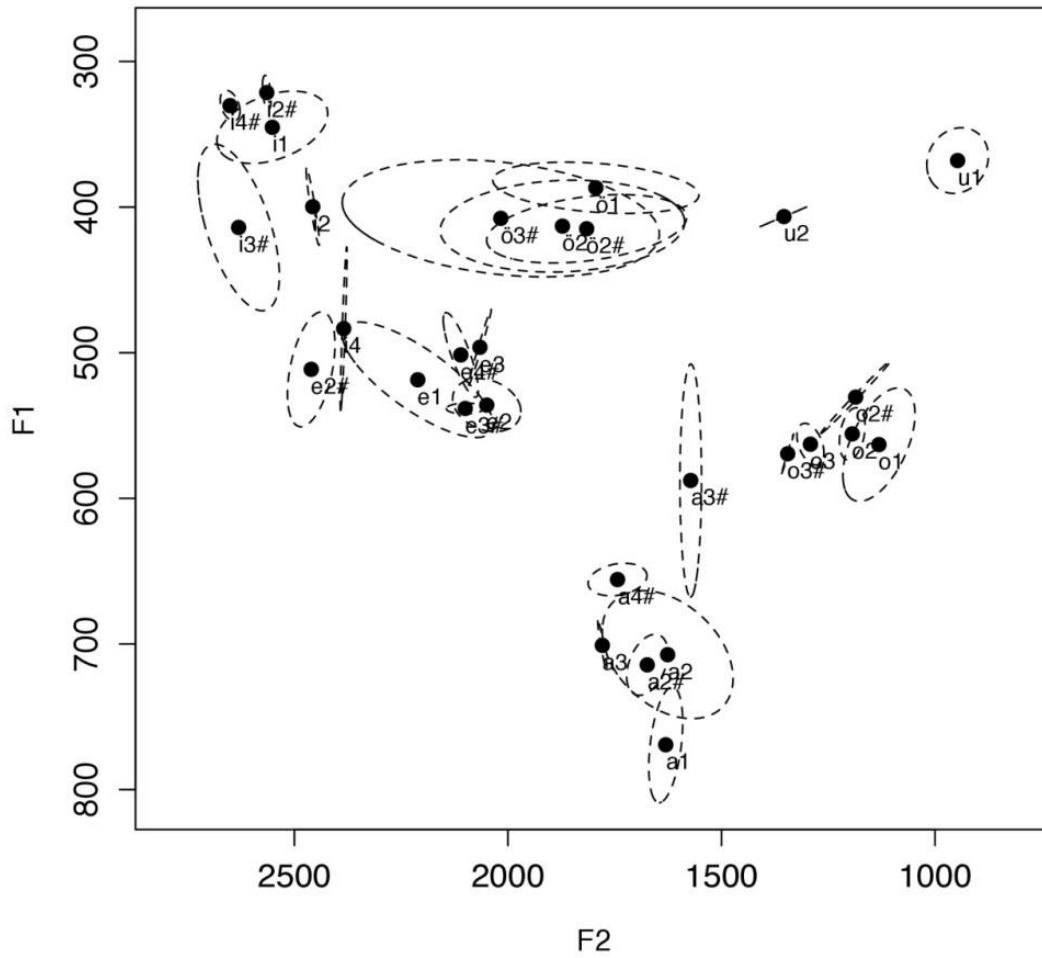


FIGURE 10 Vowel plot for Arena Blanca male speaker (SD= 1)



4.1.2 The Schwa Vowel

Additionally, there is a seventh oral vowel that is limited in its context to the past tense suffix: /-tə/. The examples in (7) and (8) show the use of this suffix. For more on /-tə/, please see Chapter 7, Section 7.2.1.2.2.6.

- (7) *h-emi* *ik^wi-di-ni-da* *ɕi-b-aw-i*
DIST2-ADV3 2PL.PRO-NON.SUBJ-CONTR? tell-B-MID-NON.FIN

ʈf-iʈf-a-tə
1SG-come-TAME-PST
‘I came here to talk to you’
- (8) *ĩkena-ma* *h-ãñ-i* *ʈfi-waits-aʈf-iħ-a-tə*
afterwards-TOP? stand-DUR-NON.FIN 1SG-know-?-PST-TAME-PST
‘afterwards, I learned while living there’

There are no minimal pairs with this sound and any of the other vowels because of its very limited morphological context. However, an acoustic study reveals that this vowel is distinct from other vowels in the system.

The data used in this study comes from six male, Mako-Spanish bilingual speakers from Porvenir II, whose first and dominant language is Mako. The recordings were made with a Zoom H4n at a sampling rate and depth of 48KHz and 24-bit respectively. As part of a larger wordlist, several conjugated verb forms ending in the past suffix /tə/ were gathered during fieldwork in 2013 and the speakers were asked to repeat each token word one time in isolation (i.e., no carrier sentence was used).

The conjugated verb forms were built using the roots ²*da-* ‘hit one’s hand with a board when working’, ²*de-* ‘crack fruits open with mouth’, ²*di-* ‘to be hard (to break, in consistency)’ and ²*do-* ‘to hit’ and a third person subject suffix *-t^h*, they ended in either *-ih-a-tə* ‘PST-TAME-PST’ or just *-a-tə* ‘TAME-PST’. Because of background noises, several tokens had to be discarded. Coding was done in Praat using the same notation conventions for place within the word as in the study above and the vowel formants

were extracted with the same Praat script as above at the vowel midpoint. Subsequently, F1 and F2 were plotted using R.¹³³

Figure 11¹³⁴ shows a scattered plot with all the tokens in the dataset. As can be seen, there is some overlap between /ə/ and /a/ (particularly the second syllable /a/s which occurred after the person suffix *t^h*-) and also between /ə/ and /i/. However, a close-up of the two areas in the plot where the overlap occurs shows that in fact the vowels are distinct. Figure 12 shows a close-up of the overlap between /ə/ and /i/. Notice that there is no overlap in the inner bags inside the shaded areas of both vowels. Figure 13 shows a close-up of the overlap between /ə/ and /a/. Here I have chosen to focus on the second-syllable /a/s, i.e., those coming after the *t^h*- third person suffix as the /a/ vowels in first syllable position showed no overlap (see Figure 11). As can be seen in the figure, there is only some minimal overlap between the inner bags of the shaded areas, which suggests that these are also distinct vowels.

¹³³ The plotting was carried out by Jesse Stewart (University of Manitoba) to whom I am indebted for the plots below.

¹³⁴ In these three figures, the asterisk in the middle of a shaded area means the average of all tokens of a given vowel, the inner bags in the shaded area capture values within 1 standard deviation of the average realization and the hulls capture two standard deviations. Different colours are used for different vowels. In these figures, /ə/ is represented as @ and /i/ as #.

FIGURE 11 Scattered plot with all the data points

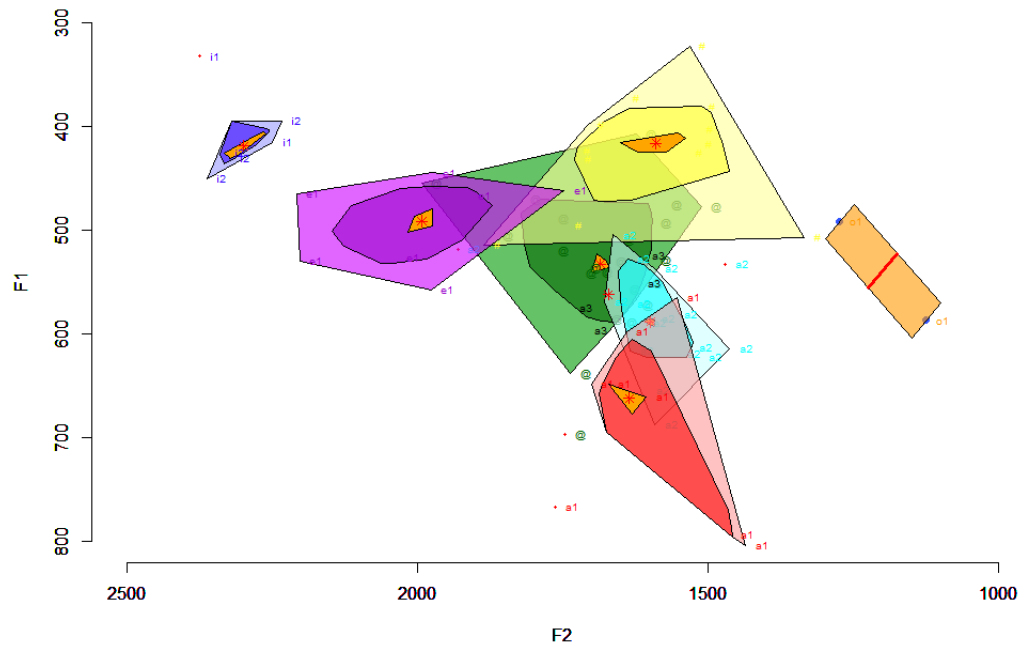


FIGURE 12 Close-up of the intersection between /ə/ and /i/

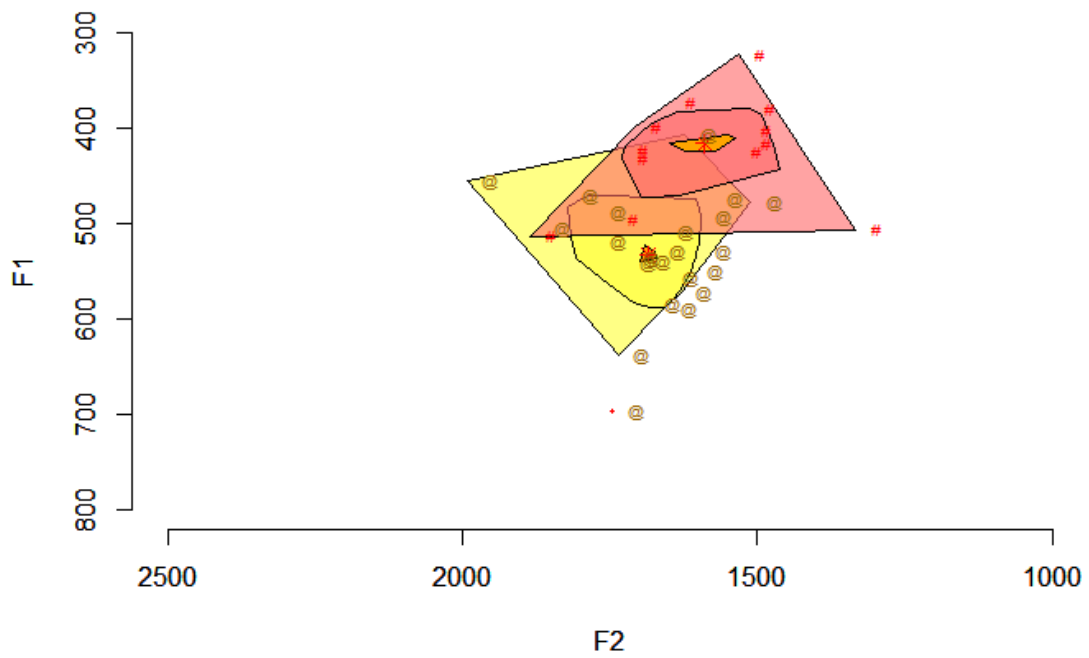
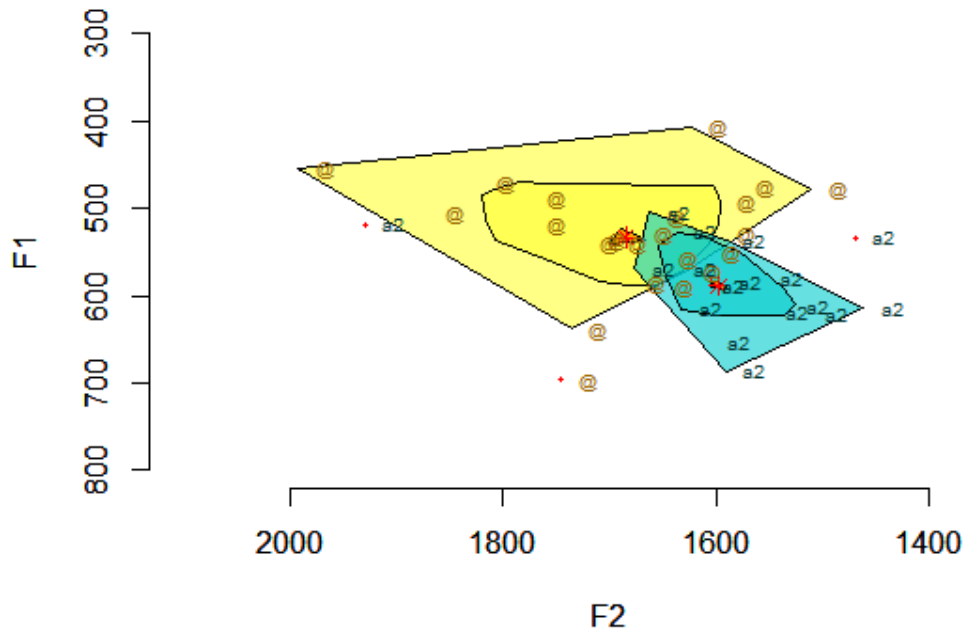


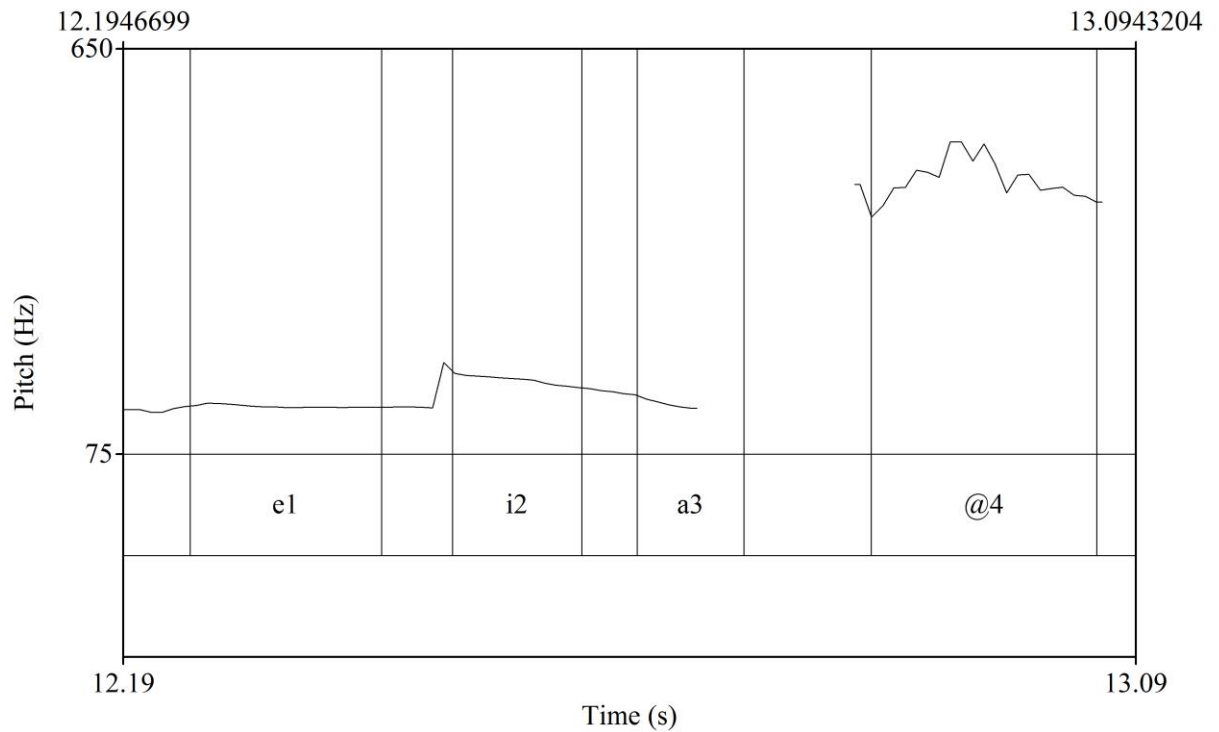
FIGURE 13 Close-up of the intersection between /ə/ and (second-syllable) /a/



If this vowel is an allophone of one of the other six oral vowels, it is not clearly understood at the present time what might condition its occurrence. It is not the preceding consonant or its word-final position as combinations of tV where V is any of the other six oral vowels occur word finally (9). Additionally, the allophony could not be conditioned by stress (which is word-final, see §4.3 below) since conjugated verb forms with the past suffix /tə/ also show word final stress as the contour of [?]*det^hihata* shows in Figure 14.

- (9)
- a. *bamati* ‘to stop’
 - b. *bamati* ‘stop!’
 - c. *bamato* ‘it will stop’
 - d. *bamata* ‘it stops’
 - e. *bamate* ‘stop!’ (reported imperative)
 - f. *ōpetu* ‘outside’

FIGURE 14 Pitch contour for the word /^ʔdet^hihatə/



4.1.3 Nasal Vowels

Each of the six oral vowels in Section 4.1.1 above has a nasal phonemic counterpart, the /ə/ vowel in Section 4.1.2 does not. The following minimal pairs support the phonemic value of the nasal vowels.

- | | | |
|------|---|--|
| (10) | a. <i>ak^wato</i> ‘(for him to) hang’ | b. <i>ak^watō</i> ‘he who hangs’ |
| | c. <i>edahī</i> ‘go see?’ | d. <i>edahĩ</i> ‘does he see?’ |
| | e. <i>ala</i> ‘macaw’ | f. <i>ālā</i> ‘yuca squeezer’ |
| | g. <i>^ʔdībī</i> ‘to break’ | h. <i>^ʔdĩbī</i> ‘to thatch’ |
| | i. <i>dubī</i> ‘to run or spread’ | j. <i>dũbī</i> ‘to suck’ |
| | k. <i>^ʔdebī</i> ‘crack fruits open’ | l. <i>^ʔdēbī</i> ‘to peel’ |

4.1.4 Phonological Processes: Vowel Nasalisation, Vowel Harmony, and Vowel Deletion

Oral vowels can undergo nasalization as in (11).

	<u>SINGULAR</u>		<u>PLURAL</u>
(11)	a. [kibo] ‘aligator’	b.	[kĩbõ] ‘aligators’
	c. [iwo] ‘sloth’	d.	[ĩwõ] ‘sloths’
	e. [ʔɖʒawe] ‘mosquito’	f.	[ʔnāwẽ] ‘mosquitos’

Nasality in this instance could be argued to be a suprasegmental feature that serves to mark the plural of certain nouns.

Vowels are also subject to a process of vowel harmony. This process seems to be limited in distribution to the set of person markers used to express possession and person agreement on Class I verbs, and to the negative verbal suffix *-iki*. Each process is discussed in turn below.

When the person prefixes (which mark either subject if on the verb or possessor if on a noun) attach to a root, the vowel in the prefix harmonizes in vowel quality with the first vowel of the root. This is shown in (12) for the third person feminine singular prefix *hV-*.

	<u>ROOT</u>		<u>CONJUGATED FORM</u>
(12)	a. <i>deh-</i> ‘light’	<i>hi-deh-obe</i>	3SG.FEM-ROOT-TAME
	b. <i>tʰits-</i> ‘bake’	<i>hi-tʰits-eb-obe</i>	3SG.FEM-ROOT-?-TAME
	c. <i>hāmat-</i> ‘stand up’	<i>hĩ-hāmat-obe</i>	3SG.FEM-ROOT-TAME
	d. <i>kikid-</i> ‘dry in the sun’	<i>hi-kikid-obe</i>	3SG.FEM-ROOT-TAME
	e. <i>kōkod-</i> ‘bring back inside’	<i>hō-kōkod-obe</i>	3SG.FEM-ROOT-TAME
	f. <i>tumat-</i> ‘close’	<i>hu-tumat-obe</i>	3SG.FEM-ROOT-TAME

As the comparison of the verb roots and the third person feminine conjugated form in (12) shows, a front vowel in the first syllable of the verb root requires an /i/ in the prefix (12)a-b while a central vowel requires an /ĩ/ (12)c-d. The back vowels, however, cannot be grouped together for this harmony process as they each require a different

vowel in the prefix: a verb root with an /o/ in its first syllable requires an /o/ in the prefix (12)e while a verb root with an /u/ in its first syllable requires an /u/ in the prefix (12)f. Additionally, the harmony extends to the nasal feature of the vowel in the first syllable of the verb root; i.e., if said vowel is nasal, the prefix vowel is also nasal (see examples (c) and (e) in (12)) but if it is oral, then the prefix vowel is also oral (see examples (a-b) (d) and (f) in (12)).

The negative suffix *-iki* occurs as such when it is not followed by other suffixes (13), however, when it is followed by the TAME suffix *-obe* or the feminine classifier *-uhu*, it harmonizes with the vowel in the suffix.

- (13) *ɕi-t-aw-iki*
 tell-1SG-MID-NEG
 ‘I am not telling (a story)’

- (14) A: *wahi-t-a* *it^{hi}-ma* *ʃf-omuk^wat-ok-obe*
 not_know-1SG-TAME 1SG.PRO-TOP? 1SG-think-NEG-TAME
 ‘I don’t know, I don’t remember’

- B: *omuk^wat-uk-uhu-Ø*
 think-NEG-CL:FEM-3.COP
 ‘she doesn’t remember’

Notice that the second vowel in the negative suffix is deleted when the VCV suffixes *-obe* and *-uhu* attach after the negative suffix. This process of deletion of the vowel in an affix also occurs with the person prefixes presented above as (15) shows with the third person feminine singular *hV-*.

- | | <u>ROOT</u> | | <u>CONJUGATED FORM</u> | |
|------|-------------------------------|--------|---------------------------------|-------------------|
| (15) | a. <i>ed-</i> | ‘see’ | <i>h-ed-obe</i> | 3SG.FEM-ROOT-TAME |
| | b. <i>omuk^wat-</i> | ‘think | <i>h-omuk^wat-obe</i> | 3SG.FEM-ROOT-TAME |

4.2 Consonants

The following table offers a summary of the phonological consonant inventory for Mako. Allophones are given between parentheses. In the sections that follow, I discuss each class of consonants separately (e.g., fricatives vs. liquids). For ease of exposition, I group together the plain voiced and voiceless stops in Section 4.2.3 and all the pre-glottalized resonants in Section 4.2.5.

TABLE 38 Mako consonants and their allophones

	bilabial	alveolar	palatal	velar	glottal
STOPS					
aspirated voiceless	p ^h	t ^h			
labialized voiceless				k ^w	
plain voiceless	p	t		k	ʔ
plain voiced	b	d			
pre-glottalized voiced	ʔb	ʔd			
FRICATIVES					
plain		(s) (ʃ)			h
labialized					h ^w
AFFRICATES					
voiceless		ts	tʃ		
voiced			ɖʒ		
pre-glottalized			ʔɖʒ		
NASALS					
plain	m	n	(ɲ)		
voiceless	(m̥)	(n̥)	(ɲ̥)		
pre-glottalized	(ʔm)	(ʔn)	(ʔɲ)		
LIQUIDS					
		l (r)			
APPROXIMANTS					
plain	w				
pre-glottalized	ʔw				

4.2.1 Aspirated Stops

There are two aspirated voiceless consonants in Mako, namely /t^h/ and /p^h/, which contrast with plain counterparts. The minimal pair in (16) shows the contrast between /p^h/ and /p/.

- (16) a. *pōbebi* ‘to open’ b. *p^hōbebi* ‘to sift’

The contrast between /t^h/ and /t/ is well-attested in my data since it signals the difference between a 1SG and a 3PL subject in Class II verbs as shown in (17) for the verbs ‘to exit’ (a-b) and ‘to laugh’ (c-d).

- (17) a. *la-t-eb-obe* ROOT-1SG-?-TAME b. *la-t^h-eb-obe* ROOT-3PL-?-TAME
c. *o-t-obe* ROOT-1SG-TAME d. *o-t^h-obe* ROOT-3PL-TAME

It may seem unusual that the plain voiceless velar stop /k/ would be left out of this aspiration contrast, but this can be explained as a historical development where Proto-Sáliban */k^h/ became Mako /h/, as the lexical comparison between the Piaroa and Mako words below suggests. For more examples of this contrast, see Chapter 10, Section 10.2 (more specifically example (35)).

- (18)

<u>Piaroa</u>	<u>Mako</u>	
[k ^h ũmadĩ]	[hãmatĩ]	‘to stand up’
[k ^h ĩ]	[hãni]	‘to live’ ¹³⁵
[k ^h æwũ]	[hãwõ]	‘sun’

¹³⁵ This Mako form has a durative suffix *-an* present in other verbs, cf. [edĩ] ‘see’ and [edani] ‘watch’.

4.2.2 Labialized Stop

There is only one labialized stop in Mako: /k^w/. The minimal pair in (19) shows that the contrast between /k^w/ and /k/ is phonemic.

- (19) a. *kabi* ‘to take something out’ b. *k^wabi* ‘to hit/kill’

Additionally, the sound /k^w/ is found in minimal pairs in conjugated vowel-initial verbs such as the one in (20) since it is the consonant of the second person prefix.

- (20) a. *ʃ-ed-obe* 1SG-see-TAME
b. *k^w-ed-obe* 2SG-see-TAME
c. *h-ed-obe* 3SG.FEM-see-TAME
d. *d-ed-obe* 1PL-see-TAME
e. *t^h-ed-obe* 3PL-see-TAME

4.2.3 Plain Stops

Mako has a voicing contrast for the bilabial and alveolar places of articulation in its stop series: cf. /p/ vs. /b/ and /t/ vs. /d/. There is, however, no voicing contrast for the velar stop /k/ as no [g] sound occurs in the language. This is not particularly surprising as the voiced velar stop seems to be a rather rare sound among South American languages in general: out of 359 South American languages in the SAPHon database (Michael, Stark & Chang, 2012), 259 languages have a /k/ with no voiced counterpart; 96 languages have both a /k/ and a /g/; and four languages do not have either of these two sounds.

The voicing contrast in the alveolar series is particularly important as it signals the difference between a 1SG and 1PL subject in Class II verbs. This is shown in (21) for the verbs *labeɓi* ‘to exit’ (a-b) and *obi* ‘to laugh’ (c-d).

- (21) a. *la-t-eb-obe* ROOT-1SG-?-TAME b. *la-d-eb-obe* ROOT-1PL-?-TAME
 c. *o-t-obe* ROOT-1SG-TAME d. *o-d-obe* ROOT-1PL-TAME

No minimal pairs are attested in my data between /p/ and /b/ but the minimal pairs of verbs in (22) and the minimal pairs with the proximate demonstrative *b-* and a classifier in (23) show the phonemic nature of both of these consonants. Minimal pairs for /k/ and other consonants are given in (24).

- (22) a. *ebi* ‘to take the fiber out’ b. *emi* ‘to grab’
 c. *libi* ‘to saw’ d. *lidi* ‘to let time pass’
 e. *debi* ‘to not exist’ f. *dewi* ‘to be white’
- (23) a. *bipo* ‘this (round)’
 b. *biɕo* ‘this (cloud)’
 c. *biʔbo* ‘this (oblong)’
 d. *biʃfo* ‘this (bunch)’
- (24) a. *kibi* ‘to gnaw’
 b. *hibi* ‘to grate’
 c. *tibi* ‘to plant’
 d. *dibi* ‘to scrape’

4.2.4 Glottal Stop

The glottal stop, unlike the other stops we have seen thus far, seems to be restricted to word-medial contexts:

- (25) a. *kʷiʔibaʔo* ‘rifle’
 b. *oʔori* ‘agouti’
 c. *iʔibi* ‘to chase’

Its phonemic value is however established by the presence in the language of minimal pairs that contrast /ʔ/ and other consonants. For example, in (26) we have the numeral ‘2’ with an infixed *-ʔo* classifier for ‘bone’, ‘hoof’ and other nouns that contrasts for the

numeral ‘2’ as used with round things (classifier *-po*) or the numeral ‘2’ used with oblong things (classifier *-^ʔbo*). We could also add the form of the proximate demonstrative for this classifier, namely *bi^ʔo*, to the examples in (23) above.

- (26) a. *d<opo>latahi* ‘two’
 b. *d<opo>latahi* ‘two’
 c. *d<o^ʔbo>latahi* ‘two’

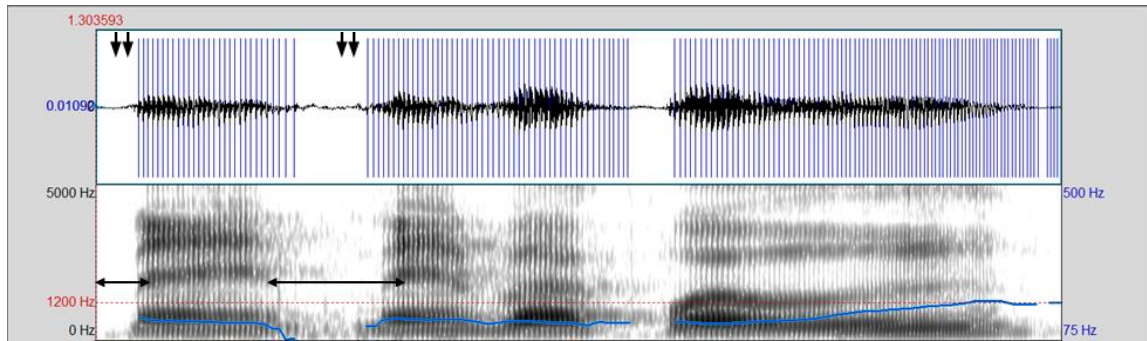
4.2.5 Pre-glottalized Resonants¹³⁶

Additionally, there is a series of pre-glottalized voiced consonants that can appear both word-initially and word-medially. These deserve a little more attention as they are cross-linguistically rare (Maddieson, 1984b, 2013; Ladefoged & Maddieson, 1996; Gordon & Ladefoged, 2001). Here, I first show the acoustic difference between the pre-glottalized consonants and their non-pre-glottalized counterparts as well as the differences between the pre-glottalized consonants depending on their position within the word. I argue that the latter differences are an artifact of the data (which was recorded in isolation). Additionally, I show that the nasal pre-glottalized consonants are allophonic variants of the oral pre-glottalized consonants.

First, let us look at the realization of [^ʔm] in the word [^ʔmẽ^ʔmēbak^wai] ‘to hit one another’. As the spectrogram in Figure 15 below shows there is full closure of the glottis (as evidenced by a lack of pulses (blue lines, top half of the figure) right before the nasal consonant starts).

¹³⁶ Part of this work was presented at University of Utah’s Conference on Endangered Languages and Cultures of Native America (CELCNA) in 2013 (see Rosés Labrada (2013a)).

FIGURE 15 Spectrogram for [ʔmẽʔmẽbak^wai]



A closer look at the realization of the first (word-initial) [ʔm] vs. the second (word-medial) [ʔm/] in [ʔmẽʔmẽbak^wai] reveals some phonetic differences as shown in the spectrograms¹³⁷ below. As can be seen in these two figures, there seems to be a difference in the realization of the sound [ʔm] depending on the position it occupies within the word: word-initial [ʔm] in Figure 16 only shows a short nasal with no smooth voice increase (see arrows) but no apparent creaky voice and no glottal closure preceding it, as it is the case with the [ʔm] in Figure 17.

¹³⁷ These spectrograms are slices of the spectrogram in Figure 15; the double-headed arrows in Figure 15 show the approximate duration of the slice enlarged in Figure 16 and Figure 17. Same applies to all enhanced spectrograms below.

FIGURE 16 Spectrogram for word-initial [ʔm] in [ʔmẽʔmẽbakʷai]

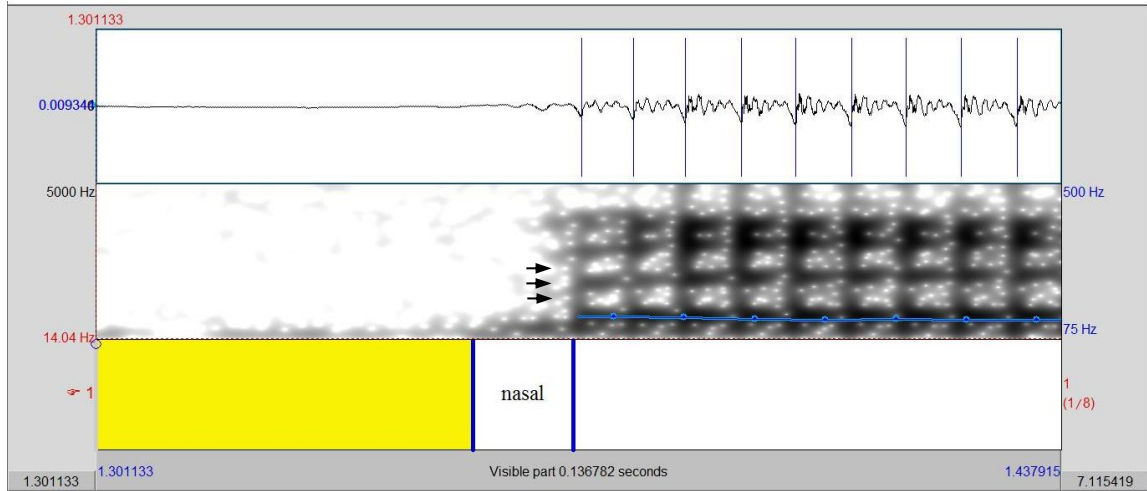
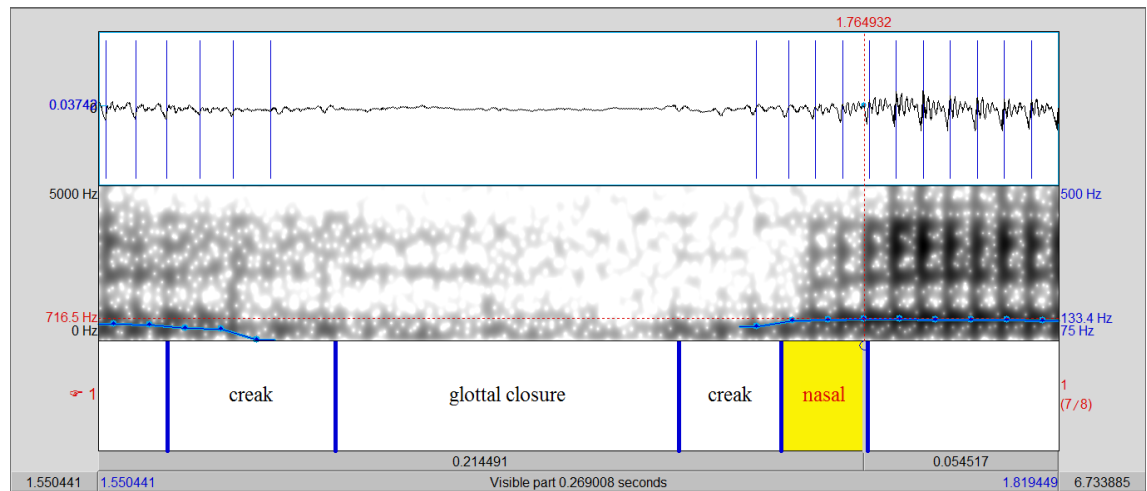
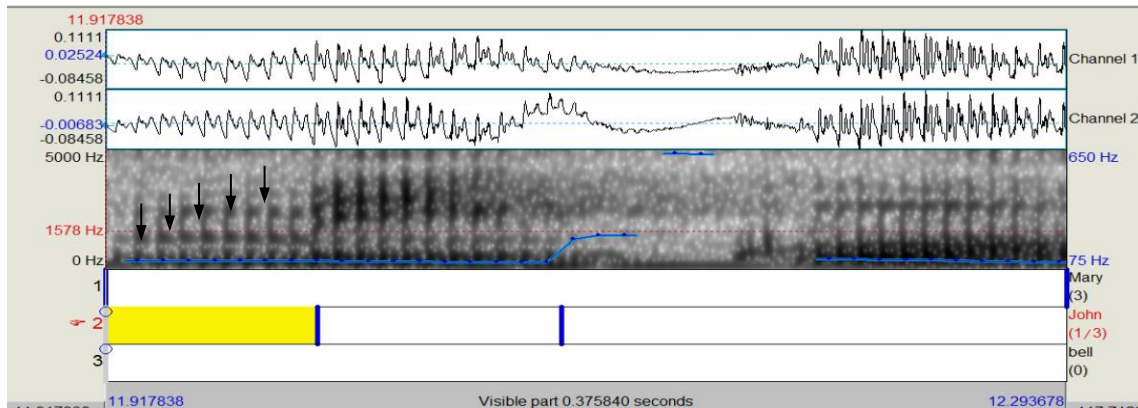


FIGURE 17 Spectrogram for word-medial [ʔm] in [ʔmẽʔmẽbakʷai]



Given that there is no glottalization observable in the spectrogram of word-initial [ʔm], the question is now whether or not there is a difference between word-initial [ʔm] and word-initial [m]. The spectrogram in Figure 18 shows that the duration of these two nasals is different and that there is a gradual increase of voicing for [m] that is not observed above for [ʔm].

FIGURE 18 Spectrogram for word-initial [m] in [mikʷõ]



This is the case for the other glottalized nasals as well. Figure 19 below shows the spectrogram for the word [ʔnēbĩ]. A slice of the word-initial consonant in Figure 20 shows that the increase of voicing is also rather abrupt for word-initial [ʔn]. Now compare that with Figure 22 which shows a word-initial [n] in the word [neekwanĩhõbĩ] in Figure 21. As can be observed, the increase of voicing for the non-glottalized alveolar nasal is, like the one for [ʔm] vs. [m], longer and smoother.

FIGURE 19 Spectrogram for the word [ʔnēbĩ]

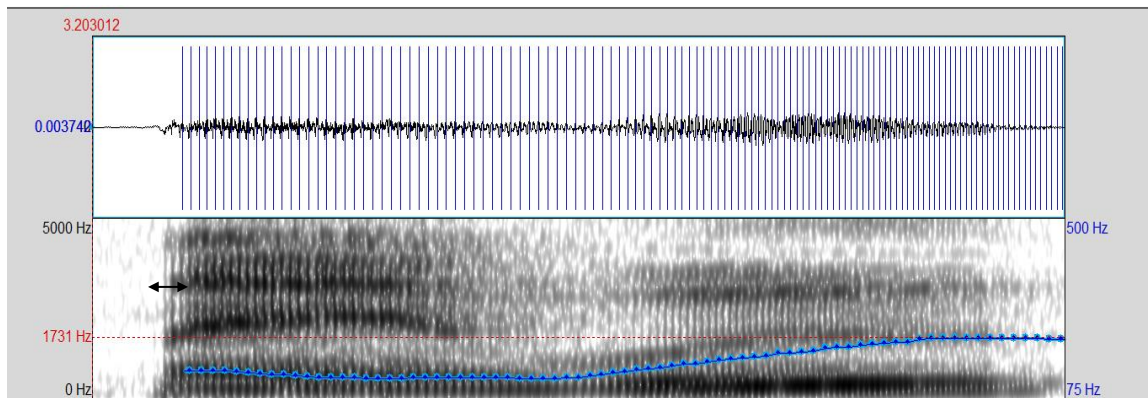


FIGURE 20 Spectrogram for word-initial [ʔn] in [ʔnēbī]

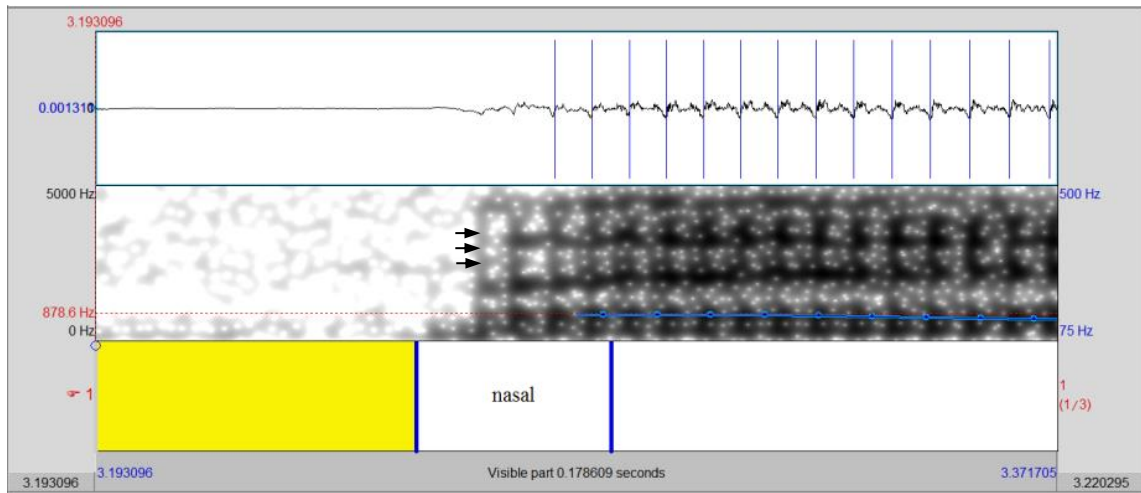


FIGURE 21 Spectrogram for the word [neekʷanīhōbi]

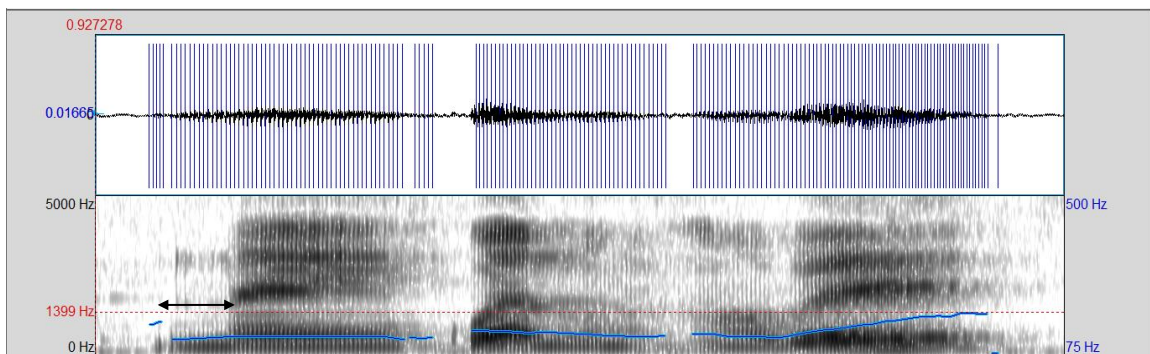
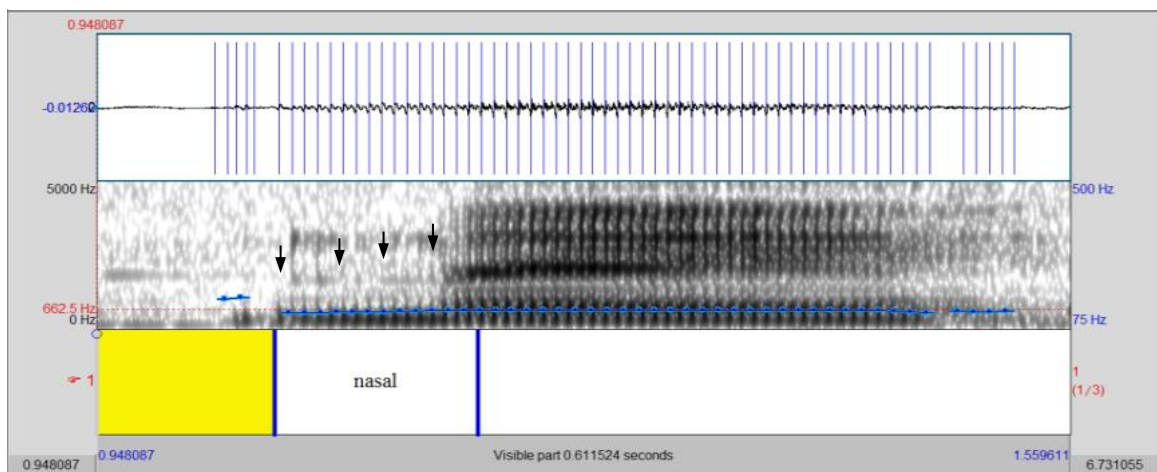


FIGURE 22 Spectrogram for word-initial [n] in [neekʷanīhōbi]



The same observations presented above for the acoustic realization of word-initial [ʔm] and [ʔn] are valid for word-initial [ʔɲ] and word-initial [ɲ] as can be seen in Figure 23 through Figure 26.

FIGURE 23 Spectrogram for the word [ʔɲāwē]

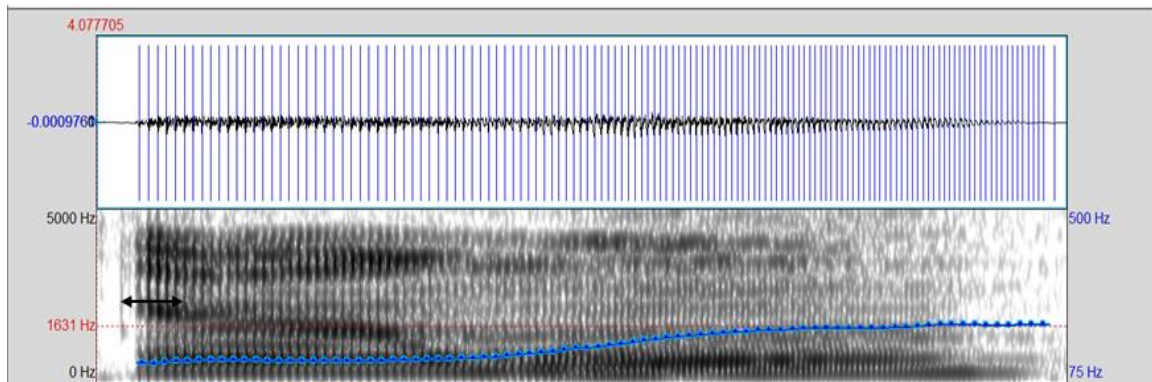


FIGURE 24 Spectrogram for word-initial [ʔɲ] in [ʔɲāwē]

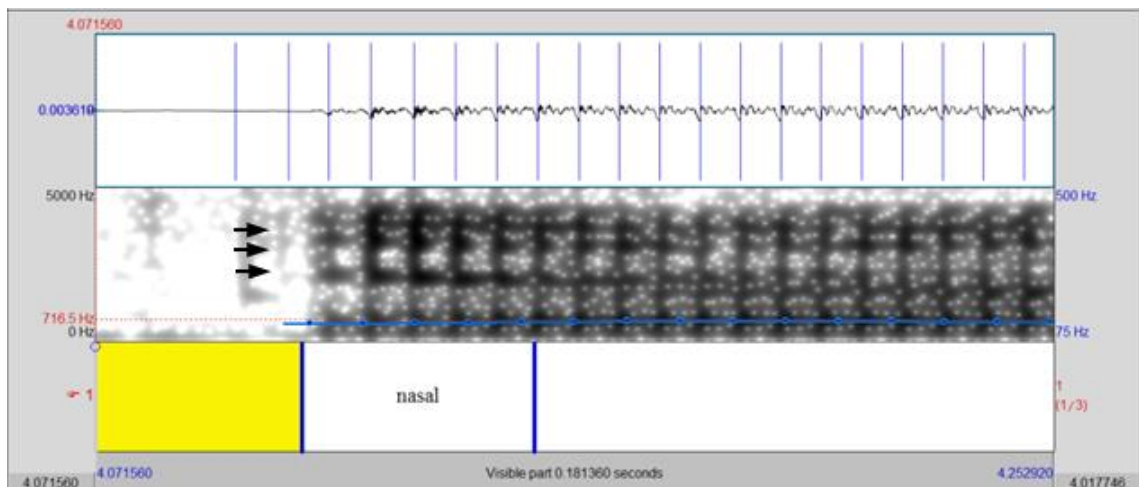


FIGURE 25 Spectrogram for the word [ɲĩbĩ]

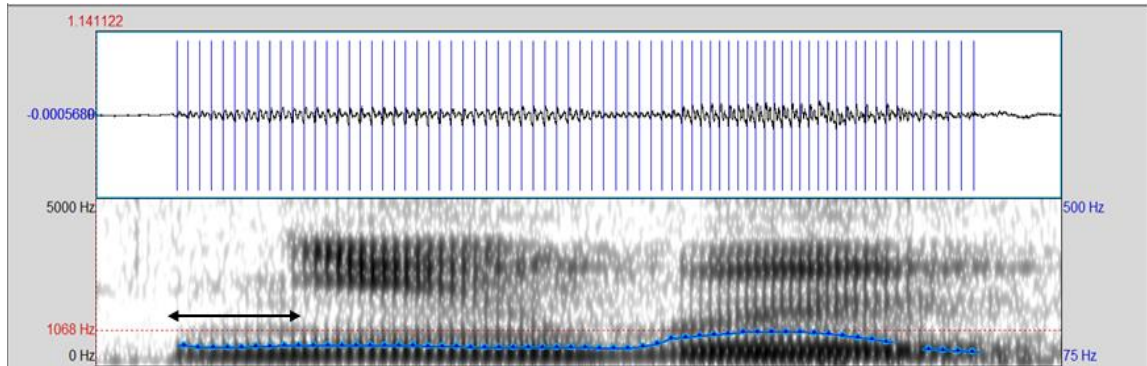
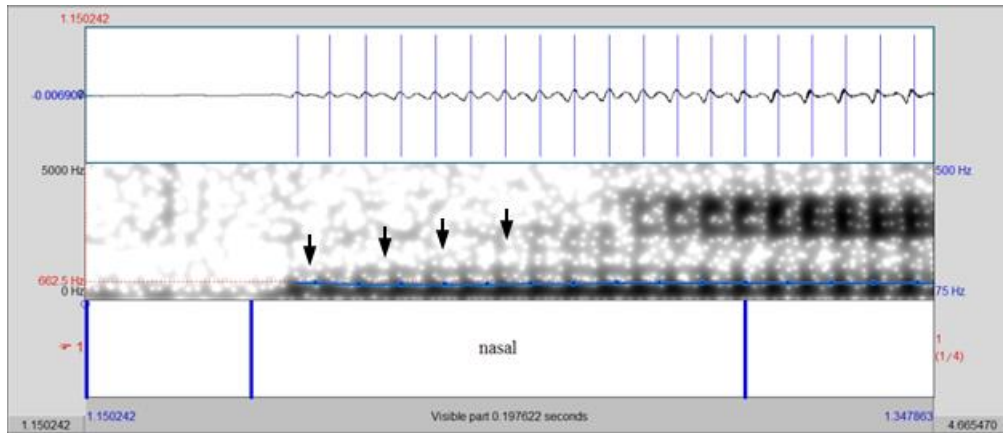


FIGURE 26 Spectrogram for word-initial [ɲ] in [ɲĩbĩ]



Thus far, what the spectrograms show is that all word-initial pre-glottalized nasals behave differently from their word-initial non-pre-glottalized counterparts. But remember there was a difference between the word-initial glottalized bilabial nasal and its word-medial counterpart in the word [ʔmẽʔmẽbak^wai]. What is the behavior of word-medial [ʔn] and word-medial [ʔɲ]? As Figure 27 and Figure 28 and Figure 29 and Figure 30 (respectively) show these two sounds behave like word-medial [ʔm], i.e., their spectrograms show a period of creakiness followed by a glottal closure followed by another period of creakiness followed by the nasal.

FIGURE 27 Spectrogram for the word [kʷã'nõma]

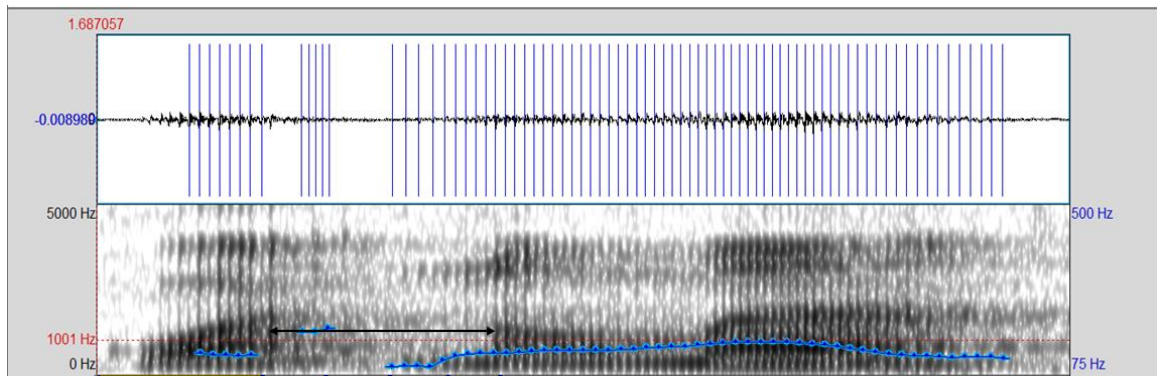


FIGURE 28 Spectrogram for the word-medial [ʔn] in [kʷã'nõma]

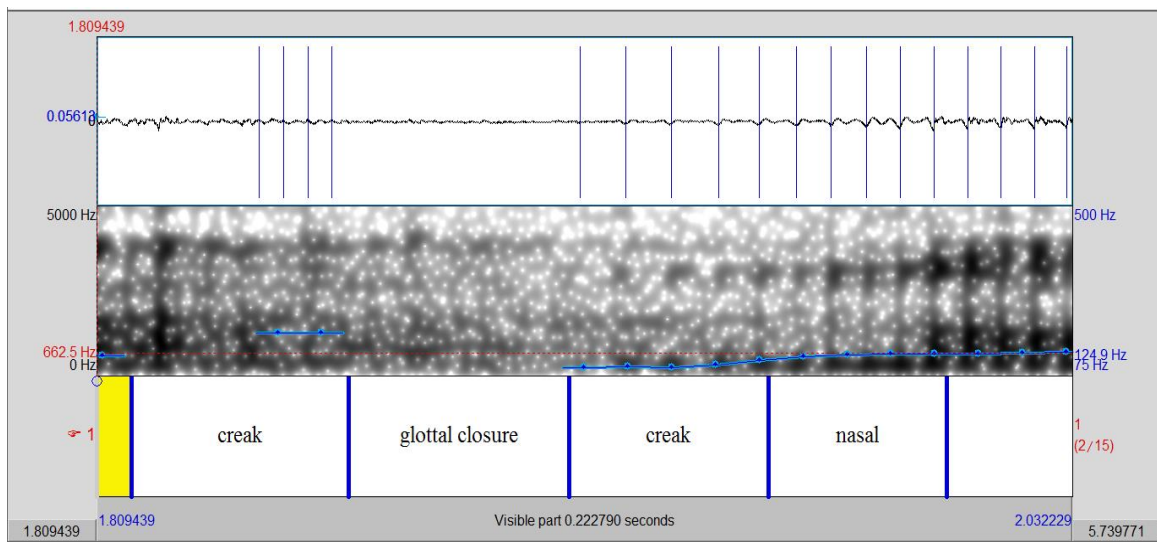


FIGURE 29 Spectrogram for the word [nũ'pĩ]

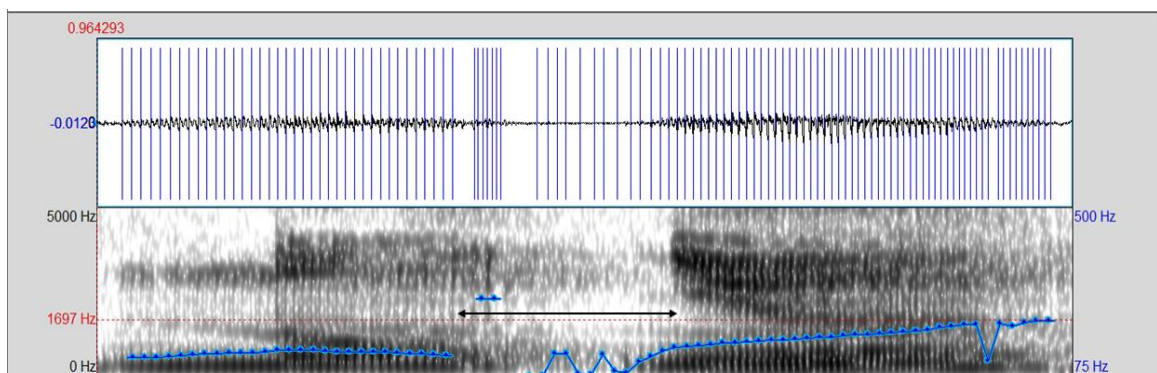
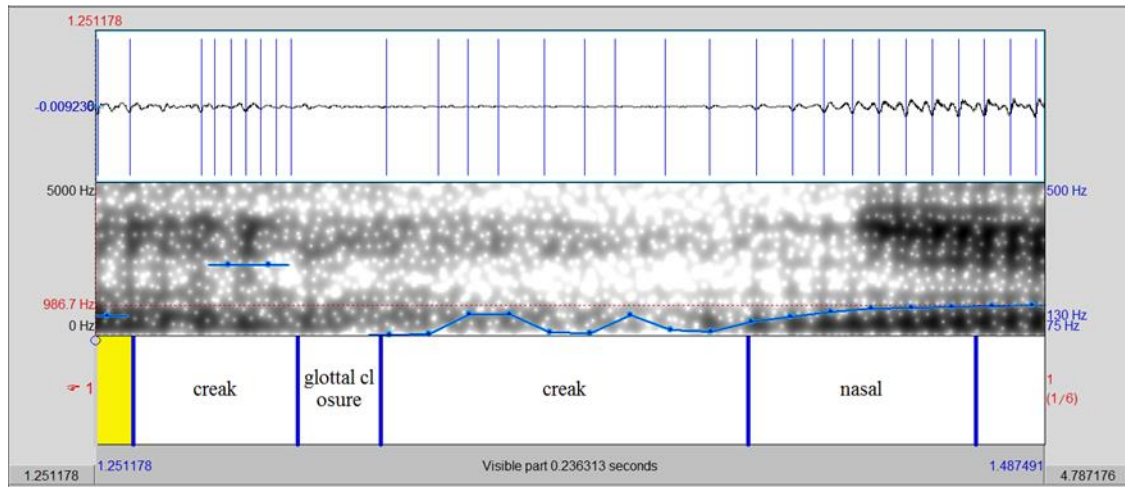


FIGURE 30 Spectrogram for the word-medial [ʔp] in [nũʔpĩ]



Now let us move on to the other three non-nasal pre-glottalized consonants. Figure 31 and Figure 32 show a word-initial non-glottalized [b] from the word [bisuma]. If we compare this to a word-initial pre-glottalized [ʔb] (see Figure 33 and Figure 34), we will notice that the main difference between the two sounds lies in the relative “strength” of the burst (Please observe double burst in Figure 34) and by a relative bigger increase in voicing for the latter sound (also observable in Figure 34).

FIGURE 31 Spectrogram for the word [bisuma]

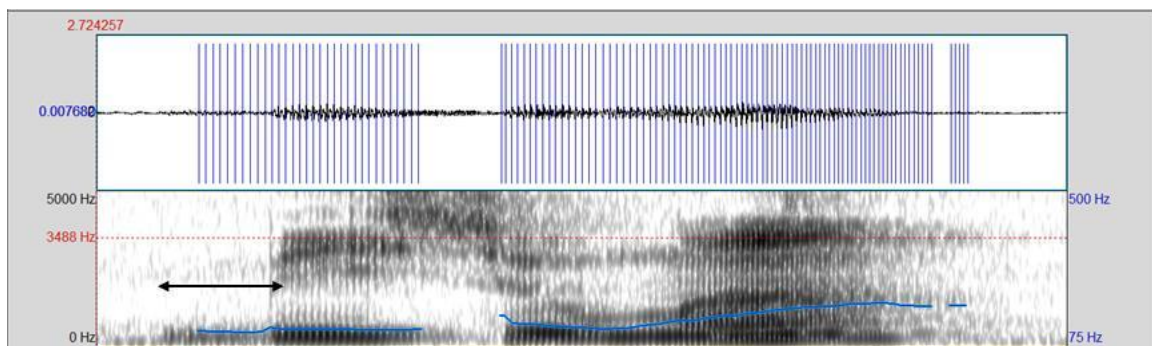


FIGURE 32 Spectrogram for the word-initial [b] in [bisuma]

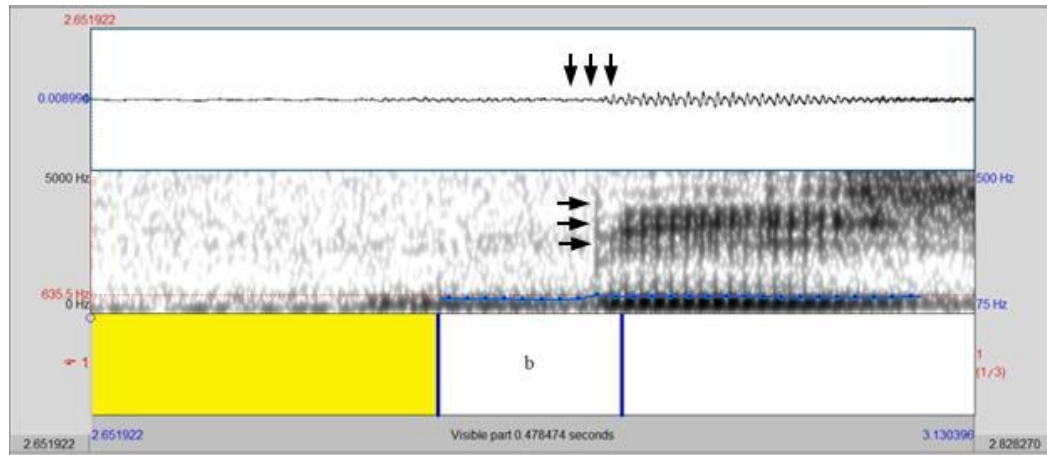


FIGURE 33 Spectrogram for the word [ʔbibi]

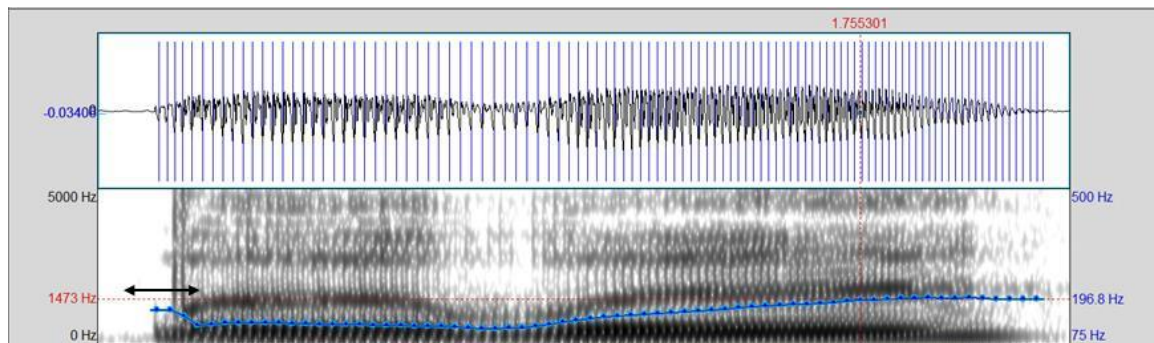
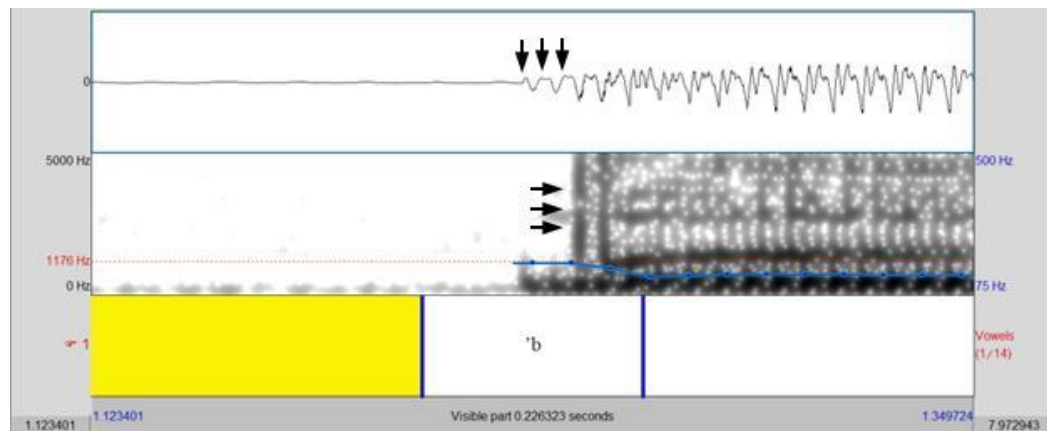


FIGURE 34 Spectrogram for the word-initial [ʔb] in [ʔbibi]



Now compare word-initial [ʔb] with word-medial [ʔb] in the word [saʔbalari] in Figure 35 and Figure 36. As can be observed, the behaviour of the word-medial variant of the

consonant resembles closely the behaviour of the word-medial pre-glottalized nasals. That is, there is a period of creak followed by complete closure of the glottis followed by more creaky voice followed by the consonant. Notice that amplitude in the [b] part of the consonant increases (rather than decreases) over time; this property is more characteristic of an implosive sound than a plosive (see Ladefoged & Maddieson (1996:24)) and so I have labeled that part of the consonant in Figure 36 as “implosive”.

FIGURE 35 Spectrogram for the word [saʔbalari]

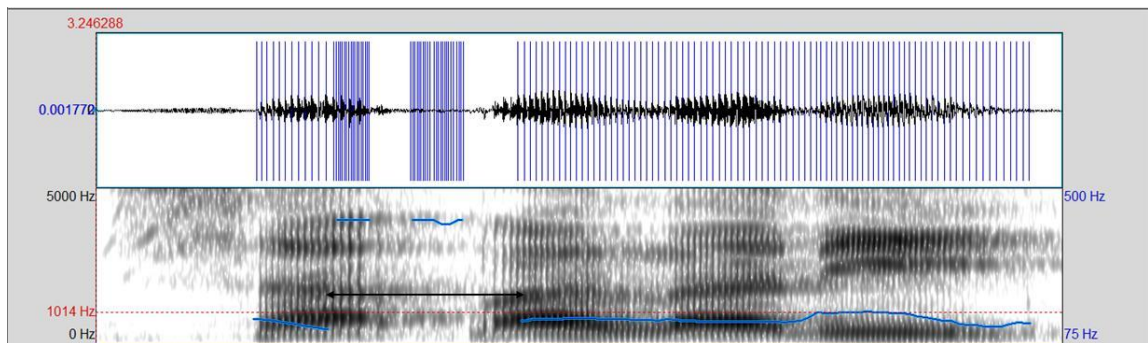
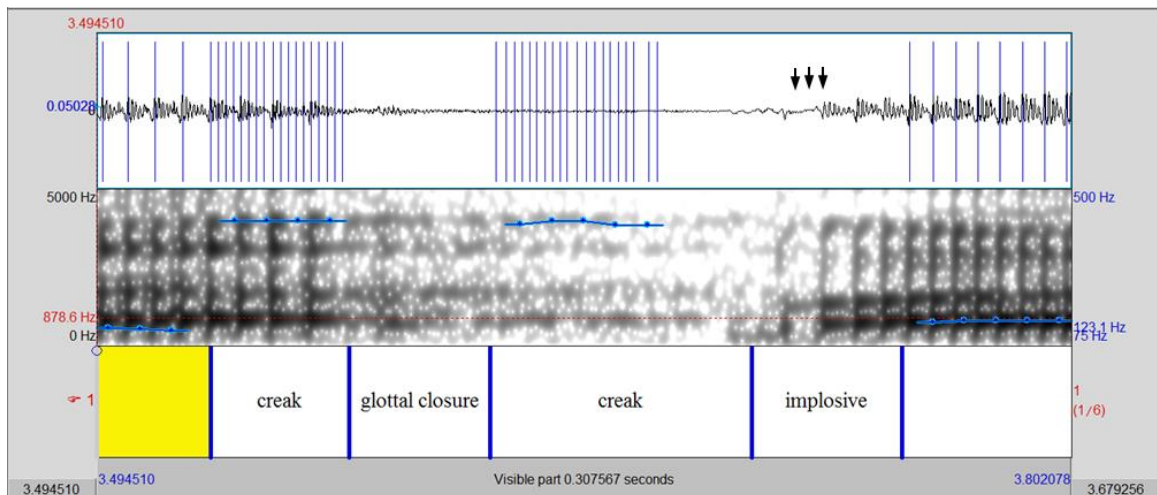


FIGURE 36 Spectrogram for the word-medial [ʔb] in [saʔbalari]



Almost the exact same observations can be made for the pre-glottalized alveolar voiced stop, the only difference being that there is no second creak period in the medial variant

of this realization.¹³⁸ A word-initial [ʔd] and a word-medial [ʔd] in the word [ʔdaʔdabi] are shown in the spectrograms in Figure 37 through Figure 39. Figure 40 is given as a point of reference to contrast the pronunciation of word-initial [ʔd] with word-initial [d].

FIGURE 37 Spectrogram for the word [ʔdaʔdabi]

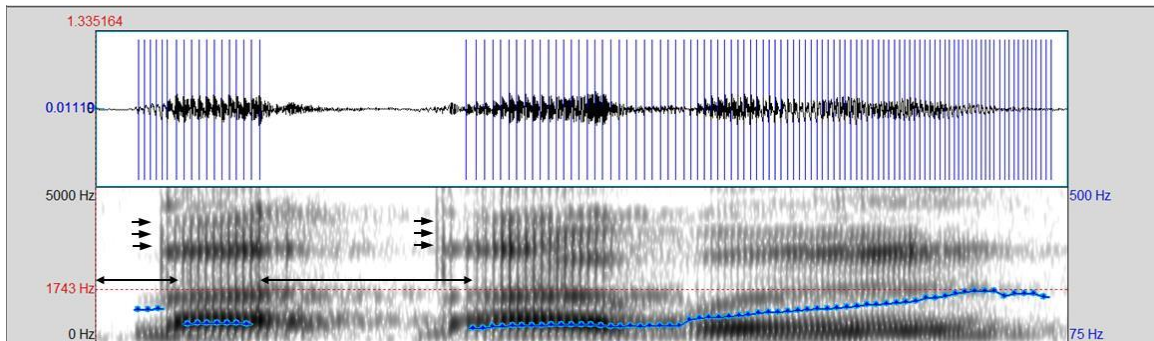
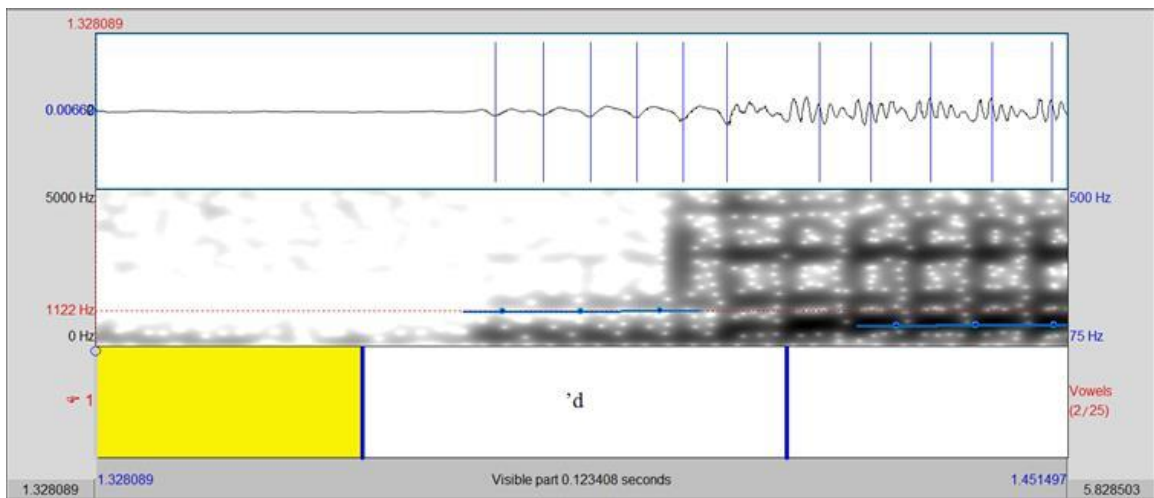


FIGURE 38 Spectrogram for the word-initial [ʔd] in [ʔdaʔdabi]



¹³⁸ Glottalized resonants are known for having variable realization, see for example Maddieson & Larson (2002).

FIGURE 39 Spectrogram for the word-medial [ʔd] in [ʔdaʔdabi]

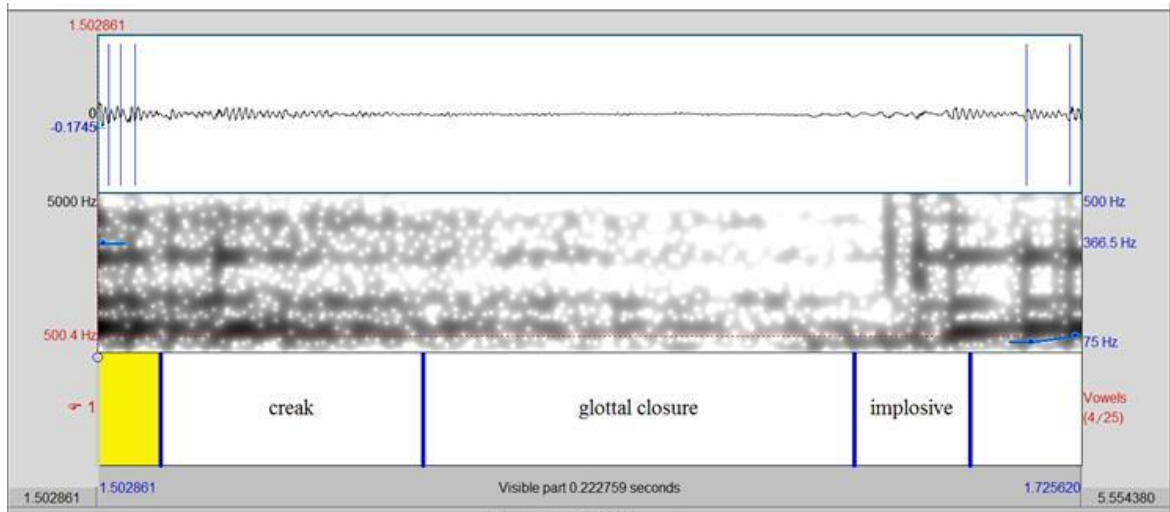
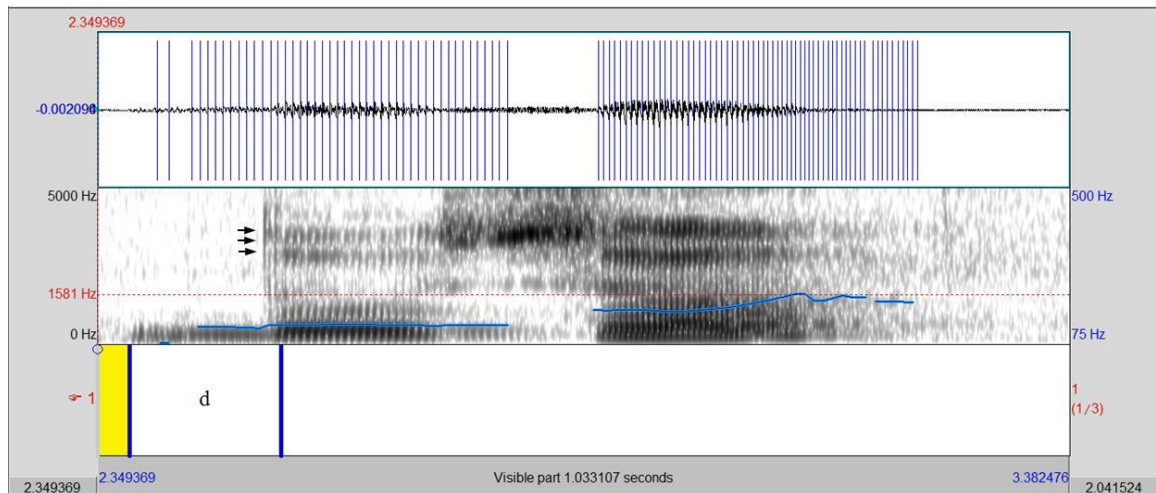


FIGURE 40 Spectrogram for the word [duso]



The third pre-glottalized oral consonant to be discussed here is /ʔɕ/.¹³⁹ The spectrogram in Figure 41 below shows the pronunciation of /ʔɕeʔɕebi/, which contains both a word-initial and a word-medial /ʔɕ/. The spectrograms in Figure 42 and Figure 43 demonstrate the existence of differences (similar to those already observed for the other

¹³⁹ The /ɕ/ undergoes a lenition process in rapid speech to /j/ in front of the front vowels.

pre-glottalized sounds) between the word-initial and word-medial variants of the sound. Word-initial /ʔd͡ʒ/ is pronounced as a creaky glide (Figure 42) while word-medial /ʔd͡ʒ/ is pronounced as a creaky glide which is preceded by a period of creakiness and complete closure of the glottis (Figure 43).

FIGURE 41 Spectrogram for the word /ʔd͡ʒeʔd͡ʒebi/

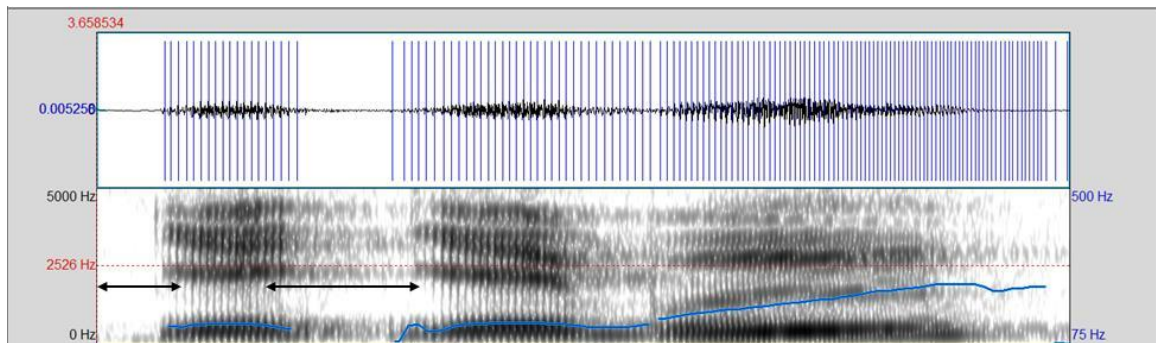


FIGURE 42 Spectrogram for word-initial [ʔj] in /ʔd͡ʒeʔd͡ʒebi/

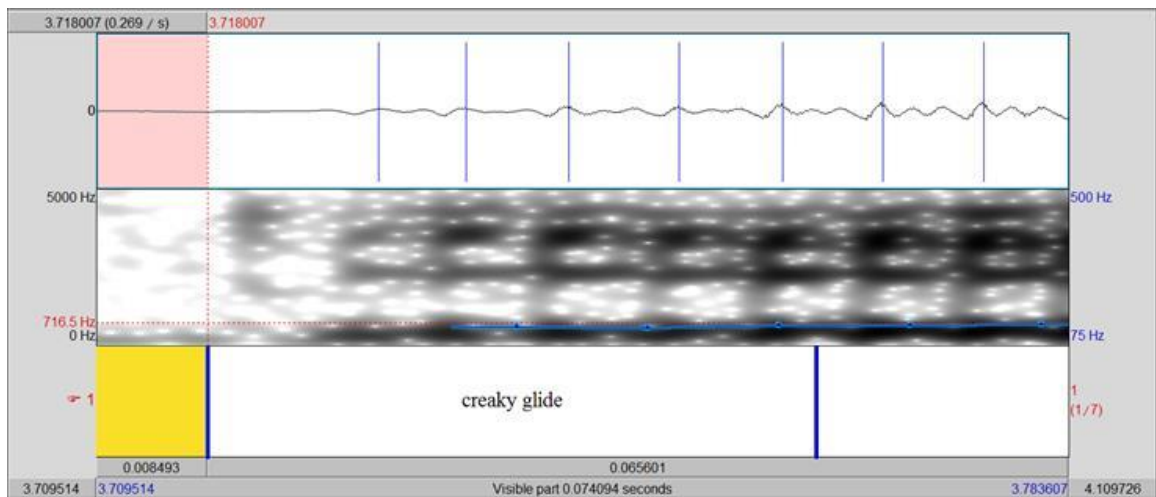


FIGURE 43 Spectrogram for word-medial [ʔj] in /ʔdʒeʔdʒebi/

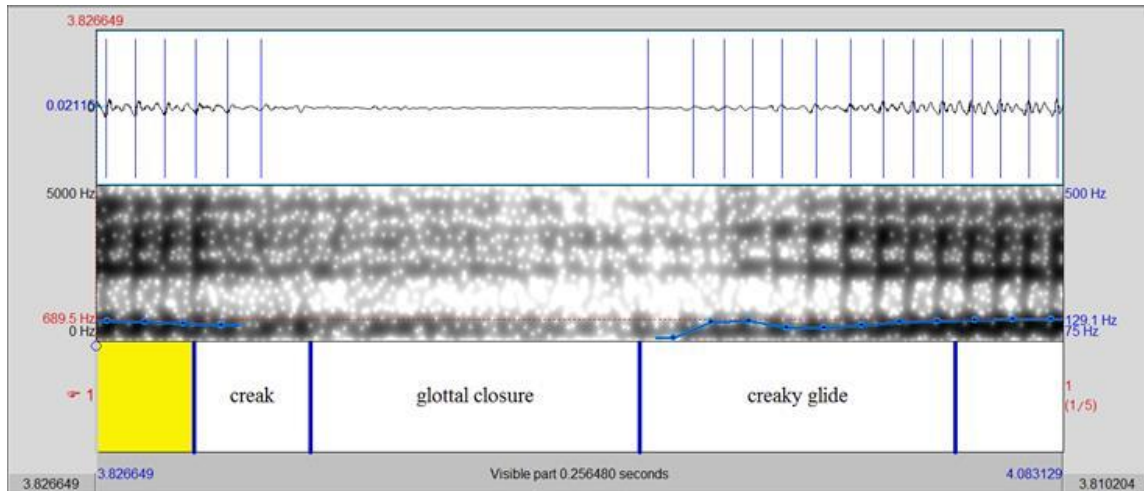


Table 3 below summarizes the discussion of the pre-glottalized sounds mentioned above.

TABLE 39 Observed acoustic characterists of consonants in FIGURE 15 to FIGURE 43

Non-glottalized consonants	Glottalized consonants	
<i>word-initial or word-medial</i>	<i>word-initial</i>	<i>word-medial</i>
<u>Nasals</u>		
no glottalization	glottalization (realized as creaky phonation)	preceding glottal stop + creaky phonation
smooth voicing increase	no smooth voicing increase	smooth(er) voicing increase
<u>Stops</u>		
soft(er) burst	strong burst	strong burst
no increase in voicing	increase in voicing	preceding glottal stop + increase in voicing
<u>Affricate</u>		
no glottalization	glottalization (realized as creaky phonation)	preceding glottal stop + creaky phonation

Given the differences between the realization of these three groups of sounds, one could posit three different phonemes: a non-glottalized consonant /C/ for the first group where no glottalization occurs and two others with different degrees of glottalization for the other two groups of sounds: perhaps a pre-glottalized consonant /^ʔC/ for word-initial

position sounds and a sequence of a glottal stop and a consonant (given the complete closure of the glottis observed) /ʔC/ for the word-medial sounds.

The syllable structure of the language, which is (C)V, does not allow codas so the sequence /ʔC/ cannot be interpreted as a /ʔ.C/ (where the . stands for a syllable boundary); neither does the syllable structure allow for complex onsets so having two onset consonants in a sequence /ʔC/ is also not the right interpretation for the data. So it is important to group these two sets of sounds under one category: pre-glottalized consonants /ʔC/. The evidence for this comes from the morphology of the language. The first syllable of the root in words like [ʔmẽʔmẽbak^wai], [ʔdaʔdabi], and [ʔɕeʔɕebi] are a reduplication of the first syllable of the word (used to indicate repeated action). This is evident if we compare the examples given in (27) and (28) below.

- (27) *k^wa-k^wa-t^h-ak^wa-obe*
 RED-ROOT-3PL-RECIP-TAME
 ‘they are fighting each other’

- (28) *ʔmẽ-ʔmẽ-t^h-akwa-obe*
 RED-ROOT-3PL-RECIP-TAME
 ‘they are slapping each other’

So we are now left with a [m], [n], [ɲ], [d], [b], and [ɕ] and a pre-glottalized counterpart to each of them (i.e., a [ʔm], [ʔn], [ʔɲ], [ʔd], [ʔb], and [ʔɕ]). Is it possible to group these sounds further? Available evidence suggests (see all the contexts above, for instance) that the pre-glottalized nasals only occur when the following vowel is a nasal and the pre-glottalized oral stops when the following vowel is oral. This complementary distribution allows me to affirm that the pre-glottalized nasals are allophonic variants of

the other three pre-glottalized consonants. Further evidence comes from pluralizing a noun with a pre-glottalized oral consonant. This is shown in (29) where the initial [ʔɕ] of the word for ‘mosquito’ becomes a [ʔn] in the plural form.

- (29) a. ʔɕawe [ʔɕawe] ‘mosquito’ b. ʔɕãwẽ [ʔnãwẽ] ‘mosquitos’

The minimal pairs below show the phonemic nature of the pre-glottalized stops:

- (30) a. ʔɕibi ‘to kill’ b. ʔɕibi ‘to break’
 c. ʔɕibi ‘to be hard’ d. ɕibi ‘to scrape’
 e. ʔɕebi ‘to weed’ f. ʔɕebi ‘to crack fruits open with mouth’

4.2.6 Fricatives

The only plain fricative is a /h/, which as we saw above is a reflex of the Proto-Sáliban aspirated voiceless velar stop *k^h. The examples in (24) show the contrast between /h/ and /k/, /t/ and /d/.

In addition to the plain /h/, there is a labialized fricative /h^w/. The minimal pairs in (31) show the contrast between /h^w/ and /h/ (a) and between /h^w/ and /w/ (b, c).

- (31) a. hibi ‘to grate’ b. h^wibi ‘to not exist’
 c. h^wibi ‘to clear a plot’ d. wibi ‘to roast’
 e. h^wibi ‘to not exist’ f. wibi ‘to tighten (while weaving)’

4.2.7 Affricate Stops

There is a voiceless affricate /tʃ/, whose phonemic status is easily established as it is used in the prefix for 1SG and can be contrasted with several other consonants, as in the examples in (20) above. /tʃ/ has a voiced counterpart /ɕ/. The phonemic value of /ɕ/ as opposed to /tʃ/ is established by the minimal pair of classifiers -ɕo used for clouds and the classifier -fɔ ‘CL:BUNCH’ exemplified above with the proximate demonstrative (23).

The third affricate stop is /ts/. The minimal pairs in (32) show the phonemic value of /ts/:

- (32) a. *tsobi* 'to dig'
b. *^hdobɪ* 'to hit'
c. *tobi* 'to cook'

In the data I have gathered so far, the /ts/ sound is sometimes accompanied by an immediately preceding burst (see arrows) indicative of the [t] release (Figure 44) but sometimes this burst is lacking (Figure 45), indicating that it is realized as a fricative, which varies between /ʃ/ and /s/. Figure 45 presents two different realizations by two different speakers of the phrase *tsobi nihini* 'dig in the ground', neither of which is accompanied by the burst we saw in Figure 44. Notice also the difference in the place of articulation in these two speakers, the first of whom produces [s] and the second [ʃ]. So, we are in presence of a consonant that shows considerable variation. This variation seems to be both intra- and inter-speaker and more research is needed to understand what factors motivate the choice of one of the three allophones of /ts/.

FIGURE 44 Spectrogram for word-initial [ts]

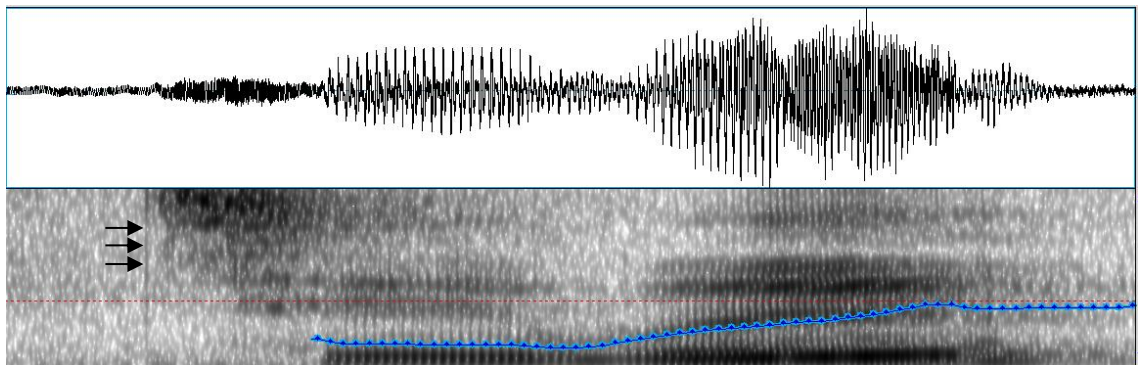
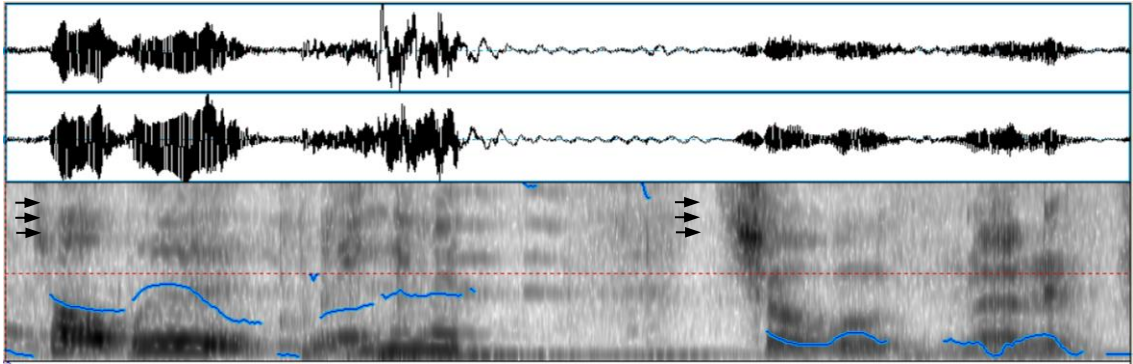


FIGURE 45 Spectrogram for word-initial [s] and [ʃ] in /tsobi nihini/



4.2.8 Nasals

There are two nasals that have phonemic status: /m/ and /n/. This is shown by the examples in (33) for /m/ and in (34) for /n/.

- (33) a. *emi* ‘to grab’ b. *ebi* ‘to take the fiber’

- (34) a. *nubi* ‘to tie’ b. *dubi* ‘to run or spread’

The palatal nasal [ɲ] is an allophone of the /ɕ/ when this sound is followed by a nasal.

- (35) a. *ɕawi* [ɕawi] ‘jaguar’ b. *ɕãwĩdĩ* [ɲãwĩdĩ] ‘jaguars’
 c. *ɕahe* [ɕahe] ‘toucan’ d. *ɕãhẽdĩ* [ɲãhẽdĩ] ‘toucans’

Additionally, there are also three voiceless nasals [m̥], [n̥], and [ɲ̥] but these are allophones of /p^h/, /t^h/ and /ts/, respectively. The evidence for allophonic status for these sounds is strongest for the [n̥] and [ɲ̥].

The nasal consonant [ɲ̥] occurs variably in the data in opposition to a [t^h] in the 3PL person prefix of verbs when the following vowel is nasal. This variation can be intra- and inter-speaker and is shown in (36). However, nasalization of /t^h/ is obligatory in nasal contexts in roots like *ĩt^hĩ* ‘son’ which is always pronounced [ĩɲ̥ĩ].

- (36) a. /t^hũ-hũn-inobe/ 3PL-live-TAME : [t^hũ-hũn-inobe]~ [ɲũ-hũn-inobe]
 b. /hĩ-t^h-an-ena/ say-3PL-DUR-ADV1 : [hĩ-t^h-an-ena]~ [hĩ-ɲ-an-ena]

The [ɲ], on the other hand, occurs in the realization of nouns formed with the dummy root *its-* when the classifier attached to the root is nasal. This is shown in (37) where the (a-c) examples show the root in a non-nasal environment and the (d-f) examples show it in a nasal environment.

- (37) a. *its-* + *-uhu* ‘CL.FEM’ = [itsuhu] ‘female’, ‘woman’
 b. *its-* + *-apo* ‘CL.ROUND’ = [itsapo] ‘round thing’ ‘mic’
 c. *its-* + *-aka* ‘CL.HARD’ = [itsaka] ‘chair’, ‘motor’, ‘ladder’
 d. *its-* + *-ãdõ* ‘CL.FABRIC’ = [ĩɲãdõ] ‘ribbon’
 e. *its-* + *-ãwõ* ‘CL.COTTON-LIKE?’ = [ĩɲãwõ] ‘a cotton-like thing’
 f. *its-* + *-õ* ‘CL.MASC’ = [ĩɲõ] ‘man’, ‘male’

For [ɲ], there is no variability, like with the [ɲ], nor morphological process, like with the [ɲ], that would provide support for the allophonic status of the consonant. However, all instances of this nasal occur before a nasal vowel as in the words in (38) and there are no instances of /p^h/ before a nasal vowel, which means that they are in complementary distribution.

- (38) a. *p^hõbebi* ‘to sift’ : [ɲõbebi]
 b. *maɲuku-p^hã* ‘mañoco’ : [maɲuku-ɲã]

4.2.9 Liquid

The liquid phoneme has two realizations: [ɾ] in front of /i/ and /ĩ/ in word-medial position and [l] in all other contexts. This is shown in (39) where I present examples of /l/ with the oral vowels /a/, /e/, /i/, /o/ and /u/ and their nasal counterparts both word-initially and word-medially. As the last column shows, the realization of this consonant

before /i/ and /ĩ/ depends on its position within the word: it is realized as [l] word-initially and as [r] intervocalically.

(39)	<u>/a/, /ã/</u>	<u>/e/, /ẽ/</u>	<u>/i/, /ĩ/</u>	<u>/o/, /õ/</u>	<u>/u/, /ũ/</u>	<u>/i/, /ĩ/</u>
	[ala]	[hilek ^w e]	[libi]	[lohinobe]	[luwa]	[libi]
	[ik ^w ila]	[t ^h ibahale]	[lidĩ]	[lõt ^h inobe]	[lu [?] dupa]	[lĩmĩ]
	[ãlã]	[lele]	[bĩli]	[welo]	[t ^h ũlũmẽ [?] ã]	[wawari]
	[la [?] di]	[mĩlẽhẽ]	[wĩlĩ]	[wilõ]		[ãwĩrĩdi]

Example (40) adds support to the allophonic nature of [r]. Here the verb root *bul-* ‘cut’ appears with an [l] in front of the non-finite suffix *-ĩ* but with an [r] in front of the progressive suffix *-in*.

(40)	<i>mik-ĩ[?]a</i>	<i>bul-ĩ</i>	<i>u-bur-in-obe</i>	<i>otom-ĩ[?]a-nĩ</i>
	twig-CL	cut-NON.FIN	3SG.MASC-cut-PST-TAME	ax-CL-NON.SUBJ
	‘cut the twig, he cuts (it) with an ax’			

The only exception to this rule seems to be the reduplication of the root *li-* ‘to crack’, used for example for when the wood on the floor cracks, or when a certain kind of fruit cracks open by itself. When this root is reduplicated, the word-initial /l/ stays [l] rather than changing to [r] as in example (41).

(41)	a. <i>libĩ</i>	‘to crack’	b. <i>lilibĩ</i>	‘to crack (repeatedly)’
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/l/ can also be variably nasalized when followed by nasal vowels as shown in examples (44) below.

4.2.10 Approximants

The Mako approximant /w/ behaves just like other consonants in the language which is why it is treated here. For example, it always occupies the syllable onset and verb roots

ending in a *-w* such as *dew-* ‘be white’ belong to Class I which is the class for verb roots that end in consonants and that therefore take subject prefixes. This consonant is commonly found in my data. As shown above, it contrasts with other consonants. In (31), we have two examples where /w/ contrasts with /h^w/. Additionally, the verb *wibi* ‘to tighten (while weaving)’ in (31)f also contrasts with other verbs such as those in (24) which start with /k/, /h/, /t/ and /d/. The contrast between /w/ and /b/ is illustrated below in (42).

- (42) a. *ɕɛbabi* ‘to be afraid’ b. *ɕɛbawi* ‘to reproduce’
 c. *debi* ‘to not exist’ d. *dewi* ‘to be white’

The plain approximant /w/ has a pre-glottalized counterpart /ʔw/. The minimal pairs in (43) show this contrast. In addition, the verb *ʔwibi* ‘to cut’ in (43) contrasts with all the verbs in (24).

- (43) a. *wibi* ‘to tighten (while weaving)’ b. *ʔwibi* ‘to cut’
 c. *wili* ‘to break’ d. *ʔwili* ‘to drill’

4.2.11 Phonological Processes: Consonant Nasalization, Lenition, and Epenthesis

Consonants, just like vowels, are also subject to nasalization processes as shown above in multiple examples (e.g., (29) for /ʔɕ/ realized as [ʔɲ], (35) for /ɕ/ realized as [ɲ], (36) for examples of /t^h/ realized as [ɲ̥], (37) for examples of /ts/ realized as [ɲ̥], and (38) for examples of /p^h/ realized as [m̥]). We also saw that the consonants [ʔɲ] and [ʔm] are in complementary distribution with the pre-glottalized stops [ʔb] and [ʔd]. I have not carried out an in-depth study of nasalization and cannot present with certainty all the

details of the consonant nasalization process or processes at work here but I give a brief exposition below.

Nasalization of a consonant is in most cases the result of a following nasal vowel (e.g., the nasalized form of the third person subject prefix in the (a) example in (36) and the three examples of [ɲ] in (37) and the two examples of [ɱ] in (38)) which suggests leftward nasalization. However, other times nasalization occurs due to a preceding nasal vowel as shown in the example (b) in (36) for the verb ‘to say’, thus showing that rightward nasalization is also possible.

Apart from the oral consonants already mentioned and presented in the examples above (i.e., /p^h/, /t^h/, /ts/, /^ɾb/, /^ɾd/, /^ɾɕ/ and /ɕ/), the liquid can be nasalized too.

- (44) a. *lõbĩ* ‘sing’ : [nõbĩ]~[lõbĩ]
 b. *wĩĩĩ* ‘mako’: [wĩĩĩ]~[wĩĩĩ]

This nasalization of /l/ seems to be an on-going sound change that has resulted in some interesting pairs with denasalization of the vowels. This is the case for the words in (45). For some speakers, only the first of these two ways of pronouncing the word is acceptable. Variation in this case seems to be age-conditioned, with younger speakers using the first variant and older speakers using the second variant.

- (45) a. *mana* ~ *mãlã* ‘path, route’
 b. *anaĩĩ^ɾbo* ~ *ãlãĩĩ^ɾbo* ‘rope’

Differences in the pronunciation of two suffixes also suggest that this is an on-going change. These are the non-subject suffix *-nĩ* and the durative suffix *-an*, which for some

older speakers can be pronounced as [li̯]¹⁴⁰ and [ãr]¹⁴¹ respectively. More research is, however, needed here to elucidate the exact sociolinguistic distribution of these variants.

The consonants /ɕ/ and /b/ can undergo lenition and be realized as [j] and [w] respectively. The context for /ɕ/ lenition seems to be before front vowels (see for example Figure 41 above). Another instance is the verb root *iɕ-* which is variably pronounced as [iɕ]—for example, in front of the non-finite suffix *-i*—or as [ij] or even [i]—for example, when attached the past suffix *-in*. The lenition of /b/ occurs intervocalically, especially in front of the non-finite suffix *-i* so a verb like *ʔdabi* ‘to hit one’s hand with a board when working’ can be pronounced as either [ʔdabi] or [ʔdawɪ]. The /w/ can also undergo lenition, or rather complete deletion as shown in (46)

(46) /otiwa/ ‘good’ : [otiwa] ~ [otia]

Consonant epenthesis also occurs with /ɕ/ and /w/. For example, the word [ʔmẽʔmẽbak^wai] discussed above can also be pronounced as [ʔmẽʔmẽbakwawɪ]. In other instances, what is epenthesized is a [ɕ] or [j] so a verb root like *h^wi-* ‘to not exist’ used with inanimate nouns can be either [h^wiɕ-a], [h^wij-a], or [h^wi-a]. Morphologically, it is

¹⁴⁰ Notice that the vowel in this case is not nasalized which seems to go against the generalization being made here. However, the Piaroa object marker is *-i* according to Mosonyi (2000) and the l:r is a regular sound correspondence between Mako and Piaroa (cf. Mako *lele* ‘turtle’ and Piaroa *rere* ‘turtle’) suggesting that the change might have been ***r > *l > n* (***Proto-Sáliban, *Pre-Mako*).

¹⁴¹ The form here is given with [r] because the only occurrence of this suffix with a liquid rather than with a nasal occurred before an *-in* suffix and the liquid is realized as [r] intervocalically. It is possible that some Marueta speakers still pronounce this suffix with a liquid, as the written version of it, i.e. <ɹl> in the New Tribes reading primers (NTM 2005a) would suggest.

the last form that is well-formed, as inanimate subjects are not marked on the verb (cf. *h^wi-t-a* ‘I don’t have’ where the *-t* is the first person singular subject suffix for Class II verbs).

4.3 Stress

Stress in Mako is word-final. Figure 46, Figure 47, and Figure 48 show both the pitch (in blue) and intensity (in yellow) contours for a two-syllable word, a three-syllable word and a five-syllable word. As can be seen in the first two figures below, both the pitch and the intensity contours correspond to one another and both reach their maximum value on the last syllable. In Figure 48, the pitch contour peaks on the fourth (from the right) syllable while the intensity contour remains as word final. It could be that in this case the speaker is exploiting both pitch and intensity to distinguish between primary and secondary stress but more research is needed in this area.

FIGURE 46 Pitch and intensity contours for the word [dutso]

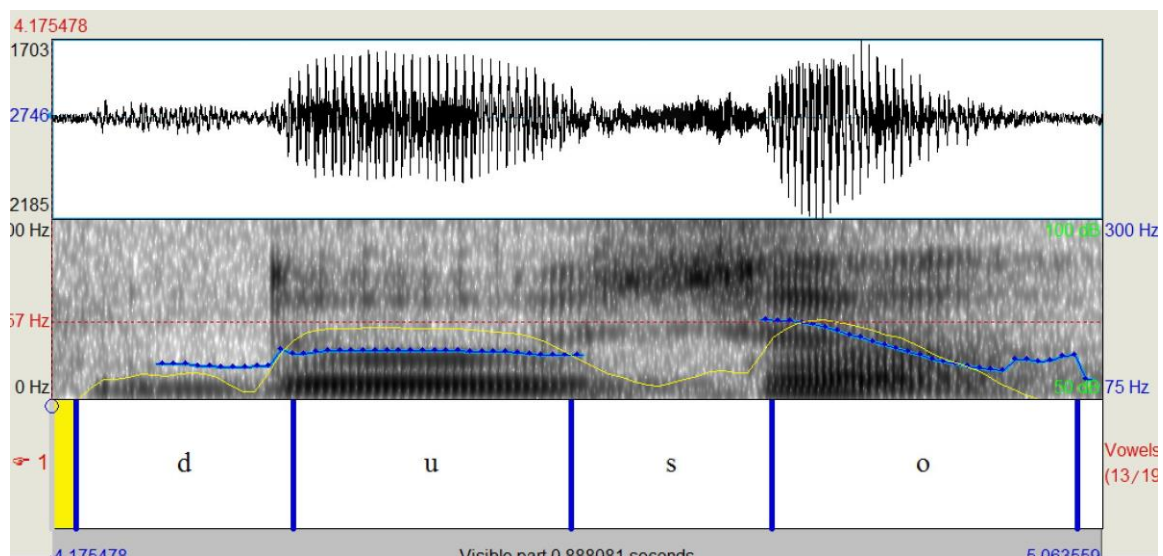


FIGURE 47 Pitch and intensity contours for the word [utsani]

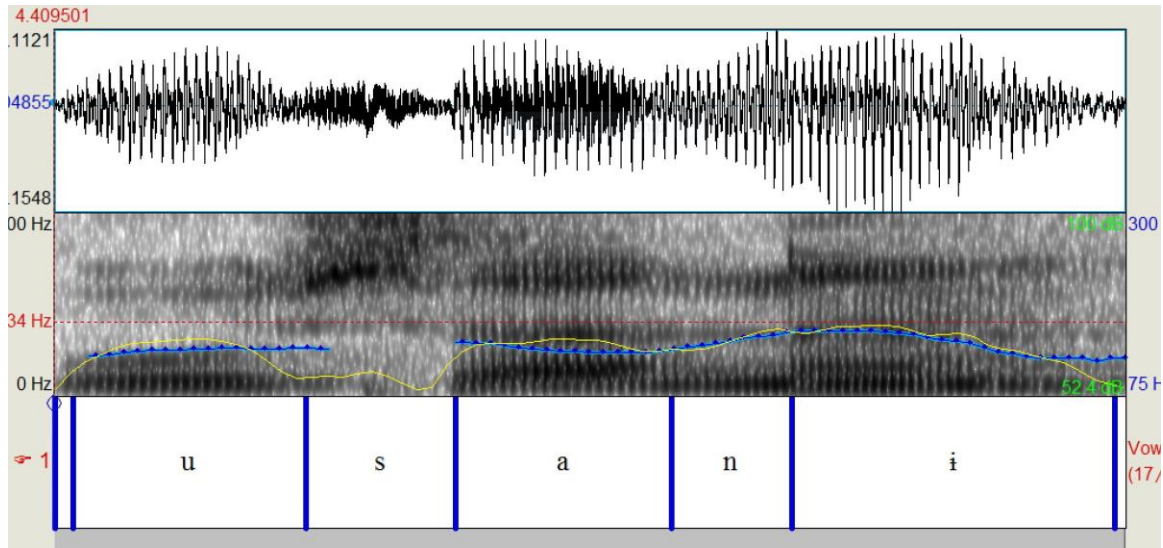
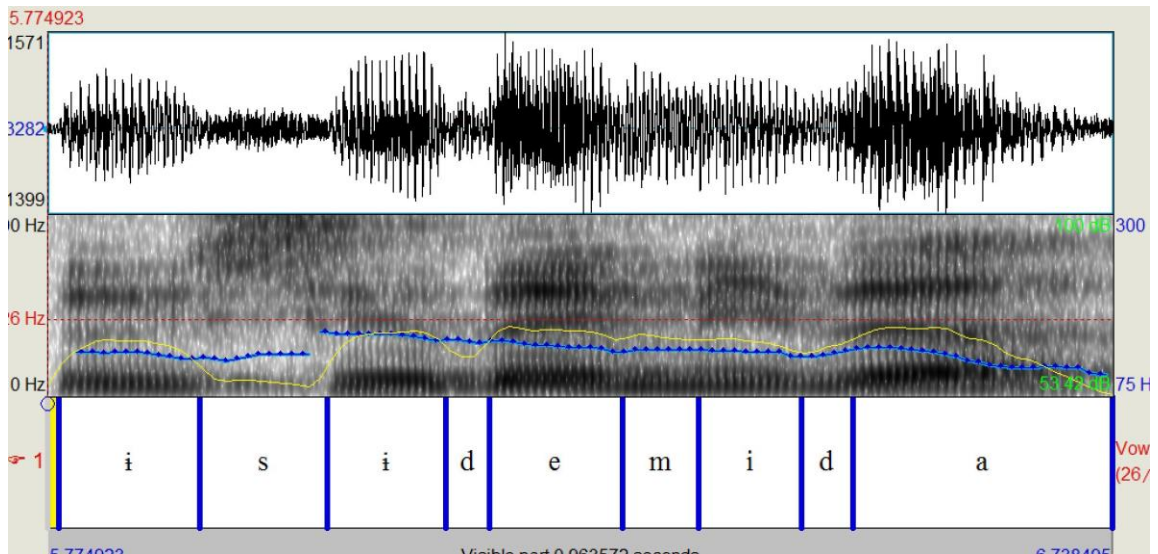


FIGURE 48 Pitch and intensity contours for the word [itsidemida]



Stress is in principle non-contrastive but one of my consultants affirms that there is a difference between ['daki] and [da'ki]; the first word would mean 'already' 'enough!' and the second one would mean 'no'. However, I do not hear a contrastive difference in this (supposedly) minimal pair; an acoustic analysis would aid to elucidate this question.

4.4 Syllable Structure

Syllable structure in Mako is (C)V and no complex onsets or codas are allowed.

- (47)
- | | | | |
|----|---------------------------------|-----------------------------------|-------------------------------|
| a. | <i>kahatinobe</i> | [ka.ha.ti.no.be] | ‘she finishes’ |
| b. | <i>ʈʂibilatobe</i> | [ʈʂi.bi.la.to.be] | ‘I turn over’ |
| c. | <i>ileka</i> | [i.le.ka] | ‘cassava’ |
| d. | <i>ileka</i> | [i.le.ka] | ‘cassava’ |
| e. | <i>edani</i> | [e.da.ni] | ‘watch’ |
| f. | <i>k^wõkõkõdinobe</i> | [k ^w õ.kõ.ko.di.no.be] | ‘she is picking (cassava) up’ |

I have heard a coda with only three words: /õdo/ ‘house’ sometimes pronounced as [ondo], /õte/ ‘oil’ sometimes pronounced [onte], and *põbebi* ‘to open’ sometimes pronounced as [pombebi]. In these instances, it is probably best to analyze the nasalization as part of the consonant, hence [o.ⁿdo], [o.ⁿte], and [po.^mbe.bi]¹⁴².

4.5 Conclusions

This chapter provided a first description of the phonology of the Mako language and of some of the acoustic characteristics of its vowels and its pre-glottalized voiced stops.

Mako has a typical Amazonian vowel system that includes a high-central vowel (Aikhenvald, 2012); the six oral vowels all have phonemic nasal counterparts. There is a seventh oral vowel, namely /ə/ that is restricted in its distribution to the past suffix /tə/.

The consonant system shows distinctions based on voice and aspiration as well as on pre-glottalization for stops and there is only one fricative, i.e., /h/—which is a reflex of Proto-Sáliban /k^h/—and one liquid /l/ which can be variably realized as [l] or [r].

¹⁴² I thank Françoise Rose for this suggestion.

Both vowels and consonants are affected by processes of nasalization. These processes require more research to understand their particularities. Vowels additionally are subject to a harmony process in the person prefixes and the negative suffix. I have also shown that stress in Mako is word-final and that the language's syllable structure is (C)V. Stress and syllable structure are two areas where further research is likely to prove fruitful.

Chapter 5

5 Parts of Speech

This chapter discusses the issue of word classes in Mako. The classification of a given word as belonging to class X or Y is usually determined by taking into account the semantic, formal (i.e., morphological), and distributional (i.e., syntactic) properties of said word. Semantic criteria, however, are not a good indicator of what constitutes a word class but rather serves to choose between labels once the word classes of a language have been determined based on morphological and syntactic criteria (Schachter & Shopen, 2007). Therefore, priority is given below to the formal and distributional properties of the different word classes. The order of presentation of each word class depends on whether the class is open (§5.1) or closed (§5.2), open classes being those whose membership is (in theory) limitless and closed classes being those with a limited number of members.

5.1 Open Classes

Typologically speaking, most languages distinguish up to four open word classes: nouns, verbs, adjectives and adverbs. Although there are debates in the literature about the existence of languages that make no noun-verb distinction, the distinction can be minimally restricted to just a noun class and a verb class. Given that there is a chapter for noun subclasses, nominal morphology and the noun phrase (Chapter 6) and that there is a chapter for verb subclasses and verbal morphology (Chapter 7) and that verbs are further dealt with in the syntax chapter (Chapter 8), the discussion of nouns (§5.1.1) and verbs (§5.1.2) that follows focuses only on the differences between these two

classes. There is no adjective class in Mako (see §5.1.3 for a quick overview of how property concepts are expressed in Mako) and the class of adverbs is, at least in principle, a closed class¹⁴³ and is therefore treated under Closed Classes (§5.2).

5.1.1 Nouns

The formal and distributional properties of Mako nouns are:

- Noun roots can be free roots and require no extra morphology to function within a phrase, clause or sentence; some bound roots exist, however, and they require a classifier (e.g., *towi* ‘tree’ for which the classifier is *-owi*) or a possessive prefix in the case of inalienably possessed nouns (e.g., kin terms) or both (e.g., body parts) to function within a phrase, clause or sentence.
- Some nouns are inalienably possessed; others can be alienably possessed.
- Nouns can be pluralized.
- Nouns cannot take TAME morphology.
- Nouns can be modified by numerals, demonstratives, pronouns, and other nouns.
- Nouns can be substituted by a pronoun.

Like nouns in other languages, Mako nouns are words denoting the names of places, people, animals, plants, and things (both concrete and abstract).

¹⁴³ I hypothesize (see below) that there is no true adverb class in Mako and that the language has “adverbial words” that come from verbs or nouns. However, for ease of presentation and pending future research, I treat them here as a separate category.

5.1.2 Verbs

Formally and distributionally, Mako verbs can be distinguished from Mako nouns in that:

- All verb roots are bound and need extra morphology to function within a phrase, clause or sentence.
- Verbs cannot be possessed (unless nominalized).
- Verbs cannot be pluralized (unless nominalized).
- Verbs take TAME morphology.
- Verbs cannot be modified by numerals, demonstratives, pronouns, and other nouns; when these co-occur with a verb, they function as verb arguments and not as modifiers.
- Verbs cannot be substituted by a pronoun.

Semantically, the class *verb* includes words that typically express actions, processes, events, etc. but also property concepts as I show in the next section.

5.1.3 Summary

Mako only has two open word classes (namely, nouns and verbs) and these can be distinguished on both morphological and distributional (i.e., syntactic) grounds. There is no adjective class in the language and most property concepts are expressed via verbs. This is exemplified below in (1) and (2) where the property concepts ‘white’ and ‘black’ predicate with the same morphology as verbs (cf. (3)).

- (1) *b-ena-ma* *dew-ō-Ø*
PROX-ADV1-TOP? be_white-CL:MASC-3.COP
‘it (a sloth) is white here’
- (2) *hōba-ma* *ǫē-b-ō-Ø*
that_one + CL:MASC-TOP? be_black-B-CL:MASC-3.COP
‘that one is black’

- (3) *hōba-ma* *ku-ō-Ø* / *tahi* / *op-ihu*
 that_one + CL:MASC-TOP? eat-CL:MASC-3.COP [filler] fruit + CL-PL
 ‘that one eats fruits’

An in-depth analysis of the formal and distributional properties of nouns and verbs is provided below in Chapter 6 and Chapter 7 respectively.

5.2 Closed Classes

This section focuses on the closed word classes and is organized into eight main sections: pronouns and pro-forms in Section 5.2.1, quantifiers in Section 5.2.2, demonstratives in Section 5.2.3, auxiliaries in Section 5.2.4, copulas in Section 5.2.5, the purpose marker *hībani* in Section 5.2.6, adverbs in Section 5.2.7, and ideophones in Section 5.2.8.¹⁴⁴ Some closed classes receive more attention than others in the present chapter depending on whether or not they are treated more in-depth in later chapters. For example, since classes such as interrogative pro-forms, numerals, and demonstratives are treated in detail elsewhere in this dissertation only a brief presentation of the class is provided here. In contrast, there is no additional treatment of place adverbs and ideophones, so I expand here on their properties.

5.2.1 Pronouns and Other Pro-forms

This section focuses on “pro-forms”, defined here following Schachter & Shopen (2007:24), as closed word classes that can substitute either open-class words or larger

¹⁴⁴ The organization follows loosely that one suggested by Schachter & Shopen (2007). For definitions of certain terms such as *pro-clause*, *pro-sentence*, etc., see these authors (pp. 24-34).

constituents. I discuss first the Mako personal pronouns (§5.2.1.1), then move on to discuss interrogative pro-forms (§5.2.1.2), and end with a discussion of pro-sentences and pro-clauses (§5.2.1.3).

5.2.1.1 Personal Pronouns

Table 40 below shows the Mako personal pronouns. The third person pronouns are composed of a distal demonstrative and an animate classifier: *ite* ‘DIST1 + CL:MASC’, *itsu/hu* ‘DIST1 + CL:FEM’, *idɿ* ‘DIST1 + CL:PL’ (see §5.2.3 and Chapter 6, §6.2.1.3).

TABLE 40 Personal pronouns

Person	Singular	Plural
1	<i>it^{hi}ɿ</i>	<i>ik^{wi}idɿ</i>
2	<i>ik^{wi}ɿ</i>	<i>ik^{wi}idɿ</i>
3.MASC	<i>ite</i>	<i>idɿ</i>
3.FEM	<i>itsu/ihu</i>	

The examples in (4) through (6) show the Mako personal pronouns in use. Notice that the main function of a pronoun is that it can replace a noun and, therefore, its functions at the phrase, clause and sentence level are the same. For more on the function of nominals, see Chapter 6 and Chapter 8.

- (4) *wahi-t-a* *it^{hi}ɿ-ma*
not_know-1SG-TAME 1SG.PRO-TOP?
‘I don’t know’
- (5) *dɿt^{hi}ɿ* *d-itɿ-ih-a* *ik^{wi}idɿ-ma*
where_from 1PL-come-PST-TAME 1PL.PRO-TOP?
‘where do we come from?’

- (6) *ite-k^{wɪ}-da* / *nomena-k^{wɪ}*
DIST1 + CL:MASC-SOC-CONTR? PN-SOC
‘with that one (male), with Rumeno’

5.2.1.2 Interrogative Pro-forms

Table 41 below shows the Mako interrogative pro-forms.

TABLE 41 Interrogative pro-forms

Form	Meaning
<i>tahi</i>	‘what’
<i>ti</i>	‘who’
<i>tah^{wɪ}idɪ</i>	‘why’
<i>dok^{wɪ}a / daik^{wɪ}</i>	‘how’
<i>diani</i>	‘when’
<i>d-ADV</i>	‘where’
<i>d(i)-CL</i>	‘which’

Interrogative pro-forms are dealt with in more detail in Chapter 8, Section 8.2.2.2 where I discuss content interrogatives. Four examples are provided here to illustrate their use. Notice that the interrogative place pro-adverb *dai* ‘where’ in (9) is formed by an interrogative root *d-* ‘INT’ and an adverbial-clause suffix (see Chapter 8 on the syntax of adverbial clauses and §5.2.7.1 on the formation of place adverbs) and that the interrogative pronoun ‘which’ is formed by this same root and a classifier (see discussion on the formation of demonstratives in §5.2.3 and in Chapter 8, §8.2.2.2.9).

- (7) *tahi-ma* *ik^{wɪ}idɪ* *d-ũk^{wɪ}ã* *kamisi*
WHAT-TOP? 1PL.PRO 1PL-POSS_ROOT clothes_Sp
‘what are our clothes?’

- (8) A: *daik^wi* *mik^w-obe-da*
 HOW2 be_called-TAME-CONTR?

hobe-ma *its-idi-ma*
 there-TOP DUMMY_ROOT-CL:RIVER-TOP?
 ‘what is it called over there, that river?’
- B: *d-idi*
 INT-CL:RIVER
 ‘which one (river)?’
- (9) *kibo* *in-awa-ma* *d-ai-da*
 alligator rock-CL-TOP? INT-ADV3-CONTR?
 ‘where is the Alligator hill?’

5.2.1.3 Pro-sentences and Pro-clauses

Pro-sentences and pro-clauses are words that can be used as substitutes for whole sentences or clauses. The typology of word classes presented in Schachter & Shopen (2007) identifies one type of pro-sentence—namely, an affirmative or negative word that, by itself, serves as an answer to polar interrogatives—and one type of pro-clause—namely, question tags.

The word for ‘yes’ in Mako can be *hao* or *hau*—variants possibly determined by pragmatic factors that remain to be investigated—and it serves to answer affirmatively a polar question as in (10). As will be shown below in Chapter 8, Section 8.2.2.1.5 most negative answers to polar questions include either a negated noun with the negative copula *#ki* or a verb with a negative suffix. There is, however, a word for ‘no’; it is just unclear at this time whether it can be used as an answer to polar interrogatives. In the corpus, its use is restricted to contexts like the one in (11) where one speaker is suggesting to someone else that she does something and the second person does not

want to do what she is being asked to do. In every day interactions, I have also seen Mako adults use this word as a directive to have children stop doing something.

- (10) A: *mea luw-ō-ka?*
 prayer owner-CL:MASC-Q2
 ‘the shamans?’ (lit. the owner of the prayers)

B: *hao*
 ‘yes’

- (11) A: *kātfō*
 PN
 ‘Kāchq’

B: *daki daki daki*
 no no no
 ‘no, no, no’

Mako polar interrogatives can make use of one of three suffixes and/or of one interrogative word. This word is the tag *ta*, exemplified here in (12). A more in-depth discussion of *ta* as well as the three interrogative suffixes that occur in polar interrogatives can be found in Chapter 8, Section 8.2.2.1.

- (12) *ahač̣i-ni-ma* *mana* *ʔwi-aw-a* / *ta*
 first-NON.SUBJ-TOP? path cut-MID-TAME TAG
 ‘first you make a path, right?’ (lit. ‘you cut’)

5.2.2 Quantifiers

The most commonly used quantifiers in Mako are numerals. These generally take classifiers and differ depending on whether they occur with animate or inanimate nouns. Table 42 provides the form of the different numerals. In naturally-occurring discourse, speakers freely employ only the numerals ‘1’, ‘2’ and ‘3’. In elicitation, however, it is possible to obtain numerals ‘4’ and ‘5’ with inanimate nouns (numerals ‘4’ and ‘5’ were

not elicited with animate nouns). Higher order numerals are borrowed from Spanish (see, for example, the use of Spanish *seis* ‘six’ in (35) below).

TABLE 42 Numerals

Numeral	ANIMATE	INANIMATE
‘1’	<i>bak^w</i> -CL:MASC <i>bak^w</i> -CL:FEM	<i>bak^w</i> -CL
‘2’	<i>dūhūtaha</i>	<i>d</i> < CL > <i>latahi</i>
‘3’	<i>wāmeduk^wa</i>	<i>wāp</i> < CL > <i>k^wa</i>
‘4’	--	<i>i[?]wehe-mu hawa-ko</i>
‘5’	--	<i>bak^wa-mu hawa-ko</i>

Examples in (13) through (17) provide an elicited paradigm for the noun ‘chest’, an inalienably possessed inanimate noun that is formed with a bound root and the classifier *-ko*.

- (13) *t^h-omu-ko* *bak^w-ako*
3PL-chest-CL one-CL
‘one chest’
- (14) *t^h-omu-ko* *d* < *oku* > *latahi*
3PL-chest-CL two < CL > two
‘two chests’
- (15) *t^h-omu-ko* *wāp* < *uko* > *k^wa*
3PL-chest-CL three < CL > three
‘three chest’
- (16) *t^h-omu-ko* *i[?]wehe-mu* *hawa-ko*
3PL-chest-CL ?-CL thing-CL
‘four chests’
- (17) *t^h-omu-ko* *bak^w-amu* *hawa-ko*
3PL-chest-CL one-CL thing-CL
‘five chests’

(18) *nii* *ena-t^{hi}*
many COP.UNCERT-EMPH?
'it would be many (people)'

(19) *t^{hi}-lūw-ō-ni-ma* *dʒi-t^h-aw-a*
1PL-rule-CL:MASC-NON.SUBJ-TOP? tell-3PL-MID-TAME

okoh^{wiini} *uts-ib-i* *d-ēwāh-a*
everything search-?-NON.FIN 1PL-return-TAME
'they say to their boss "we search everything and returned"'

(20) *okodeini* *h-ena* *hūk^w-adi*
everyone DIST2-ADV1 live-CL:PL
'everyone that lives there'

(21) A: *h-ena-da-bi* *nii-ni*
DIST2-ADV1-CONTR?-ADD many-NON.SUBJ

otid-ak^w-ō-Ø
work-FUT-CL:MASC-3.COP
'he will work a lot there'

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B: *ɕʒitsida* *ni-obe* *babe-ma*
truly be_many-TAME now-TOP?
‘now it is really a lot’

(22) *kasoi* *hã-t-o* *hĩbanĩ*
gasoil_Sp. do-1SG-FUT PURPOSE

h^wi-t-a
have_nothing-1SG-TAME
‘I don’t have anything to go collect the gasoil’

(23) *de-a* *b-chu-ni-ma*
not.exist_ANIM-TAME PROX-CL:HOUSE-NON.SUBJ-TOP?
‘there is no one in this house (that speaks Spanish)’

5.2.3 Demonstratives

Demonstratives in Mako are formed using three distinct roots and a classifier. As Table 43 shows, the root for the proximate demonstrative is *b-*. The two distal classifiers are formed with the roots *ɕʒ-* and *h-*. When VCV classifiers (e.g., *-owi* ‘CL:TREE’) attach to a demonstrative root, they do not change. However when CV classifiers (e.g., *-te* ‘CL:MASC’ and *-²wo* ‘CL:?’ used with nouns such as stomach and cloud) attach to the demonstratives, they take an extra vowel which is /i/ with the proximate *b-* and the *ɕʒ-* distal and /a/ with the *h-* distal. Additionally, the sequence of /ɕʒ + i/ can be reduced to just [i]. Demonstratives are treated more in-depth alongside the Mako nominal classification system in Chapter 6, Section 6.2.1.3 but two examples obtained during a narrative elicitation task using picture stimuli are given here to demonstrate their use.

TABLE 43 Demonstratives

CLASSIFIER→		<i>-owi</i>	<i>-²wo</i>	<i>-te</i>	<i>-hu/-tsu</i>	<i>-di</i>
		‘CL:TREE’	‘CL:?’	‘CL:MASC’	‘CL:FEM’	‘CL:PL’
ROOT↓						
<i>b-</i>	‘PROX’	<i>b-owi</i>	<i>b-i²wo</i>	<i>b-ite</i>	<i>b-ihu/b-itsu</i>	<i>b-idɨ</i>
<i>ɕ-</i>	‘DIST1’	<i>ɕ-owi</i>	<i>(ɕ)-i²wo</i>	<i>ite</i>	<i>ihu/itsu</i>	<i>idɨ</i>
<i>h-</i>	‘DIST2’	<i>h-owi</i>	<i>h-a²wo</i>	<i>hōba</i>	<i>hob-uhu</i>	<i>hob-adɨ</i>

- (24) *b-idɨ-ma* *ni-oh^wi-ɕo* *t^h-ow-in-obe*
PROX-CL:PL-TOP? hurt-water-CL 3PL-drink-PST-TAME
‘they are drinking rum’

- (25) *b-ite-ma* *ĩ-h-ōbe*
PROX-CL:MASC-TOP? 3SG.MASC-stand-TAME
‘this one (male) was there’

It is important to notice that the second distal classifier *h-* seems to not co-occur with the animate demonstrative classifiers *-hu/tsu* ‘CL:FEM’, *-te* ‘CL:MASC’, and *-di* ‘CL:PL’. Instead, these classifiers select for a root *hob-*. Their phonological form, however, is different from when they occur with the other two demonstrative roots: the feminine classifier is not reduced anymore and it occurs as *-uhu* (26) and the plural classifier has an /a/ vowel as in (27). These are the forms of the classifiers in the context of nominalized verb roots (see Chapter 6, §6.2.1.5). As (28) shows, the masculine classifier, however, does not take the familiar *-ō* form of verbal environments (see the verb ‘eat’ in (28)) but rather occurs as via combination of vowel nasality in the /o/ vowel of the root and the addition of a final /a/.

- (26) *hob-uhu-ma* *hi-ale* familia
that_one-CL:FEM-TOP? 3SG.FEM-POSS_ROOT family_Sp.

hũn-an-uhu-ma

have-DUR-CL:FEM-TOP?

‘that one (female) is the one who has her family (in other communities)’

(27) *yulewa hoho-di hob-adi-ma*

Yureba person-PL that_one-CL:PL-TOP?

‘those ones are people from Yureba’

(28) *hõba-ma op-ihu-da ku-õ-Ø*

that_one + CL:MASC-TOP? fruit + CL-CONTR? eat-CL:MASC-3.COP

‘he (always) eats fruits’

5.2.4 Auxiliaries

Two auxiliaries have been identified in Mako. These are the roots *ik^w-* and *hã-* ‘do’. The semantic contribution of *ik^w-* to a sentence like the one in (29) is unclear and this root, unlike *hã-*, does not occur in isolation as the main verb of a sentence. On the other hand, *hã-* means ‘do’ or ‘make’ when used as the main verb of a sentence; in its use as an auxiliary it occurs most commonly with verbs borrowed from Spanish as in (30) but it can also occur with a Mako non-finite verb as in (31).

(29) *martillo-ni ?do-b-i Ø-ik^w-in-obe*
hammer_Sp.-NON.SUBJ hit-B-NON.FIN 3SG.MASC-AUX-PST-TAME
‘he was hitting [the carrot] with a hammer’

(30) *santaine ahaɕi-ni funda hã-t^h-in-emi //*
PN first-NON.SUBJ found_Sp. do-3PL-PST-ADV2
‘First, it was the foundation of Santa Inés’

(31) *b-ena-ma p^huts-i hã-h-in-obe*
PROX-ADV1-TOP? sweep-NON.FIN do-3SG.FEM-PST-TAME
‘here she was sweeping’ (lit. ‘doing sweeping’)

I provide further details about the use of auxiliaries in Chapter 7, Section 7.1.3.

5.2.5 Copulas

Table 44 below summarizes the Mako copulas and (32) and (33) provide examples of their use in non-verbal predicates.

TABLE 44 Copulas

TAME	<i>ina</i>	PST
	<i>iha</i>	PST
	<i>ak^wa</i>	FUT
	<i>ofa</i>	FUT.INT
	<i>ena</i>	UNCERT
?	<i>obe</i>	PRES
POLARITY	<i>iki</i>	NEG

- (32) *tsãdi* *t^hi-ale* *sapatu-?o* ***ena***
 woman + PL 3PL-POSS_ROOT shoe_Sp.-CL COP.UNCERT
 ‘it would be a woman’s shoe’

- (33) *õdo-ma* ***iki***
 house-TOP? NEG.COP
 ‘it’s not a house’

For more on the role of copulas in nominal predicates, see Chapter 8, Section 8.1.1.

5.2.6 Purpose Marker

Schachter & Shopen (2007:50-51) mention adverbializers as a kind of subordinating conjunction (along with relativizers and complementizers). Adverbializers, according to these authors, are words expressing time, manner, purpose. Adverbial clauses in Mako are generally marked via suffixing (see Chapter 8, §8.3.3); there is, however, one construction in which a purpose adverbial clause is marked by an independent subordinator, in this case *hĩbanĩ* ‘PURPOSE’ which follows a verb conjugated with the -o

suffix (34). I go more in-depth into the use and formation of this purpose construction in Chapter 8, Section 8.3.3.4.

- (34) *ɕ-ai* [?]*ɕ-ān-i* *hã-t^h-o* ***hĩbani***
DIST1-ADV3 go-DUR-NON.FIN do-3PL-FUT PURPOSE
‘...for us to go there’

5.2.7 Adverbs

Adverbs are defined here as those words that function as modifiers of constituents other than nouns (following Schachter & Shopen (2007)). The discussion that follows is divided into three parts depending on what semantic field an adverb belongs to: adverbs of place (§5.2.7.1), adverbs of time (§5.2.7.2), and adverbs of manner (§5.2.7.3). I conclude this section with some thoughts on the possible verbal origin of the adverbs of place (§5.2.7.4), an analysis with implications for the word class of demonstratives.

5.2.7.1 Place

As Table 45 shows, place adverbs are formed using the same roots that are used in demonstratives: *b-*, *ɕ-*, and *h-*. The second half of the adverb can be one of four different endings: *-ena*, *-emi*, *-ai*, or *-eli*.

TABLE 45 Adverbs of place

ENDING→	<i>-ena</i> ‘ADV1’	<i>-emi</i> ‘ADV2’	<i>-ai</i> ‘ADV3’	<i>-eli</i> ‘ADV4’
ROOT↓				
<i>b-</i> ‘PROX’	<i>bená</i>	<i>bemi</i>	<i>bai</i>	<i>beli</i>
<i>ɕ-</i> ‘DIST1’	<i>ɕena</i>	<i>ɕemi</i>	<i>ɕai</i>	<i>ɕeli</i>
<i>h-</i> ‘DIST2’	<i>hena</i>	<i>hemi</i>	<i>#hai</i>	<i>heli</i>

As with the demonstratives, the place adverbs encode one proximate and two distals. The example in (35) illustrates the three-way contrast for the *-eli* series. The speaker, while narrating his life story, starts by saying that he was born upriver in a different village and uses the form *ɕeli* ‘there’, he then explains that he grew up there too and uses *heli* ‘there’. He then talks about how he got married there and he and his wife had three children. He ends by saying that after they moved, they had six children in Arena Blanca (the village where the interview took place, here encoded with *beli* ‘here’).

- (35) *ahaɕi-ni-ma* *ɕeli* / *uʔda-kʷi-tʰi* / *santaine-tʰi*
first-NON.SUBJ-TOP? DIST1-ADV4 upriver-VEN-EMPH? PN-EMPH?
- tʃi-wawatʃ-in-emi-ma* [...] *heli-da* *ka-t-eb-in-obe* [...]
1SG-be_born-PST-ADV2-TOP? DIST2-ADV4 grow-1SG-?-PST-TAME
- uʔda-kʷi-tʰi* *dũhũtaha-ni-da*
upriver-VEN-EMPH? two.ANIM-NON.SUBJ-CONTR?
- tres-ni-da* *hã-tʰ-in-obe*
three_Sp.-NON.SUBJ-CONTR? do-3PL-PST-TAME
- tʰẽ + mũ-ni-ma* [...]
child + PL-NON.SUBJ-TOP?
- b-eli* tre sei-ni-da
PROX-ADV4 three_Sp. six_Sp.-NON.SUBJ-CONTR?
- arenablanca-tʰi-ma*
PN-EMPH?-TOP?
- ‘first, there, upriver, in Santa Inés I was born [...] I grew up there too [...] and we had two children upriver [...] here, three, six, in Arena Blanca’

The other place adverbs are exemplified in (36) through (41) below.

- (36) *b-ena-ma* *b-ān-i* *ed-an-i-t^{hi}*
PROX-ADV1-TOP? sit-DUR-NON.FIN see-DUR-IMP-EMPH?
‘here you will see’
- (37) *b-emi-ma* *ik^wi-di-bi* *a-k-eb-an-adu-emi*
PROX-ADV2-TOP? 2PL.PRO-ADD ask-2PL-?-DUR-2PL-ADV2
‘here you too ask’
- (38) *b-ai-ma* *k^wi-waits-atf-adu-ak^w-e*
PROX-ADV3-TOP? 2PL-know-?-2PL-FUT-TAME
‘here you will learn’
- (39) *ǵ-ai-ma* *dō-Ø-āt-ō-Ø-t^{hi}*
DIST1-ADV3-TOP? grab-3SG.MASC-?-CL:MASC-3.COP-EMPH?
‘he is recording there’
- (40) *okodeini* *h-ena* *hũk^w-adĩ*
everyone DIST2-ADV1 live-CL:PL
‘everyone that lives there’
- (41) *it^{hi}-ma* *h-ĩa* *tf-in-obe* *ǵ-ena*
1SG.PRO-TOP? stand-TAME 1PL-PST.COP-TAME DIST1-ADV1

kĩbo *in-awa-nĩ*
alligator rock-CL-NON.SUBJ
‘I used to live there, in Alligator hill.’

Aside from the place adverbs summarized in Table 45, whose use was illustrated in the examples above, there is only one other place adverb. This adverb is *hobe* ‘there’ and indicates a place far away or removed from the speaker (42).

- (42) *ma-t^h-ok-obe* *hobe-ma*
touch-3PL-NEG-TAME there-TOP?
‘they are not touching there’

5.2.7.2 Time

A number of different Mako words serve as time adverbs. The examples below provide a representative sample. In (43) we have two different time adverbs, namely *maki* ‘later’ and *abini* ‘before’. In (44) and (45), we have the words *mada* ‘yesterday’ and *itek^{wai}* ‘tomorrow’, while we have the word *babe* ‘now’ in (46).

- (43) *hãa maki hã-d-ak^w-e-t^{hi}* / *ɕi-b-aw-i-t^{hi} abini*
 that later do-1PL-FUT-TAME-EMPH? tell-B-MID-IMP-EMPH before
 ‘we will do that one later, you tell (your story) before’

- (44) *ik^{wi}-ni mada ɕĩ-t-an-in-emi-ma*
 2SG.PRO-NON.SUBJ yesterday talk-1SG-DUR-PST-ADV2-TOP?
 ‘when I talked to you yesterday...’

- (45) *itek^{wai}-ma*
 tomorrow-TOP?
 ‘tomorrow’

- (46) *ile ti-aw-a-t^{hi} babe-ma*
 manioc plant-MID-TAME-EMPH? now-TOP?
 ‘one plants manioc, now’

(47) and (48) exemplify the pair *daki* ‘already’ and *ina* ‘yet’.

- (47) *daki wo?ow-i ka-h-at-ena*
 already pull_out-NON.FIN finish-3SG.FEM-?-ADV1

its-ãpĩ Ø-icɕ-ab-ih-e-tə
 DUMMY_ROOT-CL:KNIFE 3SG.MASC-give-?-PST-TAME-PST
 ‘when she was already done pulling out manioc, he would give him the knife’

- (48) *ina h-ẽwãh-ok-obe*
 yet 3SG.FEM-leave-NEG-TAME
 ‘she hasn’t left yet’

5.2.7.3 Manner

There are several words that can qualify the manner of an event. Two very common ones are *huluanĩ* ‘quickly’ and *hapĩ* ‘quickly’ which can be heard as exhortations when someone gives an order. (49) and (50) provide two further examples of manner adverbials. Notice that the adverb in (50) is transparently related to the verb *otiw-* ‘be good/well’.

- (49) *labini* *k^wa-b-i* *hã-Ø-ena-da*
 hard hit-B-NON.FIN do-3SG.MASC-ADV1-CONTR?
 ‘when he hit hard...’
- (50) *otiwani* *hã-d-o* *hĩbani-ma*
 well do-1PL-FUT PURPOSE-TOP?
 ‘...for us to do (it) well’

More research is needed to better understand whether all manner adverbials are derived from verbs (like *otiw-* ‘be good’) and if so, what the specific derivational process or processes at play would be.

5.2.7.4 From Adverbial Clause to Place Adverb?

As Chapter 8, Section 8.3.3.2 shows, the endings *-ena*, *-emi*, *-ai*, or *-eli* are used to form adverbial clauses. This is exemplified in (51) through (54) below.

- (51) *dok^wa* *iha*
 HOW1 COP.PST
- atabapo-be* *ahaçĩ-ni* *k^wĩ-[?]çĩ-ĩn-ena-ma*
 Atabapo-ALL first-NON.SUBJ 2SG-go-PST-ADV1-TOP?
 ‘how was it when you went to Atabapo for the first time?’

- (52) *ĩ-hĩb-emi-ma* *tahi-da* *wāt^hõ-da*
 3SG.MASC-hide-ADV2-TOP? [filler] hollow_trunk-CONTR?

lahu-nĩ-ma *tsĩ-b-ib-iki*
 hole-NON.SUBJ-TOP? go_into-B-?-NEG
 ‘where it (the agouti) hides is inside hollow trunks; it does not go into holes’

- (53) *Chavez we-Ø-ai-ma* / *oti-b-in-obe*
 PN command-3SG.MASC-ADV3-TOP? be_good-B-PST-TAME
 ‘things were well when Chavez was in charge’

- (54) *bat^ho huw-i* *ka-k-at-adu-eli* ...
 conuco burn-NON.FIN finish-2PL-?-2PL-ADV4
 ‘when you have finished burning the *conuco* (vegetable garden)’

If the suffixes *-ena*, *-emi*, *-ai*, or *-eli* attach to verb stems to form adverbial clauses, does this mean that the place adverbs roots *b-*, *q̣-* and *h-* are verbal? Examples (55) and (56) show that the *b-* and *h-* roots are in fact verbal and that they have the meanings ‘sit’ and ‘stand’ respectively.¹⁴⁶

- (55) *awiri-ma ap^hude-nĩ* *b-ãn-i* *ed-an-in-obe*
 dog-TOP? door-NON.SUBJ sit-DUR-NON.FIN see-DUR-PST-TAME
 ‘the dog was watching sitting by the door’

- (56) *its-uhu* *h-ãn-i* *h-ed-an-in-obe*
 DUMMY_ROOT-CL:FEM stand-DUR-NON.FIN 3SG.FEM-see-DUR-PST-TAME
 ‘the woman was looking standing’

What are the implications of this analysis for the demonstratives which, as shown above, are also formed using these roots in conjunction with a classifier? One of the

¹⁴⁶ I do not have any examples of a verb root *q̣-* functioning as a verb but I think it is safe to assume that this root also has a verbal origin.

many functions of classifiers (see Chapter 6, §6.2.1.5) is the nominalization of verbal roots as in (57). According to this analysis, a demonstrative would then be a nominalized verb.

- (57) *ile* *p^huts-aw-ã[?]dũ*
 manioc sweep-MID-CL
 ‘broom for cassava-making’ (lit. ‘cassava sweeper’)

5.2.8 Ideophones

Mako has a rich system of ideophones. Ideophones are defined here after Dingemanse (2012:655) as words that “depict sensory imagery: perceptual knowledge that derives from sensory perception of the environment and the body”. The following examples demonstrate their use in discourse and some of their morphosyntactic characteristics, namely 1) they are syntactically independent and occur at clause edges and 2) they cannot be inflected or accept any morphology.

- (58) *ate* *murihi* *hũn-ah-adi-ma*
 [ideophone] ferment put-MOT-CL:PL-TOP?
 ‘darn! after you have left (it) in the ferment’
- (59) *ado* *tub-a*
 [ideophone] be_hot-TAME
 ‘hot! It is hot’
- (60) *hatso* *otiw-a* *pelicula* *ed-i*
 [ideophone] be_good-TAME movie_Sp. see-IMP
 ‘nice! It’s good, the movie. look!’

(61) *atso:::* *ed-i*
 [ideophone] see-IMP

its-u^hu-ni *ʔwi-b-i* *t^h-ik^w-in-obe*
 DUMMY_ROOT-CL:FEM-NON.SUBJ cut-B-NON.FIN 3PL-AUX-PST-TAME
 ‘pretty! look! they were cutting the woman’s hair’

Table 46 summarizes some of the most common ideophones and provides their associated meaning as explained to me by my main consultant from Arena Blanca. Additionally, I offer some notes about the possible origin or gender distribution of some of these ideophones.

TABLE 46 Some ideophones and their contexts of use

Ideophones	Contexts for use
<i>adi</i>	<ul style="list-style-type: none"> - when you touch something very cold - when it is very cold in the room <p><u>Note:</u> some speakers use [a'ti]), possibly a Piaroa variant</p>
<i>ado</i>	<ul style="list-style-type: none"> - when you touch something very hot - when it is very hot in the room or outside because of the sun <p><u>Note:</u> some speakers use [a'to], possibly a Piaroa variant</p>
<i>aka</i>	<ul style="list-style-type: none"> - when in pain which can be caused by: <ul style="list-style-type: none"> - someone hitting you - your fingers getting caught on a door - falling - tripping
<i>aki</i>	<ul style="list-style-type: none"> - when you hit yourself
<i>aɕa</i>	<ul style="list-style-type: none"> - when you are lifting something very heavy
<i>aɕi:</i>	<ul style="list-style-type: none"> - ‘look at him!’
<i>aɕu</i>	<ul style="list-style-type: none"> - when someone scares you <p><u>Note:</u> possibly from Piaroa, the Mako equivalent could be [a'ɕi:]</p>
<i>atso</i>	<ul style="list-style-type: none"> - when you see someone pretty <p><u>Note:</u> usually used by women</p>
<i>hatso</i>	<ul style="list-style-type: none"> - when you see something pretty
<i>hĩhĩ</i>	<ul style="list-style-type: none"> - when you give something to someone (kind of a “here you are!”)

The phonological form of the ideophones in Table 46 suggests that there is a preference for them to be /aCV/. In future work, I hope to collect a much more extensive list of ideophones and further study their functions.

5.3 Conclusions

The goal of this chapter was to introduce the different word classes present in Mako. I showed that there are two open classes (namely, nouns and verbs) and that property

concepts are expressed via verbs. Both nouns and verbs will be treated in more detail in Chapter 6 and Chapter 7 where I discuss the subclasses of nouns and verbs as well as the morphology of each of these two word classes. There are also a number of closed classes. Some of these are treated in more detail in subsequent chapters (interrogative pro-forms, pro-sentences and pro-clauses in Chapter 8, numerals and demonstratives in Chapter 6, auxiliaries and copulas in Chapter 7, and the purpose marker in Chapter 8).

Chapter 6

6 Nouns, Nominal Morphology and the NP

This chapter focuses on nouns, nominal morphology, and the noun phrase. I first discuss the different sub-classes of nouns and their morphology (§6.1). Because of the importance classifiers have in the language, I provide an in-depth analysis of the characteristics of the Mako classifier system in Section 6.2. Section 6.3 deals with plural morphology and with the markers of ‘deceased’, namely *-mina/-mine*. Section 6.4 discusses noun phrases, specifically how nouns can combine with other nouns as well as with pronouns, demonstratives, numerals and nominalizations; a detailed account of possession is also offered in this section.

Figure 49 provides a nominal morphology template. Position -1 is occupied by the possessive prefixes, which is the only morphology that can precede the noun root. There are five different positions after the root. Position 1 is the locus of the classifier system, Position 2 is occupied by the plural suffixes, and Position 3 is filled by *-mina* and *-mine*, both of which serve to mark a deceased human referent. The suffixes in Positions 4 and 5 are not exclusively nominal, as they can attach to other parts of speech, so they are not treated in this chapter. For more on Position 4 suffixes, see Chapter 8 and for Position 5 suffixes, see Chapter 8 and Chapter 9. As can be seen, lexical and phrase-level syntactic information is coded close to the root while syntactic and discursive information is coded farther away from the root.

FIGURE 49 Nominal morphology

LEXICAL & SYNTACTIC (PHRASE)	LEXICAL				SYNTACTIC (CLAUSE)	DISCOURSE	
	-1	ROOT	1	2	3	4	5
possessor		bound N V	-e/-o (MASC /FEM) -CL	NAS NAS + -dĩ -mu -bia -ihu	-mina/mine (DEC)	-nĩ -k ^{wĩ} (SOC) -be (ALL) -k ^{wĩ} (VEN)	-ma -da -t ^{hĩ} -bi (ADD) -hĩ -ka -ha

6.1 Noun (Sub)classes

The discussion in this section is organized as follows. Firstly, I talk about underived nouns—defined here as those nouns whose root, whether bound or free, is a nominal root—and the subclasses within this category. Underived nouns can be further subdivided into animate and inanimate nouns and each of these two subclasses can be further subcategorized according to gender (for animates) and shape/consistency features (for inanimates). Finally, both animate and inanimate nouns may be either alienably or inalienably possessed. After the discussion of underived nouns, I describe two processes of word formation that result in derived nouns whose sources are verbal roots.

6.1.1 Underived Nouns

Underived nouns can be animate (§6.1.1.1.1) or inanimate (§6.1.1.1.2). Each of these two subclasses can be further divided into smaller subclasses depending on the gender (for animates), their shape/consistency (for inanimates), and their (in)alienability for both.

6.1.1.1 Animate vs. Inanimate

A first division of the grammatical category nouns must be made according to animacy.

There is a subclass of nouns denoting humans and other animates, like animals or deities which is opposed to a subclass that groups together nouns denoting inanimate objects. This animate/inanimate distinction plays a key role in the grammar of the language: only animate subjects can be coded in the verb (cf. (1) and (2)).¹⁴⁷

- | | | | |
|-----|---------------------------|-------------------|----------------------|
| (1) | <i>d<opo>latahi</i> | <i>pelota-po</i> | <i>bamat-obe</i> |
| | two <CL:ROUND> | ball-CL:ROUND | stop-TAME |
| | ‘two balls stop’ | | |
| (2) | <i>dūhūtaha</i> | <i>its-uhu</i> | <i>tʰi-bamat-obe</i> |
| | two.ANIM | DUMMY_ROOT-CL:FEM | 3PL-stop-TAME |
| | ‘two women stop’ | | |

In (1), the inanimate S of the intransitive verb *bamat-* ‘to stop’ (i.e., the two balls) is not coded in the verb while the animate S of the same verb (i.e., the two women) is coded via a prefix in (2). But as will be shown in the following sections, animate and inanimate nouns also differ in other respects: namely, classifier and plural morphology.

6.1.1.1.1 Animate Nouns: Gender, Classifiers and (In)alienability

One of the major features of the category of animate nouns is that it can be further subdivided into human (i.e., nouns with human referents) and non-human (i.e., nouns with non-human referents). These two subclasses within the animate category are determined by the gender morphology that attaches to the nouns.

¹⁴⁷ See Chapter 8, §8.1.2.1.1 for more details on subject marking.

Human animates can be inherently masculine or inherently feminine as shown in the examples (3) through (5), where corresponding masculine and feminine human nouns are provided. Masculine nouns are in the (a) examples while feminine nouns are in the (b) examples.

- | | |
|--|--|
| (3) a. <i>abe²do</i>
‘father’ ¹⁴⁸ | b. <i>õhõ²bĩ</i>
‘mother’ |
| (4) a. <i>a²dĩ</i>
‘grandfather’ | b. <i>ã²dõ</i>
‘grandmother’ |
| (5) a. <i>iħaba</i>
‘uncle/father-in-law’ | b. <i>iħa?u</i>
‘aunt/mother-in-law’ |

The nouns in examples (3) through (5) are either inherently masculine or inherently feminine and do not take any nominal gender morphology. The nouns in (6) through (9), however, are neither inherently masculine nor feminine and, thus, need gender morphology¹⁴⁹ to make the distinction: masculine gender is marked via either a suffix *-e* (6)a (7)a or a classifier *-õ* (8)a; feminine is marked via either a suffix *-o* (6)b (7)b or classifier *-uhu* (8)b. The pair *ĩt^hĩ* ‘son’/ *it^hi-hu* ‘daughter’ in (9) is a special case: the

¹⁴⁸ The translations for the nouns (3) through (8) and those in (9) should in fact be ‘his [kinship term]’ as they are inalienably possessed (See §6.4.1.2 below on possession). When no prefix occurs in these nouns, they are automatically interpreted by my consultants as being possessed by a male possessor. For example, I made a mistake and said the word *ilek^we* when attempting to say *ilek^wo* ‘his wife’. This caused laughter because, as it was patiently explained to me by my consultants, *ilek^we* means ‘male spouse’ and my using it without a possessive suffix gave it the interpretation ‘his husband’, something that is pragmatically weird but not grammatically unacceptable due to the fact that the Mako know that homosexual relationships between two men can exist.

¹⁴⁹ While *-e/-o* can be considered gender morphology, *-õ/-uhu* are better analyzed as classifiers. As will be shown in §6.2 below, they pattern with other classifiers in the language.

masculine form of the root is fully nasal, while the feminine is oral, but takes a reduced form *-hu* of the feminine classifier *-uhu*. In this case, it appears that the *-õ* classifier has fused with the noun and that all that remains is the nasality. There are no other instances of *-õ* attaching to a vowel final root in my corpus that allows to test this hypothesis but the fact that *-uhu* has lost its first vowel lends support to the idea of fusion.¹⁵⁰

- | | | | | |
|-----|----|---|----|---|
| (6) | a. | <i>ilek^w-e</i> | b. | <i>ilek^w-o</i> |
| | | spouse-MASC | | spouse-FEM |
| | | ‘husband’ (lit. ‘male spouse’) | | ‘wife’ (lit. ‘female spouse’) |
| (7) | a. | <i>ipi-e</i> | b. | <i>ipi-o</i> |
| | | older_sibling-MASC | | older_sibling-FEM |
| | | ‘older brother’ (lit. ‘male older sibling’) | | ‘older sister’ (lit. ‘female older sibling’) |
| (8) | a. | <i>ĩhãw-õ</i> | b. | <i>ĩhaw-uhu</i> |
| | | younger_sibling-CL:MASC | | younger_sibling-CL:FEM |
| | | ‘younger brother’ (lit. ‘male younger sibling’) | | ‘younger sister’ (lit. female younger sibling’) |
| (9) | a. | <i>ĩt^hĩ</i> | b. | <i>it^{hi}-hu</i> |
| | | son.MASC | | daughter-CL:FEM |
| | | ‘son’ | | ‘daughter’ |

Non-human animates, however, are never inherently masculine or feminine and, by default, have a masculine reading when there is lack of feminine-gender marking. To obtain a feminine reading, the non-human animate noun cannot directly take the feminine suffix *-e* or the feminine classifier *-uhu*—as shown in examples (6) through (9) for human animate nouns—but rather needs to enter a construction with a dummy root

¹⁵⁰ I thank Françoise Rose for suggesting that this could be an instance of vowel fusion.

to which the feminine classifier *-uhu* attaches. This is shown in examples (10) through (12) where feminine and masculine non-human animate nouns are given. Masculine forms are in the (a) examples; feminine forms, in the (b) examples.

- | | |
|--|--|
| <p>(10) a. <i>awiri</i>
dog.MASC
'male dog'</p> | <p>b. <i>awiri</i> <i>tsuhu</i>
dog <i>(i)ts-uhu</i>
dog DUMMY.ROOT-CL:FEM
'female dog'</p> |
| <p>(11) a. <i>iwo</i>
sloth.MASC
'male sloth'</p> | <p>b. <i>iwo</i> <i>tsuhu</i>
sloth <i>(i)ts-uhu</i>
sloth DUMMY.ROOT-CL:FEM
'female sloth'</p> |
| <p>(12) a. <i>bolodo</i>
monkey.MASC
'male monkey'</p> | <p>b. <i>bolodo</i> <i>tsuhu</i>
monkey <i>(i)ts-uhu</i>
monkey DUMMY_ROOT-CL:FEM
'female monkey'</p> |

In the examples in (10) through (12), the construction denoting a female non-human animate referent is N + DUMMY_ROOT-CL:FEM. This construction for female non-human animate referents differs from the way that feminine gender is marked in nouns with female human referents: for the former, the classifier *-uhu* attaches directly to the root; for the latter, the classifier cannot attach to the noun and, therefore, needs a dummy

root.¹⁵¹ It is important to note that the dummy root has lost its initial vowel in this construction and is, therefore, phonologically reduced; this is an indication of a lexicalization process that could ultimately result in the fusion of the noun and the DUMMY_ROOT-CL:FEM. The dummy root *its-* is treated in more detail in Section 6.2.1.4.

A further subdivision of animate nouns can be identified based on the obligatoriness of possession of a noun. Only human animate nouns can be inalienable. All non-human animates are alienable and, as such, are not obligatorily possessed.¹⁵²

The forms in examples (3) through (9) are all kinship terms and, as such, are obligatorily possessed. They are unmarked in the examples above because the possessive nominal prefix for a third person singular masculine possessor is phonologically unrealized if the root starts with a vowel.¹⁵³ When possessed by a

¹⁵¹ There is, however, one human animate noun that cannot take the suffix *-uhu* and, therefore, needs to enter this dummy root constructions. See examples below:

- | | | | | | |
|-----|----|--|----|--|--|
| (i) | a. | <i>itsabi</i>
sibling's_spouse.MASC
'brother-in-law' | b. | <i>itsabi</i>
sibling's_spouse
sibling's_spouse
'sister-in-law' | <i>tsuhu</i>
(i)ts-uhu
DUMMY_ROOT-CL:FEM |
|-----|----|--|----|--|--|

¹⁵² But they can be. The nominal possession prefixes cannot attach directly to these nouns, they all need a dummy possessive root *ah^{wi}* as in (ii). See §6.4.1.2 below.

- | | | | |
|------|--|---|---------------------|
| (ii) | <i>b-ite-ma</i>
PROX-CL.MASC-TOP?
'this is my dog' | <i>ʃ-ah^{wi}</i>
1SG-POSS_ROOT | <i>awiri</i>
dog |
|------|--|---|---------------------|

¹⁵³ Discussion of the phonological form of the prefixes is given in §6.4.1.2 but a short summary is needed here: the V in the prefixes harmonizes with the first vowel of the root (/i/ if the vowel is front, /ɨ/ if the vowel is central, and /o/ and /u/ for /o/ and /u/ respectively) or does not occur if the noun starts with a vowel. For inalienable nouns, it is hard to segment the noun from the prefix as the roots never occur

possessor other than third person singular masculine, the marking becomes explicit, as shown in examples (13) through (19) for *abe²do* ‘father’ and *õhõ²bi* ‘mother’.

TABLE 47 Possessive prefixes

Person	Singular	Plural
1	tʃ(V)-	d(V)-
2	k ^w (V)-	k ^w (V)-...-dui
3.MASC	(V)-	t ^h (V)-
3.FEM	h(V)-	

- | | |
|---|--|
| <p>(13) a. <i>tʃ-abe²do</i>
1SG-father
‘my father’</p> | <p>b. <i>tʃ-õhõ²bĩ</i>
1SG-mother
‘my mother’</p> |
| <p>(14) a. <i>k^w-abe²do</i>
2SG-father
‘your [SG] father’</p> | <p>b. <i>k^w-õhõ²bĩ</i>
2SG-mother
‘your [SG] mother’</p> |
| <p>(15) a. <i>Ø-abe²do</i>
3SG.MASC.father
‘his father’</p> | <p>b. <i>Ø-õhõ²bĩ</i>
3SG.MASC.mother
‘his mother’</p> |

alone. However, the root of a noun like *abe²do* could be analyzed as starting with a vowel given that there is no harmony between the first and the second vowels of the word, which suggests that the /a/ does not belong to the prefix; the root of a noun like *õhõ²bĩ*, on the other hand, could be argued to start with a consonant as the first vowel could be the underspecified vowel of the possessive prefix (Notice the harmony.). But given that this segmentation would rely on guesswork (the fact that the two vowels are identical does not necessarily mean that they are harmonic with each other), I have opted here instead to segment the prefix + noun word into prefix and noun after the first consonant for the sake of consistency.

- (16) a. *h-abe[?]do*
3SG.FEM-father
‘her father’
- b. *h-õhõ[?]bĩ*
3SG.FEM-mother
‘her mother’
- (17) a. *d-abe[?]do*
1PL-father
‘our father’
- b. *d-õhõ[?]bĩ*
1PL-mother
‘our mother’
- (18) a. *k^w-abe[?]do-dui*
2PL-father-2PL
‘your [PL] father’
- b. *k^w-õhõ[?]bĩ-dui*
2PL-mother-2PL
‘your [PL] mother’
- (19) a. *t^h-abe[?]do*
3PL-father
‘their father’
- b. *t^h-õhõ[?]bĩ*
3PL-mother
‘their mother’

Examples (20) through (22) demonstrate the use of possessed nouns in naturally-occurring discourse.

- (20) *neek^wanihõbe-hĩ* *tsa[?]balari* *t^h-ĩwẽne* *d-ĩt^hĩ-mũ /*
be_necessary-Q1 *criollo* 3PL-language 1PL-child-PL
- k^w-ĩt^hĩ-mũ-dui* *çĩ-t^h-an-o* *hĩbanĩma*
2PL-child-PL-2PL speak-3PL-DUR-FUT PURPOSE
- ‘is Spanish (lit. the language of the *criollos*) necessary for our children [self-repair], your children to speak?’

- (21) *ɸ-abe[?]do-ma* *b-ai-k^wĩ* *itɸ-eh-eb-ĩ*
1SG-father-TOP? PROX-ADV3-VEN come-MOT?-?-NON.FIN

Ø-otid-in-obe-a
3SG.MASC-work-PST-TAME-TAME
‘my father built it when he brought us here’ (lit. bringing (us) here)

- (22) A: *t^hẽ + mũ* *okodeini-ka?*
 child + PL everything-INT2
 ‘all the children?’
- B: *k^w-ĩt^hĩ-mũ-da-t^hĩ* / *k^w-ĩt^hĩ-mũ-da*
 2PL-child-PL-CONTR?-EMPH? 2PL-child-PL-CONTR?
 ‘just your children, just your children.’

Other human animate nouns, however, are not obligatorily possessed and, therefore, do not take the nominal possessive prefixes from Table 47. These are exemplified below. The first pair of these is morphologically complex and in fact are not exclusively used with human referents (although they are understood as having a human referent when used in isolation) but denote ‘female’ and ‘male’ respectively (see above section on female non-human animates).

- | | |
|---|---|
| <p>(23) a. <i>its-uhu</i>
 DUMMY_ROOT-CL:FEM
 ‘woman’</p> | <p>b. <i>its-õ</i>
 DUMMY_ROOT-CL:MASC
 ‘man’</p> |
| <p>(24) a. <i>tsãdĩ</i>
 woman + PL
 ‘women’</p> | <p>b. <i>ĩmãdĩ</i>
 man + PL
 ‘men’</p> |

6.1.1.1.2 Inanimate Nouns: Classifiers and (In)alienability

The second major subclass of nouns is that of inanimates, which can be further subcategorized according to several physical characteristics—encoded via classifiers¹⁵⁴—of the noun. This semantic subcategorization, however, is superseded by a

¹⁵⁴ I only present here a first approximation to the classifier system. A more detailed analysis follows in §6.2.

morphological one based on whether the roots require classifiers (bound) or not (free).

In addition, some bound roots are also inalienably possessed, which means that they require both a classifier and a possessive prefix. Each of these is discussed below.

Free noun roots can occur by themselves in discourse. The addition of a classifier in these cases (see §6.2.3.1 below) is optional and serves an individuating and/or derivational function. In (25) and (26), the inanimate nouns in the (a) examples have no classifier and have a generic referent but the ones in the (b) examples do have a classifier and have the meaning of “one of X”.

- | | | | | | |
|------|----|---------------------------|--|----|-----------------------------------|
| (25) | a. | <i>luwa</i> | | b. | <i>luwa-^ʔbo</i> |
| | | ‘guama (a type of plant)’ | | | guama-CL:OBLONG |
| | | | | | ‘one guama fruit (elongated pod)’ |
| (26) | a. | <i>balule</i> | | b. | <i>balule-^ʔbo</i> |
| | | ‘plantain/banana’ | | | plantain/banana-CL:OBLONG |
| | | | | | ‘one plantain/banana’ |

Bound roots can minimally require a classifier (27). These roots are alienable and enter optionally into possessive constructions (28).

- | | | | | |
|------|----|-----------------------------|--------------|--------------------|
| (27) | a. | <i>t-owi</i> | ROOT-CL:TREE | ‘tree’ |
| | b. | <i>b-at^ho</i> | ROOT-CL | ‘vegetable garden’ |
| (28) | a. | <i>tfi-bat^ho</i> | | |

1SG-vegetable_garden
 ‘my vegetable garden’

Other roots, however, require both a classifier and a possessor. This is the case of body part terms. The inanimate nouns in (29) through (31) all have a classifier attached to them and the absence of a classifier results in ungrammaticality¹⁵⁵. Fully grammatical nouns are presented in the (a) examples; elicited ungrammatical counterparts are presented in the (b) examples.

- | | | | | |
|------|----|---|----|---------------------------------------|
| (29) | a. | <i>t^h-ĩk^{wĩ}-lã</i> | b. | <i>*t^h-ĩk^{wĩ}</i> |
| | | 3PL-throat-CL | | 3PL-throat |
| | | ‘their throat’ | | (their throat) [intended] |
| (30) | a. | <i>t^h-ĩlaki-ɖu</i> | b. | <i>*t^h-ĩlaki</i> |
| | | 3PL-ear-CL | | 3PL-ear |
| | | ‘their ear’ | | (their ear) [intended] |
| (31) | a. | <i>t^h-ĩ[?]da-le</i> | b. | <i>*t^h-ĩ[?]da</i> |
| | | 3PL-lip-CL | | 3PL-lip |
| | | ‘their lip’ | | (their lip) [intended] |

The status of the last syllable of the nouns in (29) through (31) as an attached classifier is easily established: when these nouns occur with the numerals for ‘one’, ‘two’ or ‘three’, it is precisely this syllable that is repeated in the numeral. This is shown in (32) and (33) for the nouns ‘throat’ and ‘ear’; further discussion of the numerals and their role in the classification system can be found below in Section 6.2.1.2.

¹⁵⁵ The nouns in the examples are all body parts terms and are, thus, also inalienably-possessed (see below); here the forms given are those of 3PL because they have a generic meaning.

- (32) *bāk^w-ālā* *t^h-ĩk^w-lā*
 one-CL 3PL-throat-CL
 ‘one throat’
- (33) *d<oǵu>latahi* *t^h-laki-ǵu*
 two <CL> 3PL-ear-CL
 ‘two ears’

These same nouns are also obligatorily possessed. The possessor is expressed on the noun via the same possessive prefixes used for inalienably-possessed animate nouns and exemplified in (13) through (19) above and summarized in Table 47. Because the third person masculine possessive prefix has no phonological substance (see Table 47), nouns like (34)a are understood as being possessed by a male possessor. A severed ear or arm with no obvious possessor is marked for third person plural as in (34)b.

- (34) a. *Ø-ilaki-ǵu* b. *t^h-ilaki-ǵu*
 3SG.MASC-ear-CL 3PL-ear-CL
 ‘his ear’ ‘ear’

Although only some inanimate nouns are inalienable, they can all be possessed. See Section 6.4.1.2 below for an explanation of the different possessive constructions used with inanimate nouns.

6.1.2 Derived Nouns

In the preceding sections, underived nouns were discussed and I showed that they can be either free or bound roots and that there are a number of subclasses defined by features such as animacy, (in)alienability, and gender and shape/consistency. In this section, I show how the use of the masculine and feminine classifiers *-ō* and *-uhu* and of

the inanimate classifiers can derive nouns from verbs; these nouns can in turn be classified into animate and inanimate based on the semantics of the classifier used.

The suffixes *-õ* and *-uhu* attach to verbs to form human animate nouns that are masculine and feminine respectively (35) (36). Masculine forms are in the (a) examples while feminine forms are in the (b) examples.

- | | |
|--|--|
| (35) a. <i>luw-õ</i>
rule-CL:MASC
‘male chief’ | b. <i>luw-uhu</i>
rule-CL:FEM
‘female chief’ |
| (36) a. <i>otid-õ</i>
work-CL:MASC
‘male worker’ | b. <i>otid-uhu</i>
work-CL:FEM
‘female worker’ |

The root of *luwõ* and *luwuhu* in (35) is the same root of the verb *luw-* ‘to rule’. In (36) a similar derivational process is applied to the verbal root *otid-* ‘to work’.

The morphology used to derive inanimate nouns from verb roots is that of nominal classification. This is shown in the example below. The word for ‘handle (of a bag)’ is derived from the root of the verb ‘to grab/capture’ and the classifier for ‘rope-like objects’. Further examples of nouns derived from verbs using this strategy are given below in the discussion of classifiers (§6.2.1.5).

- (37) *dõ-ât-ak^wa-op^ha*
 grab-?-RECIP-CL:ROPE-LIKE
 ‘handle’

A third device to derive a noun out of a verb is the suffix *-i*. If applied to a transitive verb such as ‘to drink’ or ‘to eat’, the new noun refers to the O of the transitive verb and the notional A is expressed as a possessor (38) (39). (40) is an example of the ‘eat’

nominalization used in naturally-occurring speech. This and other nominalizers are further discussed in Chapter 8.

- (38) *ʈf-ow-i*
 1SG-drink-NOM
 ‘my drink’ (lit. what I drink)

- (39) *ʈʈu-ku-i*
 1SG-eat-NOM
 ‘my food’ (lit. what I eat)

- (40) *u-ku-i-ma* / *bãĩ-nĩ-da* *ku-õ-Ø*
 3SG.MASC-eat-NOM-TOP? fish.PL-NON.SUBJ-CONTR? eat-CL:MASC-3.COP
 ‘his food, he eats fish’

6.1.3 Summary

As discussed in the above subsections, Mako nouns can be divided in several subclasses depending on the nature of their root (free vs. bound nominal roots and nominal roots vs. verbal roots) and along a series of morphosemantic lines such as animacy, (in)alienability, gender and shape/consistency.

6.2 System of Nominal Classification

Complex systems of noun classification are common in the Amazon and especially in the North West Amazon where Eastern Tucanoan, Peba-Yaguan and Witotoan languages are spoken (see Payne (1987), Payne & Derbyshire (1990), Barnes (1990), Aikhenvald (1994, 2000, 2007), among others). Both Sáliba and Piaroa also have noun classifiers, as discussed in the morphological sketch of the Sáliban family in Chapter 1. As will be shown here, the Mako system functions in ways very similar to what has already been described for some of these other languages and language families,

possibly suggesting an areal spread of this type of system (Seifart & (Doris) Payne, 2007; Peña 2013 [ms.]) as the source of classifiers in the Sáliban languages. In this subsection, I examine the different environments in which classifiers can occur (§6.2.1), their morphological characteristics and the semantic and formal subclasses (§6.2.2), and their functions (§6.2.3).

6.2.1 Locus of Marking

In this section, I describe the multiple environments in which classifiers can appear: nouns (§6.2.1.1), numerals (§6.2.1.2), demonstratives (§6.2.1.3), the dummy root *its-* (§6.2.1.4), verbs (§6.2.1.5), relational nouns (§6.2.1.6) and the ‘possessed root’ *ũk^wã* (§6.2.1.7). Although the shapes of the CV classifiers change in different environments, I do not consider these as different sets of classifiers since their phonological form is predictable based on their syllable structure and their final vowel (see §6.2.2 below). The only classifiers that change depending on the environment are the masculine classifier *-õ*, which takes the shape *-te* with demonstratives, and the feminine classifier, which although VCV in other environments, behaves like a CV classifier with demonstratives.

6.2.1.1 Nouns

As shown above in Sections 6.1.1.1.1 and 6.1.1.1.2, some nouns obligatorily take classifiers, i.e., their roots are bound, while other nouns can optionally take classifiers (usually used in a derivational or singulative function, see §6.2.3.1 below). Below are examples of both kinds of nouns in naturally-occurring speech. Among the nouns that can optionally take a classifier, we have *oh^wĩçõ* ‘water’ (cf. (41) and (42) for the

derivational nature of the classifier -²*wo* ‘CL:?’ in (42)), *balule* ‘plantain’ (c.f. the two instances of this word in the first line of (45) for the singulative function of the classifier -²*bo*), and *k^{wi}ɪɕalu²da* ‘notebook’ which could be equally acceptable without the classifier -²*da*. Among the nouns with bound roots and for which the classifiers are obligatory, we have *inawa* ‘stone’ (42), *otomĩṛṛṇ* ‘ax’ (44), and *dēhāpā* ‘plate’ (45).

- (41) ... *oh^{wi}ɪɕo-ni-da* *ow-i-bi* *hawa-dāni*
 water + CL-NON.SUBJ-CONTR? drink-NON.FIN-ADD thing-SIM
 to-b-i *ow-i-bi*
 cook-B-NON.FIN drink-NON.FIN-ADD
 ‘...drinking (it) with water, likewise, cooking and drinking (it)’

- (42) *oh^{wi}ɪɕo-²wo* *teobe-ma* *in-awa* *h-ĩn-obe*
 water-CL under-TOP? stone-CL:STONE stand-PST-TAME
 ‘the stone was under the cloud’

- (43) *tɕapako/* *k^{wi}ɪɕalu-²da* *kũ-hũn-an-obe-diha-t^{hi}*
 PN notebook-CL 2SG-have-DUR-TAME-?-EMPH?
 ‘Chapako, you have the notebook’

- (44) *otom-ĩṛṛṇ-ni* *²wi-h-eb-in-obe* *its-op^{ha}*
 ax-CL-NON.SUBJ cut-3SG.FEM-?-PST-TAME DUMMY_ROOT-CL:ROPE-LIKE
 ‘she was cutting the rope with an ax’

- (45) A: *balule* / *sonodi* *balule-²bo* *idi-a²bo*
 plantain cambur plantain-CL:OBLONG be_big-CL:OBLONG
 ‘a plantain, a big cambur plantain’

- B: *sonodi* *balule-²bo* *ka-b-i* [interrupted]
 cambur plantain-CL:OBLONG peel-B-NON.FIN
 ‘peeling a big cambur plantain’

- A: *h-an-in-obe*
 3SG.FEM-put-PST-TAME
 ‘she puts’

B: <i>h-an-in-obe</i>	<i>dēh-āpā</i>
3SG.FEM-put-PST-TAME	pottery?-CL:PLATE-LIKE
‘she puts (it) in a plate’	

6.2.1.2 Numerals

Classifiers are also used in constructions with simple cardinal numerals making the distinction between animate and inanimate nouns (discussed above in §6.1.1.1 and §6.1.1.1.2). For animate referents, masculine and feminine are only opposed for the cardinal numeral ‘1’; in cardinal numerals ‘2’ and ‘3’, this opposition is neutralized.

The form of the numeral ‘1’ is *bak^w-ō* for masculine animate referents (46) (47) and *bak^w-uhu* (48) for feminine animate referents. The form of the numeral ‘2’ is *dūhūtaha* for all animates both masculine and feminine (49) (50) and the form of the numeral ‘3’ is *wāmeduk^{wa}* (51) (52), a form that is also used equally for masculine and feminine animates. Although the first six examples in (46) through (52) have human referents, (52) is in fact about a spider, a snail, and a fly, which shows that these numerals are used for animate nouns in general rather than for just animate nouns with a human referent.

- | | | | |
|------|------------------------------|--------------------|----------------|
| (46) | <i>bak^w-ō</i> | <i>ĩ-h-a</i> | <i>hobe-ma</i> |
| | one-CL:MASC | 3SG.MASC-live-TAME | there-TOP? |
| | ‘only one (man) lives there’ | | |
-
- | | | |
|------|-----------------------------------|-----------------------------|
| (47) | <i>ĩts-ō-nĩ</i> | <i>bak^w-ō-nĩ</i> |
| | DUMMY_ROOT-CL:MASC-NON.SUBJ | one-CL:MASC-NON.SUBJ |
| | <i>t^h-ĩtsid-in-obe</i> | |
| | 3PL-greet-PST-TAME | |
| | ‘they are greeting one man’ | |

- (48) *haʔɕuw-uhu bak^w-uhu*
 be_small-CL:FEM one-CL:FEM
 ‘one little girl’
- (49) *uʔda-k^wi-t^hi dũhũtaha-ni-da*
 upstream-VEN-EMPH? two.ANIM-NON.SUBJ-CONTR?

tres-ni-da hã-t^h-in-obe
 three_Sp.-NON.SUBJ-CONTR? do-3PL-PST-TAME

t^hẽmũ-ni-ma
 child + PL-NON.SUBJ-TOP?
 ‘We had two, three [self-repair], children upstream’
- (50) *dũhũtaha ɕĩ-t^h-an-ak^wa-obe*
 two.ANIM talk-3PL-DUR-RECIP-TAME
 ‘two are talking to each other’
- (51) *wãmeduk^wa iʔi-t^h-an-ib-in-obe*
 three.ANIM run-3PL-DUR-?-PST-TAME
 ‘three are chasing each other’
- (52) *dak^wi hĩ-d-ek^w-en-a-da*
 HOW2 say-1PL-?-UNCERT-TAME-CONTR

b-idĩ wãmeduk^wa-ni-ma
 PROX-CL:PL three.ANIM-NON.SUBJ-TOP?
 ‘how can we say these three?’

With inanimate referents, numerals take one of the large set of inanimate classifiers (see a list in Appendix 4). As can be seen in Table 48, for the numeral ‘1’, the classifier is used as a suffix that attaches to *bak^w-* but for numerals ‘2’ and ‘3’, it is infixes inside the numeral. For ‘2’, it follows the initial consonant *d-* and precedes *-latahi*; for ‘3’, it follows the sequence *wãp-* and precedes *-k^wa*. In all cases, the classifier has the phonological form VCV with numerals ‘1’, ‘2’ and ‘3’. For classifiers of the form VCV

in all environments, this means that the first vowel is constant throughout the three numerals (e.g., *-owi* in Table 48). For classifiers of the form CV (e.g., *-²wo*, *-ne* in Table 48), this means that the initial vowel of the classifier in the numeral is not kept constant and it changes depending on the vowel in the classifier; for other CV classifiers, both the initial and the final vowel change (e.g., *-aɕa* in Table 48). For further details about how the initial vowel is specified with different CV classifiers, see Section 6.2.2.

TABLE 48 Sample of numeral classifiers

Classifier	Numerals	Sample nouns
<i>-owi</i>	<i>bak^w-owi</i> <i>d <owi> latahi</i> <i>wāp <owi> ka</i>	<i>t-owi</i> ‘tree’ <i>its-owi</i> ‘canoe’
<i>-²wo</i>	<i>bak^w-a²wo</i> <i>d <o²wo> latahi</i> <i>wāp <u²wo> k^wa</i>	<i>sabana-²wo</i> ‘sheet’ <i>ukua-²wo</i> ‘belly’
<i>-ne</i>	<i>bak^w-ane</i> <i>d <ine> latahi</i> <i>wāp <ine> k^wa</i>	<i>ine-ne</i> ‘tongue’
<i>-ɕa</i>	<i>bak^w-aɕa</i> <i>d <iɕi> latahi</i> <i>wāp <iɕi> k^wa</i>	<i>ʃ-a</i> ‘my mouth’ <i>t-aɕa</i> ‘water rapid, small waterfall’ <i>iridi-ɕa</i> ‘hammock’

Examples of numeral classifiers with inanimate referents from naturally-occurring discourse are given in (53) through (56):

- (53) *kātũ-k-ĩhu* *d <ōkō> latahi* *b-āh-ā*
carton_Sp.-CL:SQUARE-PL two <CL:SQUARE> sit-MOT-TAME
‘two boxes are (there)’

- (54) *wãp <upo> k^wa* *me-a*
three <CL:ROUND> me-TAME
‘three (fruits) fall’
- (55) *towi* *ih-ia* *wãp <iha> k^wa*
tree + CL:TREE leaf + CL:LEAF-PL three <CL:LEAF>
‘three tree leaves’
- (56) *wãp <i?i> k^wa* *lapi-i?i* *b-ãh-ã*
three <CL:POINTED> pencil_Sp.-CL:POINTED sit-MOT-TAME
‘three pencils are (there)’

6.2.1.3 Demonstratives

Mako distinguishes three demonstratives: one proximate and two distant¹⁵⁶ (see Chapter 5, §5.2.3 above). The proximate demonstrative is *b-*, the first distal demonstrative is *ɕ-*,¹⁵⁷ the second distal demonstrative is *h-*. When -VCV classifiers (e.g., *-idɿ* in Table 49) attach to the demonstrative, they keep their VCV form; when -CV classifiers (e.g., *-ɕo*, *-pu*, and *-hu* in Table 49) attach to the demonstratives, they take an /i/ vowel with the proximate and the first distal demonstrative and an /a/ with the second distal demonstrative.

¹⁵⁶ It is unclear at this stage of my investigation what the difference is between the two distant demonstratives. More research is needed in this area.

¹⁵⁷ For some classifiers, my consultants accept *ɕ-iCL* (e.g., *(ɕ)it^ho bat^ho* ‘that garden’) but often the *ɕ-* is deleted and in some cases the speakers do not accept the forms with the /ɕ/. This can be described as a process of /ɕ/ lenition in the environment /i/___/a/ (see for example the word for ‘hammock’ /iridiɕa/, more commonly pronounced [iridi(j)a]). This analysis is further supported by the fact that the first distal demonstrative is always *ɕ-* elsewhere (for example in place adverbs, see Chapter 5, §5.2.7.1).

TABLE 49 Sample of demonstrative classifiers

Classifier	Demonstratives	Sample nouns
<i>-idĩ</i>	<i>b-idĩ</i> <i>ç̣-idĩ</i> <i>h-idĩ</i>	<i>oh^we ts-idĩ</i> ‘small river’
<i>-ç̣o</i>	<i>b-iç̣o</i> <i>iç̣o</i> <i>h-aç̣o</i>	<i>oh^wi-ç̣o</i> ‘water’ <i>voladora</i> ‘lightweight boat’ <i>loʔo-ç̣o</i> ‘catara’, ¹⁵⁸
<i>-t^ho</i>	<i>b-it^ho</i> <i>(ç̣)-it^ho</i> <i>h-at^ho</i>	<i>bat^ho</i> ‘vegetable garden’
<i>-hu</i>	<i>b-ihu</i> <i>ihu</i> <i>h-ahu</i>	<i>its-ahu</i> ‘hole’

Examples of demonstrative classifiers with inanimate referents from naturally-occurring discourse are given in (57) through (61):

- (57) *dok^wa nĩ-nĩ* *kũ-hũk^w-adu-obe-t^hi*
how many-NON.SUBJ 2PL-live-2PL-TAME-EMPH?

b-ehu-nĩ-ma

PROX-CL:HOUSE-NON.SUBJ-TOP?

‘how many of you live in this house?’

- (58) *ahaç̣i-nĩ-ma* *b-ĩdõ-t^hi*
first-NON.SUBJ-TOP? PROX-CL:CLOTH-EMPH?

hĩ-d-ek^w-an-o

talk-1PL-?-DUR-O

hĩbani...

PURPOSE

‘to talk about this one (a ribbon) first’

¹⁵⁸ Prepared hot sauce that one can add to food.

- (59) *ahadʒi-ni-ma* *b-i²wo-t^{hi}* *hĩ-d-ek^w-an-a*
 first-NON.SUBJ-TOP? PROX-CL-EMPH? talk-1PL-?-DUR-TAME
 ‘first, we talk about this one (a cloud)’

- (60) J: ¿dónde nació? (Spanish)
 ‘where was he born?’

B: *h-idi-t^{hi}-da*
 DIST2-CL:RIVER-EMPH?-CONTR?
 ‘in that same river’

- (61) *h-apo* *ena*
 DIST2-CL:ROUND COP.UNCERT
 ‘that’s a microphone, I think’ (lit. round thing)

With animate referents, the classifiers for masculine and feminine differ from the classifiers used to denote these meanings in other environments. While with numerals and on verbs (see §6.2.1.5 below) the masculine nominalizer is *-õ*, its shape is *-te* with the proximate and the first distal demonstrative (62) (63). The form of the feminine classifier *-uhu* is *-tsu* with the proximate demonstrative (64); with the first distal demonstrative, speakers vary between the forms *ihu* and *itsu* (65).

- (62) *wahi-b-õ-Ø* *b-ite-ma*
 know-B-CL:MASC-3.COP PROX-CL:MASC-TOP?
 ‘this one (male) doesn’t know’

- (63) *ite-k^{wi}-da* / *nomena-k^{wi}*
 DIST1 + CL:MASC-SOC-CONTR? PN-SOC
 ‘with that one (male), with Rumeno’

- (64) *b-itsu-ma* cinco
 PROX-CL:FEM-TOP? five_Sp.
 ‘this one (female) is five’

- (65) *²do-²do-b-ak^wa-i* *itsu-ma*
 RED-hit-B-RECIP-NON.FIN PROX + CL:FEM-TOP?
 ‘hitting each other, that one (female)’

6.2.1.4 Dummy Root *its-*

The dummy root *its-* can take any classifier to form a noun, with maybe the exception of the animate plural. With the feminine and the masculine classifiers, i.e., *-uhu* and *-õ* respectively, the meaning of the noun is ‘woman’ and ‘man’ (see (23) above). In other cases, the derived noun can serve to denote referents from broad categories, and it does not even need to have a specific referent as the examples in (66) show.

- (66) a. *its-aka*
 DUMMY_ROOT-CL
 ‘chair, motor, ladder’
- b. *its-ade*
 DUMMY_ROOT-CL:GRAIN
 ‘anything small and round’
- c. *its-a²wo*
 DUMMY_ROOT-CL
 ‘bag, garbage’

In other instances, however, a given *its-* noun seems to be more strongly associated with a single referent as for example with *itsowi* ‘curiara’.¹⁵⁹

Phonologically, VCV classifiers such as *-owi* do not change when they attach to the dummy root; CV classifiers such as *-ka*, *-de*, and *-²wo* in (66) always take an /a/ vowel

¹⁵⁹ Regional term for canoe

when they attach to the dummy root. See Section 6.2.2 for further discussion of this point.

Examples in (67) through (69) are taken from naturally-occurring speech and show the use of *its*- nouns in context.

- (67) cone_{ho}-*ma* *its-aka* *ok^wa* *ãh-ĩn-obe*
 rabbit_Sp.-TOP? DUMMY_ROOT-CL inside stand-PST-TAME
 ‘the rabbit was inside the cage’
- (68) *its-aka* *bamat-ah-ena-ma*
 DUMMY_ROOT-CL:HARD stay_still-MOT-TEMP-TOP?
- its-obu* *i-b-eb-i* *ik^w-ib-i*
 DUMMY_ROOT-CL:LIQUID throw-B-?-NON.FIN AUX-?-NON.FIN
 ‘once the manioc paste has formed at the bottom, you throw out the liquid’
- (69) *bãĩ = ts-õ*
 fish = DUMMY_ROOT-CL:MASC
- its-ãḡũ* *ok^wa* *ãh-ã*
 DUMMY_ROOT-CL:BOTTLE inside stand-TAME
 ‘the fish is inside the fish bowl’

There is morphosyntactic evidence for saying that these words are nouns: 1) they take nominal morphology (e.g., plural morphology) and 2) they can by themselves be the head of a noun phrase (see, for example, *itsaka* in (68)).

6.2.1.5 Verbs

When attached to a verb, both animate and inanimate classifiers serve to nominalize the verb (see §6.1.2 above for animate classifiers attached to verb roots). This is a strategy that is readily used to name objects. Examples (70) through (74) are extracted from

naturally-occurring speech and show how a classifier can attach to a verb to make a new noun that serves to denote an inanimate referent.

- (70) *its-ãçũ* *tum-aw-ãt^hõ*
DUMMY_ROOT-CL:BOTTLE close-MID-CL
‘cork’
- (71) bloke *ʔdi-at-ak^w-api*
cement_block_Sp. build-ʔ-ʔ-CL:FLAT
‘wall made of cement blocks’
- (72) *ow-aw-ã^ʔdõ* *ʔda-in-obe*
drink-MID-CL:CONTAINER break-PST-TAME
‘the glass broke’
- (73) *t^h-õʔõwã* *em-aw-ite* *its-api-ni*
3PL-image grab-MID-CL:PLANK DUMMY_ROOT-CL:FLAT

ak^wat-i *nin-aw-obe*
hang-NON.FIN stay-MID-TAME
‘the picture frame is put hanging on the wall’
- (74) *t^h-õʔõwã* *em-api*
3PL-image grab-CL:FLAT

bloke *ts-api-ni*
cement_block_Sp. DUMMY_ROOT-CL:FLAT-NON.SUBJ

bẽbẽ-b-i *nin-aw-obe*
stick-B-NON.FIN stay-MID-TAME
‘the picture is stuck onto the cement block wall’

These nominalized verbs via a classifier can function as a noun modifier (see §6.4.4 below for more examples) as shown in (75).

- (75) *towi* *bul-aw-aʔo*
tree + CL fell-MID-CL
‘the felled tree, the tree stump’

In some cases, these nouns derived from a verb via classifier-suffixing can function as the main verb of a sentence. This is most common with the masculine and feminine classifiers, exemplified here with *-uhu* in (76) through (78) (see Chapter 7 for more examples and an expanded analysis).

- (76) *lawo* *ilaw-uhu-Ø*
necklace wear-CL:FEM-3.COP
‘she is wearing a necklace’
- (77) *lawo* *ts-op^{ha}* *nin-aw-uhu-Ø*
necklace DUMMY_ROOT-CL:ROPE-LIKE put-MID-CL:FEM-3.COP
‘she is wearing a necklace’
- (78) *tah^{widi}* *tf-ed-ob-i* // *pi-o* //
WHY 1SG-see-PURP-NON.FIN old-FEM
- ed-i* *ʔɕ-ũhu-Ø*
 see-NON.FIN go-CL:FEM-3.COP
‘why should I go see? She is old. She can go see.’

Although not as common as with the animate classifiers (perhaps due to the fact that inanimate nouns are less readily the A or the S of a sentence), inanimate classifiers can also appear suffixed to a verb in lieu of the more commonly-used finite morphology. Compare, for example, (79) with (80): in the first example, the speaker, talking about a hose that is rolled up at the foot of a tree stump, uses a finite verb form marked with the suffix *-obe*; in the second, however, the finite morphology is replaced by the classifier for oblong things which corresponds to the hose referent. These examples would suggest that it is the classifier for S that can attach to the verb as a suffix. A look at the conversation stretch in (81) then shows that inanimate nouns in A function can also be marked on the verb via a classifier. When asked to describe a picture of a tree carrying

fruit, speaker A cross-references the tree with its classifier as a verb suffix; immediately after, Speaker B repeats the sentence but does not cross-reference the tree on the verb, rather he uses a finite verb form with *-obe*.

- (79) *helud-i* *w-ãn-aw-obe*
 roll-NON.FIN stay-DUR-MID-TAME
 ‘(the hose) is (there) rolled up’
- (80) *helud-i* *w-ãn-aw-aʔbo*
 roll-NON.FIN stay-DUR-MID-CL:OBLONG
 ‘(the hose) is (there) rolled up’
- (81) A: *opo-ma* *nii-ni* *wah-owi*
 fruit + CL-TOP? many-NON.SUBJ carry-CL:TREE
 ‘(the tree) carries a lot of fruit’
- B: *eso* / *nii-ni* *wah-in-obe*
 that’s_right_Sp. many-NON.SUBJ carry-PST-TAME
 ‘(the tree) was carrying a lot (of fruit)’

6.2.1.6 Relational Nouns

Some relational nouns such as *laʔaka* ‘foot, base’, *bahale* ‘tip, point’, and *haʔi* ‘middle’ take classifiers. Although a minor pattern, this is one that deserves discussion here because of its cross-linguistic rarity.¹⁶⁰ In (82), we have *laʔaka*. ‘foot, base’ with no marking. If we compare this instance with the two in (83) and (84), we notice that in the

¹⁶⁰ In other Amazonian languages, roots with the semantics of “middle”, “side”, etc. can either be relational nouns or classifiers. In the first case, they can be compounded with the main noun (forming one phonological word) or occur in apposition with the main noun. This is common in Tukanoan languages but the relational noun is not marked with a classifier, only the noun it attaches to is (Kristine Stenzel, pers. comm.). The second strategy is found in Arawakan languages such as Matsigenka (Zachary O’Hagan, pers. comm.), Tariana (Aikhenvald, 1994) and Baniwa/Kurripako (Aikhenvald, 2007).

latter cases a classifier is attached to it: in (83) it is the classifier *-ʔo* which also occurs in the nominalized verb root of ‘cut’ and in (84) it is *-owi*. Comparing (82) with (85) shows that the word for ‘tip’ can also take classifiers and comparing the different forms of the word for ‘middle’ in (86), (87), and (88) confirms that it also takes classifiers.

- (82) *bahale-da towi laʔaka-ni b-ĩn-obe*
tip-CONTR? tree + CL:TREE foot-NON.SUBJ sit-PST-TAME
‘the (hose) tip was at the foot of the tree’
- (83) *towi huw-aw-aʔo laʔaka-ʔo mangera w-ĩn-obe*
tree + CL:TREE cut-MID-CL foot-CL hose_Sp. sit-PST-TAME
‘the hose was at the foot of the tree stump’
- (84) *towi laʔaka-owi mangera b-ĩn-obe*
tree + CL:TREE foot-CL:TREE hose_Sp. sit-PST-TAME
‘the hose was at the foot of the tree’
- (85) *b-idi-t^{hi}-da / bahal-idi-t^{hi}*
DEMS_PROX-CL:RIVER-EMPH?-CONTR? tip-CL:RIVER-EMPH?
‘in this same river, at the headwaters’ (lit. the tip of the river, i.e., where it begins)
- (86) *pino t-owi mi=ts-aʔo haʔi-ʔo*
pine_Sp. tree + CL:TREE high = DUMMY_ROOT-CL middle-CL
h-õbe
stand-TAME
‘the pine tree is on the middle of the hill’
- (87) *its-ahu iwaw-obe paño-ʔe haʔi-ʔe*
DUMMY_ROOT-CL:HOLE be_visible-TAME cloth_Sp.-CL middle-CL
‘a hole is visible in the middle of the piece of cloth’
- (88) *its-ahu iwaw-obe paño haʔi-di*
DUMMY_ROOT-CL:HOLE be_visible-TAME cloth_Sp. middle-CL
‘a hole is visible in the middle of the piece of cloth’

It is unclear why these nouns can sometimes occur with a classifier and other times without (cf. (82) with (83) and (84)) or whether relational nouns like *õpetu* ‘outside’ and *ap^hude* ‘side’ can also take classifiers but this is an avenue for future research.

6.2.1.7 Possessed Inanimate Root *ũk^wã*

As Section 6.4.1.2 below shows, alienably possessed inanimate nouns can enter into a possession construction with the ‘possessed root’ *ũk^wã*. In this construction, the possessive prefix goes on the ‘possessed root’ rather than on the noun. In some cases, the possessed root can also take a classifier. When this happens, the noun is omitted.

- (89) *b-ipo-ma* *it^{hi}i* *ʃf-ũk^wã-po*
PROX-CL:ROUND-TOP? 1SG.PRO 1SG-POSS_ROOT-CL:ROUND
‘this one is my fruit’
- (90) *b-op^ha-ma* *it^{hi}i* *ʃf-ũk^w-op^ha*
PROX-CL:ROPE-LIKE-TOP? 1SG.PRO 1SG-POSS_ROOT-CL:ROPE-LIKE
‘this one is my rope’
- (91) *b-i[?]di-ma* *it^{hi}i* *ʃf-ũk^wã-[?]di*
PROX-CL-TOP? 1SG.PRO 1SG-POSS_ROOT-CL
‘this one is my clay (kneaded mud?)’

This is a minor pattern only attested in elicitation but a recurring one that deserves more research.

6.2.2 Morphophonological Characteristics and Formal and Semantic Organization of the System

Classifiers in Mako can be divided into two main groups depending on their phonological form: most classifiers have a CV syllable structure while a few others are VCV. Only one classifier has a V form: *-õ* ‘CL:MASC’.

TABLE 50 VCV vs. CV classifiers

VCV	Sample nouns	CV	Sample nouns
- <i>owi</i>	<i>towi</i> ‘tree’	- ² <i>da</i>	<i>ɕõmu-²da</i> ‘ear of corn’ <i>its-a²da</i> ‘a row of <i>seje</i> fruit’
- <i>ite</i>	<i>itsowi tsite</i> ‘oar’, <i>akaɕite</i> ‘jaw bone’	- <i>tfo</i>	<i>buberi-tfo</i> ‘bunch of <i>seje</i> fruit’, <i>nunufɔ-tfo</i> ‘bunch of <i>cucurito</i> fruit’ <i>its-atfo</i> ‘bunch’
- <i>ĩpĩ</i>	<i>mĩpĩ</i> ‘arch’, <i>maɕopĩ</i> ‘rainbow’	- <i>de</i>	<i>buberi-de</i> ‘ <i>seje</i> fruit’ <i>ɕõmu-de</i> ‘a grain of corn’ <i>its-ade</i> ‘anything small and round’

As explained above in Section 6.2.1.2, the syllable structure of classifiers has implications for their phonological form in different environments. VCV classifiers maintain their phonological form in all environments (92), CV classifiers change depending on the environment. When the latter attach to a noun that optionally takes a classifier, their syllable structure remains CV; however, on demonstratives, numerals and the dummy root *its-*, their syllable structure is VCV. The vowel added to the form of the CV classifier with the numeral ‘1’, the second distal demonstrative *h-*, and with the dummy root *its-* is always /a/ (see the (a) examples in (92) through (94) for the numeral, and Table 49 and Table 50 above for the second distal demonstrative and for the dummy root *its-* respectively). The vowel added to the proximate demonstrative and the first distal demonstrative is always /i/ (see Table 49 above). When the classifier occurs inside the numerals ‘2’ and ‘3’, the vowel changes depending on the final vowel of the CV classifier. This is exemplified in (93) and (94) for the CV classifiers -*tfo* ‘CL:BUNCH’ and -*de* ‘CL:GRAIN-LIKE’ respectively.

- (92) a. *bak^w-iŋã otom-iŋã*
 one-CL ax-CL
 ‘one ax’
- b. *d<iŋã>latahi otom-iŋã*
 two<CL> ax-CL
 ‘two axes’
- c. *wãp<iŋã>k^wa otom-iŋã*
 three<CL> ax-CL
 ‘three axes’
- d. *b-iŋã otom-iŋã*
 PROX-CL ax-CL
 ‘this ax’
- e. *ɕ-iŋã otom-iŋã*
 DIST1-CL ax-CL
 ‘that ax’
- f. *h-iŋã otom-iŋã*
 DIST2-CL ax-CL
 ‘that ax’
- (93) a. *bak^w-aŋfo buberi-tfo*
 one-CL:BUNCH seje-CL:BUNCH
 ‘one bunch of seje’
- b. *d<aŋfo>latahi buberi-tfo*
 two<CL:BUNCH> seje-CL:BUNCH
 ‘two bunches of seje’
- c. *wãp<aŋfo>k^wa buberi-tfo*
 three<CL:BUNCH> seje-CL:BUNCH
 ‘three bunches of seje’

- d. *b-itfo* *buberi-tfo*
PROX-CL:BUNCH *seje*-CL:BUNCH
‘this bunch of *seje*’
- e. *ɕ-itfo* *buberi-tfo*
DIST1-CL:BUNCH *seje*-CL:BUNCH
‘that bunch of *seje*’
- d. *h-atfo* *buberi-tfo*
DIST2-CL:BUNCH *seje*-CL:BUNCH
‘that bunch of *seje*’
- (94) a. *bak^w-ade* *buberi-de*
one-CL:GRAIN *seje*-CL:GRAIN
‘one grain of *seje*’
- b. *d<ide>latahi* *buberi-de*
two <CL:GRAIN> *seje*-CL:GRAIN
‘two grains of *seje*’
- c. *wāp<ide>k^{wa}* *buberi-de*
three <CL> *seje*-CL:GRAIN
‘three grains of *seje*’

The V in the CV classifiers then allows for a morphophonological organization of the system: All classifiers ending in *-o* (e.g., *-tfo* ‘CL:BUNCH’, *-po* ‘CL:ROUND’, *-^hbo* ‘CL:OBLONG’, *-ɕo* ‘CL:LIQUID’) can be grouped together, as they all trigger an /o/ vowel in the numeral ‘2’ and an /u/ vowel in the numeral ‘3’; all classifiers ending in *-e* (e.g., *-de* ‘CL:GRAIN’, *-^hɕe* ‘CL:HAIR’, *-be* ‘CL:BUNDLE’) can be grouped together, as they all trigger an /i/ vowel in both the numerals ‘2’ and ‘3’.

Although the above patterns allow for a formal organization of the system, they do not capture the behavior of all classifiers. For example, the classifier *-ola* used with the

nouns *ik^wila* ‘fire’ and *t^hola* ‘port’ behaves like other VCV classifiers if we take into account its behavior with demonstratives, the dummy root *its-* and the numeral ‘1’ (i.e., its phonological form stays the same in all these environments) but with the numerals ‘2’ and ‘3’, it behaves like the CV classifiers that end in /o/ (i.e., it triggers an /o/ vowel in the numeral ‘2’ and a /u/ vowel in the numeral ‘3’).

Additionally, the Mako classifiers can be organized according to the semantic notions they encode. Many classifiers encode shape (e.g., *-po* ‘CL:ROUND’, *-²bo* ‘CL:OBLONG’, *-ba* ‘CL:FLAT’), others encode consistency (e.g., *-²di* ‘CL:DOUGH’, *-obu* ‘CL:LIQUID’, *-lo* ‘CL:JELLY-LIKE’), and still others encode groupings of things (e.g., *-ffo* ‘CL:BUNCH’, *-tso* ‘CL:GROUP’). In most cases, the inclusion of a given noun in the group of nouns that take a specific classifier is clear: round things are grouped together, as they always take the classifier *-po* ‘CL:ROUND’. However, sometimes the semantic motivation for the choice of a given classifier is less clear: most liquids take the classifier *-obu* ‘CL:LIQUID’ but ‘water’ and ‘catara’ do not, they take the classifier *-dzo* instead. For a list of classifiers and their semantic meanings and/or nouns they can be used with, see Appendix 4.

6.2.3 Functions of Classifiers

As seen in the preceding sections, classifiers in Mako can serve many functions. First and foremost, they classify nouns into a particular class depending on certain salient characteristics of said noun; for example female animate nouns are classified using *-uhu* ‘CL:FEM’ and round inanimate nouns are classified using *-po* ‘CL:ROUND’. Secondly, they serve an agreement function between a noun and its modifier (see §6.2.1.2 and

§6.2.1.3 for agreement between a noun and a numeral and a noun and a demonstrative respectively). Thirdly, they serve a derivational function deriving new nouns from verb roots (see notably §6.2.1.5). In addition to these functions, the Mako classifiers can serve to specify and individuate a referent (§6.2.3.1) and as an anaphoric device (§1.1.1.1).

6.2.3.1 Individuation and Specification

The individuation and specification function of classifiers can be argued to be at the juncture between inflection and derivation. When nouns that can be optionally marked with a classifier take a given classifier, they become individuated ('one of X') and are at the same time specified for a given feature (e.g., oblong). The specification of a given feature via a classifier can then result in "new" nouns.

In (95), we have the root for 'plantain/banana', which, when used by itself (a), has a generic reading. The addition of a classifier as in (b) through (e) individuates the referent (one of plantain/banana) but it also specifies a new meaning (plant, bushel, bunch, fruit) for this referent.

- | | |
|---|--|
| <p>(95) a. <i>balule</i>
 'plantain/banana'</p> <p>b. <i>balule-ba</i>
 plantain/banana-CL
 'plantain/banana tree'</p> <p>c. <i>balule-ko</i>
 plantain/banana-CL
 'plantain/banana bushel'</p> | <p>d. <i>balule-pa</i>
 plantain/banana-CL
 'plantain/banana bunch'</p> <p>e. <i>balule-ʔo</i>
 plantain/banana-CL:OBLONG
 'plantain/banana fruit'</p> |
|---|--|

6.2.3.2 Classifiers as an Anaphoric Device

Classifiers are widely used as an anaphoric device in naturally-occurring discourse where their use can help track a given referent through a stretch of discourse (96) (97) or to refer to a given referent without needing to mention the full lexeme when the discourse is sufficiently clear to warrant omission of the noun itself (98) (99).

In (96), the referent ‘school’ is introduced into the discourse by means of a full noun (in this case a borrowing from Spanish). The speaker continues talking about other things they asked for when they founded their community and once he is finished with the list, he says “well, a good school was built”. In this new mention of the referent ‘school’—previously established in the discourse—, the speaker uses the dummy root *its-* and the classifier for ‘dwelling’.

- (96) ... *ĩkena-ma* *ekwela-da* *a-b-eb-i* (...)
 afterwards-TOP? school_Sp.-CONTR? ask-B-?-NON.FIN
- ĩkena-ma* *wehe*
 afterwards-TOP? well
- otiwa* *ts-ehu* *t^h-otid-ih-a-tə*
 good DUMMY_ROOT-CL:HOUSE 3PL-work-PST-PST
- ‘... afterward, they asked for a school (...); afterward, well, they built a good school’

In (97), a speaker is retelling the story “Frog, where are you?”. When he gets to the point of the story where the child’s dog barks at a wasp nest, he uses the full noun *bāh* “*ĩḡu*”. He continues talking about how the wasps were angry because the dog shook the tree and how at that point the frog came out of the hole where it was hiding. At this

point, the wasps are preparing to attack and the story goes back to them. Here, however, the speaker only refers to the nest by using a demonstrative with the classifier *-ɕu*.

- (97) *its-ahu-ni-da* *uts-in-obe-a*
 DUMMY_ROOT-CL:HOLE-NON.SUBJ-CONTR? search-PST-TAME-TAME
- awiri-da* *bãh^{wĩ}-ɕu* *lu-emi*
 dog-CONTR? wasp-CL bark-ADV2
- nii-ni* *bãh^{wĩ}-da* *welu-t^h-ak^wa-in-obe*
 many-NON.SUBJ wasp-CONTR? get_riled_up-3PL-RECIP-PST-TAME
- awiri* *ɕã^ʔ-ɕ-ẽb-i* *hã-emi* / *hemikena-ma*
 dog shake_tree-?-NON.FIN do-ADV2 afterwards-TOP?
- h^woi-ma* *its-ahu* *a-eb-in-obe-a*
 toad-TOP?DUMMY_ROOT-CL:HOLE exit-?-PST-TAME-TAME
- h-aɕu-hu-t^hi* *bãh^{wĩ}-ma* *nii-ni*
 DIST2-CL-CL-EMPH? wasp-TOP? many-NON.SUBJ
- t^h-lãh-in-obe*
 3PL-be_around-PST-TAME

‘... the dog is searching in the hole. When he barks at a wasp nest, many wasps get riled up, when the dog shakes the tree. Afterward, the toad comes out of the hole. In the wasp nest, there are many wasps.’

The second situation, i.e., the one where the context is specific enough to warrant not mentioning the referent with a full lexeme, is exemplified here in (98) and (99). In both of these examples, the speakers (interviewer and interviewee) use the proximate demonstrative with the classifier for ‘dwelling’ to refer to the house in which they are. Both these utterances were produced during a census carried out in the interviewee’s house; the context was therefore sufficiently clear for both speakers to not use *ôdo*

‘house’. (98) was the question with which the interviewer started the census; (99) was produced by the interviewee in response to the question “who speaks Spanish here?”.

- (98) *dok^wa n̄i-ni* *kũ-hũk^w-adu-obe-t^{hi}*
 HOW1 many-NON.SUBJ 2PL-live-2PL-TAME-EMPH?

b-ehu-ni-ma
 PROX-CL:HOUSE-NON.SUBJ-TOP?
 ‘how many of you live in this house?’

- (99) *de-a* *b-ehu-ni-ma*
 not_exist.ANIM-TAME PROX-CL:HOUSE-NON.SUBJ-TOP?
 ‘there is no one in this house (that speaks Spanish)’

6.3 Nominal Morphology: Plurals and *-mina/-mine* ‘DEC’

Thus far, I have discussed the nominal morphology of possession (Position -1 in Figure 49; see above in the introduction to the chapter), and that of classification (Position 1 in Figure 49; see §6.1.1.1.1 for gender morphology and §6.2 for classifiers). In this section, I deal with number morphology for both animate and inanimate nouns (§6.3.1) and with the markers *-mina/-mine* ‘DEC’ which, as will be seen below, encode information about the passing of a human animate referent (§6.3.2).

6.3.1 Number

Animate and inanimate nouns differ in the morphology they employ to form plurals. A plural animate noun is marked by either just nasalization as in (100) to (102), nasalization plus the suffix *-di* as in (103) to (105), or just the suffix *-mũ* as in (106) to (107). Singular forms are in the (a) examples; plural forms, in the (b) examples. The forms given in the examples that follow (i.e., (100) through (107)), unlike examples in

the rest of this chapter, are in a narrow phonetic transcription to show the nasalization of the consonants. The same applies to (108) and (109) below.

- | | | | |
|----------|---|----|--|
| (100) a. | <i>kɪbo</i>
alligator.SG
'alligator' | b. | <i>kĩbõ</i>
alligator + NAS.PL
'alligators' |
| (101) a. | <i>ɪwo</i>
sloth.SG
'sloth' | b. | <i>ĩwõ</i>
sloth + NAS.PL
'sloths' |
| (102) a. | <i>ʔɕawe</i>
mosquitos.SG
'mosquito' | b. | <i>ʔnãwẽ</i>
mosquito + NAS.PL
'mosquitos' |
| (103) a. | <i>awiri</i>
dog.SG
dog' | b. | <i>ãwĩĩ-ɖĩ</i>
dog-PL + NAS
'dogs' |
| (104) a. | <i>wawari</i>
monkey.SG (a kind of)
'monkey' | b. | <i>wãwãĩĩ-ɖĩ</i>
monkey-PL + NAS
'monkeys' |
| (105) a. | <i>awɪɕu</i>
crab.SG
'crab' | b. | <i>ãwĩɲũ-ɖĩ</i>
crab-PL + NAS
'crabs' |
| (106) a. | <i>õhõĩĩ</i>
nephew/son_in_law.SG
'nephew/son-in-law' | b. | <i>õhõĩĩ-mũ</i>
nephew/son_in_law-PL
'nephews/sons-in-law' |
| (107) a. | <i>ĩnĩ</i>
son.SG
'son' | b. | <i>ĩnĩ-mũ</i>
son-PL
'sons' |

It is probable that the difference between the pluralization strategy that involves only nasalization and the pluralization strategy that involves nasalization and the use of the

suffix *-dĩ* is motivated by the referent (lower-order animals vs. humans and higher-order animals, i.e., animals that are closer to humans, respectively) but further research is needed in this area. The *-mũ* suffix seems to select nasal noun roots.¹⁶¹

In addition to human animate nouns, two inanimate nouns have been identified as using the *-dĩ* suffix: ‘sun’ and ‘star’.

- | | |
|--|---|
| <p>(108) a. <i>hãwõ</i>
sun.SG
‘sun’</p> | <p>b. <i>hãwõ-dĩ</i>
sun-PL + NAS
‘suns’</p> |
| <p>(109) a. <i>tsiri-ʔi</i>
star-CL:POINTED
‘star’</p> | <p>b. <i>ᵑĩĩ-ʔi-dĩ</i>
star-CL:POINTED-PL + NAS
‘stars’</p> |

‘Sun’ and ‘star’ are, however, exceptional in their choice of plural suffix. All other inanimate nouns employ either *-bia* or *-ihu*, which attach, as shown in the examples below, to a noun with a classifier. While *-bia* can occur with all inanimate nouns in (110) through (116), the use of *-ihu* is restricted to nouns whose classifiers end in /o/ in (114) through (116).

- | | |
|---|--|
| <p>(110) a. <i>towi</i>
tree + CL:TREE
‘tree’</p> | <p>b. <i>towi-bia</i>
tree + CL:TREE-PL
‘trees’</p> |
| <p>(111) a. <i>otoho-ɕu</i>
pan/pot-CL
‘frying pan/pot’</p> | <p>b. <i>otoho-ɕu-bia</i>
pan/pot-CL-PL
‘frying pans/pots’</p> |

¹⁶¹ I thank Tania Granadillo for this suggestion. Further research is needed to find other forms with *-mũ*.

- (112) a. *t^h-ibah-ale*
3PL-eye-CL
'(their) eye'
- b. *t^h-ibah-ale-bia*
3PL-eye-CL-PL
'(their) eyes'
- (113) a. *t^h-o[?]ɕe*
3PL-tooth + CL
'(their) eye'
- b. *t^h-o[?]ɕe-bia*
3PL-tooth + CL-PL
'(their) teeth'
- (114) a. *wale-t^ho*
scab-CL
'scab'
- b. *wale-t^ho-bia*
scab-CL-PL
'scabs'
- c. *wale-t^h-ihu*
scab-CL-PL
'scabs'
- (115) a. *iwe-ʔo*
bone-CL
'bone'
- b. *iwe-ʔo-bia*
bone-CL-PL
'bones'
- c. *iwe-ʔ-ihu*
bone-CL-PL
'bones'
- (116) a. *t^h-ihẽ-ʔbo*
3PL-thigh-CL
'(their) thigh'
- b. *t^h-ihẽ-ʔbo-bia*
3PL-thigh-CL-PL
'(their) thighs'
- c. *t^h-ihẽ-ʔb-ihu*
3PL-thigh-CL-PL
'(their) thighs'

As can be seen from the examples in (114), (115) and (116), when a noun with a classifier ending in /o/ takes the plural suffix *-ihu*, the classifier loses its /o/. The final /a/ of some classifiers ending in this vowel sometimes undergoes a similar reduction process when the suffix *-bia* is attached to it; in such cases, the /b/ of the plural suffix is also lost:

- (117) a. *otom-ĩʔã*
ax-CL
'ax'
- b. *otom-ĩʔ-ĩã*
ax-CL-PL
'axes'
- (118) a. *dowo-ʔda*
pestle-CL
'pestle'
- b. *dowo-ʔd-ia*
pestle-CL-PL
'pestles'

The examples in (119) through (121) show the use of inanimate nouns in their plural form in naturally-occurring speech.

- (119) *hōba-ma* *op-ihu-da* *ku-ō-Ø*
that_one + CL:MASC-TOP? fruit + CL-PL-CONTR? eat-CL:MASC-3COP
‘he (always) eats fruits’
- (120) *t^h-iba-bia-ni* *ʔdo-ʔdo-t^h-ak^wa-in-obe*
3PL-face + CL-PL-NON.SUBJ RED-hit-3PL-RECIP-PST-TAME
‘they are hitting each other in their faces’
- (121) *ikenā* *t^h-ehu-bia* *we-Ø-ih-a-tə*
afterward 3PL-CL:HOUSE-PL order-3SG.MASC-PST-TAME-PST
- t^h-otid-o* *hībani*
3PL-build-FUT PURPOSE
‘afterwards, he ordered that they build their houses’

6.3.2 *-mina/-mine* ‘DEC’

The suffixes *-mina* and *-mine* inform the hearer/reader that the person being talked about has passed away and is no longer among us. This is a category that is widespread among Amazonian languages (Floyd, 2014).

In (122), one of the community leaders is retelling the story of how their project raising buffalos with an NGO got started by the late Cachero and refers to him ‘our late grandfather’. In (123), a different speaker answers to the question of “what was your father’s name?” during a census interview. In (124), a third speaker is telling how her late grandfather used to tell people to move away after releasing a curassow (taboo). That same speaker is enumerating in (125) who were the first people to settle where the community is nowadays; this list includes her late brother.

- (122) *d-a[?]di-mina-ma* *Ø-mik^w-in-a* *Cachero*
 1PL-grandfather-DEC-TOP? 3SG.MASC-be_called-PST-TAME PN
 ‘our late grandfather was called Cachero’
- (123) *ite* *tf-abe[?]do-mina-da*
 PROX + CL-MASC 1SG-father-DEC-CONTR?
- Luis* *Ø-mik^w-in-a*
 PN 3SG.MASC-be_called-PST-TAME
 ‘that one, my late father was called Luis’
- (124) *k^w-a[?]di-mine* *h^wi-b-eb-an-i* *Ø-iɕa*
 2SG-grandfather-DEC yell-B-?-DUR-NON.FIN 3SG.MASC-AUX.TAME
- bisi-ma* *ɕi-Ø-an-ih-iɕa*
 PN-TOP? tell-3SG.MASC-DUR-PST-TAME
- tupa-k^wi* *hãwẽ* *di-b-ib-ah-e*
 over_there-VEN ? run-B-?-?-REP.IMP
- itsule-ni* *ehat-i* *ka-t-at-ak^w-obe*
 curassow-NON.SUBJ release-NON.FIN finish-1SG-?-FUT-TAME
 ‘your deceased grandfather used to yell—Bisi used to say—“move fast over there that I just finished releasing the curassow”’
- (125) ... *ik^widi-ma* / *tf-ipi-e-mine* /
 1PL.PRO-TOP? 1SG-older_sibling-MASC-DEC
- ite* *Payua* *t^h-abe[?]do ...*
 DIST1 + CL:MASC NP 3PL-father
 ‘[...] us, my deceased older brother, that one the father of the Payua, [...]

The difference between *-mina* and *-mine* could be dialectal: the *-mina* forms come from the speech of Arena Blanca speakers, the *-mine* forms from speakers of Porvenir II. However, when presented with the question of what the difference between these two

forms was, my main consultant in Porvenir II said that the difference between *-mina* and *-mine* lies in the amount of time that has passed since the person in question passed away: *-mina* is used for recently deceased people and *-mine* for people that passed away long ago.

6.4 The Noun Phrase

The previous sections have centered on nouns and their morphology; this section, on the other hand, focuses on the internal structure of noun phrases (NPs).

In Mako, a NP can be minimally formed by a personal pronoun (126), a numeral (127), a demonstrative (128), a noun (129), and a nominalization (130).

- (126) *wahi-t-a* *it^{hi}-ma*
not_know-1SG-TAME 1SG.PRO-TOP?
‘I don’t know’
- (127) *wāmeduk^{wa}* *wō-t^h-an-ak^{wa}-in-obe*
three.ANIM hug-3PL-DUR-RECIP-PST-TAME
‘three were hugging each other’
- (128) *idi-ma* *tsādi* *dūhūtaha*
DIST1 + CL:PL-TOP? woman + PL two.ANIM
‘those are two women’
- (129) *its-uhu-ni* *wō-b-an-i*
DUMMY_ROOT-CL:FEM-NON.SUBJ hug-B-DUR-NON.FIN

Ø-itsid-in-obe
3SG.MASC-greet-PST-TAME
‘he was hugging the woman’

- (130) *ow-aw-ã²dõ* mesa *ts-ite* *h-õbe*
 drink-MID-CL table_Sp. DUMMY_ROOT-CL stand-TAME
 ‘the glass is on the table’

NPs can also be formed with a noun and one or several of the following modifiers:

a(nother) noun (§6.4.1), numerals (§6.4.2), demonstratives (§6.4.3), and nominalizations (§6.4.4). Complex noun phrases are treated below.

6.4.1 Noun + Noun

Nouns can modify other nouns in two different situations: 1) two nouns are joined together in a NP with one of them modifying the meaning of the other (usually specifying it) and 2) two nouns are joined together in a possessive construction where one noun is the possessor and the other the possessum. The first type of construction is treated in Section 6.4.1.1; the second one, in Section 6.4.1.2.

6.4.1.1 Apposition

Two types of noun-noun NPs can be identified: the first one is composed of a noun and the dummy root *its-* to which a classifier is attached; the second one is composed of two nouns in apposition. Each construction is explained in turn.

6.4.1.1.1 [Noun + DUMMY_ROOT-CL]

In §6.2.1.4 above, I showed that the dummy root *its-* can combine with a classifier to form a noun. In many cases, the *its-* noun occurs next to another noun, classifying it. In this structure, the dummy root *its-* serves as a host for the classifier. This is shown in (131) with the Spanish words *lápiz* ‘pencil’ and *mesa* ‘table’ modified by the *its-* nouns *(i)ts-ĩ?i* and *(i)ts-ite* and with *wĩlĩ* ‘Mako’ (132) modified by *its-õ*.

- (131) *lapi* *ts-i?i* *mesa* *ts-ite* *w-ĩn-obe*
 pencil_Sp. DUMMY_ROOT-CL table_Sp. DUMMY_ROOT-CL lie-PST-TAME
 ‘the pencil was on the table’

- (132) *wĩĩ* *its-õ-tsã*
 Mako DUMMY_ROOT-CL:MASC-1.COP
 ‘I am a Mako man’

Notice that in this construction the dummy root can lose its initial vowel, which could eventually result in the joining of the two members of the construction. This has already happened with *its-õ* ‘DUMMY_ROOT-CL:MASC’, which is now usually attached to the word it modifies, as in (133).

- (133) \emptyset -*ĩmĩledĩ* = *ts-õ-nĩ*
 3SG.MASC-partner = DUMMY_ROOT-CL:MASC-NON.SUBJ

’do-∅-in-obe-t^{hi}
 hit-3SG.MASC-PST-TAME-EMPH?
 ‘He was hitting his (male) partner’

6.4.1.1.2 [Noun + Noun]

In the second apposition construction, the first noun specifies the second one. The semantic head of this type of compound, therefore, is the second noun: in (134), the compound refers to a kind of man and not to a kind of prayer while in (135) the compound refers to a kind of leaf and not to a kind of *yagrumo* tree.

- (134) *mea* *luw-õ*
 prayer rule-CL:MASC
 ‘shaman’ (lit. the ruler of the prayers)

- (135) *wanaka* *ih-ia*
yagrumo leaf + CL:LEAF-PL
 ‘*yagrumo* leaves’¹⁶²

6.4.1.2 Possession

Two nouns in apposition could also be in a possessor-possessum relationship (which can be a special kind of modification relationship). As shown in examples (136) through (138), the order inside this construction is always possessor + possessum.

- (136) *k^w-abe[?]do* *Ø-abe[?]do*
 2SG-father 3SG.MASC-father
 ‘your father’s father’
- (137) *mariu* *i-pi-o*
 tapir 3SG.MASC-older_sibling-MASC
 ‘the tapir’s older brother’
- (138) *tfapako* *Ø-ōhō[?]bĩ*
 PN 3SG.MASC-mother
 ‘Chapako’s mother’

The possessor noun can be replaced by a pronoun as shown in (139).

- (139) *ik^wi* *k^w-ilek^w-o*
 2SG.PRO 2SG-spouse-FEM
 ‘your wife’

Notice that in the four preceding examples, the possessum takes a possessive prefix. As discussed in Sections 6.1.1.1.1 and 6.1.1.1.2, some nouns are inalienably possessed and they always take a possessive prefix.

¹⁶² A tree of the *Cecropia* genus

Alienably possessed nouns, on the other hand, can enter one of four different constructions: 1) they can occur with a possessor and no possessive prefix (140), 2) they can occur with a possessor and a possessive prefix (141), 3) they can occur without possessor and with the possessive prefix (142), or 4) they can occur with one of three “possessed roots” as discussed below.

- (140) *Jorge bat^ho*
 PN vegetable_garden¹⁶³
 ‘Jorge’s vegetable garden’
- (141) *it^hi tʃi-bat^ho*
 1SG.PRO 1SG-vegetable_garden
 ‘my vegetable garden’
- (142) *tʃi-bat^ho*
 1SG-vegetable_garden
 ‘my vegetable garden’

The most common ‘possessed root’ is *ũk^wã*. In this construction, the possessive prefix occurs on the possessed root (143).

- (143) *b-ola-ma it^hi tʃ-ũk^wã t^hola*
 PROX-CL-TOP? 1SG.PRO 1SG-POSS_ROOT port + CL
 ‘this one is my port’

This construction is arguably equivalent to the one where the possessive prefix goes on the noun itself: another way of expressing the meaning in (143) would be (144).

¹⁶³ Sp. *conuco*

- (144) *b-ola-ma* *it^{hi}* *fo-t^hola*
 PROX-CL-TOP? 1SG.PRO 1SG-port + CL
 ‘this one is my port’

However, this possibility seems to be available to only some nouns. While the two sentences in (145) and (146) are both acceptable for my consultants, only the second sentence (i.e., the one with the ‘possessed root’) out of the pair in (147) and (148) seems to be acceptable. Although this could be a result of the data gathering process (i.e., elicitation), further research is need in this area to determine if there is a difference among alienably possessed nouns with respect to which possession construction they can enter into.

- (145) *b-i[?]dã-ma* *it^{hi}* *fi-ile-[?]dã*
 PROX-CL-TOP? 1SG.PRO 1SG-manioc-CL:TUBER
 ‘this one is my yucca’
- (146) *b-i[?]dã-ma* *it^{hi}* *fi-ũk^{wã}* *ile-[?]dã*
 PROX-CL-TOP? 1SG.PRO 1SG-POSS_ROOT yucca-CL:TUBER
 ‘this one is my yucca’
- (147) **b-i[?]bo-ma* *it^{hi}* *fi-luwa-[?]bo*
 PROX-CL-TOP? 1SG.PRO 1SG-*guama*-CL:OBLONG
 (this one is my *guama* fruit)¹⁶⁴ [intended]
- (148) *b-i[?]bo-ma* *it^{hi}* *fi-ũk^{wã}* *luwa-[?]bo*
 PROX-CL-TOP? 1SG.PRO 1SG-POSS_ROOT *guama*-CL:OBLONG
 ‘this one is my guama fruit’

As shown in Section 6.2.1.7 above, the ‘possessed root’ can be the host of the classifier.

¹⁶⁴ Scientific name: *inga*

- (149) *b-i[?]ʒe-ma* *it^{hi}* *ʃ-ũk^wã-[?]ʒe*
 PROX-CL-TOP? 1SG.PRO 1SG-POSS_ROOT-CL
 ‘this one is my notebook’

While *ũk^wã* is used with possessed inanimate nouns, alienably-possessed non-human animate nouns require a different possessed root *ah^wi*, which is often translated by my consultants as ‘pet’. Examples (150) and (151) are both taken from the story “Frog, where are you?”.

- (150) *Ø-ah^wi* *awiri-k^wi-da*
 3SG.MASC-POSS_ROOT.ANIM dog-SOC-CONTR?
 ‘with his dog’
- (151) *Ø-ah^wi* *sapo* *Ø-ĩmĩledĩ-ma*
 3SG.MASC-POSS_ROOT.ANIM frog_Sp. 3SG.MASC-relatives-TOP?
- towi* *wãme* *t^h-ed-an-ak^wa-in-obe*
 tree + CL:TREE on_top_of 3PL-see-DUR-RECIP-PST-TAME
 ‘his frog and its family were looking on top of a tree’

Non-human animate nouns can only be possessed if they enter in the *ah^wi* construction—unlike inanimate nouns for which several strategies are available. In other words, the possessive prefixes cannot attach to non-human animate nouns:

- (152) **ʃ-awiri*
 1SG-dog
 (my dog) [intended]

Possession of borrowed Spanish inanimate nouns is accomplished by attaching the possessive prefix to a different possessed root. This root is *ale* and, as (153) and (154) below show, it occurs with a possessive prefix and in apposition with a Spanish noun, although the latter is not required as (155) shows.

- (153) A: *k^{wi}-ale* *año-t^{hi}*
 2SG-POSS_ROOT year_Sp.-EMPH?
 ‘your age’ (lit. year)
- B: *tʃi-ale* *año-ma* *treintaido-t^{hi}*
 1SG-POSS_ROOT year_Sp.-TOP? thirty_two_Sp.-EMPH?
 ‘my age is 32’ (lit. year)
- (154) *hemikena-ma* *Ø-ab-in-obe*
 afterward-TOP? 3SG.MASC-sleep-PST-TAME
- i-ale* *kama-ni*
 3SG-POSS_ROOT bed_Sp.-NON.SUBJ
 ‘afterwards, he was sleeping in his bed’
- (155) *t^{hi}-ale* *hēl-ō* *i-ale-k^{wi}*
 3PL-POSS_ROOT other-CL:MASC 3SG.MASC-POSS_ROOT-SOC
- balew-ab-ik^{wa}-i* *t^h-alew-in-obe* *ta*
 exchange-?-RECIP-NON.FIN 3PL-play-PST-TAME TAG
 ‘they were playing at exchanging their things with the thing of the other one, right?’

While *ah^{wi}* can occur with non-human animate Spanish borrowings (see (151) above for ‘frog’), human animate borrowings take *ale*:

- (156) *Jorge* *i-ale* *novia*
 PN 3SG.MASC- POSS_ROOT girlfriend_Sp.
 ‘Jorge’s girlfriend’
- (157) *hob-uhu-ma* *hi-ale* *familia*
 that_one-CL:FEM-TOP? 3SG.FEM- POSS_ROOT family_Sp.
- hūn-an-uhu-ma*
 have-DUR-CL:FEM-TOP?
 ‘that one (female) is the one who has her family (in other communities)’

6.4.2 Noun + Numeral

A noun phrase can also be formed by juxtaposing a numeral and a noun. The three examples below are extracted from naturally-occurring speech and show the use of the numerals ‘1’ (158), ‘2’ (159), and ‘3’ (160). For additional examples and for an explanation of the difference between animate and inanimate numerals, see Section 6.2.1.2.

- (158) *ni-oh^wi-ɕɔ* *ts-ãɕũ* *bak^w-ãɕũ*
hurt-water-CL DUMMY_ROOT-CL one-CL

hũ-hũn-in-obe *mesa-nĩ*
3SG.FEM-put-PST-TAME table_Sp.-NON.SUBJ
‘she put one bottle of alcohol on the table’

- (159) *pelota-po* *d<opo>latahi* *w-ãh-in-obe*
ball_Sp-CL two <CL:ROUND> sit-MOT-PST-TAME

mesa *wãme*
table_Sp. on_top_of
‘the two balls are on top of the table’

- (160) *ĩmadi* *wãmeduk^wa* *b-ãh-i* *t^hu-ku-in-obe-ka*
man + PL three.ANIM sit-MOT-NON.FIN 3PL-eat-PST-TAME-TAG
‘three men were eating seated?’

6.4.3 Demonstrative + Noun

Mako has three demonstratives: a proximate demonstrative and two distal demonstratives. As shown in Section 6.2.1.3, demonstratives take classifiers and can form a noun phrase by themselves. In naturally-occurring speech, they do not readily combine with a noun but in elicitation demonstrative-noun NPs are easily volunteered by my consultants.

- (161) *b-owi* *its-owi*
 PROX-CL DUMMY_ROOT-CL:TREE
 ‘this curiara’
- (162) *ime* *mehe*
 DIST1 + CL savannah
 ‘that savannah’
- (163) *h-aʔɕe* *kʷiɕalu-ʔɕe*
 DIST2-CL notebook-CL
 ‘that notebook’

6.4.4 Noun + Nominalizations

As shown above in Section 6.2.1.5, classifiers can attach to verbs, nominalizing them. These nominalizations¹⁶⁵ can in turn be used to modify a noun. For example, the noun ‘tree’ is modified in (164) by a nominalized—via the classifier for ‘tree’—form of the verb *bul-* ‘to fell’.

- (164) *mangera-ma towi* *bul-aw-owi* *laʔaka-ʔo*
 hose_Sp-TOP? tree + CL:TREE fell-MID-CL:TREE bottom-CL

 b-ĩn-obe
 sit-PST-TAME
 ‘the hose was at the foot of the felled tree’ (lit. the tree the felled one’)
- (165) *itʰi* *tf-em-in-obe*
 1SG.PRO 1SG-buy-PST-TAME

¹⁶⁵ These nominalizations are in fact relative clauses. For more on relative clauses, see Chapter 8, §8.3.2.

iridi-ǵa Maria *hu-bukʷ-in-aǵa-ma*
 hammock-CL PN 3SG.FEM-knit-PST-CL-TOP?
 ‘I bought the hammock that Maria knitted’ (lit. the hammock the one
 that Maria knitted)

- (166) *awiri* *iwari-ʔbo* *dew-aʔbo* *hũn-an-õ-Ø*
 dog tail-CL:OBLONG be_white-CL have-DUR-CL:MASC-3.COP
 ‘the dog has a white tail’ (lit. a tail that is white = a tail a white one)

The nominalizer *-i* also serves to nominalize a verb. This nominalized form of the verb can also modify a noun.

- (167) *ǰǵe-bia* *in-awa-ni* *h-ĩ*
 moss + CL-PL rock-CL-NON.SUBJ stand-NOM
 ‘the moss that is on the stones’
- (168) *mariu-ni-ma* *itʰi* *to-t-i*
 tapir-NON.SUBJ-TOP? 1SG.PRO cook-1SG-NOM
 ‘the tapir I am cooking’
- (169) *ǰǵe-bia* *maricǵu* *u-ku-i*
 moss + CL-PL tapir 3SG.MASC-eat-NOM
 ‘the moss that the tapir eats’

6.4.5 Summary

This section focused on noun phrases and showed that a NP can be minimally constituted by a personal pronoun, a numeral, a demonstrative, a noun or a nominalization. I also showed that nouns can combine with other nouns as well as with pronouns, numerals, demonstratives and nominalizations to form more complex NPs. Although most of the noun phrases in the preceding sections are formed by one or two lexemes, this needs not be the case. More complex NPs can occur freely in the

language, even if they are rare in the corpus. An example of a NP with three lexemes is in (170).

- (170) *towi* *ih-ia* *wāp < iha > k^{wa}*
 tree + CL:TREE leaf + CL:LEAF-PL three < CL:LEAF >
 ‘three tree leaves’

It is also important to note that complex NPs like the ones discussed in Sections 6.4.1 through 6.4.4 do not always require a noun:

- (171) *dak^{wi}* *hĩ-d-ek^w-en-a-da*
 HOW2 say-1PL-?-UNCERT-TAME-CONTR?
- b-idi* *wāmeduk^{wa}-ni-ma*
 PROX-CL:PL three.ANIM-NON.SUBJ-TOP?
 ‘how can we say these three?’

6.5 Conclusions

This chapter provides a first approximation to Mako nouns, nominal morphology and noun phrases. Mako nouns can be either bound or free nominal roots, or (bound) verb roots. They can be divided into several subclasses depending on their animacy, (in)alienability, gender and shape/consistency. A complex system of noun classification, much like the system of other Northwest Amazonian languages (Seifart & (Doris) Payne, 2007; Peña 2013 [ms.]), allows for classification, specification, individuation, and referent tracking of nouns but, unlike other languages of the area, Mako classifiers can also appear on relational nouns. This is a construction that could contribute to the typology of nominal classification. Other nominal morphology includes plurals, two markers for ‘deceased’, and possessive prefixes. Alienable and inalienable possession

and three different ‘possessed roots’ make up a complex system that deserves further attention.

This chapter also dealt with noun phrases and showed that they can be simple (a pronoun, a noun, a numeral, a demonstrative, or a nominalization) or complex (more than one of the following: pronoun, noun, numeral, demonstrative and nominalization).

The functions of noun phrases at the sentence-level is discussed in Chapter 8 where I show other morphology that attaches to nouns (Position 4, Figure 49). Position 5 (Figure 49) morphology is dealt with in Chapter 8 (*-hĩ*, *-ka*, and *-ha*) and in Chapter 9 (the rest).

Chapter 7

7 Verbs and Verbal Morphology

Verbal morphology is suffixal and agglutinating; there is only one prefix slot for marking animate subjects in copulas, the auxiliary *ik^w*, and Class I verbs. This section starts with a discussion of the different verb subclasses (§7.1) and then moves on to discussing inflectional and derivational verbal morphology (§7.2).

7.1 Verb (Sub)classes

In this section, I look at how human animate subjects are marked in Mako and use this marking to establish two verb classes defined by the slot in which the subject marking occurs. Each class and the subject markers for each are in turn further described.

7.1.1 Lexical Verbs

This section is concerned with lexical verb roots; functional verb roots such as copulas and auxiliaries are treated later. First, I show how Mako verbs can belong to one of two classes as defined by the slot of subject marking (§7.1.1.1) and then show how all verbs can be divided into finite, non-finite and nominalized subclasses (§7.1.1.2).

7.1.1.1 Class I and II Verb Roots

Mako verb roots can be divided into two classes depending on the phonology of the verb: roots ending in a consonant (on the left) and roots ending in a vowel (on the right).

- | | | | | | | |
|-----|----|-------------------------|------------------|----|--------------|---------------|
| (1) | a. | <i>ed-</i> | ‘see’ | b. | <i>hã-</i> | ‘make/do’ |
| | c. | <i>otid-</i> | ‘work’ | d. | <i>di-</i> | ‘scrape’ |
| | e. | <i>p^hõr-</i> | ‘put away’ | f. | <i>wahi-</i> | ‘not know’ |
| | g. | <i>kikid-</i> | ‘dry in the sun’ | h. | <i>wi-</i> | ‘fell’ |
| | i. | <i>amat-</i> | ‘squeeze’ | j. | <i>wo-</i> | ‘stink/smell’ |

The final segment of a given verb root has consequences for subject marking which provides a formal criterion for this division of verb roots into two classes. Roots ending in a consonant take a subject prefix (e.g., *bil-* ‘turn over’ in (2) and (3)) and those that end in a vowel take a subject suffix (e.g., *p^hõ-* ‘sift’ in (4) and (5)).

- | | | | |
|-----|--|----------------|---|
| (2) | <i>b-ena-ma</i> | <i>ile</i> | <i>hi-bil-in-obe</i> |
| | PROX-ADV1-TOP? | manioc/cassava | 3SG.FEM-turn.over-PST-TAME |
| | ‘here she was turning over the cassava’ | | |
| | | | |
| (3) | <i>b-ena-ma</i> | <i>ile</i> | <i>t^hi-bil-in-obe</i> |
| | PROX-ADV1-TOP? | manioc/cassava | 3PL-turn.over-PST-TAME |
| | ‘here they were turning over the cassava’ | | |
| | | | |
| (4) | <i>b-ena-ma</i> | <i>ile</i> | <i>p^hõ-h-eb-in-obe</i> |
| | PROX-ADV1-TOP? | manioc/cassava | sift-3SG.FEM-?-PST-TAME |
| | <i>lu[?]dupa-ni</i> | | |
| | sieve-NON.SUBJ | | |
| | ‘here she was sifting the manioc with the sieve’ | | |
| | | | |
| (5) | <i>b-ena-ma</i> | <i>ile</i> | <i>p^hõ-t^h-eb-in-obe</i> |
| | PROX-ADV1-TOP? | manioc/cassava | sift-3PL-?-PST-TAME |
| | <i>lu[?]dupa-ni</i> | | |
| | sieve-NON.SUBJ | | |
| | ‘here they were sifting the manioc with the sieve’ | | |

Although most verb roots only belong to one class (as determined by their phonology and the locus of subject marking), there is at least one attested verb that can occur with

either the subject prefixes or the subject suffixes. The choice, however, is still determined by the final element in the root. The root for ‘hug’ appears as *wõ-* which takes a suffix (6) and as *wõʔɕ-* which takes a prefix (7). If this is a derivational process to derive Class I verbs from Class II verbs, it is not a productive one.

- (6) *wãmeduk^{wa}* *wõ-t^h-ãn-ak^{wa}-in-obe*
 three.ANIM hug-3PL-?-RECIP-PST-TAME
 ‘the three [men] were hugging/greeting each other’
- (7) *wõʔɕ-ab-ik^{wa}-i* *t^hi-sid-ak^{wa}-in-obe-t^hi*
 hug-?-RECIP-NON.FIN 3PL-greet-RECIP-PST-TAME-EMPH?
 ‘they were greeting each other [by] hugging each other’

7.1.1.2 Finite, Non-finite and Nominalized Verbs

All Mako lexical verbs can co-occur with inflectional finite and non-finite morphology as well as with derivational morphology such as classifiers. The syntactic distribution of verb roots marked with the different finite suffixes, the non-finite suffix and the classifiers differs, as further explored in Chapter 8. In the sections that follow, I present the relevant morphology for finiteness (§7.1.1.2.1 and §7.1.1.2.2) as well as how classifiers can nominalize a verb (§7.1.1.2.3).

7.1.1.2.1 Finite Verbs

Finite verbs are defined here as those verb forms that 1) occur in independent clauses, 2) take either a subject prefix or a subject suffix (depending on the final segment of their root) and 3) are inflected with either *-a* (8), *-e* (9), or *-obe* (10), or with the negative suffix *ikɛ* (11) if in a declarative or interrogative sentence, or with the morphology of the imperative (12) and the prohibitive (13) if in one of those two

moods. This morphology (and, therefore, finite verbs) is discussed in detail in

§7.2.1.2.1.

- (8) *ik^widi -ma wahi-d-a*
 1PL.PRO-TOP? not_know-1PL-TAME
 ‘we don’t know’
- (9) ... *daki its-uhu wo-h-ak^w-e*
 later DUMMY_ROOT-CL:FEM die-3SG.FEM-FUT-TAME
 ‘(when the parrot flies by singing before sunrise, they say that) later a woman will die’
- (10) *tsurini o-kib-adu-obe-ma*
 bad laugh-2PL-2PL-TAME-TOP?
 ‘you are mocking me’
- (11) *tf-ed-iki*
 1SG-see-NEG
 ‘I don’t see (it)’
- (12) *dõ-b-at-i-t^hi*
 grab-B-?-IMP-EMPH?
 ‘grab (it)!’
- (13) *k^w-alew-a ik^wi-ma*
 2SG-play-PROH 2SG.PRO-TOP?
 ‘don’t play!’

7.1.1.2.2 Non-finite Verbs

Non-finite verb forms take the suffix *-i* and are never marked for person. *-i* attaches to all verb roots (including auxiliaries). The examples in (14)—these are the same roots as in (1) above—exemplify this for both Class I and Class II verbs (Class I verbs are on left; Class II verbs, on the right):

- | | | | | | | |
|------|----|---------------------------------|---------------------|----|------------------------|------------------|
| (14) | a. | <i>ed-<u>i</u></i> | ‘to see’ | b. | <i>hã-<u>b-i</u></i> | ‘to make/do’ |
| | c. | <i>otid-<u>i</u></i> | ‘to work’ | d. | <i>di-<u>b-i</u></i> | ‘to scrape’ |
| | e. | <i>p^hõr-<u>i</u></i> | ‘to put away’ | f. | <i>wahi-<u>b-i</u></i> | ‘to not know’ |
| | g. | <i>kikid-<u>i</u></i> | ‘to dry in the sun’ | h. | <i>wi-<u>b-i</u></i> | ‘to fell’ |
| | i. | <i>amat-<u>i</u></i> | ‘to squeeze’ | j. | <i>wo-<u>b-i</u></i> | ‘to stink/smell’ |

As mentioned before, the distribution of verb roots into the verb classes I and II obeys a phonological constraint: verb roots ending in a consonant belong to Class I and verbs roots ending in a vowel belong to Class II. As it can be seen from the Class II verb roots in (14b, d, f, h, j), in the non-finite forms of these verbs, there is a *-b* suffix (underlined). It could be argued that this *-b* is in fact part of the non-finite suffix and that this is a case of phonological allomorphy: *-i* for verb roots ending in a consonant and *-bi* for verb roots ending in a vowel. However, there is morphological evidence that indicates otherwise.

- 1) There can be intervening material between the *-b* and the *-i*. This is, for example, the case in stems where a suffix follows the *-b* but precedes the *-i*. One example is provided in (15)a for the verb *ka-* ‘finish’, further discussion of the suffix *-at* and other similar suffixes can be found in §7.2.2.
- 2) In addition, the *-b* suffix can appear independently of the non-finite marker *-i*, for example with the imperative form of *dõ-* in (12).

The primary function of the *-b* suffix would then be to act as a place-holder for the subject suffixes in the non-finite forms of Class II verbs. This is shown in (15) below where, for ease of comparison, the finite (left-hand) and non-finite (right-hand) forms of several Class II verbs are provided.

- (15)
- | | |
|--|---|
| <p>a. <i>ka-b-at-i</i>
 finish-B-?-NON.FIN
 ‘to finish’</p> <p>c. <i>di-b-i</i>
 scrape-B-NON.FIN
 ‘to scrape’</p> <p>e. <i>wahi-b-i</i>
 not_know-B-NON.FIN
 ‘to ignore, to not know’</p> | <p>b. <i>ka-h-at-in-obe</i>
 finish-3SG.FEM-?-PST-TAME
 ‘she finishes’</p> <p>d. <i>di-h-obe</i>
 scrape-3SG.FEM-TAME
 ‘she scrapes’</p> <p>f. <i>wahi-t-a</i>
 not_know-1SG-TAME
 ‘I don’t know’</p> |
|--|---|

7.1.1.2.3 Nominalized Verbs

As discussed in Chapter 6, Section 6.1.2, there are two strategies to turn a verb into a noun: 1) use of a classifier (animate or inanimate) and 2) use of the nominalizing suffix *-i*. The functions of nominalized verbs are further discussed in Chapter 8.

7.1.2 Copulas

The Mako copulas were presented in Chapter 5, Section 5.2.5 and their use is discussed below in Chapter 8, Section 8.1.1. At least five of these copulas can be claimed to be verbal. These are: *ina*, *iha*, *ena*, *ofa* and *ak^wa*. The existence of a finite suffix *-a* (see §7.1.1.2.1), in conjunction with the fact that the copulas mark person like Class I verbs (16), allows for a classification of these copulas as verbal, all with the shape *VC-a*.

- (16) [maestro *ɣ-ina*]
teacher_Sp. 1SG-COP.PST
‘I was a teacher’

7.1.3 Auxiliaries

There are two auxiliary verbs in Mako: *ik^wi* and *hābi*. These are discussed and exemplified below. Their status as auxiliaries depends on two primary criteria:

semantically, these are “light” verbs that do not add a lexical meaning to the verb phrase and syntactically they are fixed to the last position in the clause (cf. (19) with (20)). Morphologically, however, they can inflect for all the finite categories discussed below.

7.1.3.1 *ik^wi*

The exact function of *ik^wi* is as of now unclear to me. It appears in a construction with a preceding verb in its non-finite form and can take TAME marking, as shown in the examples below. Attempts to reverse the order of the main verb and the auxiliary are all rejected by speakers (20).

- | | | | |
|------|---|---|--|
| (17) | <i>ɕi-eli-da-da</i>
DIST1-ADV4-CONTR?-CONTR? | <i>la-b-eb-i</i>
exit-B-?-NON.FIN | <i>t^h-ik^w-ak^w-e</i>
3PL-AUX-FUT-TAME |
| | ‘they are going to show it right there’ | | |
| (18) | <i>ʔbi-b-i</i>
kill-B-NON.FIN | <i>Ø-ik^w-in-obe</i>
3SG.MASC-AUX-PST-TAME | |
| | ‘he killed it’ | | |
| (19) | <i>wo-b-i</i>
die-B-NON.FIN | <i>h-ik^w-in-obe</i>
3SG.FEM-AUX-PST-TAME | |
| | ‘she died’ | | |
| (20) | <i>*ik^w-i</i>
AUX-NON.FIN | <i>wo-h-in-obe</i>
die-3SG.FEM-PST-TAME | |
| | (she died) [intended] | | |

7.1.3.2 *hãbi*

The verb *hãbi* ‘to do/make’ can be used as an independent verb. In some constructions, however, it seems to function as an auxiliary. The first construction, and the one in

which it is most extensively used, is one where the first verb is a Spanish borrowing

(21) (22).¹⁶⁶

(21) **fracasá** ***hã-d-ab-a***

fail_Sp. do-1PL-?-TAME

‘we are failing’

(22) *ik^widĩ-ma* Proyecto Cría de Búfalos *d-omuk^wat-in-obe* / [...]

1PL.PRO-TOP? buffalo-raising project_Sp. 1PL-think-PST-TAME

okoh^wiinĩ **beneficiá** ***hã-t^h-o*** *hĩ-b-an-ĩ*

everyone benefit_Sp. do-3PL-O say-B-DUR-NON.FIN

‘we thought of the buffalo-raising project so that everyone could benefit’

This use probably mirrors examples like (23) where the verb *hãbĩ* occurs with a Mako non-finite verb.

(23) *b-ena-ma* *p^huts-ĩ* ***hã-h-ĩn-obe***

PROX-ADV1-TOP? sweep-NON.FIN do-3SG.FEM-PST-TAME

ile *p^huts-aw-ã[?]dũ-nĩ*

manioc sweep-MID-CL-NON.SUBJ

‘here she was sweeping with the broom that is used when you make cassava’

7.1.4 Summary of Verb (Sub)classes

The preceding discussion focused on the different classes and subclasses of verbs found in Mako. As shown, there are three main verb classes: lexical verbs, copulas and auxiliaries. Lexical verbs can be further divided into Class I and Class II depending on

¹⁶⁶ The Spanish verbs in (21) and (22) appear here without the final *-r* of Spanish infinitives. This could be the result of one of two processes: 1) adaptation to the Mako CV phonology or 2) direct borrowing from Venezuelan Spanish without the *-r*.

whether they end in a vowel and attach the subject markers in a suffix slot immediately following the verb root or whether they end in a consonant and attach the subject markers in a prefix slot immediately preceding the verb root. Lexical verbs can have non-finite, finite and nominalized forms.

In the following sections, the focus is on the inflectional and derivational morphology that lexical verbs can take.

7.2 Verbal Morphology

This section focuses on verbal morphology and it is divided into two main subsections: inflectional morphology (§7.2.1) and derivational morphology (§7.2.2).

7.2.1 Inflectional Morphology

In this section, I focus on the inflectional categories that can be marked on the Mako verb. I start with person marking for both subjects and objects (§7.2.1.1) and then move on to consider the morphology of sentence mood and TAME (§7.2.1.2) and negative polarity (§7.2.1.3).

7.2.1.1 Person Marking

This section deals with the coding of both subjects (S&A) and objects (O) on the Mako verb. This marking is, however, restricted to animate nouns (both human and non-human).

7.2.1.1.1 S & A Markers

S and A animate arguments are coded on the verb via two sets of markers: a set of prefixes for Class I verbs and a set of suffixes for Class II verbs. The following two

subsections present in detail the morphology of subject marking for these two verb classes.

7.2.1.1.1.1 Class I Verbs

Class I verbs take a prefix. A full paradigm is given in (24) for *hāmat*- ‘stand up’:

(24)	<i>ʔĩ-hāmat-obe</i>	1SG-ROOT-TAME
	<i>kʷĩ-hāmat-obe</i>	2SG-ROOT-TAME
	<i>ĩ-hāmat-obe</i>	3SG.MASC-ROOT-TAME
	<i>hĩ-hāmat-obe</i>	3SG.FEM-ROOT-TAME
	<i>ḍĩ-hāmat-obe</i>	1PL-ROOT-TAME
	<i>kʷĩ-hāmat-adu-obe</i>	2PL-ROOT-2PL-TAME
	<i>tʰĩ-hāmat-obe</i>	3PL-ROOT-TAME

In all persons both singular and plural, the animate subject is marked by a prefix; 2PL additionally takes a suffix *-adu* that distinguishes it from 2SG. Except for 3SG.MASC where there is no initial consonant, all of the prefixes have an initial consonant that is followed by a vowel. The vowel in the prefix set is underspecified, harmonizing in nasality and in vowel quality¹⁶⁷ with the first vowel of the verb root.

7.2.1.1.1.2 Class II Verbs

Class II verbs do not make use of the set of prefixes discussed above; they, on the other hand, take suffixes. This is exemplified in (25) for *me*- ‘fall’:

¹⁶⁷ See Chapter 4, §4.1.4 for this harmony process.

(25)	<i>me-t-obe</i>	ROOT-1SG-TAME
	<i>me-kib-obe</i>	ROOT-2SG-TAME
	<i>me-Ø-obe</i>	ROOT-3SG.MASC-TAME
	<i>me-h-obe</i>	ROOT-3SG.FEM-TAME
	<i>me-d-obe</i>	ROOT-1PL-TAME
	<i>me-kib-adu-obe</i>	ROOT-2PL-2PL-TAME
	<i>me-t^h-obe</i>	ROOT-3PL-TAME

There is some variation as to how second person is marked. In (25) a suffix *-kib* ‘2SG’ is used; in the examples in (26), however, either /k/ or /k^w/ is used to mark second person in the verb *labebi* ‘to exit’. This difference could be dialectal¹⁶⁸ or it could be phonologically-conditioned; more research is needed to better understand what conditions this alternation. For now, I include both suffixes as coding second person.

(26)	<i>la-k^w-eb-obe</i>	ROOT-2SG-?-TAME
	<i>la-k^w-eb-adu-obe</i>	ROOT-2PL-?-2PL-TAME

A comparison of the forms of the prefixes in examples (24) with the form of the suffixes in (25) and (26) reveals that, except for the first person singular where the prefix consonant is a voiceless affricate stop /tʃ/ and the suffix consonant is a voiceless alveo-dental stop /t/, the Class II verbal suffixes are clearly related to the prefixes used for Class I verbs.

All the Mako subject affixes are given in Table 51. For more on the functions of these affixes, see Chapter 8, Section 8.1.2.1.1 and for their diachrony, see Chapter 10.

¹⁶⁸ The forms in (25) come from a speaker of Porvenir II on the Ventuari River and the forms on (26) come from a speaker of Arena Blanca on the Guapuchí River.

TABLE 51 Mako Class I and Class II verbal subject markers

Person	Singular		Plural	
	Prefix Set	Suffix Set	Prefix Set	Suffix Set
1	ʃ(V)-	-t	d(V)-	-d
2	k ^w (V)-	-kib/-k ^(w)	k ^w (V)-...-adu	-kib/-k ^(w) ...-adu
3.MASC	(V)-	-Ø		t ^h (V)-
3.FEM	h(V)-	-h		-t ^h

7.2.1.1.2 O Markers

Objects, unlike subjects for Class I verbs and like subjects for Class II verbs, are coded via a set of suffixes that attach to the verb. The difference between the Class II set of subject suffixes and the object suffixes lies in their position with respect to the verb root. The verb *ʔdo-* ‘hit’ in (27) has a third person singular feminine subject and a third person singular feminine object. However, both arguments have different referents (i.e., A and O do not refer to the same woman¹⁶⁹) and note that the subject suffix immediately follows the verbal root while the object suffix comes at the right edge of the word and follows TAME (and polarity).

- (27) *its-uhu_i* *ʔdo-h_i-obe-h_j*
DUMMY_ROOT-CL:FEM_A hit-3SG.FEM_A-TAME-3SG.FEM_O
‘the woman_i hits her_j’

The forms in Table 52 show object marking on a partial paradigm for the *me-* ‘fall’ and their meaning is ‘X_A falls on Y_O’; that is, the form *mehat^hi* in the cell with a 3SG.FEM subject (subjects are on the first column) and a 1SG object (objects are on the first row) means ‘she falls on me’. The empty cells in Table 52 correspond to subject-object

¹⁶⁹ This is indicated in the translations with co-referentiality subindexes.

combinations that are conceptually impossible without implying some degree of reflexivity: for example, a 1SG acting on a 1SG object implies that the action performed by the subject affects him/herself. As the forms in Table 52 confirm, the O suffixes all attach to the right edge of the verb and follow the TAME (and polarity) markers.

TABLE 52 Partial paradigm of the verb *me-* ‘fall’ with the O markers

Object → Subject ↓	1SG	2SG	3SG.MASC	3SG.FEM
1SG	--	<i>me-t-a-k^{wi}</i>	<i>me-t-a-ni</i>	<i>me-t-a-hi</i>
2SG	<i>me-kib-a-t^{hi}</i>	--	<i>me-kib-a-ni</i>	<i>me-kib-a-hi</i>
3SG.FEM	<i>me-h-a-t^{hi}</i>	<i>me-h-a-k^{wi}</i>	<i>me-h-a-ni</i>	<i>me-h-a-hi</i>

Table 53 summarizes all the O markers (see Chapter 8, §8.1.2.3.1 for their use in naturally-occurring discourse).

TABLE 53 The O person markers

	Singular	Plural
Person		
1	<i>-t^{hi}</i>	<i>-di^{t^{hi}}</i>
2	<i>-k^{wi}</i>	<i>-adu...-k^{wi}</i>
3.MASC	<i>-ni</i>	<i>-dini</i>
3.FEM	<i>-hi</i>	

The phonological form of these suffixes varies: CV for all persons in singular and the 2PL and CVCV for 1PL and 3PL. As shown above for the subject affixes (both the prefixes and the suffixes), the second person forms share the same marker *-k^{wi}* and the difference between the two lies in the presence of the suffix *-adu* for 2PL. In the case of the object suffixes, however, the suffix *-adu* precedes the second person suffix given that it occupies the same position (i.e, pre-TAME) that it does in the subject paradigms.

7.2.1.2 Marking of Tense/Aspect/Mood/Evidentiality Categories and Polarity Marking

This section is concerned with the marking of TAME categories and polarity on the Mako verb. The morphology of the different sentence moods is presented in Section 7.2.1.2.1.¹⁷⁰ Section 7.2.1.2.2 presents the morphology of tense and aspect marking. Section 7.2.1.3 presents the morphology of verbal negation.

7.2.1.2.1 Sentence Mood

There are three main types of sentence mood in Mako: declaratives (§7.2.1.2.1.1), imperatives (§7.2.1.2.1.2), and prohibitives (§7.2.1.2.1.3). All of these are further explored in Chapter 8, Section 8.2. Chapter 8 also shows that interrogatives and declaratives are marked the same way for TAME and polarity.

7.2.1.2.1.1 Declarative

The declarative mood is considered here as a default mood and stands in contrast with the imperative and the prohibitive moods. The most basic (= minimally inflected) finite forms that can be found in a declarative sentence are ones with the suffix *-a* (28) or with the suffix *-obe* (29). Both of these suffixes can occur at the right edge of an independent clause verb. They, however, behave differently with respect to their position regarding the negative suffix: while *-a* does not co-occur with it (30) (31), *-obe* attaches to it (32).

- (28) *d-ai* *k^wɪ-ʔɕ-a*
 INT-ADV3 2SG-go-TAME
 ‘where are you going?’

¹⁷⁰ See Chapter 8, Section 8.2 for the syntax and intonation of sentence moods.

- (29) *hobe-da t^hũ-hũk^w-obe*
 there-CONTR? 3PL-live-TAME
 ‘they live there’
- (30) *it^hi-ma tf-ed-iki hawa-t^hi-ma*
 1SG.PRO-TOP? 1SG-see-NEG thing-EMPH?-TOP?
 ‘I didn’t see any of that’
- (31) *ɕi-t-aw-iki*
 tell-1SG-MID-NEG
 ‘I am not telling (a story)’
- (32) *t^h-iɕ-ok-obe babe-ma*
 3PL-give-NEG-TAME now-TOP?
 ‘now they don’t give/sell (any fuel)’

While *-obe* is always used for present events when it attaches directly to a subject-marked verb, verbs marked with just *-a* and *-iki* are not tense-marked—as the different tense in the translations of (30) and (31) suggest—and can be used for past as well as present events. The means for marking past and future tense are discussed in Section 7.2.1.2.2 below.

The third suffix that can occur at the right edge of a main clause and that does not mark tense is *-e*. This suffix, however, cannot attach directly to the root but rather attaches to either a past suffix *-ih* (see §7.2.1.2.2.2) or a future suffix *-ak^w* (see §7.2.1.2.2.3).

7.2.1.2.1.2 Imperative

Imperative forms for the verb *itf-* ‘come’ (Class I) and *’do-* ‘hit’ (Class II) are given in (33) and (34), respectively. The (a) forms correspond to second person singular subjects, while the (b) forms correspond to second person plural subjects.

- (33) a. *itf-i* ROOT-IMP b. *itf-adu-i* ROOT-2PL-IMP
- (34) a. *do-b-i* ROOT-B-IMP b. *do-b-adu-i* ROOT-B-2PL-IMP

As can be seen in the examples above, the imperative marker is the suffix *-i*. This suffix attaches equally to both verb classes but for Class II verbs, the *-b* suffix that is also present in non-finite forms (see discussion in §7.1.1.2.1) is needed between the root and the imperative suffix. As shown above, the use of this suffix is phonologically conditioned and responds to the need to have CV syllables. The difference between second person singular and second person plural is marked by the presence of the suffix *-adu* in the plural form.

In addition to this imperative suffix, there is another imperative suffix *-e*, which as the example below suggests, is used as a reported imperative (that is, its meaning could be translated as something like “do something on someone else’s order”).

- (35) reunio-*t^{hi}i* *hĩ-t^h-an-i-ma* *p^hop^hop^ho*
meeting_Sp.-EMPH say-3PL-DUR?-NOM-TOP? [clapping]

 ?*me?**me-b-an-i* *waits-atf-adu-e*
RED-clap-B-DUR?-NON.FIN know-?-PL-REP.IMP

 we-Ø-ahĩḡ-adu-a-k^{wi}-t^{hi}i
order-3SG.MASC-FIRST?-2PL-TAME-2PL.O-EMPH?
‘he has ordered you (pl): learn to clap at what they say in m

7.2.1.2.1.3 Prohibitive

The prohibitive stands in opposition to the imperative forms discussed in the previous subsection. It is formed by the addition of the suffix *-a* and the verb is marked with a subject affix. Prohibitive forms for the verb *itf*- ‘come’ (Class I) and ²*do*- ‘hit’ (Class II)

are given in (36) and (37), respectively. The (a) forms correspond to second person singular subjects, while the (b) forms correspond to second person plural subjects.

(36) a. *k^w-itf-a* 2SG-ROOT-PROH b. *k^w-itf-adu-a* 2PL-ROOT-2PL-IMP

(37) a. *ʔdo-kib-a* ROOT-2SG-PROH b. *ʔdo-kib-adu-a* ROOT-2PL-2PL-IMP

The example in (59) shows the prohibitive in use, where a mum tells her child not to play.

(38) *k^w-alew-a*
2SG-play-PROH
'don't play!'

It is important to note that there is identity of form between this prohibitive form and an affirmative form marked with the declarative marker *-a*. The discourse context and intonation serve to disambiguate (see Chapter 8, §8.2.3.2).

7.2.1.2.2 TAME

Minimally-inflected affirmative finite forms of the verb in declarative sentences take the suffixes *-a* and *-obe* as shown above in §7.2.1.2.1.1. There are a number of other suffixes that occur in combination with these suffixes and with *-e* to mark TAME categories. The discussion of these suffixes is organized depending on the position they occupy with respect to these three basic markers.

TABLE 54 TAME marking

Position 1	Position 2	Position 3
<i>-in</i> (PAST)	<i>-a</i>	<i>-tə</i> (PAST)
<i>-ih</i> (PAST)	<i>-e</i>	<i>-tiha/-diha/-dihe</i> (?)
<i>-ak^w</i> (FUTURE)	<i>-obe</i>	
<i>-otf</i> (VOLITIONAL)		
<i>-en</i> (UNCERTAINTY)		

7.2.1.2.2.1 *-in*

The past suffix *-in* co-occurs with *-a* (39) (40) and *-obe* (41) (42) (43) but not with *-e* (44).

- (39) *José Y. tf-itf-otf-a hĩ-Ø-an-in-a //*
 PN 1SG-come-VOL-TAME say-3SG.MASC-DUR?-PST-TAME

itf-in-a-hĩ

come-PST-TAME-Q1

‘José Y. said: “I will come”. Did he come?’

- (40) *santaine-t^{hi} i-wawatf-in-a papa-ma*
 PN-EMPH? 3SG.MASC-be_born-PST-TAME dad_Sp.-TOP?
 ‘My dad was born in Santa Inés’

- (41) *hi-t^{hi}its-eb-o hĩbani*
 3SG.FEM-bake-?-FUT PURPOSE

tfa tfa tfa ʔwã-ʔwã-h-in-obe

[onom.] RED-put_in-3SG.FEM-PST-TAME

‘She put in (the sifted manioc flour) in order to make cassava’

- (42) *dehãʔdõ ok^{wa} manzana-po h-an-in-obe*
 cup inside apple_Sp.-CL.ROUND 3SG.FEM-put-PST-TAME
 ‘she put the apple inside the cup’

- (43) *kamihi-do ʔwi-h-in-obe tijera-nĩ*
 clothes-CL cut-3SG.FEM-PST-TAME scissors_Sp.-NON.SUBJ
 ‘she cut the clothes with scissors’

- (44) **José itf-in-e*
 PN come-PST-TAME
 (José came) [intended]

-in is most commonly used in narratives to describe events. It is unclear at the present time how it differs from the other past marker *-ih*. It is possible that *-in* is a progressive past and *-ih* a definite past but more research is needed to elucidate this question.

7.2.1.2.2.2 *-ih*

Like *-in*, the past suffix *-ih* can co-occur with *-a* (45) (46) (47). Unlike *-in*, it can co-occur with *-e* (48) but not with *-obe* as shown in the ungrammatical example in (49). (48) is in fact a constructed example based on the naturally-occurring example in (71), there are no text examples of the combination *-ih* + *-e*.

- (45) *dít^{hi}* *d-itf-ih-a* *ik^widi-ma*
 where_from 1PL-come-PST-TAME 1PL.PRO-TOP?
 ‘where did we come from?’
- (46) *mama* // *ōd-ihu* *dok^wai* *ik^widi* *wa...* //
 mum_Sp. house-PL HOW 1PL.PRO [false start]
- hoho-di-t^{hi}-ma* /
 person-PL-EMPH?-TOP?
- dok^w-ahiɟa* *k^w-ed-ih-a* *k^w-itf-ib-ena-ma*
 HOW-FIRST 2SG-see-PST-TAME 2SG-come-?-ADV-TOP?
 ‘mum, what kind of houses did you see when you came here?’
- (47) *daik^wi* *ku-wait-atf-ih-a* *tsa[?]balari* *t^h-ĩwēne-ma*
 HOW1 2SG-know-?-PST-TAME criollos 3PL-language-TOP?
 ‘how did you learn Spanish?’

- (48) *k^w-ed-in-a-hĩ* *hõba-ma*
 2SG-see-PST-TAME-Q1 that_one + CL:MASC-TOP?

Ø-idɕ-ab-ih-e
 3SG.MASC-give-?-PST-TAME
 ‘did you see that he gave out (stuff)?’

- (49) **gasoi* *tf-idɕ-ih-obe*
 gasoil_Sp. 1SG-give-PAST-TAME
 (I gave out gasoil) [intended]

7.2.1.2.2.3 -ak^w

The future suffix -ak^w can combine with -a, -e, and -obe. It most commonly appears with -e (50) (51) (52) and -obe (53) but it can also appear with -a (54).

- (50) *tfatfi* *bia* *k^we-k-at-ak^w-e*
 PN this carry-2SG-?-FUT-TAME
 ‘Chachi, you will carry this’

- (51) *idi* *t^h-ed-ak^w-e*
 3PL.PRO 3PL-see-FUT-TAME
 ‘they will see’

- (52) *b-ai-ma* *ik^widi-bi* *k^wi-waits-atf-adu-ak^w-e*
 PROX-ADV3-TOP? 1PL.PRO-ADD 2PL-know-?-2PL-FUT-TAME
 ‘we will also learn there’

- (53) *k^wĩ-ɕ-ak^w-obe* *ɕ-ai*
 2SG-go-FUT-TAME DIST1-ADV3
 ‘you are going there’

- (54) *bāk-ena-ma* *dak^wĩ* *a-k-eb-an-ak^w-a-da*
 ?-ADV1-TOP? HOW2 ask-2SG-?-DUR-FUT-TAME-CONTR?
 ‘how are you going to ask in the future?’

Although all three forms are in use in Arena Blanca, speakers from Porvenir II and Marueta rejected the forms in the paradigm with $-ak^w + e$. For them, future marking should be done with $-ak^w + -obe$.

7.2.1.2.2.4 *-otf*

The examples below show the use of the suffix *-otf* with the verbs *ič-* ‘give’ (55), *itf-* ‘come’ (56) and *hũn-* ‘put’ (57). *-otf* can occur with both *-a* as in (55) (56) and (57) and with *-obe* (58) and it serves to express the volition or intention of the speaker and its use is restricted to a first person subject both singular and plural—as the elicited example in (59) shows—, non-first person subjects resulting in ungrammaticality (60).

- (55) *gasoi* *tf-ič-otf-a* *hĩ-Ø-an-ih-a-tə*
 gasoi_Sp. 1SG-give-VOL-TAME say-3SG.MASC-DUR-PST-TAME-PST
 ‘he said: “I am going to give you gasoil”’

- (56) *José Y.* *tf-itf-otf-a* *hĩ-Ø-an-in-a*
 PN 1SG-come-VOL-TAME say-3SG.MASC-DUR?-PST-TAME
 ‘José Y. said: “I am going to come”’

- (57) *č-ena* *foto* *Piari-nĩ* *em-ob-i*
 DIST1-ADV1 picture_Sp. PN-NON.SUBJ grab-PURP-NON.FIN

tfũ-hũn-otf-a
 1SG.MASC-put-VOL-TAME
 ‘I am going to put Piari over there so he is in the picture’

- (58) *tf-ič-otf-obe*
 1SG-give-VOL-TAME
 ‘I will give’

- (59) *d-itf-otf-a-tə*
 1PL-come-VOL-TAME-PST
 ‘we were going to come’

- (60) **José Ø-ɪf-ɔf-a-tə*
 PN 3SG.MASC-come-VOL-TAME-PST
 (José was going to come) [intended]

(59) also shows that this is a true volitional and not a future since it can co-occur with the past suffix *-tə* (discussed below in §7.2.1.2.2.6).

7.2.1.2.2.5 *-en*

The use of *-en* results in a statement that is less certain. Compare the two elicited examples in (61) and (62):

- (61) *ãwĩrĩ-dĩ* *lu-t^h-a*
 dog-PL + NAS hunt-3PL-TAME
 ‘the dogs hunt/are hunting’
- (62) *ãwĩrĩ-dĩ* *lu-t^h-en-a*
 dog-PL + NAS hunt-3PL-UNCERT-TAME
 ‘the dogs hunt/are hunting, I think’ (Explanation: I hear them barking, they are out of my sight, I am not sure if they are in fact hunting)

The three textual examples below support this analysis. In (63), the speaker was talking about me charging my computer and he is not certain that I was going to do that; in (64), the speaker is consulting with another speaker on how to best describe a stimulus picture; and in (65), the speaker—when asked if he knew any myths—says they (the old people) would know.

- (63) *b-ai* *carga* *hã-Ø-ak^w-en-a-t^hĩ*
 PROX-ADV3 charge_Sp. do-3SG.MASC-FUT-TAME-UNCERT-EMPH?
 ‘he is going to charge (it) here, I think’

- (64) *dak^wi hĩ-d-ek^w-en-a-da*
 HOW2 say-1PL-?-UNCERT-TAME-CONTR?

b-idĩ wãmeduk^wa-nĩ-ma
 PROX-CL:PL three.ANIM-NON.SUBJ-TOP?
 ‘how can we say these three?’

- (65) *idĩ t^{hi}-waits-en-a-t^{hi}*
 3PL.PRO 3PL-know-UNCERT-EMPH?
 ‘they know, I think’

7.2.1.2.2.6 -tə

The suffix *-tə* can attach to present or past forms already inflected with *-a* or *-e*. (66) and (67) represent the most basic pattern where *-tə* attaches to a verb inflected with *-a*. In these examples, the meaning contribution of the suffix seems to be that it specifies that the form is now in past tense since, unlike forms marked with only *-a*, the forms with *-a + -tə* can only be interpreted as past.

- (66) *h-emi ik^widi-nĩ-da* *qĩ-b-aw-ĩ*
 DIST2-ADV2 2PL.PRO-NON.SUBJ-CONTR? tell-B-MID-NON.FIN

tf-ĩf-a-tə
 1SG-come-TAME-PST
 ‘I came here to talk to you’

- (67) *b-ena-ma d<ohu>lataha-da hĩ-h-an-a-tə*
 PROX-ADV1-TOP? two<CL>-CONTR? say-3SG.FEM-DUR-TAME-PST

wawarika-ma
 PN-TOP?
 ‘Marina said there were (only) two here’

The claim that *-tə* is associated with the past is supported by the fact that it can attach to forms inflected with the past suffixes *-ih* and *-in* as shown below but not with a future-marked form (68).

- (68) **José Ø-itf-ak^w-a-tə / itf-ak^w-e-tə*
 PN Ø-come-FUT-TAME-PST
 (José will come) [intended]

Examples (69) and (70) below exemplify the use of *-ih + -a + -tə*.

- (69) *b-eli-ma ni-i hawa a-d-eb-in-obe /*
 PROX-ADV4-TOP? be_big-NOM thing ask-1PL-?-PST-TAME
ni-ih-a-tə
 be_big-?-PST-TAME-PST
 ‘before we asked for a big one (and) it was big/a lot’ (refers to a gasoil quota for the community)

- (70) *ahaɟi-ma papa dē-b-i i-ʔɟ-ih-a-tə*
 first-TOP? dad_Sp. pick-B-NON.FIN 3SG.MASC-go-PST-TAME-PST
buberi
seje (palm)
 ‘first dad went to pick *seje*’¹⁷¹

In addition to occurring with *-ih + -a*, *-tə* can occur with a verb marked by *-ih + -e*, as shown below in (71). These examples with *-ih + -e + -tə* are common and serve as a basis for the construction of the example in (48) above.

- (71) *daki woʔow-i ka-h-at-ena*
 already pull_out-NON.FIN finish-3SG.FEM-?-ADV1

¹⁷¹ *Oenocarpus bataua* (possibly var. *oligocarpus*)

its-ãpĩ Ø-*iɕ̥-ab-ih-e-tə*
 DUMMY_ROOT-CL 3SG.MASC-give-?-PST-TAME-PST

didiha-api-ma *hĩhĩ* *bul-ab-i* *hĩ-b-an-i*
 ?-CL-TOP? [ideophone] cut-?-IMP say-B-DUR?-NON.FIN

‘when he was done pulling out manioc, he would give him the knife and
 say: here, take the knife and cut’

The suffix *-tə* can also occur after the sequence of *-in + -a*, as in the elicited example in (72).

(72) *José* *it̥-in-a-tə*
 PN come-PST-TAME-PST
 ‘José came’

A characteristic of this suffix worth noting is that it is the only context in the language where the vowel /ə/ appears (see Chapter 4, §4.1.2 for a discussion of this and the status of this vowel).

7.2.1.2.2.7 *-tiha/-diha/-dihe*

Mako speakers use the forms *-tiha*, *-diha* and *-dihe* attached to fully inflected finite verbs (73) (74) as well as to nominalized (76) (77) and adverbialized (77) verbs. It is unclear what the semantic contribution of this marker is to the sentence. However, its internal structure seems to be a first person suffix (*t-* for singular and *d-* for plural¹⁷²), the marker *-ih* and either one of the two TAME markers *-a* and *-e*.

¹⁷² The fact that this form is being person-marked receives support from the fact that my main consultant in Porvenir II consistently pronounced *tiha* as *ʃiha*. Remember that there is alternation in how you mark first person singular subject depending on the position of the marker in the word: *ʃ-* being the prefix for Class I verbs and *-t* the suffix for Class II verbs.

- (73) *huw-i* / *hūwĩ* / *ti-aw-a-tiha*
 burn-NON.FIN WELL plant-mid-TAME-?
 ‘after burning, well, one plants’
- (74) *p^{hi}-b-at-i* *ik^w-i* *wal-aw-a-tiha* *ta*
 strain-B-?-NON.FIN AUX-NON.FIN toast-MID-TAME-? TAG
 ‘after straining, one toasts it, right?’
- (75) *ɕi-b-aw-ad-i-Ø* [*it^{hi}-k^{wi}* *luw-a-tiha*]
 tell-B-?-CL.PL-3.COP 1SG.PRO-SOC rule-TAME-?
 ‘they always say: “you are with me”’
- (76) *Candelario* *mik^w-õ-tiha* *ta*
 PN be_called-CL:MASC-? TAG
 ‘his name is Candelario, right?’
- (77) *daik^{wi}* *itad-i-dihe*
 HOW1 be_called-NOM-?
 ‘what is that thing called?’
- (78) *daik^{wi}* *mik^w-emi-diha*
 HOW1 be_called-ADV2-?
 ‘what is that place called?’

7.2.1.2.2.8 -a (Again!)

Although *-a* and *-obe* cannot co-occur in present forms and *-a* and *-e* cannot co-occur in forms marked with *-ih*, it is possible for *-a* to follow *-obe* in forms marked with the past *-in* (79) (80) and to follow *-e* in forms with the future *-ak^w*.

- (79) *d-a[?]d-i-mina* *wo-b-i* *Ø-ik^w-in-obe-a*
 1PL-grandfather-DEC die-B-NON.FIN 3SG.MASC-AUX-PST-TAME-TAME
 ‘our grandfather died’
- (80) *tf-abe[?]do-da* *Ø-itf-eh-eb-in-obe-a*
 1SG-father-CONTR? 3SG.MASC-come-MOT?-?-PST-TAME-TAME

b-ai-k^wi
 PROX-ADV3-VEN
 ‘My father brought (us) here’

- (81) CD *Ø-ig-ib-ak^w-e-a*
 CD 3SG.MASC-give-?- FUT-TAME-TAME
 ‘He will leave CDs’

The second construction (i.e., the one with the future marker *-ak^w*) is less common in the corpus than the one with *-in + -obe* but this could be an effect of the kinds of texts I have collected, which are primarily narratives of past events.

7.2.1.2.2.9 Historical Note: Copulas and TAME markers

Table 55 provides a summary of the TAME suffixes discussed above and the negative suffix (discussed below in §7.2.1.3) alongside the Mako copulas (presented above in Chapter 5, §5.2.5 above and exemplified below in Chapter 8, §8.1.1).

Table 55 Comparison of TAME suffixes and copulas

	SUFFIX	COPULA
PST	<i>-in</i>	<i>ina</i>
PST	<i>-ih</i>	<i>iha</i>
FUT	<i>-ak^w</i>	<i>ak^wa</i>
UNCERT	<i>-en</i>	<i>ena</i>
PRES?	<i>-obe</i>	<i>obe</i>
VOL	<i>-otf</i>	<i>otfa</i>
NEG	<i>-iki</i>	<i>iki</i>

A comparison of the form of all of the suffixes with the copulas shows their near identity. Not only is the form of the copulas identical to that of the suffixes but their semantics are identical. Take for example the suffix *-en* and the copula *ena*. As shown

above in Section 7.2.1.2.2.5, the suffix *-en* codes uncertainty. In (82), the copula *ena* codes the speaker’s uncertainty about whether what he was looking at in a stimulus picture was a ribbon or not.

- (82) *its-ado* *ta* / *its-ado* ***ena***
 DUMMY_ROOT-CL TAG DUMMY_ROOT-CL COP.UNCERT
 ‘A ribbon, right? It could be a ribbon’

This suggests that either the copulas and the suffixes share the same origin or that the copulas grammaticalized as verb suffixes. I have argued elsewhere for this second analysis (see Rosés Labrada (2015)).

7.2.1.2.3 Aspect

More research is needed to better understand aspect in Mako verbs. The discussion here focuses on habitual and iterative aspect because of their special marking. As Section 7.2.1.2.3.1 shows habitual aspect is marked with a nominal construction. Section 7.2.1.2.3.2 shows that iterative aspect is coded via reduplication.

7.2.1.2.3.1 Habitual Aspect

The habitual aspect construction consists of a verb root that has been nominalized via a classifier that agrees in number and gender in the singular—marked via a classifier—with the subject of the clause, followed by a copular suffix (see Chapter 8, §8.1.1.). For example, the verb ‘know’ in (83) is marked for person with the first person copular suffix *-tsa* and for gender with the feminine classifier *-uhu*.

- (83) *waits-uhu-tsa*
 know-CL:FEM-1.COP
 ‘I know’

- (84) *h-emi hawa p^ha-b-at-an-adi-tsa*
DIST2-ADV2 thing help-B-?-DUR-CL:PL-1.COP
‘there we always help with that thing’
- (85) *hōba-ma op-ihu-da ku-ō-Ø*
that_one + CL:MASC-TOP? fruit + CL-PL-CONTR? eat-CL:MASC-3.COP
‘he (always) eats fruits’
- (86) *hob-adi-ma bāĩ ku-adi-Ø*
that_one-CL:PL-TOP? fish + PL eat-CL:PL-3.COP
‘they (always) eat fish’

These verb forms are non-finite forms of the verb since 1) they do not mark person via the S & A markers but rather make use of the human classifiers and 2) they do not take the TAME suffixes *-a* and *-obe* (compare (87) with (88) and (89)). Additionally, the suffixes that attach to these forms are the copular suffixes used in nominal predicates (see Chapter 8, §8.1.1).

- (87) *hōba-ma tebo-nĩ h-ō-Ø*
that_one + CL:MASC-TOP? woods-NON.SUBJ stand-CL:MASC-3.COP
‘it (the agouti) lives in the woods’ (lit. ‘it always stands in the woods’)
- (88) *çari me-ena-ma hobe laʔaka ã-h-a*
yari fall-ADV-TOP? over_there foot 3SG.MASC-stand-TAME
‘when the *yari* fruit falls, it (the agouti) is always at the foot of the tree’
- (89) *mariu-ma / tebo-nĩ ã-h-obe-ma*
tapir-TOP? woods-NON.SUBJ 3SG.MASC-stand-TAME-TOP?
‘the tapir, it lives in the woods’ (lit. ‘the tapir always stands in the woods’)

Although they are non-finite verb forms (because they historically stem from a construction formed by a nominalized verb and copular suffix), synchronically they can be used as the main verb to mark habitual aspect, as the example below suggests. In

(90), the masculine classifier is attached to the verb ‘do’ which is also marked with a middle (see below §7.2.2.1.1). One of the functions of the middle is to reduce the valency of the verb, thus ‘do’ in (90) is not specified for a subject. This means that the only function of the classifier + copular suffix construction here is to mark aspect.

- (90) *ʒĩte* *ʔʒ-an-i* *h^wi-b-i-bi*
 night go-DUR-NON.FIN call-B-NON.FIN-ADD

hã-b-aw-õ-Ø *ʔbi-b-i*
 do-B-MID-CL:MASC-3.COP shoot-B-NON.FIN
 ‘calling when one goes at night, one can also kill it’

7.2.1.2.3.2 Iterative Aspect

There are in my corpus a number of reduplicated verb roots. All of the roots are monosyllabic and belong to Class II (i.e., the class of verb whose roots end in a vowel and take a subject suffix).¹⁷³

The examples in (91) through (93) show some reduplicated forms in use. In (91), the speaker is describing what the agouti does all day: this animal likes to spend time scraping off the peel of the manioc with its teeth, an activity that can be thought of as inherently iterative. In (92), the speaker describes how they used to get the strips necessary to weave a sieve by scraping off the bark off the wood: one needs many such strips and the activity is per force performed time and time again. In (93), the same speaker as in (91) is still talking about the agouti but in this fragment, he explains what needs to be done to hunt this animal. In the second clause, he says that one needs to

¹⁷³ Attempts to elicit reduplicated Class I verbs were unsuccessful.

blow on a leaf (to get it to come to you) and in the third clause he corrects himself by repeating the verb ‘to blow’ in its reduplicated form, a form that is (arguably) more fitting to this context given that one needs to blow on the leaf multiple times and not just the one time.

- (91) *ile-da* *ki-ki-b-i* *k^we-b-atf-ō-Ø*
 manioc-CONTR? RED-scrape-B-NON.FIN go-B-?-CL:MASC-3.COP
 ‘it (the agouti) roams about eating yucca’
- (92) *lu[?]dupa* *i?i* *di-di-b-i* *wībo* *w-ib-ih-e-tə*
 sieve strip RED-scrape-B-NON trunk sit-?-PST-TAME-PST
 ‘he was sitting on a trunk scraping off strips to make a sieve’
- (93) *?bi-t-o* *hĩ-b-an-i-ma* /
 kill-1SG-NON.FIN PURPOSE-TOP?
- its-ihā-ni-bi* *p^hu-b-i* /
 leaf-CL-NON.SUBJ-ADD blow-B-NON.FIN
- p^hu-p^hu-b-i* *?bi-t-ik^wi* *tʃ-ihā*
 RED-blow-B-NON.FIN kill-1SG-? 1SG-COP.PST
 ‘to kill it (the agouti), you kill it by blowing on a leaf, by blowing repeatedly on a leave (to make it come out)’

7.2.1.3 Negation

Negation of a verb form is accomplished via the addition of the suffix *-iki*. This suffix has three phonological forms: *iki*, *-ok*, and *-uk* (see Chapter 4, §4.1.4 for the harmony process that applies to this suffix). Two examples of the use of this suffix in context are given here.

- (94) *t^h-iç-**ok**-obe* *hob-adi-ma*
 3PL-sell-NEG-TAME that_one-CL:PL-TOP?
 ‘they don’t sell (fuel)’

- (95) *icɕ-aw-ik-ak^w-e* *hĩ-Ø-an-ih-od-a-t^{hi}*
 sell-MID-NEG-FUT-TAME say-3SG.MASC-DUR?-PST-?-TAME-EMPH?
 ‘he said: “we are not going to sell (any more fuel)”’

The ordering of the negative suffix with respect to other inflectional suffixes is as follows: it follows the past suffixes *-in* and *-ih* and the volitional suffix *-off* but it precedes *-obe*, *-tə*, *-en*, and *-ak^w*.

7.2.1.4 Summary of Inflectional Verbal Morphology

This section focused on the marking of inflectional categories on the verb: subjects, objects, sentence mood, TAME, aspect and polarity. More research into the fine-grained semantics of the TAME system is needed to elucidate the differences between, for example, the two kinds of past (that is, the one with *-in* and the one with *-ih*) or between the paradigm marked with *-a* and the one marked with *-obe* which seem to be, at least in part, largely overlapping in their semantics.

7.2.2 Derivational Verbal Morphology

There are a number of other suffixes that occur with lexical verbs regardless of their class and that are not inflectional. These are summarized in Table 56 below. The top two suffixes are voice suffixes, i.e., *-ak^wa* ‘RECIP’ and *-aw* ‘MID’. The grouping of the other suffixes requires more research. The combinatorial possibilities and restrictions of all of the suffixes in Table 56 remain to be determined. However, I offer attested examples to illustrate co-occurrence of some of these suffixes.

TABLE 56 Derivational verbal morphology

Roots (with & without person marking)	Derivational	Inflectional
Class I: (SUBJ-)root- Class II: root(-SUBJ/B)-	<i>-aw</i> MIDDLE <i>-ak^wa</i> RECIPROCAL	TAME & polarity
	<i>-an</i> DURATION (LONG) <i>-ib</i> DURATION (SHORT)/SPEED? <i>-ah</i> ASSOC.MOT <i>-eb</i> ?	
	<i>-ab</i> ? <i>-atf</i> ? <i>-at</i> ?	

7.2.2.1 Valence-reducing Affixes

Valence-changing operations have not been studied in-depth. I present here two valence-decreasing morphemes: the middle *-aw* (§7.2.2.1.1) and the reciprocal *-ak^wa* (§7.2.2.1.2).

7.2.2.1.1 Middle *-aw*

The form of the middle suffix is *-aw*. This suffix has two main functions. The first one is as a reflexive as in (96), (97), and (98).

- (96) *p^huts-aw-i*
 clean-MID-IMP
 ‘clean yourself!’
- (97) *ditf-aw-i*
 wash-MID-MP
 ‘wash yourself!’
- (98) *ed-aw-i*
 look-MID-IMP
 ‘look at yourself!’

The second function of the middle suffix is to indicate that a given action is carried out by an impersonal subject, as shown in (99) through (101) below. In these cases, the verb does not bear any subject marking.

- (99) *hemikena-ma ak^w-i ka-b-at-i-ma*
 afterwards-TOP? weave-NON.FIN finish-B-?-NON.FIN-TOP?
nu-b-ib-i ab-aw-a
 tie_a_knot-B-?-NON.FIN sleep-MID-TAME
 ‘after finishing weaving, one ties the hammock and sleeps’
- (100) *tahi-t^hi em-aw-a-da hãa-ma*
 WHAT-EMPH? grab-MID-TAME-FOC? that-TOP?
 ‘from what does one get that?’
- (101) *ãlã buk^w-aw-a*
sebucán weave-MID-TAME
 ‘one weaves a *sebucán*’¹⁷⁴

7.2.2.1.2 Reciprocal -ak^wa

The reciprocal marker is -ak^wa. Compare the verb in (102) with the verb in (103). In the first example, the verb ‘hit’ is used to describe the action performed by a third singular masculine subject on a third singular masculine object.

- (102) *Ø-ĩmĩledi = tsõ-nĩ* *?do-Ø-in-obe-t^hi*
 3SG.MASC-partner = CL.MASC-NON.SUBJ hit-3SG.MASC-PST-TAME-EMPH?
 ‘he was hitting his partner’
- (103) *tais tais tais* *?do-?do-t^h-ak^wa-obe*
 (sound of hitting) RED-hit-3PL-RECIP-TAME
 ‘they are hitting each other bam bam bam’

¹⁷⁴ Instrument used to squeeze the manioc paste before making cassava.

Additional examples of the reciprocal are given in (104) and (105).

- (104) *lu-t^h-an-ak^wa-obe-t^hi*
 chase-3PL-DUR?-RECIP-TAME-EMPH?
 ‘they are chasing each other’

- (105) *k^wa-k^wa-t^h-ak^wa-w-a* /
 RED-hit-3PL-RECIP-EPENTH-TAME

t^hiba-bia-ni *ʔbẽ-ʔbẽ-t^h-ak^wa-in-obe*
 3PL.POSS.face-PL-NON.SUBJ RED-slap-3PL-RECIP-PST-TAME
 ‘they are hitting each other; they slapped each other’s faces’

Although this suffix resembles the future marker *-ak^w*, elicited examples like (106) show that they are distinct morphemes.

- (106) *ʔdo-ʔdo-t^h-ak^wa-w-ak^w-obe*
 RED-hit-3PL-RECIP-EPENTH-FUT-TAME
 ‘they are going to fight’ (lit. hit each other)

7.2.2.2 Other Derivational Affixes

This section presents the non-voice derivational suffixes in the Table 56 above. The first four suffixes to be discussed have a general meaning associated with duration and/or motion (§7.2.2.2.1). The meaning of the other three suffixes is not clear at the present time so they are presented individually: *-ab* in Section 7.2.2.2.2, *-at* in Section 7.2.2.2.3 and *-aff* in Section 7.2.2.2.4.

7.2.2.2.1 *-an*, *-ah*, *-ib*, and *-eb*

The four markers in this section have a general meaning of duration (durative *-an* and possibly *-eb* and *-ib*) and motion (motion away from the speaker *-ah*). In examples (107) and (108), I show a paradigm of elicited forms with the four morphemes *-an*, *-ib*, *-ah*

and *-eb*. The (a) forms in each of the two examples below are the simple imperative form of each of the verbs and serve as a point of comparison but notice that the occurrence of these suffixes is not dependent on the presence of the imperative. The (b) examples are marked with the durative *-an*, the (c) examples with the marker *-ib* which implies that the action is performed swiftly, the (d) examples are marked with the motion marker *-ah* which denotes that there is a movement associated with the action (usually away from the speaker giving the command), and the (e.) examples show forms that combine with the *-eb* marker also with semantics of (short) duration. Notice that the form *?*dif-ib-i* was deemed incorrect by the speakers consulted during elicitation.

- | | |
|---|--|
| <p>(107) a. <i>p^huts-i</i>
clean-IMP
'clean!'</p> | <p>d. <i>p^huts-ah-i</i>
clean-MOT-IMP
'go clean it!'</p> |
| <p>b. <i>p^huts-an-i</i>
clean-DUR-IMP
'clean (a while)!'</p> | <p>e. <i>p^huts-eb-i</i>
clean-?-IMP
'clean it quickly!'</p> |
| <p>c. <i>p^huts-ib-i</i>
clean-?-IMP
'clean quickly!'</p> | |
| <p>(108) a. <i>dif-i</i>
wash-IMP
'wash!'</p> | <p>d. <i>dif-ah-i</i>
wash-MOT-IMP
'go wash it!'</p> |
| <p>b. <i>dif-an-i</i>
wash-DUR-IMP
'wash (a while)!'</p> | <p>e. <i>dif-eb-i</i>
wash-?-IMP
'wash it quickly!'</p> |
| <p>c. <i>?*dif-ib-i</i>
wash-?-IMP
'wash quickly!'</p> | |

The use of *-an* as a durative marker and that of *-ah* as a motion marker are supported by numerous naturally-occurring examples in the corpus. For *-an*, see (104) above, among many other examples, where it is used with the verb ‘to chase’. An additional example of *-ah* is given in (109).

- (109) *k^w-ã[?]dõ-nĩ* *ɕĩ-b-aw-ah-i*
 2SG-grandmother-NON.SUBJ tell-B-MID-MOT-IMP
 ‘go call your grandmother’

The use of *-ib* and *-eb* is less well-understood. For example, although in all instances where *-ib* is used it serves indicate that the action in question is performed swiftly or in a quick manner, it is unacceptable (or almost) with some verbs (see ungrammatical example above in (108)). As for *-eb*, its use to describe actions that could also be described without this suffix makes determining the semantic contribution of *-eb* to a verb very difficult.

The following examples show the use of the suffix *-eb* with different verbs. The examples were obtained during a picture description task and offered by the same speaker to describe the same picture (110) (111) or very similar pictures (112) (113). More research and further comparison of examples where both a verb with and without *-eb* is used are needed.

- (110) *hi-t^{hi}its-eb-o* *hĩbanĩ*
 3SG.FEM-bake-?-FUT PURPOSE

 tʃa tʃa tʃa ʔwã-ʔwã-h-in-obe
 [onom.] RED-put_in-3SG.FEM-PST-TAME
 ‘she was putting in (the sifted manioc flour) in order to make cassava’

- (111) *b-ena-ma* *ile* *hi-t^hits-eb-o* *hĩbanĩ*
 PROX-ADV-TOP? manioc 3SG.FEM-bake-?-FUT PURPOSE

ʔwã-h-eb-in-obe
 put_in-3SG.FEM-?-PST-TAME
 ‘here she was putting in (the sifted manioc flour) in order to make
 cassava’

- (112) *b-ena-ma* *b-ena-ma* *hu-p^huts-eb-in-obe*
 PROX-ADV1-TOP? (repetition) 3SG.FEM-sweep-?-PST-TAME

ile *p^huts-ek^w-ã^ʔǵũ-nĩ*
 manioc sweep-?-CL-NON.SUBJ
 ‘here she was sweeping with the broom that is used when you make
 cassava’

- (113) *b-ena-ma* *p^huts-i* *hã-h-ĩn-obe*
 PROX-ADV1-TOP? sweep-NON.FIN do-3SG.FEM-PST-TAME

ile *p^huts-aw-ã^ʔǵũ-nĩ*
 manioc sweep-MID-CL-NON.SUBJ
 ‘here she was sweeping with the broom that is used when you make
 cassava’

7.2.2.2.2 -ab

The suffix *-ab* seems to mark an object argument of the verb as the examples (114) and (115) below show.

- (114) *ed-ab-ih-i* /
 see-?-MOT-IMP

75 litros-da-bi *em-ib-i* *d-ẽwãh-õ*
 75 liters_Sp.-CONTR?-ADD grab-?-NON.FIN 1PL-return-FUT?
 ‘go look at it to see if we can at least buy 75 liters and go’

- (115) *t^hi-wi-²ɕe* *t^hi-p^hes-**ab**-ik^wa-in-obe*
 3PL-hair-CL 3PL-look.for-?-RECIP-PST-TAME
 ‘they are searching each other’s hair (for lice)’
- (116) *k^wiɕalu-²da* *iɕ-**ab**-ik^wa-w-i* *t^h-alew-in-obe/*
 notebook-CL give-?-RECIP-EPENTH-NON.FIN 3PL-play-PST-TAME
- ɕai* *ɕai* *t^hi-ts-**ab**-ik^wa-w-i*
 thus thus 3PL-return-?-RECIP-EPENTH-NON.FIN
 ‘they were playing [at] giving each other the notebook, returning [it] to each other thus’

What is really interesting about this suffix is that it causes the vowel in the suffix that follows to dissimilate and go from /a/ to /i/. Comparison of example (114) with (117), and of (115) and (116) with the examples in Section 7.2.2.1.2 above where the reciprocal marker *-ak^wa* is discussed shows that the form of the motion suffix *-ah* changes to *-ih* and that that of *-ak^wa* changes to *-ik^wa*.

- (117) *Melania* / *ed-**ah**-i-t^hi*
 PN see-MOT-IMP-EMPH?
 ‘Melania, go look’

7.2.2.2.3 *-at*

The use of the suffix *-at* is not fully understood at the present time. As with *-eb* above, this suffix seems to be used freely by speakers when describing the same action and, thus, it is not clear what the semantic contribution of it is. Compare the two examples below.

- (118) *b-ena-ma* *ile* *hi-bil-in-obe*
 PROX-ADV1-TOP? manioc 3SG.FEM-turn_over-PST-TAME
 ‘here she was turning over the cassava’

- (119) *b-ena-ma* *hi-bil-at-in-obe* *ile-ka*
 PROX-ADV1-TOP? 3SG.FEM-turn_over-?-PST-TAME manioc-CL
 ‘here she was turning over the cassava’

This suffix is part of other verbs, like for example, *kabati* ‘to finish’, which can be contrasted with an underived verb as well as with two verbs marked with the suffixes *-eb* and *-ib* (120). The semantic relationship between the underived verb and the *-ib* verb is more transparent than with the other two. It is thus difficult to say whether this constitutes a set of verbs derived from the same root *ka-* or not.

- (120) a. *ka-b-i* ‘to take out’
 b. *ka-b-ib-i* ‘to take the bark/outer layer of a plant off’
 c. *ka-b-eb-i* ‘to lift’
 d. *ka-b-at-i* ‘to finish’

7.2.2.2.4 *-atf*

The same applies to the suffix *-atf* which is used with a few verbs but it is not fully productive. The most widely-attested use is with the verb *waitsatfi* ‘to learn’. Compare the examples in (121) and (122). In the first one, we have the verb ‘to know’; in the second one, it becomes clear that the verb ‘to learn’ is derived from ‘to know’ by adding the suffix *-atf*. However, the derivational nature of *-atf* is not always clear. The verb *k^webatfi* ‘to walk around’ in (123) does not seem to have a “*-atf*-less” counterpart: **k^webi*.

- (121) *hau* // *comunidadá* *t^h-otid-in-emi-ma* *tfi-waits-obe*
 yes community_Sp. 3PL-work-PST-ADV-TOP? 1SG-know-TAME
 ‘yes, I know about when they made the community’

- (122) *reunio-t^hi* *hĩ-t^h-an-i-ma* *p^hop^hop^ho*
 meeting_Sp.-EMPH say-3PL-DUR?-NOM-TOP? [clapping]

ʔbẽʔbẽ-b-an-i *waits-af-adu-e*
 RED-clap-B-DUR?-NON.FIN know-?-PL-REP.IMP

we-Ø-ahidɔ-adu-a-k^wi-t^hi
 order-3SG.MASC-FIRST?-2PL-TAME-2PL.O-EMPH
 ‘he has ordered you (pl): “learn to clap at what they say in meetings!”’

(123) *ile-da* *ki-ki-b-i* *k^we-b-af-õ-Ø*
 manioc-CONTR? RED-scrape-B-NON.FIN go-B-?-CL:MASC-3.COP
 ‘it (the agouti) roams about eating yucca’

7.2.3 Between Derivation and Inflection: -o

There are no spontaneous uses of this suffix outside of the special purposive construction (see Chapter 8, §8.3.3.4 for further details) with the purpose marker *hĩbani* in (124).

(124) *hi-t^hits-eb-o* *hĩbani*
 3SG.FEM-bake-?-FUT PURPOSE

ʔa ʔa ʔa *ʔwã-ʔwã-h-in-obe*
 [onom.] RED-put_in-3SG.FEM-PST-TAME
 ‘she was putting in (the sifted manioc flour) in order to make cassava’

The only two examples in the corpus that do not involve the verb *hĩbani* are given in (125) and as can be seen from the preceding context, these can be considered to be elliptical in nature.

- (125) A: *k^w-ed-adu-o* *hĩbani-ma* / *hĩĩhi*
 2PL-see-2PL-FUT? PURPOSE-TOP? here_it_is
 ‘here it is for you (pl) to look at’
- B: *tf-ed-o* *k^wãt^hĩma*
 1SG-see-FUT? then
 ‘let me see then’
- C: *tf-ed-o* *ĩt^hĩ* *k^wãt^hĩma*
 1SG-see-FUT? 1SG.PRO then
 ‘let me see then’

My main consultant from Arena Blanca, however, says that a verb form ending *-o* could be used to talk about a future action and that in such cases, it does not require the addition of *hĩbani*. The context provided by my consultant as a possible use of this form follows:

- (126) *tf-ĩf-o* (with rising intonation)
 1SG-come-FUT
 ‘am I coming (too)? OR ‘can I come?’ [on a trip, for example]

Perhaps this suffix is better understood as coding permission. More research is needed, however, to better understand its functions.

7.2.4 Conclusions

This chapter focuses on Mako verbs and their morphology. Mako lexical verb roots are bound roots and can be divided into two main classes, namely Class I and Class II. Class membership is determined by the last segment of the verb root which has consequences for the coding of subjects: verbs that end in consonants mark their animate subjects via a set of prefixes while verbs that end in vowels do it with a set of suffixes. Depending on their flexional and derivational morphology, Mako lexical verbs

can be further divided into finite, non-finite and nominalized. Two minor types of verbs are copulas, both are treated in the following chapter.

This chapter also dealt with the morphology of sentence mood, TAME and polarity marking in finite clauses and with derivational morphology. In Chapter 8 I show that there are other markers, e.g., adverbializers, that also attach to verb roots and I examine in more detail the functions of nominalized verb forms in the formation of complex sentences.

Chapter 8

8 Syntax

This chapter describes the syntax of Mako sentences by focusing on types of predicates (§8.1), sentence mood (§8.2), and complex sentences (§8.3).

Predicates in Mako can be nominal (§8.1.1) or verbal (§8.1.2). In the discussion of nominal predicates, particular attention is paid to the role of copulas. The discussion of verbal predicates start with a discussion of S and A agreement on the verb by means of the Class I and Class II subject markers (§8.1.2.1) and by means of old copular suffixes (§8.1.2.1.1). The discussion from there on revolves around intransitive (§8.1.2.2), transitive (§8.1.2.3) and ditransitive marking (§8.1.2.4). Throughout, attention is paid to how verb arguments are marked. The discussion of verbal predicates ends with a discussion of alignment in simple sentences (§8.1.2.7).

After presentation of these two types of predicates, I present the intonation and morphosyntax associated with simple sentences in different sentence moods: declarative sentences (§8.2.1), interrogative sentences (§8.2.2), and imperative sentences (§8.2.3).

Complex sentences are defined here as sentences with more than one clause. The discussion of complex sentences is organized according to their functions. I discuss complement clauses with utterance verbs (8.3.1), relative clauses (8.3.2), and adverbial clauses (8.3.3). The discussion of adverbial clauses is organized around their functional contribution to the sentence: time adverbials in Section 8.3.3.1, locative-temporal

adverbials in Section 8.3.3.2, and manner adverbials in Section 8.3.3.3. Purpose clauses are discussed in Section 8.3.3.4. Clause chains are in Section 8.3.3.5.

8.1 Types of Predicates

Typologies of nonverbal predicates largely agree on what functional domains are usually coded by this clause type. Mako employs nonverbal predicates for some of these domains but verbal ones for others:

TABLE 57 Coding of functional domains with verbal vs. nominal constructions

Functional Domain		Coding Means
<u>Payne (1997)</u>	<u>Dixon (2009)</u>	
Equative	Identity	Nominal
Proper inclusion		Nominal
Attributive	Attributive	Verbal
Location	Location	Verbal
Existential		Verbal
	Benefactive	(not attested)
Possession	Possession	Nominal

8.1.1 Nominal Predicates

Nominal predication constructions in Mako can be of two types:

TABLE 58 Nominal predicates in Mako

Construction	Form	TAME+Polarity
<u>Type A:</u>	([NP ₁]) [NP ₂ -(COP)]	simple present aff
<u>Type B:</u>	([NP ₁]) [NP ₂ (SUBJ)-COP]	present neg (& aff) other neg & aff

The first construction occurs in affirmative present tense nominal predicates and is either marked with one of three personal suffixes *-tsa* ‘1.COP’ (1), (5), *-ha* ‘2.COP’ (2)

(6), and $-\emptyset$ ‘3.COP’ (3) (7) for first, second, and third (respectively) animate referents, or unmarked for inanimate referents¹⁷⁵ (4) (8).

- (1) [maestro-**tsa**]
 teacher_Sp.-1.COP
 ‘I am a/the teacher’
- (2) [wĩĩĩ its-ō-**hã**]
 Mako DUMMY_ROOT-CL:MASC-2.COP
 ‘you are Mako’ (lit. a Mako man)
- (3) [hōba-ma ʔf-abe²do- \emptyset]
 that_one + CL:MASC-TOP? 1SG-father-3.COP
 ‘he is my father’
- (4) [k^{wi}ɕalu ih-ia-ma]
 notebook leaf-PL-TOP?
 ‘these are paper sheets’
- (5) [ɪt^{hi}-ma]_{NP1} [ɕulewa hoho-**tsa**]_{NP2-COP}
 1SG.PRO-TOP? Yureba person-1.COP
 ‘I am a Yureba person’
- (6) [ɪk^{wi}-ma]_{NP1} [ɕulewa hoho-**ha**]_{NP2-COP}
 1SG.PRO-TOP? Yureba person-2.COP
 ‘you are a Yureba person’
- (7) [Yulewa hoho-di]_{NP1} [hobadi- \emptyset -ma]_{NP2-COP}
 Yureba person-PL that_one-CL:PL-3.COP-TOP?
 ‘those ones are people from Yureba’ (lit. Yureba people)

¹⁷⁵ This is a property of subject marking in Mako more generally: animates are marked, inanimates are not. See §8.1.2.1 below.

- (8) [(*it^{hi}*) *ʃ-ũk^{wa}*]_{NP1} [*ile-ka*]_{NP2}
 (1SG.PRO) 1SG-POSS_ROOT manioc-CL
 ‘this cassava is mine’ (lit. this cassava is my possessed thing)

The Type B construction on the other hand is used when the predication is in present tense but has negative polarity (9) or when the predication has a TAME value different than simple present: past (11) (12), future (14) and uncertain present (15).

- (9) *b-ika-ma* (*it^{hi}*) *ʃ-ũk^{wa}-ka*
 PROX-CL-TOP? (1SG.PRO) 1SG-POSS_ROOT-CL

iki-ka

COP.NEG-CL

‘this (cassava) is not mine’

- (10) *bak^w-õ-da-ma* *iki*
 one-CL:MASC-CONTR?-TOP? COP.NEG
 ‘it is not just one’

- (11) *b-ika-ma* (*it^{hi}*) *ʃ-ũk^{wa}* *ile-ka*
 PROX-CL-TOP? (1SG.PRO) 1SG-POSS_ROOT manioc-CL

ina-ka

COP.PST-CL

‘this cassava was mine’

- (12) *dok^{wa} iha* *atabapo-be* *ahaɕi-ni* *k^{wi}-ʔɕ-ĩn-ena-ma*
 HOW1 COP.PST Atabapo-ALL first-NON.SUBJ 2SG-go-PST-ADV1-TOP?
 ‘how was it when you went to Atabapo for the first time?’

- (13) *tĩ-tsẽdĩ = ts-õ* *iha* *k^w-a[?]dĩ*
 WHO-person + PL = DUMMY_ROOT-CL:MASC COP.PST 2SG-grandfather
 ‘what (type of person) was your grandfather?’

- (14) (*it^{hi}*) *ʃ-ũk^{wa}* *ak^{wa}-ka*
 (1SG.PRO) 1SG-POSS_ROOT COP.FUT-CL
 ‘(it) will be my cassava’

- (15) *ɕãdĩ* *tʰi-ale* *sapatu-ʔo* ***ena***
 woman + PL 3PL-POSS_ROOT shoe_Sp.-CL COP.UNCERT
 ‘that would be a woman’s shoe’
- (16) *makĩ* *ɕĩ-b-ena-da* *ena-tʰi*
later be_dark-B-ADV1-CONTR? COP.UNCERT-EMPH?
 ‘later when it is dark, I think’

When the subject of the Type B construction has an animate referent, it is marked as a prefix on the copula (17) (18). This is the same set of prefixes that is used with Class I verbs (i.e., verbs that end in a consonant) as (19) shows.

- (17) [maestro ***tf-ina***]
 teacher_Sp. 1SG-COP.PST
 ‘I was a teacher’
- (18) [Jorge] [maestro ***Ø-ena***]
 PN teacher_Sp. 3SG.MASC-COP.UNCERT
 ‘Jorge is a teacher, I think’
- (19) Jorge ***tf-ed-a***
 PN 1SG-look-TAME
 ‘Jorge is looking’

In addition to the copulas shown above, there are two other copulas with more restricted distribution. The first one is *otfa* and the second one is *obe*.

The copula *otfa* can only occur with first persons, in either singular or plural as the examples below show. Because of its first person distribution, I hypothesize that this is a volitional copula. Further research is needed to clarify this question.

- (20) [maestro ***tf-otfa***]
 teacher_Sp. 1SG-COP.VOL
 ‘I will be a teacher’

(21) [maestro *d-ofa*]
 teacher_Sp. 1PL-COP.VOL
 ‘we will be teachers’

(22) *[maestro *t^h-ofa*]
 teacher_Sp. 3PL-COP.VOL
 (they will be teachers) [intended]

The copula *obe* seems to be restricted to locative phrases as the three examples below show.

(23) *it^hi-ma* siete año (siete año) *ʃ-obe*
 1SG.PRO-TOP? seven years (repetition) 1SG-COP
 ‘I have been [in school X] for seven years’

(24) *d-ai luw-a d-obe-da ik^widi-ma*
 INT-ADV3 own-TAME 1PL-COP-CONTR? 1PL.PRO-TOP?
 ‘where do we come from?/where are we from?’

(25) *wĩĩ t^h-ĩwēne obe*
 Mako.PL 3PL-language COP
 ‘the Mako language is (there)’

The copula *obe* differs from the other copulas in that it can combine with them. In (26), for example, it combines with the copula *ina* to predicate past locations.

(26) *ik^widi-ma / ʃ-ipi-e-mine /*
 1PL.PRO-TOP? 1SG-older_sibling-MASC-DEC

ite Payua t^h-abe[?]do /
 DIST1 + CL-MASC PN 3PL-father

Maloka / ik^widi
 PN 1PL.PRO

tsule *bičt^hĩ-da* ***d-in-obe***
only_Sp? many?-CONTR? 1PL-COP.PST-COP
‘us, my late older brother, the father of the Payuas, Maloka, it was just us
(here).’

Another difference between *obe* and the other TAME copulas is that the copulas *ina*, *iha*, *ak^wa*, *ofa*, and *ena* are all of the form CVa. The /a/ vowel in these forms could be a trace of the *-a* suffix (see §7.2.1.2.1.1).

Table 59 summarizes the Mako copulas and their meanings.

TABLE 59 Mako copulas

TAME	<i>ina</i>	PST
	<i>iha</i>	PST
	<i>ak^wa</i>	FUT
	<i>ofa</i>	FUT.INT
	<i>ena</i>	UNCERT
?	<i>obe</i>	PRES
POLARITY	<i>ikĩ</i>	NEG

As the above discussion shows, the Mako nominal predicates can be marked by either a copular suffix in present tense or by a copula with an attached person prefix in negative present tense and in other TAME configurations. I have also shown that different copulas make different semantic contributions to a nominal predicate. Despite their different functions, all of the copulas have in common one main characteristic: they cannot head a predicate.

These nominal predicates (whether copula-marked or not), however, constitute a minor predicate type as most of the predicates in the language are headed by verbs and are therefore verbal. This second type of predicate is treated in following section.

8.1.2 Verbal Predicates

This section focuses on the morphosyntax of verbal predicates. Unlike the predicates discussed in Section 8.1, the nucleus of the clauses described in this section consists of one¹⁷⁶ verb. The focus of this section is the syntax of the Mako verbal clause and, in particular, the arguments taken by the different categories of verbs and their semantic roles as well as types of obliques. This section is organized as follows: subject agreement (§8.1.2.1), intransitive¹⁷⁷ predicates (§8.1.2.2), transitive predicates (§8.1.2.3), and ditransitive predicates (§8.1.2.4). In the discussion that follows, S is the single argument of an intransitive verb; A is the most-agentive argument of a transitive verb and P, its the most-patientive argument; R and T refer to the two (non-A) arguments in a ditransitive verb, R is used with the recipient of a proto-typically ditransitive verb and T, with its theme.

¹⁷⁶ Sentences with more than one verb are considered here as complex sentences and are discussed in §8.3.

¹⁷⁷ Transitivity here is defined as a property of the clause rather than of the verb, following Hopper & Thompson (1980); the terms “intransitive”, “transitive” and “ditransitive” are thus used only as a convenient label for one-, two- and three-place predicates, respectively.

8.1.2.1 Subject Agreement

This section is concerned with the coding of S and A. The main strategy for marking S and A in verbal predicates, namely the use of two distinct yet related sets of person affixes is discussed in Section 8.1.2.1.1. Section 8.1.2.1.2. discusses how S and A are encoded in verbal predicates in the habitual aspect.

8.1.2.1.1 Prototypical S and A Agreement

Both S and A are cross-referenced on verbs with the same set of affixes, as the examples in (27) and (28) show. In (27), the A of the verb *hĩ-* ‘say’ is marked the same way as the S of the verb *wõ-* ‘smell’ is in (28).

- (27) *hemikena-ma* *hĩ-Ø-an-in-obe*
afterwards-TOP? say-3SG.MASC-DUR-PST-TAME
- ĩt^{hi}* *tf-ihaba-ma* /
1SG.PRO 1SG-father_in_law-TOP?
- no *hõba-nĩ-ma* *ʔbi-t-iki*
no_Sp. that_one + CL:MASC-NON.SUBJ-TOP? shoot-1SG-NEG
‘afterwards, my father-in-law said: “no, I am not killing that one”’
- (28) *p^{hu}* *wõ-Ø-in-obe*
[ideophone] smell-3SG.MASC-PST-TAME
‘he (the anaconda) stank’

This marking can be accomplished via a set of suffixes (27) (28) or with a set of prefixes (29) (30).

- (29) *b-ena-ma* *ile* *hi-bil-in-obe*
here-TOP? manioc 3SG-FEM-turn_over-PST-TAME
‘here she turned over the cassava’

- (30) *Beatriz-ma ile hõ-kõkod-in-obe*
 PN-TOP? manioc 3SG.FEM-bring_inside-PST-TAME
 ‘Beatriz brought the cassava inside (the house)’

These two sets of affixes—whose phonology was discussed in Chapter 4, Section 4.1.4 above and their form presented in Chapter 7, Section 7.2.1.1.1—are exclusively used for animate S and A referents (31) (33). Inanimate S and A are not cross-referenced on the verb (32) (34).

- (31) *iwika-ma mĩ = ts-ãpã-nĩ ã-w-õbe*
 spider-TOP? high = DUMMY_ROOT-CL-NON.SUBJ 3SG.MASC-sit-TAME
 ‘the spider is on the ceiling’

- (32) *kaçua-?o-ma hoho u-nĩ w-õbe*
 hat-CL-TOP? person head-NON.SUBJ sit-TAME
 ‘the hat is on the man’s head’

- (33) *(Felix) ã-?ç-ĩn-obe çada*
 (PN) 3SG.MASC-go-PST-TAME there
 ‘Felix went there’

- (34) *its-owi-ma oh^we-nĩ ?ç-ĩn-obe*
 DUMMY_ROOT-CL-TOP? river-NON.SUBJ go-PST-TAME
 ‘the boat was going on the river’

The cross-referencing of subjects on the verb is independent of the semantic role a given subject may have: agent with the verb ‘kill’ in (27) above, experiencer in (35), patient in (36) (37), theme in (38), and possessor in (39).

- (35) *it^hi-ma f-ed-iki hawa-t^hi-ma*
 1SG.PRO-TOP? 1SG-see-NEG thing-EMPH?-TOP?
 ‘I didn’t see any of that’

- (36) *santaine-t^{hi}* *i-wawatf-in-a* *papa-ma*
 PN-EMPH? 3SG.MASC-be_born-PST-TAME dad_Sp.-TOP?
 ‘My dad was born in Santa Inés’
- (37) *t^{hi}-[?]wĩdik^w-ena-ma* *alawata* *lõ-Ø-ena-ma*
 3PL-dream-ADV1-TOP? howler_monkey¹⁷⁸ sing-3SG.MASC-ADV1-TOP?
- hĩ-t^h-ik^w-an-a*
 say-3PL-?-DUR-TAME
- dakĩ* *its-õ* *wo-Ø-ak^w-e*
 later DUMMY_ROOT-CL:MASC die-3SG.MASC-FUT-TAME
- ‘when they dream about when the howler monkey sings, they say “later a man will die”’
- (38) *awiri-ma* *ehu* *õpetu* *ĩ-b-õbe*
 dog CL:HOUSE outside 3SG.MASC-sit-TAME
 ‘the dog is sitting outside of the house’
- (39) *mama /* *ik^widĩ* *wãĩme-ma* *dũ-hũn-an-obe*
 mum 1PL.PRO warime-TOP 1PL-have-DUR-TAME
 ‘mum, do we have *warimes*?’¹⁷⁹

Morphosyntactic coding of subjects is limited to the verbal person affixes discussed above. Syntactically, subject noun phrases can occur either before (37) (30) or following the verb (27) (36) and they do not receive any morphological case or semantic role marking as shown in the examples above where subjects occur completely unmarked (37) (39) or with the suffix *-ma* ‘TOP?’ (35) (36) (38), which is not a role marker, as it occurs on subjects and objects (27) as well as on adverbial phrases (37).

¹⁷⁸ *Alouatta seniculus*

¹⁷⁹ Piaroa traditional celebration

8.1.2.1.2 Subject Agreement in Habitual Aspect Sentences

As shown in Chapter 7, Section 7.2.1.2.3.1, habitual aspect is expressed via a construction in which the verbs are nominalized with a classifier (masculine, feminine or plural) and one of the copular suffixes discussed in Section 8.1.1. In this construction, the agreement in person with the subject is expressed via the copular suffix: *-tsa* for first person, *-ha* for second person, and *-Ø* for third person in both singular and plural. Agreement in gender and number is accomplished via the classifier. This is exemplified in (40) and (41) for third person masculine and feminine respectively.

- (40) *mĩ = ts-aʔo* *wãme* *ab-õ-Ø*
high-DUMMY_ROOT + CL on_top_of sleep-CL:MASC-3.COP
'he sleeps on the hills'
- (41) *omuk^wat-uk-**uhu**-Ø*
think-NEG-CL:FEM-3.COP
'she doesn't remember'

8.1.2.2 Intransitive Predicates

Intransitive predicates require a single nominal argument with the grammatical role of subject. The semantic role associated with the subject nominal varies according to the semantics of the verb. In (42) and (43), the subject arguments can be said to be agents; in (44) (45) and (46), however, the verbs express a characteristic—colour in (44) (45), and smell in (46)—of their respective subject arguments. In these three examples, the subject is non-agentive.

- (42) *k^we-t^h-atf-iki*
walk-3PL-?-NEG
'they didn't walk'

- (43) *papa i-ʔɕ-ĩh-a-tə*
dad_Sp. 3SG.MASC-go-PST-TAME-PST
‘my dad went’
- (44) *b-ena-ma dew-ō-∅*
PROX-ADV1-TOP? be_white-CL:MASC-3.COP
‘it [a sloth] is white here’
- (45) *hōba-ma ɕẽ-b-ō-∅*
that_one + CL:MASC-TOP? be_black-B-CL:MASC-3.COP
‘that one is black’
- (46) *hōba-ma wō-b-ō-∅*
that_one + CL:MASC-TOP? smell-B-CL:MASC-3.COP
‘that one stinks/smells bad’

Two other important characteristics of Mako verbal clauses are also exemplified by the examples in (42) through (46): zero anaphora and word order.

For anaphora, compare example (42) with (43). In (42) the subject of the clause is cross-referenced on the verb by means of a 3PL subject suffix but there is no overt NP or pronoun; in (43), however, the subject NP is both cross-referenced and expressed. Zero anaphora is widespread in Mako clauses and it affects both subjects and objects (see §8.1.2.3.1).

The examples above also show that when subjects are expressed, they tend to come before the verb (i.e., word order is SV). However, this is not always the case. As (47) shows, the S can also follow the verb.

- (47) *wahi-t-a* *it^{hi}-ma*
 not_know-1SG-TAME 1SG-TOP?
 ‘I don’t know’

8.1.2.3 Transitive Predicates

Mako transitive predicates require one A argument with the grammatical role of subject and one P argument with the grammatical role of object. As the examples below show, the prototypical semantic role associated with the subject nominal in a transitive predicate is that of agent and the prototypical object nominal has the semantic role of patient.

- (48) *zanahoria* *[?]wi-h-in-obe*
 Sp_carrot cut-3SG.FEM-PST-TAME
 ‘she cut the carrot’

- (49) *bãĩ* *to-Ø-obe*
 fish cook-3SG.MASC-TAME
 ‘he is cooking fish’

- (50) *ile* *hi-t^{hi}ts-eb-in-obe*
 cassava 3SG.FEM-bake-?-PST-TAME
 ‘she was making the cassava cake’

- (51) *b-ena-ma* *hi-bĩl-at-in-obe* *ile-ka*
 PROX-ADV1-TOP? 3SG.FEM-turn_over-?-PST-TAME cassava-CL
 ‘She was turning over the cassava’

Notice that although the preferred position for an object is pre-verbal, i.e., OV as in (48) through (50), it is also possible for it to be post-verbal (51). When both the subject and the object are expressed, the order is usually SOV as in (52), which is also the case in Sáliba and Piaroa (see Chapter 1, §1.3.2.3).

- (52) Beatriz-*ma* *ile* *hõ-kõkod-in-obe*
 PN-TOP? cassava 3SG.FEM-pick_up-PST-TAME
 ‘Beatriz was picking up the cassava’

8.1.2.3.1 O Animate Verb Suffixes

Like animate subjects, animate objects can be marked on the verb. Verbal object markers were presented in Chapter 7, Section 7.2.1.1.2. The examples below show their use in discourse.

- (53) *ida* *ɕi-b-aw-ab-ih-i-ni*
 c’mon tell-B-MID-?-MOT-IMP-3SG.MASC.O
 ‘c’mon go tell him!’

- (54) *baha* *ts-i?i* *ti-af-ib-obe-kʷi*
 thorn DUMMY_ROOT-CL poke-?-?-TAME-2SG.O

tsiʔbari *lo-Ø-ib-akʷ-e* *hĩ-b-an-i*
 ray sting-3SG.MASC-?-FUT-TAME say-B-DUR-NON.FIN

hawadāni *tsiʔbari* *lo-Ø-ib-obe-kʷi*
 likewise ray sting-3SG.MASC-?-TAME-2SG.O

mutsuari *tʰ-inekʷ-akʷ-e*
 gonorrhea 3PL-get-FUT-TAME

o *mutsuari* *hũn-an-o* *Ø-itf-a*
 or_Sp. gonorrhea have-DUR-CL:MASC 3SG.MASC-come-TAME

hĩ-b-an-i
 say-B-DUR-NON.FIN

‘they say “a thorn pokes you, a ray will sting (you)”. In the same way, they say “a ray stings you, they are getting gonorrhea or a man with gonorrhea is coming”’

8.1.2.3.2 Marked Object NPs

The object NPs in the examples (48) through (51) above are morphologically unmarked for their grammatical role. However, objects can optionally be marked with the suffix *-ni* as shown in examples (55) and (56).

- (55) [...] *itsule-ni* *ehat-i* *ka-t-at-ak^w-obe*
 curassow-NON.SUBJ release-NON.FIN finish-1SG-?-FUT-TAME
 ‘I just released the curassow’ (lit. will finish releasing)
- (56) *k^wã[?]dõ-ni* *çĩ-b-aw-ah-i*
 2SG-grandmother-NON.SUBJ call-B-MID-MOT-IMP
 ‘go call your grandmother!’

Notice that in both (55) and (56) the object is pre-verbal just as it is in examples (48) through (50). It is thus not the position of the object that determines whether it is marked or not. Notice, however, that the animacy of the objects in (48) through (51) differs from that of the objects in (55) and (56): in the former, the objects are all inanimate, while in the latter ‘curassow’ and ‘grandmother’ are animate and individuated. The presence of the object marker, although not solely determined by animacy, is more likely to appear with animate objects.¹⁸⁰

Object NPs need not be expressed, however; compare (57) with (58), both used to describe the same scene by two different speakers during the same elicitation session. In (57), the speaker includes the patient of the action *zanahoria* ‘carrot (Spanish)’. In (58), the other speaker leaves it out.

¹⁸⁰ Textual counts are needed to confirm the hypothesis that *-ni*-marked objects are in fact more likely to be animate than inanimate. This remains a future stage in my analysis of object-marking.

- (57) **zanahoria** **martillo-*nĩ***
 carrot_Sp. hammer_Sp.-NON.SUBJ

 [?]*do-b-i* *Ø-ik^w-in-obe*
 hit-B-NON.FIN 3SG.MASC-AUX-PST-TAME
 ‘he was hitting the carrot with a hammer’
- (58) **martillo-*nĩ*** [?]*do-b-i* *Ø-ik^w-in-obe*
 hammer_Sp.-NON.SUBJ hit-B-NON.FIN 3SG.MASC-AUX-PST-TAME
 ‘he was hitting [the carrot] with a hammer’

8.1.2.4 Ditransitive Predicates

Prototypical ditransitive verbs have, in addition to an A, a T argument and an R argument. The most common ditransitive verb in the corpus is by far the verb *ičɟ*- ‘give’ in examples (59) through (63). In (59), the verb is used to describe a scenario where a man is giving a woman a watch. The semantic roles of the verb arguments are: an agent (the man, not expressed but cross-referenced on the verb with a subject prefix), a theme (the watch *lěřō ts-iʔi*) and a recipient (the woman *itsuhu*). Often, however, one of the arguments is not overtly expressed: the R in (60), the T with the verb ‘return’ in (62).

- (59) *its-uhu-nĩ* *lěřō* *ts-iʔi*
 DUMMY_ROOT-CL:FEM-NON.SUBJ watch_Sp. DUMMY_ROOT-CL

 \emptyset -*ičɟ-in-obe*
 3SG.MASC-give-PST-TAME
 ‘he was giving the watch to the woman’
- (60) *gasoi* *tf-ičɟ-of-a* *hĩ-Ø-an-ih-a-tə*
 gasoi_Sp. 1SG-give-VOL-TAME say-3SG.MASC-DUR-PST-TAME-PST
 ‘he said: “I am going to give (you) gasoil”’
- (61) *ahačɟi-nĩ* *hob-uhu-nĩ* *h-ičɟ-in-obe*
 first-NON.SUBJ that_one-CL:FEM-NON.SUBJ 3SG.FEM-give-PST-TAME
 ‘first, that one (female) was giving something to the woman’

- (62) *k^wicɕalu-²da* *icɕ-ab-ik^wa-w-i* *t^h-alew-in-obe* /
 notebook-CL give-?-RECIP-EPENTH-NON.FIN 3PL-play-PST-TAME

ɕ-ai *ɕ-ai* *t^hi-ts-ab-ik^wa-w-i*
 dist1-adv3 dist1-adv3 3PL-return-?-RECIP-EPENTH-NON.FIN
 ‘they were playing [at] giving each other the notebook, returning [it] to each other thus’
- (63) *tahi* *t^h-icɕ-ab-ik^wa-in-a-da*
 what 3PL-give-?-RECIP-TAME-CONTR?
 ‘what were they giving each other?’

However, not all ditransitive verbs have arguments with the semantic roles of T and R. In (64), the verb ‘take out’ has a T (the cucumber) and a source argument (the bag); in (65), the verb ‘drop’ has a T (the little fruits) and a goal argument (the cup).

- (64) *its-a²wo* *ok^wa-t^hi* pepino *ts-a²bo*
 DUMMY_ROOT-CL inside-EMPH? Sp_cucumber DUMMY_ROOT-CL

te-h-eb-in-obe
 take_out-3SG.FEM-PST-TAME
 ‘she was taking the cucumber out of the bag’
- (65) *its-ã²dõ* *ok^wa-t^hi* *ide-bia* *ha-h-in-obe*
 DUMMY_ROOT-CL inside-EMPH? little_fruit + CL-PL drop-3SG.FEM-PST-TAME
 ‘she was dropping the little fruits inside the cup’

Examples (59) and (61) show that R noun phrases are marked with the same marker as P noun phrases, that is, with *-ni* and the same can be said of T noun phrases as shown in the elicited example in (66).

- (66) *it^hi-ma* *Pedro-ni* *ɸ-icɕ-in-obe* *ɸ-it^hi-hu-ni*
 1SG.PRO PN-NON.SUBJ 1SG-give-PST-TAME 1SG-child-CL:FEM-NON.SUBJ
 ‘I gave my daughter to Pedro’

Additionally, R noun phrases can also be cross-referenced on the verb with the same set of suffixes as P noun phrases (67).

- (67) reu_{nio}-*t^hi* *hĩ-t^h-an-i-ma* *p^hop^hop^ho*
meeting_Sp.-EMPH say-3PL-DUR?-NOM-TOP? [clapping]
- ʔbẽʔbẽ-b-an-i* *waits-atf-adu-e*
RED-clap-B-DUR?-NON.FIN know-?-PL-REP.IMP
- we-Ø-ahĩɔ-adu-a-k^{wi}-i-t^hi*
order-3SG.MASC-FIRST?-2PL-TAME-2PL.O-EMPH?
- ‘he has ordered you (pl): learn to clap at what they say in meetings!’

8.1.2.5 $-ni$

In the preceding sections, I have shown that the suffix *-ni* can mark the P argument of a transitive verb (55) (56) and well as the R (59) (61) and the T (66) arguments of a ditransitive verb. However, examples (57) and (58) also show that this suffix can occur attached to a nominal with the semantic role of instrument. Examples (68) and (69) below show nominals with the semantic roles of location and goal also marked with the suffix *-ni*.

- (68) *hōba-ma* *tebo-ni* *h-ō*
that_one-TOP? woods-NON.SUBJ stand-CL:MASC
‘he lives in the woods’ (lit. ‘he always stands in the woods’)
- (69) *ĩ-hĩb-emi-ma* *tahi-da* *wāt^hō-da*
3SG.MASC-hide-ADV2-TOP? [filler] hollow_trunk-CONTR?

 lahu-ni-ma *tsi-b-ib-iki*
 hole-NON.SUBJ-TOP? go_into-B-?-NEG
‘where it (the agouti) hides is inside hollow trunks; it does not go into holes’

The suffix *-ni*, however, cannot occur with noun phrases with the semantic roles of S or A as the unacceptability of the two elicited examples below show.¹⁸¹

- (70) **it^{hi}-ni* *Pedro-ni* *'do-t-obe*
 1SG.PRO-NON.SUBJ PN-NON.SUBJ hit-1SG-TAME
 (I hit Pedro) [intended]

- (71) **Pedro-ni* *ĩ-[?]ɕ-in-obe*
 PN-NON.SUBJ 3SG.MASC-go-PST-TAME
 (Pedro went) [intended]

The range of semantic roles marked by the suffix *-ni* thus includes P, T, and R but also instruments, locations and goals. Therefore, its use attached to a noun phrase does not help distinguish objects from obliques and has no implications for clausal valence. In other words, *-ni*-marked nominals can occur with intransitive (68), transitive (55) and ditransitive (66) verbs.

Relativization by means of a classifier cannot distinguish objects from obliques either. As can be seen in the elicited examples below, both the P (72) and T (73) arguments of a verb are relativized by means of a classifier and the subject is marked on the verb with a subject affix. This is also the case for the instrument in (74) and the goal of movement in (75). Notice that in (74) both the A and the P are expressed inside the relative. The R argument of the verb in (76), however, is not expressed via a classifier.

¹⁸¹ As will be shown in §8.1.2.6, noun phrases with a sociative semantic role are marked with *-k^{wi}* ‘SOC’ and allative and venitive noun phrases are marked with *-be* ‘ALL’ and *-k^{wi}* ‘VEN’ respectively. It is unclear at this point of my investigation whether these semantic roles can also be marked with *-ni*.

This is due to its animacy as shown in (77) where an animate P is also marked with the same marker *-ok^wo* ‘FEM_OBJ’.¹⁸²

P

- (72) *it^{hi}-ma tf-em-in-obe iridi-ɕa* [Maria *hu-buk^w-in-aɕa*]
 1SG.PRO 1SG-grab-PST-TAME hammock-CL PN 3G.FEM-weave-PST-CL
 ‘I bought the hammock that Maria wove’

T

- (73) *k^{wi}ɕalu-[?]ɕe* [*k^w-iɕ-in-a[?]ɕe*] *otiw-a[?]ɕe*
 notebook-CL 2SG-give-PST-CL be_good-CL
 ‘the notebook you gave (me) is good’

Instrument

- (74) *tf-utsak^w-a k^{wi}b-a?o* [*mariu-ni* *?bi-kib-in-a?o*]
 1SG-look_for-TAME rifle-CL tapir-NON.SUBJ shoot-2SG-PST-CL
 ‘I am looking for the rifle you killed the tapir with’

Goal

- (75) *odo* [*tfi-[?]ɕ-ah-ehu*] *iglesia p^{he}a h-ehu*
 house 1SG.MASC-go-MOT?-CL church_Sp. near stand-CL
 ‘the house I went to is near the church’

¹⁸² Further examples of relative clauses formed via classifiers can be found in §8.3.2 below.

(animate) R

(76) *its-u^hu-ma*

DUMMY_ROOT-CL:FEM-TOP?

[*its-ō* *k^wiɕʒalu-^ʔɕʒe* *Ø-iɕʒ-in-**ok^wo-ma***]
DUMMY_ROOT-CL:MASC notebook-CL 3SG.MASC-give-FEM_OBJ-TOP

Maria *mik^w-u^hu-Ø*
PN be_called-CL:FEM-3.COP

‘the woman to whom the man gave the book is called Maria’

(animate) P

(77) *ik^wi* *its-u^hu-ni*

2SG.PRO DUMMY_ROOT-CL:FEM-NON.SUBJ

[*k^w-ed-in-**ok^wo***]
2SG-see-FEM_OBJ-TOP

k^wi-waits-obe
2SG-know-TAME

‘you know the woman you saw’

However, relativization via the nominalizer *-i* (§8.3.2) does allow the identification of P nouns phrases with the grammatical role of object. *-i*-marked relative clauses can be of two types: they can be S relative clauses (78) or O relative clauses (79). Notice that in the case of the S relative clauses, the *-ni*-marked oblique remains inside the clause.

(78) *i^ʔɕʒe-bia* [*in-awa-ni* *laib-i*]
moss + CL-PL rock-CL-NON.SUBJ grow-NOM
‘the moss that grows on the stones’

(79) *i^ʔɕʒe-bia* [*mariu u-ku-i*]
moss + CL-PL tapir 3SG.MASC-eat-NOM
‘the moss that the tapir eats’

The use of *-ni* on P, T, and R but also on locatives, instruments, and goals and its preference for animate Ps and Rs suggests that this could be a case of differential object marking but further research is needed to clarify this question. I hope to be able to investigate more fully the use of the *-i* nominalizer as a test for verbal valence.

8.1.2.6 Obliques

The previous discussion focused on the structure of intransitive, transitive and ditransitive verbal predicates and has revolved around a verb and its core arguments (i.e., subject and P, T, and R) as well as on *-ni*-marked obliques such as instruments and locatives. In this section, I look at sociatives (§8.1.2.6.1), allatives and venitives (§8.1.2.6.2) and sentence-level temporal and locative obliques (§8.1.2.6.3). Other temporal and locative obliques are clauses; these are dealt with in Section 8.2.3 below.

8.1.2.6.1 Sociative *-kʷi*

The suffix *-kʷi* attaches to a noun to indicate that the referent was accompanied by someone else (80) (81) (82). This marker can also be used with non-animate referents as in the elicited example in (83).

- (80) *ite-ma* / *waya* / *tího-kʷi* / *pʰoɕoka-kʷi*
 DIST1 + CL-TOP? anteater who-SOC woodpecker-SOC
 ‘that one, the anteater, with that other one, with the woodpecker’

- (81) *h-ilekʷ-e-kʷi* *hĩ-b-ĩn-obe* *hĩ-t-an-a*
 3SG.FEM-spouse-MASC-SOC 3SG.FEM-sit-PST-TAME say-1SG-DUR-TAME
 ‘I say she is sitting with her husband’

- (82) *Sandra-kʷi* *i-wawatf-in-a-hĩ*
 PN-SOC 3SG.MASC-be_born-PST-TAME-Q1
 ‘was he born with Sandra?’ (i.e., at the same time as)

- (83) A: *tahi-kʷi to-h-obe-da maria-ma*
 WHAT-SOC cook-3SG.FEM-TAME-CONTR? PN-TOP?
 ‘with what does Maria cook?’

B: *laʔdi-kʷi*
 hot_pepper-SOC
 ‘with hot peppers’

In elicitation, speakers find acceptable sentences like (84) where *-kʷi* is used with an instrument but this is never found in texts and could be a translation effect of Spanish *con* ‘with’.

- (84) *b-ena-ma ile pʰõ-tʰ-eb-in-obe luʔdupa-kʷi*
 PROX-ADV1-TOP? manioc sift-3PL-?-PST-TAME sieve-INST
 ‘here they are sifting the manioc with the sieve’

8.1.2.6.2 Allative *-be* and Venitive *-kʷi*

Two other suffixes code obliques. These are the allative *-be* which serves to denote “motion towards” (85) (86) (87) and the venitive *-kʷi* which serves to code “motion towards the speaker” (88) (89).

- (85) *batʰo-be tʃĩ-ʔçĩn-obe*
 garden-ALL 1SG-go-PST-TAME
 ‘I went to the vegetable garden’
- (86) *Jorge-ma Canada-be ã-ʔçĩn-obe*
 NP-TOP? PN-ALL 3SG.MASC-go-PST-TAME
 ‘Jorge is going to Canada’
- (87) *dokʷa iha Atabapo-be ahaçĩ-nĩ kʷĩ-ʔçĩn-ena-ma*
 HOW1 COP.PST Atabapo-ALL first-NON.SUBJ 2SG-go-PST-ADV1-TOP?
 ‘how was it when you went to Atabapo for the first time?’

- (88) *tf-abe[?]do-ma b-ai-k^{wi} if-eh-eb-i*
 1SG-father-TOP PROX-ADV3-VEN come-MOT?-?-NON.FIN

Ø-otid-in-obe-a

3SG.MASC-work-PST-TAME-TAME

‘my father built it when he brought us here’ (lit. bringing (us) here)

- (89) *if-i b-ai-k^{wi}*
 come-IMP PROX-ADV3-VEN
 ‘come here’

Although *-k^{wi}* most commonly occurs with the adverb *bai* ‘here’ and associated with the verb *if-i* ‘to come’, sometimes the venitive occurs in constructions like (90) (91) where the meaning of “towards the speaker” is not obvious. In (90), we have *-k^{wi}* with the word *u[?]da* ‘upriver’, always used to talk about places near the headwaters or towards the headwaters of a river. One of my main consultants explained the difference between *u[?]da* and *u[?]dak^{wi}* as one of proximity where the former is farther away from the community. In (91), *-k^{wi}* is being used with the place adverb *ɕai* which is formed with a distal demonstrative root and often denotes the opposite of *baik^{wi}*. If the interpretation of the meaning difference between *u[?]da* and *u[?]dak^{wi}* is taken into account, perhaps *ɕaik^{wi}* means “closer than *ɕai* ‘there’”.

- (90) *ahacɕi-ni-ma ɕ-eli / u[?]da-k^{wi}-t^{hi} / santaine-t^{hi}*
 first-NON.SUBJ-TOP? DIST1-ADV4 upriver-VEN-EMPH? PN-EMPH?

tfi-wawatf-in-emi-ma [...]

1SG-be_born-PST-ADV2-TOP?

‘first, there, upriver, I was born in Santa Inés’

- (91) *k^w-alew-a k^wene ɕ-ai-k^{wi}*
 2SG-play-PROH PN DIST1-ADV3-VEN
 ‘don’t play, Kwene. (move) over there’

8.1.2.6.3 Sentence-level Obliques

In (92) and (93), the sentence starts with an adverbial place oblique. In (94), the first word of the sentence is *itek^wai* ‘tomorrow’ which is an adverb of time and in (95) we have the *ahaɕi* ‘first’. These are the most common types of sentence-level obliques. Notice that while in the first three cases, the oblique is marked with *-ma*, in (95) *ahaɕi* is marked with *-ni*.

- (92) *b-ena-ma* *hi-bil-at-in-obe* *ile-ka*
 PROX-ADV1-TOP? 3SG.FEM-turn_over-?-PST-TAME cassava-CL
 ‘here she was turning over the cassava’

- (93) *b-ena-ma* *ile* *p^hõ-t^h-eb-in-obe*
 PROX-ADV1-TOP? manioc sift-3PL-ASSOC.MOT?-PST-TAME

lu[?]dupa-ni
 sieve-NON.SUBJ
 ‘here they were sifting the manioc with the sieve’

- (94) *itek^wai-ma* *tf-ift-ak^w-obe*
 tomorrow-TOP? 1SG-come-FUT-TAME
 ‘I am coming/will come tomorrow’

- (95) *ahaɕi-ni* *wi-b-i* *ãwãh-i*
 first-NON.SUBJ fell-B-NON.FIN return-NON.FIN
 ‘first, you go and fell’

8.1.2.7 Alignment

As shown above, S and A are marked in Mako using the same two sets of subject affixes: a set of prefixes for consonant-final verb roots and a set of suffixes for vowel-final verb roots. In addition to this, I showed that neither S nor A receive any case marking and that their position within the sentence is usually initial but allows flexibility. The fact that S and A behave identically provides support for a subject

category in Mako. I also showed that O is marked differently from S and A. O noun phrases can be case-marked with a suffix *-ni* and when cross-referenced on the verb, the O suffixes occur at the right edge of the word. The treatment of S and A as one category different from O allows a classification of Mako main clause grammar as nominative-accusative.

Although more research is needed on ditransitive verbs to determine what, if any, are the differences between T and R, the evidence available points towards Neutral (i.e., where no distinction is made between O and T and R; see Haspelmath (2015)) object alignment with respect to object marking on the NP and to cross-referencing on the verb.

8.1.2.8 Summary

In this section, I showed that predicates can have one, two or three core arguments depending on whether they are intransitive, transitive or ditransitive. I also showed that the subject of a clause is always cross-referenced on the verb, while the object may or may not be cross-referenced. Crucially, subjects and objects are cross-referenced using distinct sets of affixes, which makes main clauses in Mako nominative-accusative.

While the subject NPs, if expressed, is not marked for its grammatical role, the object NPs are optionally marked with a suffix *-ni*. This object marker more generally serves to encode any object of the verb: it can mark a T, a R, a locative, and an instrumental.

8.2 Sentence Mood

The following sections focus on speech acts and sentence mood. Here I present the phonological, morphological and syntactic characteristics of declaratives (§8.2.1) interrogatives, (§8.2.2), and imperatives (§8.2.3). The discussion of interrogatives is divided into polar interrogatives (§8.2.2.1) and content interrogatives (§8.2.2.2).

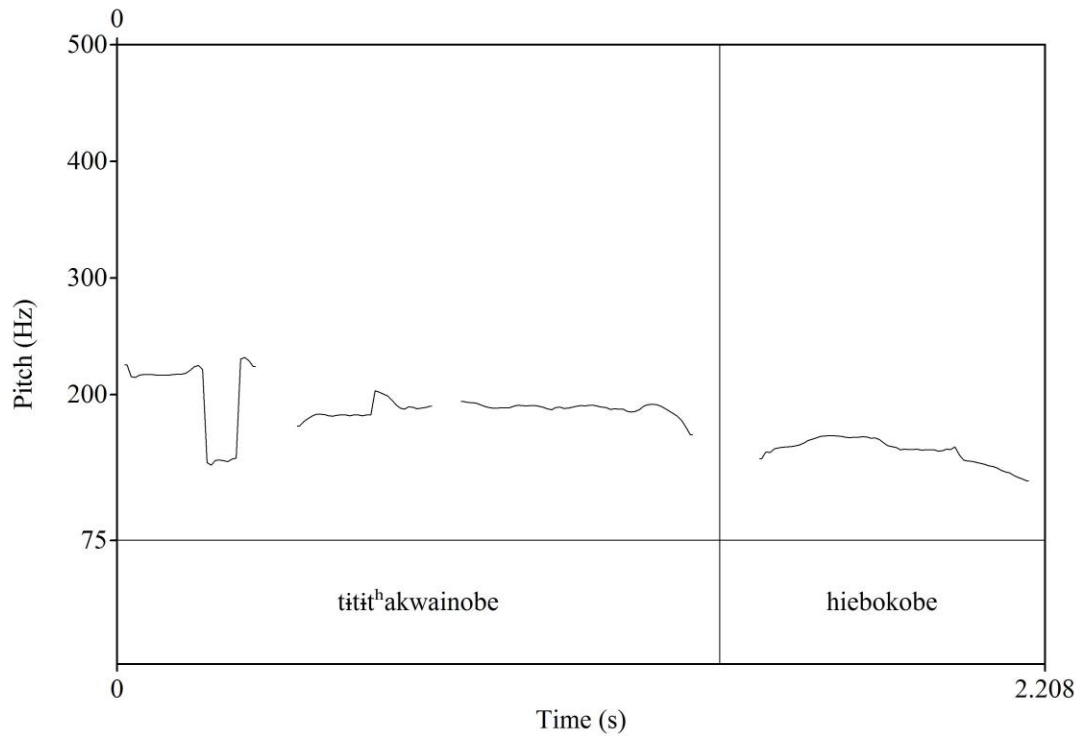
8.2.1 Declarative Sentences

Many examples of declaratives can be found throughout the preceding chapters. There are two main types of declaratives: affirmative declaratives and negative declaratives. Both affirmative and negative declaratives have falling intonation. This is shown in Figure 50 where the pitch contour of both the affirmative and the negative declarative in (96) can be seen.

- (96) *ti-ti-t^h-akwa-in-obe* / *hi-Ø-eb-ok-obe*
RED-smash-3PL-RECIP-PST-TAME push-3SG.MASC-?-NEG-TAME
'they were smashing into each other. he is not pushing (his partner).'

These two sentence subtypes differ, however, in the absence vs. presence of a negative marker; each is treated separately below in Sections 8.2.1.1 and 8.2.1.2 respectively.

FIGURE 50 Falling intonation in declaratives



8.2.1.1 Affirmative Declaratives

Affirmative declaratives are the ‘unmarked’ sentences in the language. While interrogatives and imperatives (see below) require special morphology and—in the case of polar interrogatives and negative imperatives—special intonation, declaratives do not. They are also the most common type of sentence in my corpus. The examples below are taken from naturally-occurring speech and show a range of different types of declaratives: finite verbal predicate (97), habitual aspect predicate (98) (see Chapter 7 §7.2.1.2.3.1), and a nominal predicate (99).

- | | | |
|------|----------------------------|-------------------|
| (97) | <i>b-ai-k^{wi}</i> | <i>ʃ-ʃ-in-obe</i> |
| | PROX-ADV3-VEN | 1SG-come-PST-TAME |
| | ‘I came here’ | |

- (98) *p^ha-b-at-adi-tsã*
 help-B-?-CL:PL-1.COP
 ‘we always help’
- (99) *hob-uhu-ma* *hi-ale* familia
 that_one-CL:FEM-TOP? 3SG.FEM-POSS_ROOT family_Sp.

hũn-an-uhu-ma
 have-DUR-CL:FEM-TOP?
 ‘she is the one who has family (there)’

8.2.1.2 Negative Declaratives

The negative marker is *iki*. This marker functions both as a suffix (100) on verbal predicates and a copula (101)¹⁸³ on nominal predicates.

- (100) *it^hi-ma* *tf-ed-iki* *la?aka-t^hi-da*
 1SG.PRO-TOP? 1SG-see-NEG beginning-EMPH?-CONTR?
 I haven’t seen (that) from the beginning’
- (101) *wahi-t-a* *d-a²di-ma* *iki* /
 not_know-1SG-TAME 1SG-grandfather-TOP? NEG.COP

hõba-ma / *mariu-ma*
 that_one + CL:MASC-TOP? PN-TOP?
 ‘I don’t know, he is not our grandfather, that one, Mario’

8.2.2 Interrogative Sentences

This section presents the grammar associated with interrogatives. For polar interrogatives, there is a general interrogative marker *-hĩ* used in most contexts and three other markers *-ka*, *-ha*, and *ta* that have more restricted semantics. All four

¹⁸³ For more on the negative suffix and the slot it occupies in the verbal morphology, see Chapter 7, §7.2.1.3.

markers are covered in Section 8.2.2.1 in the following order: *-hĩ* (§8.2.2.1.1), *-ka* (§8.2.2.1.2), *-ha* (§8.2.2.1.2), and finally *ta* (§8.2.2.1.3). Content interrogatives are dealt with in Section 8.2.2.2 where I show the different question words the language has and how questions are formed with each of them. An interesting pattern of initial reduplication of question words is also discussed in this section as well as the root *d-*.

8.2.2.1 Polar Interrogatives

Mako uses the two most common strategies for marking polar interrogatives in the languages of the world: a special intonation pattern and interrogative particles (König & Siemund, 2007:292). Mako, as shown below, uses rising intonation to mark polar interrogatives. In addition to intonation, this sentence subtype can be marked with one of four interrogative markers: *-hĩ*, *-ka*, *-ha*, and *ta*. Each is presented in turn below.

8.2.2.1.1 Yes/No Marker: *-hĩ*

The interrogative suffix *-hĩ*, which serves to form a yes/no question, most commonly attaches to a verb as in (102) through (108). The suffix attaches to the verb after the TAME markers of the inflected verb form. However, in some cases when the only TAME morphology is the suffix *-a*, one of two different morphophonological processes¹⁸⁴ can occur: 1) the /a/ vowel in the TAME suffix is replaced by a /i/ vowel (107), and 2) there is a complete deletion of the /a/ vowel and of the /h/ in the interrogative suffix. Although word order is fairly flexible in Mako, it is possible to affirm that there is no special change in word order in polar interrogatives.

¹⁸⁴ More research is needed to understand the motivation for these two processes.

- (102) *Sandra-k^{wi} i-wawatf-in-a-hĩ*
 PN-SOC 3SG.MASC-be_born-PST-TAME-Q1
 ‘was he born with Sandra?’ (i.e., at the same time as)
- (103) *k^w-ed-iki-hĩ*
 2SG-see-NEG-Q1
 ‘don’t you see?’
- (104) *ãhãk^w-õ-Ø-hĩ*
 listen-CL:MASC-3.COP-Q1
 ‘does he understand?’
- (105) *otiw-a-hĩ at^he- a-t^h-eb-ak^wa-in-obe-t^hi*
 be_good-TAME-Q1 [false start] ask-3PL-?-RECIP-PST-TAME-EMPH
 ‘they are asking each other “how are you?”’ (lit. are you well?)’
- (106) *mama ik^{wi}di du-d-aw-in-a-hĩ mōd̥ʒu-nĩ-ma*
 mum_Sp. 1PL.PRO paint-1PL-MID-PST-TAME-Q1 onoto-NON.SUBJ-TOP?
 ‘mum, did we paint ourselves with onoto?’¹⁸⁵
- (107) *k^{wi}-waits-i-hĩ*
 2SG-know-TAME-Q1
 ‘do you know?’
- (108) *k^w-ã[?]dō-ma h-ẽwãh-ĩ*
 2SG-grandmother-TOP? 3SG.FEM-leave-TAME + Q1
 ‘did your grandmother leave?’

In addition to occurring attached to verbs, the interrogative suffix *-hĩ* can also occur on a noun. In (109), speaker A is proposing a description for a video clip where a woman is sitting next to a man and she says that the woman is sitting with her husband. Speaker B asks whether the man *is* in fact the woman’s husband. In (110), the speaker is unsure

¹⁸⁵ *Bixa orellana*

if one of two people on the video clip is a woman or a man and she asks the other speakers in the room whether that person is a woman.

- (109) A: *h-ilek^w-e-k^wi* *hĩ-b-ĩn-obe* *hĩ-t-an-a*
 3SG.FEM-spouse-MASC-SOC 3SG.FEM-sit-PST-TAME say-1SG-DUR-TAME
 ‘I say she is sitting with her husband’

B: *h-ilek^w-e-hĩ*
3SG.FEM-spouse-MASC-Q1
'is it her husband?'

A: *hau*
yes
'yes'

- (110) *b-ai-k^{wi}-tʃe* *b-uhu* *its-uhu-hĩ*
PROX-ADV3-VEN-SIDE sit-CL:FEM DUMMY_ROOT-CL:FEM-Q1
‘is the one sitting on this side a woman?’

Although most yes/no questions are formed with the aid of the suffix *-hĩ*, its presence is not obligatory (111). In these cases, it is a rising intonation contour that signals to the hearer that this is a question and not an assertion (see Figure 51 below for the pitch contour of example (111)). Rising intonation is also present in the polar interrogatives marked with *-hĩ* (see Figure 52 for the pitch contour of the example in (105)).

- (111) *mama* / *ik^widi* *wāĩme-ma* *dũ-hũn-an-obe*
 mum_Sp. 1PL.PRO *warime*-TOP? 1PL-have-DUR-TAME
 ‘mum, do we have *warimes*?’,¹⁸⁶

¹⁸⁶ *warime* is a traditional Piaroa celebration. See Mansutti Rodríguez (2006).

FIGURE 51 Rising intonation in an interrogative without *-hĩ*

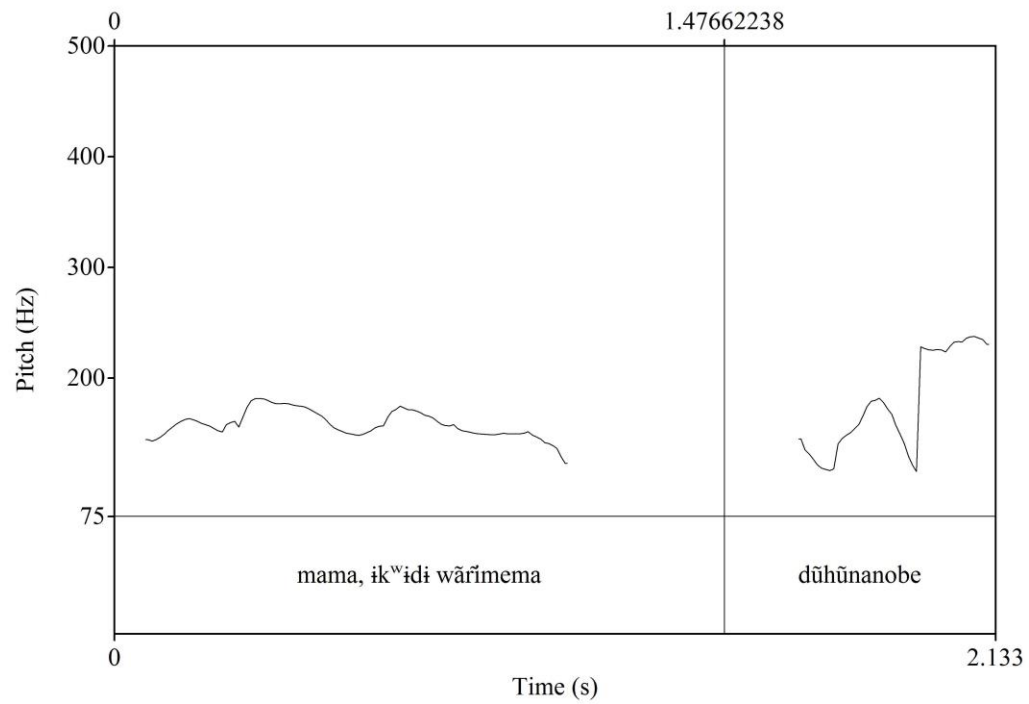
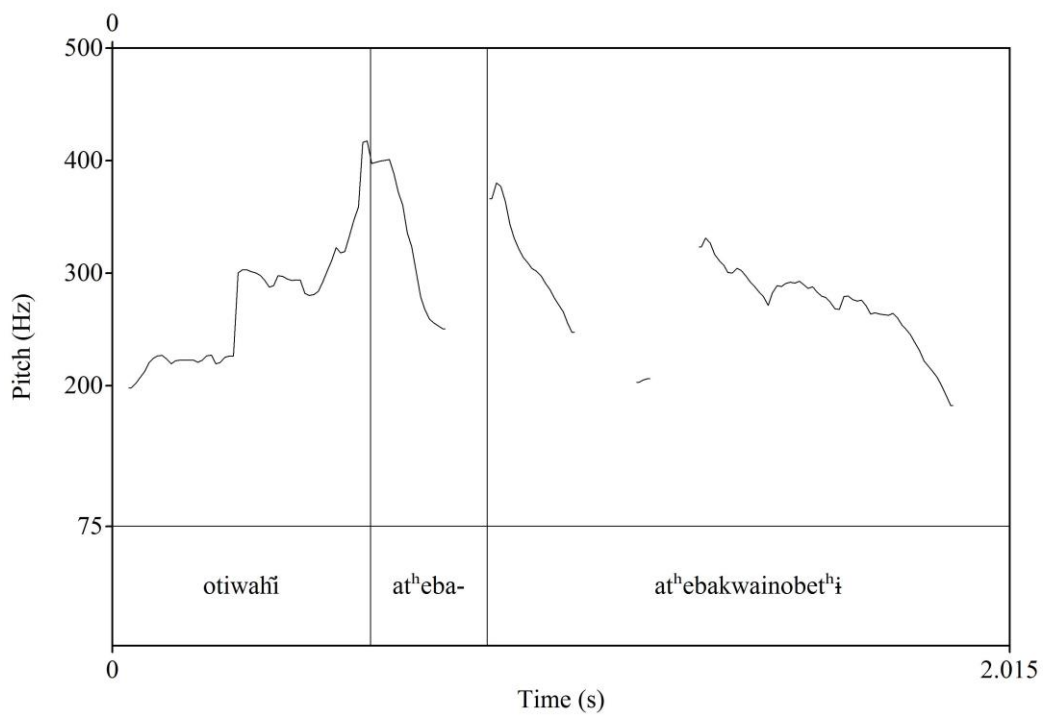


FIGURE 52 Rising intonation in an interrogative with *-hĩ*



8.2.2.1.2 Corroboration Marker: $-ka$

The marker *-ka* also serves to mark an interrogative. Like *-hĩ*, it can attach to both a verb (112) and a noun (113), although it most commonly appears with nouns (see (114) through (116)). The fact that it most commonly appears attached to a noun could be explained by its pragmatic function: *-ka* is used when a speaker needs clarification or confirmation about something that has been said in the preceding discourse but that she did not understand correctly. In such cases, speakers are most likely to just repeat the constituent that is being interrogated. Examples (112) through (114) and example (117) below all constitute repetitions of something mentioned in the immediately preceding discourse.

- (112) *lu[?]du-pa* *buk^w-aw-a-ka*
sieve-CL weave-MID-TAME-Q2
'(when) one weaves a *manare*?'
- (113) *ah in-ap^ho-ka*
ah *catumare*-CL:ROPE-LIKE-Q2
'ah, the *catumare*?',¹⁸⁷
- (114) *its-õ-da-ka* / *ta*
DUMMY_ROOT-CL:MASC-CONTR?-Q2 TAG?
'a boy? right?'

In a few instances, however, the *-ka* marked interrogative is not a repetition of something previously said. Both (115) and (116) show examples where one speaker asks what they used to call something and speaker A answers, uncertain,

¹⁸⁷ woven basket that is used for carrying things on one's back (like a backpack) or with a strap across one's forehead

“shamans?”/“the head of the turtle?”. Both these cases could also be interpreted as a request for clarification if we consider that speaker A was unsure about what exactly her interlocutor was referring to.

(115) A: *lele* *Ø-u-ka*
 turtle 3SG.MASC-head-Q2
 ‘the head of the turtle?’

B: *hao*
 yes
 ‘yes’

(116) A: *mea* *luw-õ-ka*
 prayer owner-CL:MASC-Q2
 ‘the shamans?’ (lit. the owner of the prayers)

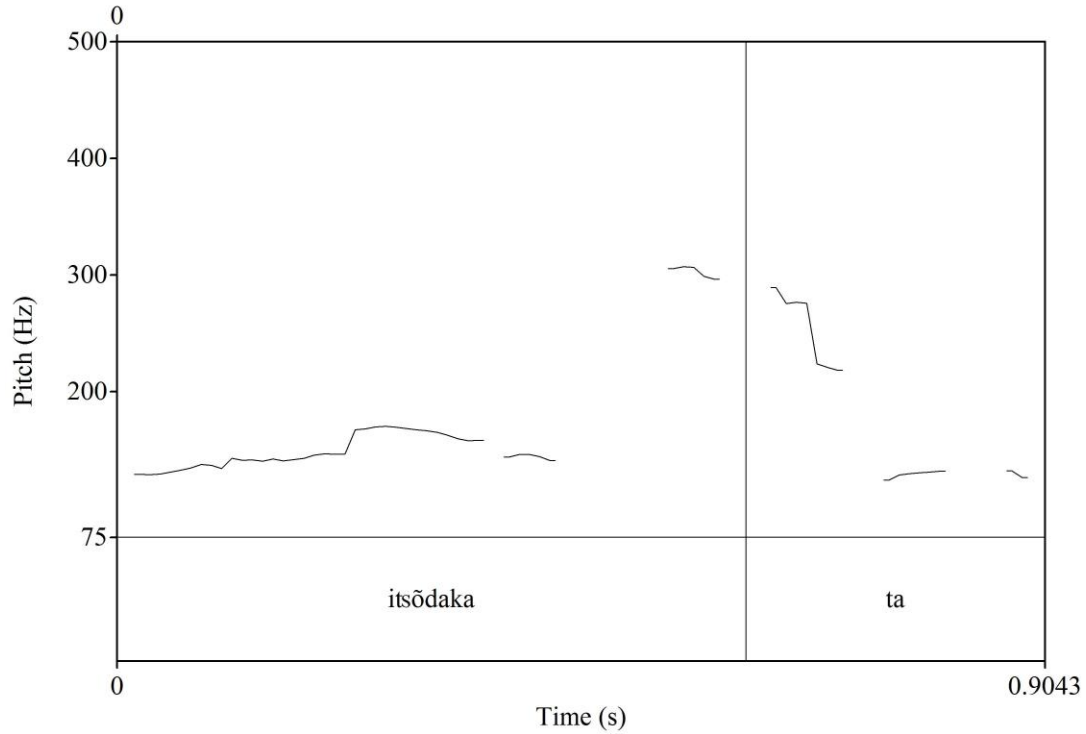
B: *hao*
 ‘yes’

-ka marked interrogatives are usually followed with an affirmative answer—in (115) and (116) above with a ‘yes’, in (117) below with an affirmative vocalization—and accompanied by rising intonation (see the pitch contour of example (114) in Figure 53 below).

(117) A: *wẽçũd-ak^w-it̃i-ni-ka*
 write-?-CL-NON.SUBJ-Q2
 ‘on the desk?’

B: *mmm*
 [agrees]

FIGURE 53 Rising intonation in an interrogative with *-ka*



8.2.2.1.3 Interrogative-topic Marker: *-ha*

The interrogative marker *-ha* most commonly introduces a new topic into the discourse. In its function, *-ha* is reminiscent of the English construction “what about/how about” and of the Nepali “nuance particle *ni*” (Acharya, 1991).¹⁸⁸ In the examples in (118) through (121), the speakers’ intention was to call the attention of their hearer(s) towards

¹⁸⁸ Nepali example showing the use of *ni* from (Acharya, 1991:145):

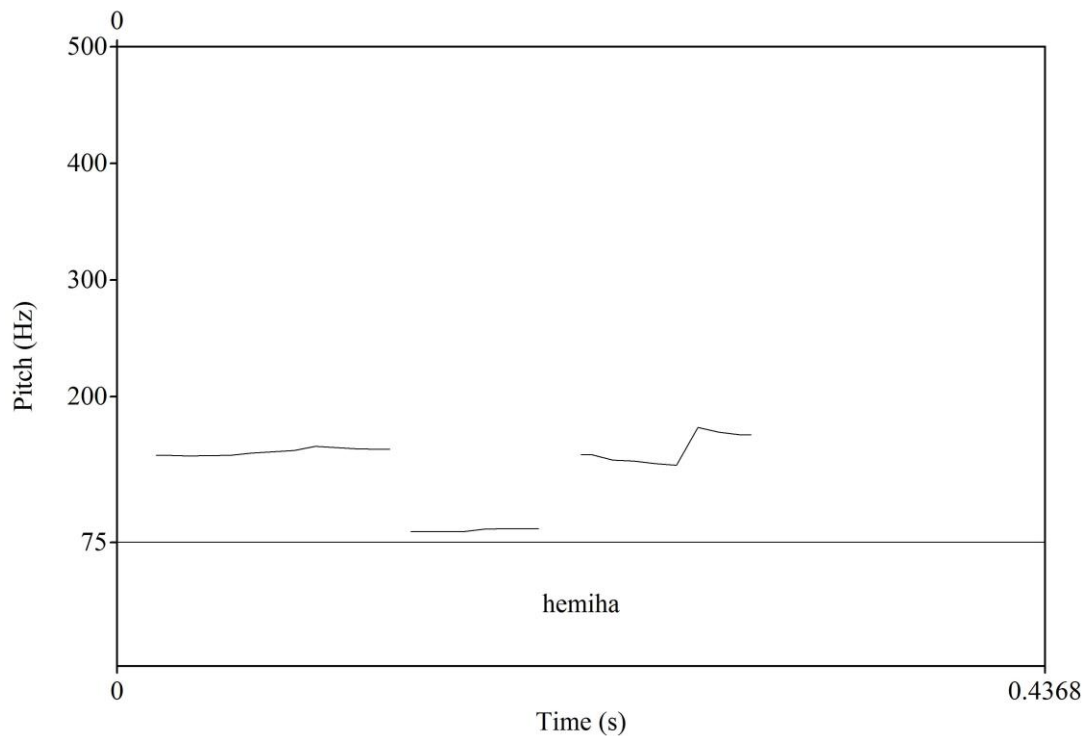
- (i) $\pm s\bar{a}no\ b\bar{a}bu + kasto + cha \pm ni$
 $\pm S: CNP-nm + SC:adj (interrog) + Pev1-3sgpres \pm NU: nu$
 $\pm small\ boy + how + is + ni (and\ what\ about?)$
 ‘And how about the little boy?’

a new topic: a person in (118) and (119), a new stimulus video clip in (120) and (121).

As can be seen in Figure 54, *-ha* interrogatives are marked with rising intonation.

- (118) *hōba-ha* *fʼatʼi-ha*
 that_one + CL:MASC-Q3 PN-Q3
 ‘what about that one? what about Chachi?’
- (119) *ite-da-ha* *ipo-da*
 DIST1 + CL:MASC-CONTR?-Q3 DIST1 + CL:ROUND-CONTR?
 ‘what about him? The round one’
- (120) *b-emi-ha*
 PROX-ADV2-Q3
 ‘and here?’
- (121) *h-emi-ha*
 DIST2-ADV2-Q3
 ‘and there?’

FIGURE 54 Rising intonation in an interrogative with *-ha*



8.2.2.1.4 Confirmation Tag: *ta*

Unlike the other markers used in polar interrogatives in Mako, *ta* is not a suffix that attaches to another word but rather a word that occurs by itself, usually preceded by a pause (see Figure 53 above and Figure 55 below). It usually follows a proposition that the speaker believes to be true or correct as in (122), (123), and (124). In all these examples, the speaker is asking for confirmation from her interlocutor that her proposition is the best way to describe a stimulus picture. Other uses of *ta* conform to this pattern such as the one (125) where the speaker is trying to confirm if she had understood a question I had asked in Spanish. However, more research is needed to understand its pragmatics and how it is different from the corroboration marker *-ka*, which it can follow (114).

- (122) *t^h-ilaki-ǵu nin-ak^wa-ĩpĩ*
 3PL-ear-CL wear-RECIP-CL

i-nin-aw-in-obe Ø-ilaki-ǵu / ta
 3SG.MASC-wear-MID-PST-TAME 3SG.MASC-ear-CL TAG
 ‘he was wearing an earring on his ear, right?’

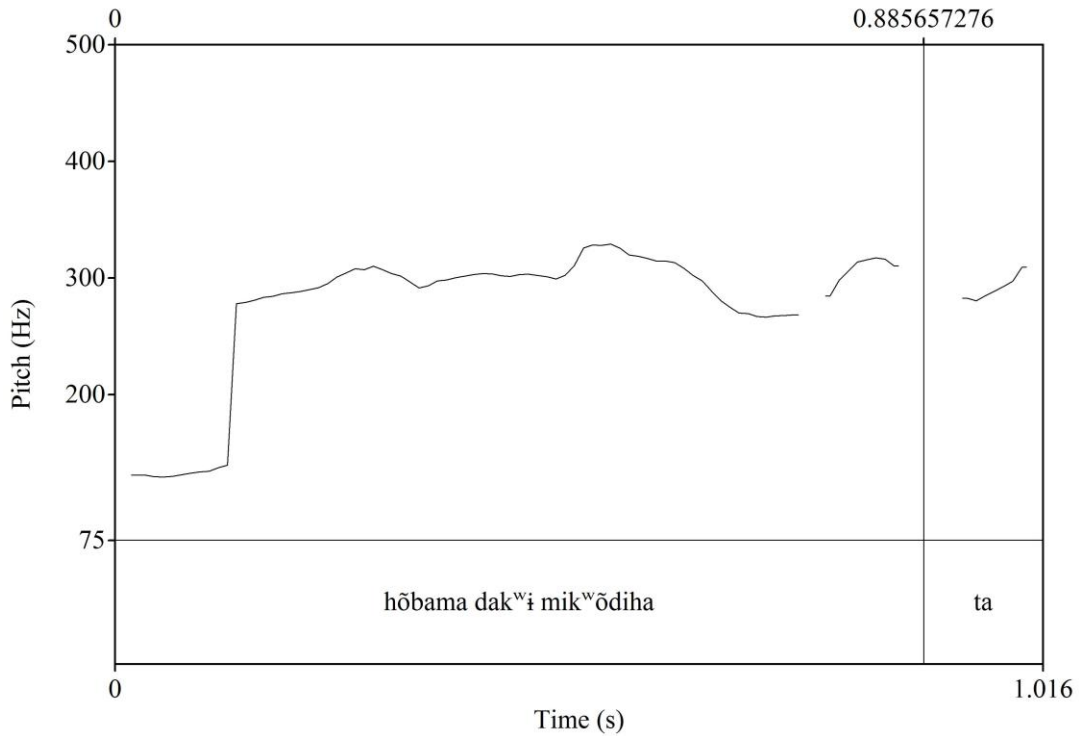
- (123) *maleta-[?]bi-ma saku-ǵu ok^wa an-aw-obe / ta*
 suitcase_Sp.-CL-TOP? sack_Sp.-CL inside put-MID-TAME TAG
 ‘the suitcase is inside the sack, right?’

- (124) *hau de-h-aw-in-obe / ta*
 YES greet-3SG.FEM-MID-PST-TAME TAG
 ‘yes, she was greeting, right?’

- (125) *hōba-ma dak^wi mik^w-ō-Ø-diha / ta*
 that_one + CL:MASC-TOP? HOW2 be_called-CL:MASC-3.COP-? TAG
 ‘what was his name? right?’

The pitch contour of *ta* usually shows a drop as in Figure 53 above but this need not always be the case as the pitch contour of the example in (125) in Figure 55 below shows.

FIGURE 55 Rising intonation in an interrogative with *ta*



8.2.2.1.5 Answers to Polar Interrogatives

Affirmative answers to polar interrogatives can consist of *hau* ‘yes’ (109), *hao* ‘yes’ (107) and vocalizations of agreement (117). Negative answers to polar interrogatives can be of two types: 1) when an entire proposition is questioned as in (126), speakers can reply with a negative declarative, which may or may not include the word *ina* ‘yet’; and 2) when only a noun is being questioned as in (109), speakers can negate the noun

with the negative copula *iki*. This is shown in example (127) where I asked one of my consultants to provide a negative answer to the question in (109).

(126) A: *k^w-ã[?]dõ-ma* *h-ẽwãh-ĩ*
 2SG-grandmother-TOP? 3SG.FEM-leave-TAME + Q1
 ‘did you grandmother leave?’

B: *ina* *h-ẽwãh-ok-obe*
 yet 3SG.FEM-leave-NEG-TAME
 ‘she hasn’t left yet’

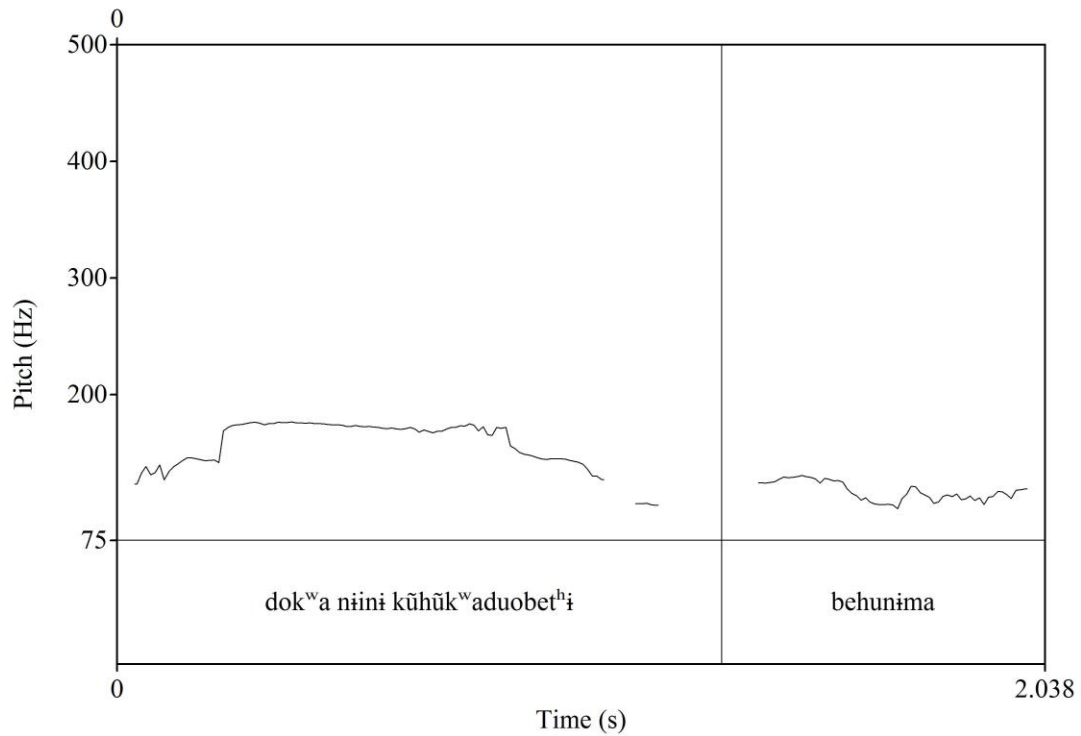
(127) A: *h-ilek^w-e-hĩ*
 3SG.FEM-spouse-MASC-Q1
 ‘is it her husband?’

B: *h-ilek^w-e-ma* *iki*
 3SG.FEM-spouse-TOP? COP.NEG
 ‘it’s not her husband’

8.2.2.2 Content Interrogatives

Content interrogatives are formed with the help of an interrogative word (e.g., who, what, etc.) and unlike polar interrogatives, they are not marked by rising intonation as the pitch contour of example (147) below shows in Figure 56. Each interrogative word is treated separately below, notice however that there are certain characteristics of content interrogatives that are shared by more than content interrogative word. These are: 1) possible reduplication of the initial syllable of *tahi* ‘what’, *ti* ‘who’, and *tah^widi* ‘why’; 2) the use of *dok^wa* ‘how’ in both manner content interrogatives and in quantity content interrogatives; and 3) the use of an interrogative root *d-* in both questions words for ‘where’ and ‘which’.

FIGURE 56 Falling intonation in a content interrogative



8.2.2.2.1 *tahi* ‘What?’

tahi is used for inanimate nouns and it most commonly serves to question the object of a verb¹⁸⁹ (128) (129).

- (128) *tahi* *ɕʒi-t-aw-obe*
 WHAT talk_about-1SG-MID-TAME
 ‘what am I going to talk about?’

- (129) *tahi* *Ø-iɕʒ-in-obe-da*
 WHAT 3SG.MASC-give-PST-TAME-CONTR?
 ‘what was he giving?’

¹⁸⁹ It remains to be tested whether *tahi* can serve to interrogate the inanimate subject of a verb in sentences such as “what is red?” or “what hit me?”.

tahi can appear by itself or it may take the non-subject marker *-nɪ* as in (130) or the sociative marker as in the elicited example in (131).

(130) *tahi-nɪ-da*

WHAT-NON.SUBJ-CONTR?

‘with what?’

(131) A: *tahi-kʷɪ* *to-h-obe-da* *maria-ma*

WHAT-SOC cook-3SG.FEM-TAME-CONTR? PN-TOP?

‘with what does Maria cook?’

B: *laʔdi-kʷɪ*

hot_pepper-SOC

‘with hot peppers’

Sometimes, the first syllable of *tahi* is reduplicated. This seems to be a stylistic resource that is exploited by speakers with the words for ‘what’, ‘who’ and ‘why’.

(132) *ta-tahi* *ɕɪ-t-aw-ob-i*

RED-WHAT talk_about-1SG-MID-PURP-NON.FIN

‘for me to talk about what?’

8.2.2.2.2 *ti* ‘Who?’

The interrogative word *ti* serves to question an animate argument of a verb: this can be the subject (133), an object (134), or an oblique (135). Although *ti* occurs by itself (133) when it is the subject of the verb in the interrogative clause, it can take the object marker *-nɪ* when in the place of an object (134) or be marked with *-kʷɪ* when in the place of a sociative oblique (135).

(133) *tsaʔbalari* *tʰ-ɪwēne-ma* *ti* *ɕɪ-b-an-ō-ma*

criollos 3PL-language-TOP? WHO speak-B-DUR-CL:MASC-TOP?

‘Spanish, who speaks it here?’

- (134) *ti-ni* *h^{wi}-kib-a*
 WHO-NON.SUBJ call-2SG-TAME
 ‘who are you calling?’

- (135) *ti-k^{wi}* *k^{wi}-hãhĩç-adu-a*
 WHO-SOC 2PL-live-2PL-TAME
 ‘who have you lived with?’

Like with *tahi*, the first syllable—and in this case the only one—of *ti* can be reduplicated:

- (136) *ti-ti-da* *hĩ-t-an-a*
 RED-WHO-CONTR? say-1SG-DUR-TAME
 “‘who is it?’, I say’

8.2.2.2.3 *tah^{widi}* ‘Why?’

The interrogative word for ‘why’ is *tah^{widi}*. Like other question words, it occurs sentence initially as the examples below show. There is some dialectal variation in how the word is pronounced: all instances in my corpus show either *tah^{widi}* or *tahidĩ*, example (138) was elicited with a speaker from Marueta and notice that his pronunciation is /tahawidĩ/. The example in (139) shows that, like ‘what’ and ‘who’ above, the first syllable of the word for ‘why’ can also be reduplicated.

- (137) *tah^{widi}* *hu-budek^w-a-bi*
 WHY 3SG.FEM-cry-TAME-ADD
 ‘why is she crying too?’

- (138) *tahawidĩ* *to-Ø-obe-da* *o?ori-nĩ-ma*
 WHY cook-3SG.MASC-TAME-CONTR? agouti-NON.SUBJ-TOP?
 ‘why is he cooking the agouti?’

- (139) *ta-tah^{widi}* *hẽt^{hi}* *hã-kib-a*
 RED-WHY like_that do-2SG-TAME
 ‘why are you doing like that?’

8.2.2.2.4 *diani* ‘When?’

The interrogative word for ‘when’ is largely absent from my corpus except for occurrences of it by itself so the two examples below come from elicitation. Like other interrogative words, *diani* occurs at the beginning of content interrogative sentence (140) (141). Unlike the *-ni* that appears sometimes on the words for ‘what’ and ‘who’ and that is optional, *diani* cannot be broken down into *dia* + *-ni*. This results in ungrammaticality (142).

- (140) *diani* *k^w-itf-in-a-da* *ajakutfo-be-ma*
 WHEN 2SG-come-PST-TAME-CONTR? Ayacucho-ALL-TOP?

ahadgi-ni-ma
 first-NON.SUBJ-TOP?
 ‘when did you come to Ayacucho for the first time?’

- (141) *diani* *k^wa-t^h-in-a-da* *ime-ni-ma*
 WHEN 2SG-come-PST-TAME-CONTR? peccary-NON.SUBJ-TOP?
 ‘when did they kill the peccary?’

- (142) **dia* *k^wa-t^h-in-a-da* *ime-ni-ma*
 WHEN 2SG-come-PST-TAME-CONTR? peccary-NON.SUBJ-TOP?
 (when did they kill the peccary?) [intended]

8.2.2.2.5 *dok^{wa}* and *daik^{wi}* ‘How?’

There are two interrogative words that serve to question manner: *dok^{wa}* (143) and *daik^{wi}* (144) (145). What conditions the choice of one versus the other is not fully understood at the present time but their distribution in the corpus is suggestive of a split between *dok^{wa}* being used to question the manner of a “state” (i.e., the way things were/are/will be) as in (143) and *daik^{wi}* being used to question manner of an event (i.e., the way something was/is/will be done) as in (144) and (145).

- (143) *dok^{wa}* *iha* *atabapo-be* *ahaɕi-ni*
 HOW1 COP.PST Atabapo-ALL first-NON.SUBJ

k^{wi}-ɕĩn-ena-ma

2SG-go-PST-ADV1-TOP?

‘how was it when you went to Atabapo for the first time?’

- (144) *daik^{wi}* *k^w-ed-adu-a* *h-emi-ma*
 HOW2 2PL-see-2PL-TAME DIST2-ADV2-TOP?

‘how/what did you see there?’

- (145) *daik^{wi}* *k^{wi}-waits-atf-ih-a* *tša^ʔbalari* *t^h-ĩwẽne-ma*
 HOW2 2PL-know-?-PST-TAME criollos 3PL-language-TOP?

‘how did you learn Spanish?’

The word *dok^{wa}* is also used as a greeting among Mako speakers. This is what you say when you arrive somewhere and it is most commonly answered with an *otiwa* ‘well’.

Example (146) is a reported use of *dok^{wa}* in this context.

- (146) *dok^{wa}* *a-t^heb-akwa-in-obe-t^hi* / *ta*
 HOW1 ask-3PL-?-RECIP-PST-TAME-EMPH? TAG

‘they are asking each other “how are you?”, right?’ (lit. how?)

8.2.2.2.6 *dok^{wa} niini* ‘How Many/Much?’

The combination of *dok^{wa}* and the quantifier *niini* is used to form questions about quantities. It can refer to both animate and inanimate entities (cf. (147) with (148) and (149)) and both countable and non-countable entities (cf. (147) in which the interrogative refers to ‘people’ with the elicited example in (148) in which it refers to ‘water’). The syntactic function of the interrogated constituent can be either the subject of the verb as in (147) or the object as in (148) and (149).

- (147) *dok^wa niini kũ-hũk^w-adu-obe-t^{hi} b-chu-ni-ma*
 HOW1 many 2PL-live-2PL-TAME-EMPH? PROX-CL:HOUSE-NON.SUBJ-TOP?
 ‘how many of you live in this house?’
- (148) *dok^wa niini k^w-itf-eh-eb-a-da oh^wi-ɕo-ma*
 HOW1 many 2SG-come-?-?-TAME-CONTR? water-CL-TOP?
 ‘how much water did you bring?’
- (149) *karlo-ma dok^wa niini kũ-hũn-an-obe-da*
 PN-TOP? HOW1 many 2SG-put-DUR-TAME-CONTR?
 ‘how many (years) do you have, Carlos?’

8.2.2.2.7 *dok^wa lek^we* ‘How Long?’

The expression used to question the duration of an event is *dok^wa lek^we*. This is formed with the question word for ‘how’ *dok^wa* and the word for ‘time’ *lek^we*. The example below comes from a discussion about what foods women could not eat after menstruating for the first time. The interviewer asks the interviewee ‘how long’ the restriction lasted and she answers with ‘long’.

- (150) A: *dok^wa lek^we*
 HOW1 time
 ‘for how long?’
- B: *lek^we*
 time
 ‘long’ (lit. time)

8.2.2.2.8 *d-ADV* ‘Where?’

There are four words for ‘where’ in Mako: *demi*, *dai*, *dena*, and *dɪt^{hi}*. As can be seen in the examples below, they all can be analyzed as being composed of a root *d-* and another morpheme. In the case of the first three, i.e., *demi* (151), *dai* (152) and *dena* (153), the second morpheme is one of the adverbializers used in temporal-locative

clauses discussed in Section 8.3.3.2. These three morphemes as well as the fourth morpheme, i.e., the one in *dɪtʰi* (154), are all used in locative adverbs with the demonstrative roots *b-*, *h-*, and *ɕ-* as shown in Chapter 5, Section 5.2.7.4, which allows for a grouping of *d-* with the demonstrative roots (see also the next section).

(151) A: *d-emi*

INT-ADV2

‘where?’

B: *ikʷidi di-wawatf-in-emi*

1PL.PRO 1PL-be_born-PST-ADV2

‘where we were born’

(152) A: *hōba-ma d-ai ð-ʔɕ-āh-a-da*

that_one + CL:MASC-TOP? INT-ADV3 3SG.MASC-go-MOT-TAME-CONTR?

‘that one, where did he go?’

B: *ohʷe-kʷi*

river-VEN

‘toward the river’

A: *d-ai*

INT-ADV3

‘where?’

B: *∅-ōhōʔbĩ-kʷi ð-ʔɕ-āh-abe*

3SG.MASC-mother-SOC 3SG.MASC-go-MOT-TAME-?

‘he left with this mother’

(153) *d-ena h-otid-obe-da maria-ma*

INT-ADV1 3SG.FEM-work-TAME-CONTR? PN-TOP?

‘where does Maria work?’

(154) *d-itʰi d-itf-ih-a ikʷidi-ma*

where_from 1PL-come-PST-TAME 1PL.PRO-TOP?

‘where do we come from?’

8.2.2.2.9 *d-(i)CL* ‘Which?’

The use of the root *d-* with classifiers to form question words for ‘which’ adds support to the analysis of it as a demonstrative root. In (155), the root *d-* takes the feminine classifier and in (156), the masculine classifier. In both cases, the classifiers are in the form they have with the proximate and the first distal demonstratives; i.e., their syllable structure is now VCV and their first vowel is /i/ (see Chapter 6, §6.2.1.3 for other examples). In (8), a VCV classifier (for ‘river’) is attached to the root *d-* and the root behaves in the same way as other demonstrative roots, i.e., it maintains its VCV form.

(155) A: *d-itsu*

INT-CL:FEM

‘which one (female)?’

B: *Naunau-k^{wi}*

PN-SOC

‘with Naunau’

(156) A: *its-õ-da-ka*

ta

DUMMY_ROOT-CL:MASC-CONTR?-Q3 TAG

‘a boy? right?’

B: *d-ite*

// *hau its-õ*

INT-CL:MASC

yes

DUMMY_ROOT-CL:MASC

‘which one (male)?’ yes, a boy’

(157) A: *daik^{wi} mik^w-obe-da*

HOW2

be_called-TAME-CONTR?

hobe-ma its-idi-ma

there-TOP DUMMY_ROOT- CL:RIVER-TOP?

‘what is it called over there, that river?’

B: *d-idi*

INT-CL:RIVER

‘which one (river)?’

8.2.3 Imperative Sentences

The third type of speech act presented here is commands. Although the morphology of imperative verb forms has been dealt with elsewhere in this dissertation (see Chapter 7, §7.2.1.2.1.2 for the imperative and Chapter 7, §7.2.1.2.1.3 for the prohibitive, a quick exposition of the facts is provided in each of the sections below: Section 8.2.3.1 discusses (positive) imperatives and Section 8.2.3.2, prohibitives.

8.2.3.1 Imperatives

Positive imperatives are formed by attaching the *-i* suffix to a verbal root. Class I verbs (i.e., those verbs that take subject prefixes) take no additional morphology (158) (159) (160); however, because there is no person marking in the positive imperative, Class II verbs (i.e., those verbs that take subject suffixes) have a *b-* suffix in the slot where the subject marking would go (161) (162). Imperatives with a second plural subject additionally take a plural marker (158).

(158) *āhāk^w-adu-i*

listen-2PL-IMP

‘listen (you all)’

(159) *itf-i* *b-ai-k^wi*

come-IMP

PROX-ADV3-VEN

‘come here’

(160) *ōpetu-be-t^hi* *alew-ah-i*

outside-ALL-EMPH?

play-MOT-IMP

‘go play outside’

(161) *kã'dēpo-ma te-b-af-i*
 PN-TOP? come_in-B-?-IMP
 'Kã'dēpo, come in'

(162) *mama ɔʒi-b-aw-i ikʷi-da*
 mum tell-B-MID-IMP 2SG.PRO-CONTR?
 'mum, you tell (it)'

The intonation of positive imperatives can be either falling or rising. This is shown by the pitch contours of the words *edadui* 'look!' and *tumati* 'close!' in Figure 57 and Figure 58 (respectively) show.

FIGURE 57 Falling intonation in a positive imperative

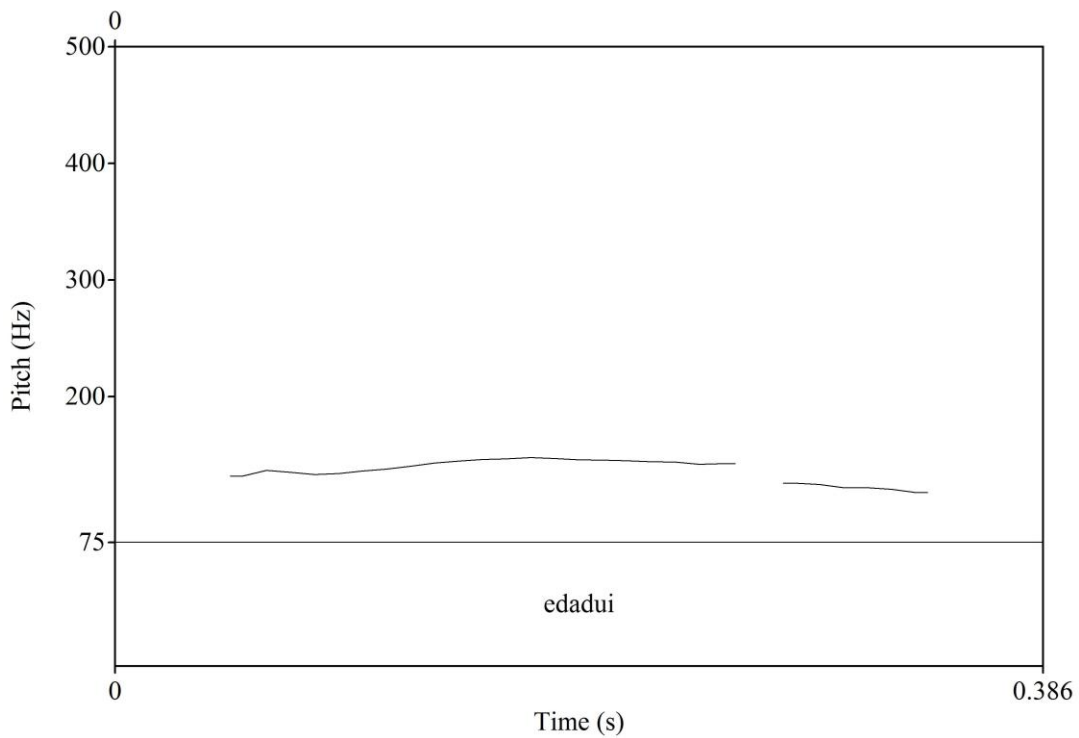
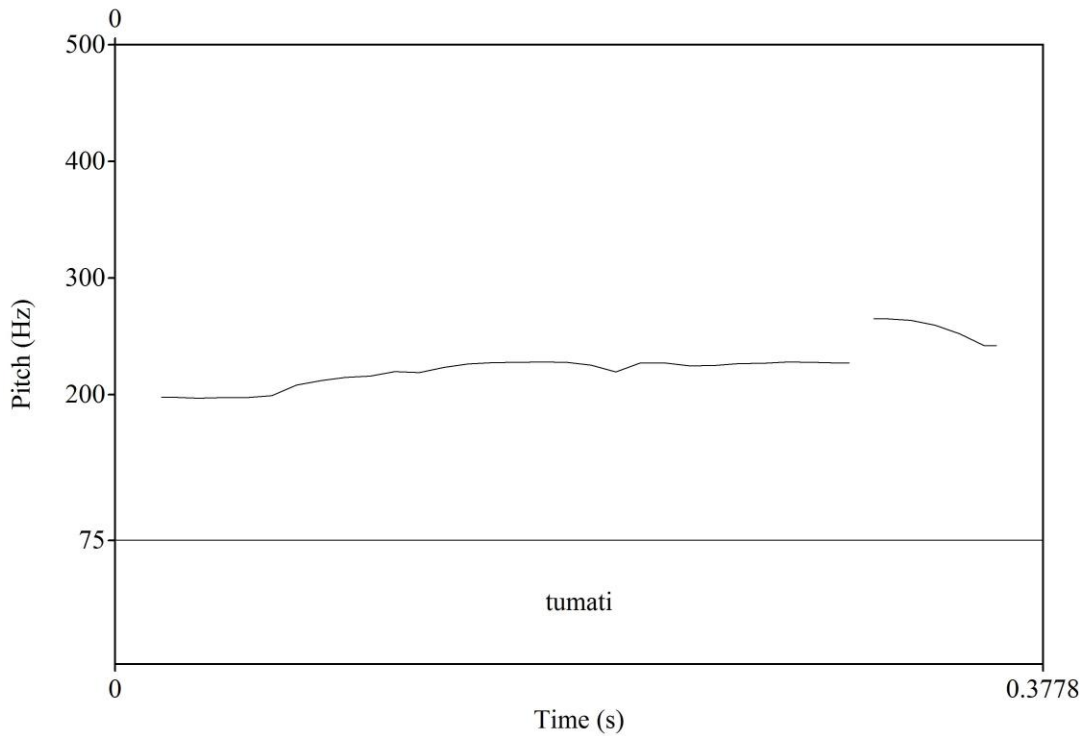


FIGURE 58 Rising intonation in a positive imperative



8.2.3.2 Prohibitives

Negative imperatives (or prohibitives) are formed by adding an *-a* suffix to the verbal root. Unlike their positive counterparts, negative imperatives do take person marking and hence, Class I verbs take a second person subject prefix as in examples (163) through (166) and the first verb in (167) and Class II verbs take a second person subject suffix as in the second verb in (167).

- (163) *k^w-alew-a* *k^wene* *ɕ-ai-k^wi*
 2SG-play-PROH PN DIST1-ADV3-VEN
 ‘don’t play, Kwene. (move) over there’

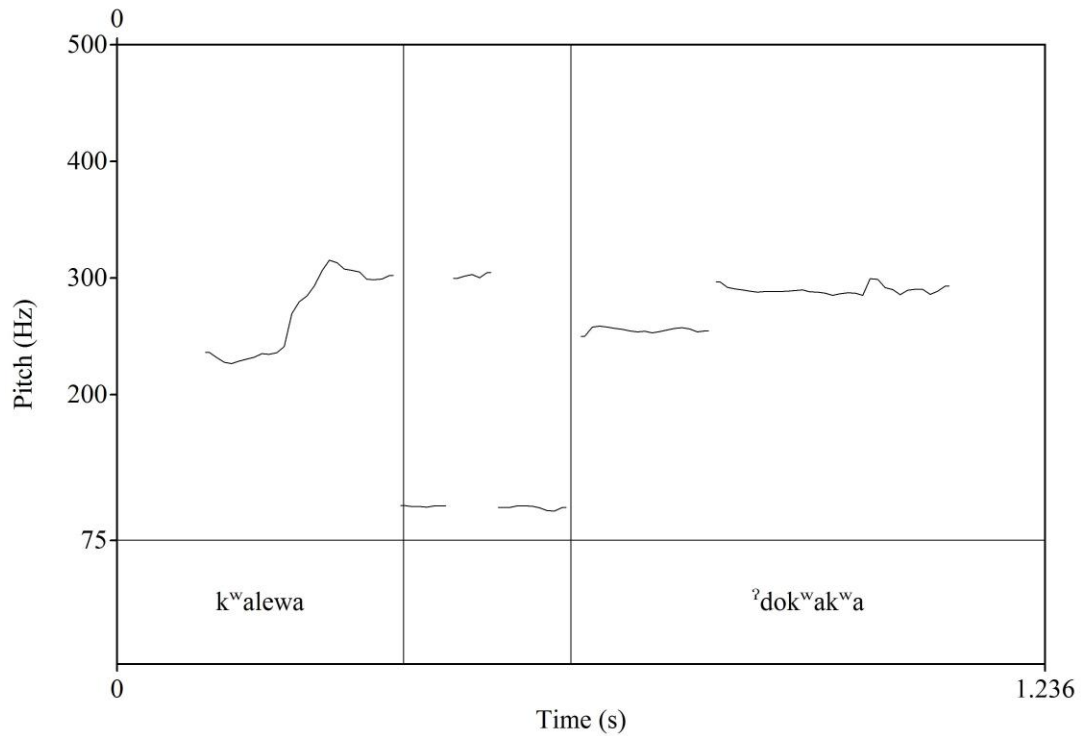
- (164) *k^w-alew-adu-a*
 2SG-play-2PL-PROH
 ‘don’t play (you all)’

- (165) *b-ena-ma* *k^w-iff-a*
 PROX-ADV1-TOP? 2SG-come-PROH
 ‘don’t come here’
- (166) *ɕʝ-ai-k^wi* *ɕʝ-ai-k^wi* *ɕʝ-ai-k^wi* *ku-tumat-a*
 DIST1-ADV3-VEN DIST1-ADV3-VEN DIST1-ADV3-VEN 2SG-close-PROH
 ‘(move) over there, (move) over there, (move) over there. don’t close’
- (167) *k^w-alew-a* *ʔdo-k^w-a-k^wa*
 2SG-play-PROH hit-2SG-PROH-RED?
 ‘don’t play, don’t hit’

Another difference between positive and negative imperatives can be found in their intonation. While positive affirmatives can occur with either falling or rising intonation, negative imperatives occur with rising intonation.¹⁹⁰

¹⁹⁰ This is an empirical observation based on a large number of tokens but one that requires further study. If negative imperatives do occur with rising intonation 100% of the time, this could be the way the language has of differentiating a negative prohibitive from an affirmative declarative since both forms are morphologically identical. My main consultant in Arena Blanca affirms that there is a difference in “acento” (stress) between the two forms.

FIGURE 59 Rising intonation in a negative imperative



8.3 Complex Sentences

The following sections focus on clause combining strategies. Complex sentences are defined here as sentences with two or more verbs, where at least one is the main verb of an independent clause. I present three types of clause-combining strategies:

complementation (§8.3.1), relativization (§8.3.2) and adverbialization (§8.3.3). The sections on complementation and relativization provide only an overview of possible strategies; the section on adverbialization provides a more in-depth analysis. Table 60 offers a summary of the morphosyntactic properties of the different clause combining strategies.

TABLE 60 Summary of clause combining strategies

Functional Domain	Construction Type	Designated Morphology	Subject Marking	TAME Marking	Other Characteristics	
Complementation	Type A: Direct speech	none	same as independent clause	same as independent clause		
Noun modification (relatives)	Type A:	-i ‘NOM’	subject marking affixes	-ah PST -in PST -ak ^w FUT		
	Type A: S/A inside Rel	human classifiers	human classifiers		with third person	
	Type B: S/A inside Rel		human classifiers and subject marking affixes		with other persons	
	Type C: Human O or R inside Rel	-ok ^{wo} ‘FEM_OBJ’ -ek ^{we} ‘MASC_OBJ’	subject marking affixes			
	Type D: Non-human animate P or R inside Rel	-ik ^{wi} ‘NON_HUM_OBJ_SG’ -aw ⁱ ‘NON_HUM_OBJ_PL’	subject marking affixes			
	Type E: inanimate P or other complements (e.g., instrument)	classifiers	subject marking affixes			
Sentence Modification (temporal)	Type A: “after clauses” (1)	-ah + human classifiers	none (if impersonal)	none	The plural classifier takes the form -ad ⁱ	
	Type B: “after clauses” (2)	non-finite verb + ‘finish’	none	none	They are clause chains	
	Type C: “before clauses”	-ak ^w + human classifiers	3rd (if impersonal) subject marking affixes	none	The plural classifier takes the form -ed ⁱ	
	Type D: “temporal clause”	-ač ⁱ ‘TEMP’	subject marking affixes	already past?		
Sentence Modification (temporal-locative)	Type A: “-ena clause”	-ena ‘ADV1’	subject marking affixes	-in PST -ak ^w FUT	They all occur attached to demonstrative roots	independent word
	Type B: “-emi clause”	-emi ‘ADV2’				
	Type C: “-ai clause”	-ai ‘ADV3’				independent word
	Type D: “-eli clause”	-eli ‘ADV4’				
Sentence Modification (manner)	Type A: similitive clause	-i ‘NOM’ + -dā ⁿⁱ ‘SIM’	subject marking affixes	?	Also with nouns	
	Type B: accord clause	-ač ^e ‘ACCORD?’	subject marking affixes	?		
Sentence Modification (purpose)	Type A: “-ob clause”	-ob ‘PURP’ + i ‘NON.FIN’	none	none		
	Type B: “hī ^{bani} clause”	-o ‘FUT’ + hī ^{bani} ‘PURPOSE’	subject marking affixes	none		
Event cohesion	Type A : clause chains	-i ‘NON.FIN’ on medial verbs	none	none	Final verb is finite	

8.3.1 Complement Clauses

This section focuses on complement clauses with utterance verbs, an investigation of complementation strategies with other types of complement-taking verbs is ongoing.

The vast majority of complement clauses with an utterance verb occur with *hĩbani* ‘to say’ as the main verb (168) (169). As these examples show, there is no dedicated subordinator to mark the complement clause of an utterance verb. These complements are in fact best treated as direct speech since both complement clauses in (168) and (169) are fully finite independent clauses.

- (168) [*hawa-bi h^wi-d-obe* ... *hĩ-t-an-a* ... *ik^wi-di-ma*]
 thing_ADD lack-1PL-TAME say-1PSG-?-TAME 1PL.PRO-TOP?
 “‘we don’t have even that’, I say’ (lit. “that we lack”, I say, “us”)

- (169) *José Y.* [*ĩf-ĩf-otf-a*] *hĩ-Ø-an-in-a*
 PN 1SG-come-VOL-TAME say-3SG.MASC-DUR?-PST-TAME
 ‘José Y. said: “I will come”’

Examples (170) and (171) provide examples with another complement-taking utterance verb: *ĩbawĩ* ‘to tell’. In these examples, as in the examples above, the complement clauses are considered direct speech.

- (170) *t^hũ-lũw-õ-nĩ-ma* *ĩb-t^h-aw-a*
 1PL-own-CL.MASC-TOP? tell-3PL-?-TAME
 [*okoh^wiini* *uts-ib-i* *d-ẽwãh-a*]
 everything search-?-NON.FIN 1PL-return-TAME
 ‘they say to their boss “we search everything and return”’
- (171) *ĩb-b-aw-adĩ* [*ĩt^hi-k^wi* *luw-a-tiha*]
 tell-B-?-CL.PL 1SG.PRO-SOC rule-TAME-?
 ‘they always say: “you are with me”’

Direct speech as the complement of an utterance verb is common (Cristofaro, 2013).

What is not common is for direct speech to occur as the complement of knowledge and acquisition of knowledge predicates (see Noonan (2007)) such as ‘to dream’. However, this is the case in Mako (172). More research is needed to determine if direct speech is the only strategy for complementation in Mako.

- (172) [*k^w-if-ak^w-obe-ma*] *fĩ-[?]wĩdik^w-a-tə*
 2SG-come-FUT-TAME-TOP? 1SG-dream-TAME-PST
 ‘I dreamt you were coming’ (lit. I dreamt “you will come”)

Another avenue of research would be what are the constraints, if any, on the position of the complement with respect to the main clause verb. The examples above suggest that there is no specific constraint regarding the position of a complement clause with respect the main clause (Notice that in (168) the complement clause is interrupted by the main clause, in (169), the complement clause interrupts the main clause, in (170) and (171) the complement clause follows the main clause while in (172) it precedes it.); however, this requires further investigation.

8.3.2 Relative Clauses

Relative clauses serve to modify the head of a noun phrase. There are two ways of forming relative clauses, namely the *-i* nominalizer and classifiers. Each is discussed in turn below.

In Mako, relative clauses can be built using a nominalizer *-i* in (173) and (174), the noun modified by the relative is the S of the verb inside the relative; in (175) and (176), the O of a transitive verb. As can be seen in (173) through (176), the relative clause follows the NP.

(173) *iʔdʒe-bia* [*in-awa-ni* *h-i*]
 moss + CL-PL rock-CL-NON.SUBJ stand-NOM
 ‘the moss that is on the stones’

(174) *iʔdʒe-bia* [*in-awa-ni* *laib-i*]
 moss + CL-PL rock-CL-NON.SUBJ grow-NOM
 ‘the moss that grows on the stones’

(175) *mariu-ni-ma* [*itʰi* *to-t-i*]
 tapir-NON.SUBJ-TOP? 1SG.PRO cook-1SG-NOM
 ‘the tapir I am cooking’

(176) *iʔdʒe-bia* [*mariu u-ku-i*]
 moss + CL-PL tapir 3SG.MASC-eat-NOM
 ‘the moss that the tapir eats’

Relative clauses are also formed by suffixing a classifier to a verb. The discussion that follows focuses first on relative clauses modifying an animate noun and then moves on to considering those relative clauses that modify an inanimate noun. All the examples that follow in the remainder of this section come from elicitation.

An animate noun can have one of three functions inside the relative clause: subject (A and S), object of a transitive verb, and recipient of a ditransitive verb. Let us consider first relative clauses where the noun they modify is the subject of the relative. In (177) through (179), the grammatical role of the relativized noun inside the relative clause is S; in (180) and (181), it is A.

(177) *tʰẽmu* [*ohʷe iban-ah-õ*] *ʔdĩ-Ø-atf-obe*
 child river bathe-MOT?-CL:MASC be_sick-3SG.MASC-?-TAME
 ‘the child (male) who bathed in the river got sick’

(178) *tʰẽmu* [*ohʷe iban-ah-uhu*] *ʔdĩ-h-atf-obe*
 child river bathe-MOT?-CL:FEM be_sick-3SG.FEM-?-TAME
 ‘the child (female) who bathed in the river got sick’

(179) *t^hẽmu* [*oh^we iban-ah-adi*] *?dĩ-t^h-aff-obe*
 child river bathe-MOT?-CL:PL be_sick-3PL-?-TAME
 ‘the children who bathed in the river got sick’

(180) *ik^wĩ* [*its-uhu-nĩ* *k^w-ed-in-õ*]
 2SG.PRO DUMMY_ROOT-CL:FEM-NON.SUBJ 2SG-see-PST-CL:MASC
k^wĩ-waits-a
 2SG -know-TAME
 ‘you (male) that saw the woman know’

(181) *ik^wĩ* [*its-õ-nĩ* *k^w-ed-in-uhu*]
 2SG.PRO DUMMY_ROOT-CL:MASC-NON.SUBJ 2SG-see-PST-CL:FEM
k^wĩ-waits-a
 2SG -know-TAME
 ‘you (female) that saw the man know’

As can be seen from the examples above, the masculine, feminine and plural classifiers serve as subject relativizers. Notice that there is a difference in person coding between (177) (178) (179) on the one hand and (180) and (181) on the other. While in the former three examples, the only cross-referencing occurs with the classifiers; in the latter two examples, the cross-referencing is accomplished via the classifiers and a second person marker prefix *k^w-*. This difference is not due to a difference between S relativization and A relativization, as a comparison of the examples in (177) (178) (179) and (182) shows. I hypothesize that it could be due the person of the subject, namely third versus second (and possibly first), but further investigation is needed.

(182) *its-uhu* [*kamisi dif-an-uhu-ma oh^we-be-t^hĩ*]
 DUMMY_ROOT-CL:FEM clothes_Sp. wash-DUR-CL:FEM-TOP river-ALL-EMPH
 Maria *mik^w-uhu-Ø*
 PN be_called-CL:FEM-3.COP
 ‘the woman who is washing clothes in the river is called Maria’

When the relativized noun functions as an P or an R inside the relative clause, the relativizers are *-ek^we* for feminine referents and *-ok^wo* for masculine referents.

(183) *its-ō-ma*

DUMMY_ROOT-CL:MASC-TOP?

[*its-u^hu* *h-ed-in-ek^we*]
DUMMY_ROOT-CL:FEM 3SG.FEM-see-PST-MASC_OBJ

Ø-ĩ^hĩ-mũ-nĩ *dũhũtaha-nĩ*
3SG.MASC-child-PL-NON.SUBJ two.ANIM-NON.SUBJ

hun-an-ō-Ø
have-DUR-CL:MASC-3.COP

‘the man that the woman saw has two children’

(184) *its-u^hu*

DUMMY_ROOT-CL:FEM

[*its-ō* *Ø-ed-in-ok^wo*]
DUMMY_ROOT-CL:MASC 3SG.MASC-see-PST-FEM_OBJ

h-ĩ^hĩ-mũ-nĩ *dũhũtaha-nĩ*
3SG.FEM-child-PL-NON.SUBJ two.ANIM-NON.SUBJ

hun-an-u^hu-Ø
have-DUR-CL:FEM-3.COP

‘the woman that the man saw has two children’

(185) *its-ō-ma*

DUMMY_ROOT-CL:MASC-TOP?

[*its-u^hu* *k^wiɕʒalu-ʔɕe*]
DUMMY_ROOT-CL:FEM notebook-CL

h-iɕʒ-in-ek^we-ma]
3SG.FEM-give-PST-MASC_OBJ-TOP?

Ø-ĩ^hĩ-mũ-nĩ *dũhũtaha-nĩ*
3SG.MASC-child-PL-NON.SUBJ two.ANIM-NON.SUBJ

hun-an-ō-Ø

have-DUR-CL:MASC-3.COP

‘the man to whom the woman gave the book has two children’

(186) *its-u^hu-ma*

DUMMY_ROOT-CL:MASC-TOP?

[*its-ō* *k^{wi}ɪɕalu-ʔɕe*

DUMMY_ROOT-CL:MASC notebook-CL

Ø-iɕ-in-ok^wo]

3SG.MASC-give-PST-FEM_OBJ-TOP?

h-ĩt^hĩ-mũ-nĩ

dũhũtaha-nĩ

3SG.FEM-child-PL-NON.SUBJ two.ANIM-NON.SUBJ

hun-an-u^hu-Ø

have-DUR-CL:FEM-3.COP

‘the woman to whom the man gave the book has two children’

Although Mako generally groups human and non-human animates together (for example, in subject cross-referencing in the verb), it seems to make a distinction between these two types of referents with respect to the form of the object relativizer. The examples below show that the form of the object relativizer for non-human animates is *-ik^wĩ*.

(187) *to-t-otf-a* *mariu-nĩ* [*ʔbi-k^{wi}ib-in-ik^wĩ*]

cook-1SG-VOL-TAME tapir-NON.SUBJ kill-2SG-PST-NON_HUM_OBJ

‘I will cook the tapir you killed’

(188) *wawari* [*ʔfu-hun-an-ik^wĩ*] *duw-ō-Ø*

monkey 1SG-have-DUR-NON_HUM_OBJ be_red-CL:MASC-3.COP

‘the monkey I have is red’

It is, however, possible that these three forms are more closely related than their surface form reveals. Remember that the suffixes *-e* and *-o* mark masculine and feminine

respectively (see Chapter 6, §6.1.1.1.1). If we take into account the property of the negative suffix *ikʔ* to harmonize with the vowel in the suffix *-obe*, thereby appearing as *-ok*, maybe it is possible to say that the markers for masculine and feminine relativizers are formed by same object nominalizer that we have seen used for non-human animate referents *-ik^wi* and one of the masculine/feminine suffixes. More research, however, is needed to elucidate this question.

A plural non-human animate object is also marked differently. In this case, the marker is *-awʔ*.

- (189) *to-t-ak^w-obe* *mãrĩũ-dʔ-ni* [*ʔbi-kib-in-awʔ*]
 cook-1SG-FUT-TAME tapir-PL-NON.SUBJ kill-2SG-PST-NON_HUM_OBJ_PL
 ‘I will cook the tapirs you killed’

Inanimate nouns generally function inside the relative clause as either the P or the T. In both cases, the relativization is done via a classifier.

P

- (190) *its-owi-ma* [*ʔf-em-in-owi-ma*] *duw-owi*
 DUMMY_ROOT-CL-TOP 1SG-buy-PST-CL:TREE-TOP? be_red-CL
 ‘the canoe I bought is red’

T

- (191) *k^wiɕʔalu-ʔɕe* [*k^w-iɕʔ-in-aʔɕe-ma*] *otiw-aʔɕe*
 notebook-CL 2SG-give-PST-CL-TOP? be_good-CL
 ‘the notebook you gave (me) is good’

Interestingly, the function of the inanimate referent inside the relative clause can also be that of an instrument (192) or a goal (193) as the examples below show (see also examples and discussion in 8.1.2.5

- (192) *its-ãpĩ-ma* [Pedro *mariu-nĩ* *k^wa-Ø-in-ãpĩ*]
 DUMMY_ROOT-CL-TOP PN tapir-NON.SUBJ kill-3SG.MASC-PST-CL

mesa *ts-ite-ma* *nihak^wĩ* *b-ã*
 table_Sp. DUMMY_ROOT-CL-TOP under lie-TAME
 ‘the knife with which Pedro killed the tapir is under the table’

- (193) *ōdo* [*tĩ-[?]ç-ah-ehu*] *iglesia* *p^hea* *h-ẽhu*
 house 1SG-go-MOT?-CL church_Sp. near stand-CL
 ‘the house I went to is near the church’

Tense and negation can also be marked inside the relative clauses. The relative clause in (188) is in present tense; the rest of the preceding examples have a past reading and they are marked with either *-ah* as in (178) or with *-in* as in (181). As (194) shows, they can also be marked for future. All of the above examples as well as (194) below are affirmative relatives, a relative clause marked for negation is given in (195).

- (194) *its-ãpĩ-ma* [*tĩ-icç-ak^w-ãpĩ*] *otiw-ãpĩ*
 DUMMY_ROOT-CL-TOP? 1SG.MASC-give-FUT-CL be_good-CL
 ‘the knife that you will give me is good’

- (195) *its-uhu-ma*
 DUMMY_ROOT-CL:FEM-TOP?

[*its-õ* *k^wicçalu-[?]çe*]
 DUMMY_ROOT-CL:MASC notebook-CL

Ø-icç-in-ok-ok^wo-ma]
 3SG.MASC-give-NEG-FEM_OBJ-TOP?

Maria *mik^w-uhu-Ø*
 PN be_called-CL:FEM-3.COP

‘the woman to whom the man did not give the book is called Maria’

8.3.3 Adverbial Clauses

In this section, I discuss first time clauses (§8.3.3.1); then locative clauses (§8.3.3.2), which as will be shown can also serve to convey temporal notions; and finally manner clauses (§8.3.3.3).

8.3.3.1 Time Clauses

This section deals with temporal adverbial clauses, more specifically with after- and before-clauses in Sections 8.3.3.1.1 and 8.3.3.1.2 respectively. Section 8.3.3.1.3 deals with temporal adverbial clauses marked with *-aɕi*. Other temporal clauses are treated in the locative-temporal section because of the overlap in functions of the suffixes used in this latter type of temporal clause.

8.3.3.1.1 “After-clauses”: *-ah+CL* and [VERB_{NON.FIN} + *kabati*]

To indicate that an action/activity Y follows a preceding action activity X, Mako speakers employ the suffix *-ah*, which serves to mark motion (see Chapter 7, §7.2.2.2) and a human classifier. The example in (196) shows a sequence of actions employed in the description of how to make cassava. The speaker employs the classifier *-adi* which corresponds to a third person plural because there is no specification of who the agent is.

- (196) [*k^wa-b-ah-adi-ma*] / *ʔɕe-b-i* //
clean-B-MOT-CL:PL-TOP? pull_out-B-NON.FIN
- hemikena-da* [*ʔɕe-b-i* *ẽw-ãh-ãdi-ma*] /
afterwards-CONTR? pull_out-B-NON.FIN return-MOT-CL:PL-TOP?
- ʔdẽ-b-i* //
peel-B-NON.FIN

[*[?]dẽ-b-ah-adi*] / *ĩkena-ma* *hi-b-i* //

peel-B-MOT-CL:PL afterwards-TOP? grate-B-NON.FIN

ate [*murihi* *hũn-ah-adi-ma*]

IDEOPHONE ferment put-MOT-CL:PL-TOP?

‘after having cleaned (your parcel), you pull out (the manioc roots). Then
after you have come back from pulling out (the manioc roots), you peel.
After peeling, you grate. Darn! After leaving in ferment’

Although human classifiers serve to nominalize a verb, the verb forms in the “after-clauses” in (196) above cannot occur as a NP as the unacceptability of the examples in (197) with a finite verb and (198) with a nominalized verb show.

(197) *[*k^wa-b-ah-adi-ma*] / *wõ-t^h-obe*

clean-B-MOT-CL:PL-TOP? stink-3PL-TAME

(those who go and clean smell) [intended]

(198) *[*k^wa-b-ah-adi-ma*] / *wõ-b-adi-Ø*

clean-B-MOT-CL:PL-TOP? stink-B-CL:PL-3.COP

(those who go and clean smell) [intended]

Another way of expressing the idea of two events occurring one after the other is by using a construction with the verb ‘to finish’. In this construction, the verb *kabati* ‘to finish’, in its non-finite form, is placed after a non-finite verb; the adverbial phrase thus formed then modifies the main clause with a finite verb (199) (200). Notice that the word *hemikena* ‘after’,¹⁹¹ is not obligatory in this construction (201).

(199) *hemikena-ma* [*ak^w-i* *ka-b-at-i-ma*]

after-TOP? weave-NON.FIN finish-B-?-NON.FIN-TOP?

¹⁹¹ See Chapter 9, §9.2.2 for its function in the organization of discourse.

agent or not. This can be seen in the examples below¹⁹² where the verbs are marked for a third person plural agent.

- (203) *hemikena-ma* [*ʔdĩ-t^h-ak^w-edĩ*] *tsol-ĩ*
 afterwards-TOP? thatch-3PL-FUT-CL.PL slash-NON.FIN
 ‘after, before thatching, you have to slash’

- (204) [*wāme* *t^h-tsaḡud-ak^w-edĩ-ma*] *ahaḡi* *p^ho-b-ĩ*
 on_top_of 3PL-polish-FUT-NOM.PL-TOP? first dig-B-NON.FIN
 ‘before you polish on top, you have to dig’

The use of the future marker in the “before” clause makes sense if we think of the meaning of this suffix as one of temporal posteriority: future simple clauses express an action that will occur in a time posterior to the time of utterance; in the “before” clauses, the verb in the dependent clause expresses an action that will occur posterior to the event in the main clause.

To facilitate the comparison of the “before” and “after” clauses, compare (203) and (204) above with (205) and (206) below.

- (205) *tsol-ah-adĩ* *ʔdĩ-b-ĩ*
 slash-MOT-CL:PL thatch-B-NON.FIN
 ‘after slashing, you thatch’
- (206) *hemikena-ma* *ok^wa* *p^ho-b-ah-adĩ*
 afterwards-TOP? inside dig-B-MOT-CL:PL
- wāme* *tsaḡud-ĩ*
 on_top polish-NON.FIN
 ‘after you have dug inside, you polish on top’

¹⁹² In these examples the main verb is in its non-finite form but the sentence is well-formed. See §8.3.3.5.1 below.

The examples above are all from procedural texts with unidentified agents and hence the subject of the adverbial clause in the third person plural. The elicited examples below show that this needs not be the case. Additionally, (207) shows that the subject of both clauses can have different referents.

- (207) [*abini* *Jorge* *i-tsaɟud-ak^w-õ-ma*]
 before PN 3SG.MASC-polish-FUT-CL:MASC-TOP?

 ahaɟi *p^ho-t-a*
 first dig-1SG-TAME
 ‘before Jorge polishes, I dig’
- (208) [*õdo* *?dĩ-t-ak^w-õ-ma*] *tfo-tsol-a*
 house thatch-1SG-FUT-CL:MASC-TOP? 1SG-slash-TAME
 ‘before I thatch the house, I have to slash’

As can be seen, it is the combination of a verbal suffix, *-ah* for “after-clauses” and *-ak^w* for “before-clauses” and a human classifier that marks these two types of adverbial temporal clauses. However, there is a difference between these two types in that the form of the animate plural classifier that attaches to the “after-clauses” is *-adi* and the one that attaches to the “before clauses” is *-edi*.

8.3.3.1.3 Temporal: *-aɟi*

There are only two examples of the suffix *-aɟi* in my corpus: (209) is a naturally occurring example and (210) is an example built based on (209) and that my consultant deemed correct. In the first example, the verb *h^wibi* ‘to not exist’ is used in the temporal adverbial clause and the subject is ‘axes’ and, therefore, the verb has no person marking. In the second example, the verb *emi* ‘to buy’ is used in the temporal adverbial clause; this time, however, the verb is marked with a 3PL subject affix. Both clauses

express a temporal circumstance but, as will be shown below, there are another suffixes that are also used to mark temporal adverbial clauses (namely, *-ena*, *-ai*, *-emi*, and *-elɪ*. see §8.3.3.2).

- (209) [*otom-ɪʔã* *h^{wi}-aɕɪ-ma*] *daik^{wɪ}* *hã-t^h-i-ahiɕa*¹⁹³
ax-CL not_exist-TEMP-TOP? HOW2 do-3PL-?-TAME
‘how did they do it (= slash) when they didn’t have axes’ (lit. ‘when axes didn’t exist’)

- (210) [*otom-ɪʔã* *t^h-em-aɕɪ-ma*] *daik^{wɪ}* *hu-t^h-i-ahiɕa*
ax-CL 3SG.MASC-buy-TEMP-TOP? HOW2 slash-3PL-?-TAME
‘how did they slash when they bought axes?’

The distribution of *-aɕɪ* could be restricted to past temporal clauses with questions that end in *-ahiɕa*. Further examples are needed to settle this question.

8.3.3.2 Locative-temporal Clauses

There are four markers that are used in locative-temporal clauses. These are the same four markers discussed above in Chapter 5, Section 5.2.7.1, which—as I showed—serve to form adverbs of place when they attach to the demonstrative roots *b-*, *ɕ-*, and *h-*.

¹⁹³ It is unclear what the *-ahiɕa* or the *-i* suffix that precedes it in these examples are. More examples and research is needed to have a clear understanding of what this construction means and what motivates its use. It however seems to be linked to questions since its use in a declarative sentence results in unacceptability.

- (i) **otom-ɪʔã* *t^h-em-aɕɪ-ma* *hu-t^h-i-ahiɕa* *otia-ni*
ax-CL 3SG.MASC-buy-TEMP-TOP? slash-3PL-?-TAM good-NON.SUBJ
‘they slashed well when they bought axes’ [intended]
- (ii) *otom-ɪʔã* *t^h-em-aɕɪ-ma* *hu-b-ia-t^h-in-obe* *otia-ni*
ax-CL 3SG.MASC-buy-TEMP-TOP? slash-B-?-3PL-PST-TAM good-NON.SUBJ
‘they slashed well when they bought axes’ [corrected]

When attached to other verb roots¹⁹⁴, they are often interpreted as temporal clauses (although in some instances they can be used with locative reference).

These four adverbial suffixes form non-finite clauses. However, subjects are marked on the adverbialized verb forms as well as a past-future distinction. They are discussed here in this order: *-ena*, *-emi*, *-ai*, *-eli*.

8.3.3.2.1 *-ena*

The adverbializer *-ena* is the one most commonly used to form temporal clauses.

An *-ena* marked clause has a reading of “when X” as the examples in (211) through (214) show. Notice that subjects are cross-referenced on the verb in the adverbial clause with a subject affix: suffix for a Class II verb like ‘fly’ in (211) and a prefix for a Class I verb like ‘to come’ in (212) as it is expected in a main clause verb. Another interesting characteristic of these adverbial clauses is that they can also be specified for tense with either the past tense suffix *-in* as in (213) or with the future suffix *-ak^w* as in (214).

- (211) *dew-atf-ak^wa* *abini*
 be_white-?-? before
- [*kulewa* *lõ-b-i* *ki-Ø-ena-da*] //
- parrot sing-B-NON.FIN fly-3SG.MASC-ADV1-CONTR?
- hĩ-t^h-ik^w-an-obe*
 say-3PL-?-DUR-TAME

¹⁹⁴ See Chapter 5, §5.2.7.4 for a discussion of the verbal origin of the demonstrative roots.

- (216) [*puʔi* *ĩ-h-ĩn-ena*]
 PN 3SG.MASC-stand-PST-ADV1
 ‘where Pu’i used to live?’

Interestingly, *ena* can occur in conjunction with a noun as the example in (217) shows, which suggests a possible origin of the suffix *-ena* as an independent word. This is an avenue of future research.

- (217) *pelota-po-ma* *mi=ts-aʔo* ***ena***
 ball_Sp.-CL:ROUND-TOP? high=DUMMY_ROOT-CL ADV1

hwi-b-atf-ib-i *me-in-obe*
 slide-B-?-?-NON.FIN fall-PST-TAME
 ‘the ball fell sliding down the hill’

8.3.3.2.2 *-emi*

The adverbializer *-emi* is the one which most consistently has locative semantics rather than temporal as the three examples below suggest.

- (218) *karena* *la-Ø-eb-in-emi*
 jail_Sp. exit-3SG.MASC-?-PST-ADV2
 ‘here (the picture) is where/when he left the jail’

- (219) A: *d-emi*
 INT-ADV2
 ‘which one?’

- B: *ik^widi* *di-wawatf-in-emi*
 1PL.PRO 1PL-be_born-PST-ADV2
 ‘where we were born’

As with *-emi* and unlike *-ena*, there are no examples of *-ai* with nouns. *-eli*, in the next section, however, does occur with both verbs and nouns.

8.3.3.2.4 *-eli*

The adverbializer *-eli* is less common in my data but as with the other three adverbializers discussed here it co-occurs with demonstrative roots and as we saw above, it can also occur with the interrogative root *d-* (also in (224)). Its use on verbs is less frequent but as the example in (224) shows, it behaves like the other adverbializers treated above. One interesting particularity of *-eli* is that, like *ena*, it can occur by itself accompanying a noun (225).

(224) A: *d-eli*

INT-ADV4

‘from where?’

B: *bat^ho huw-i ka-k-at-adu-eli-ma*

conuco burn-NON.FIN finish-2PL-?-2PL-ADV4-TOP?

‘from when you finish burning the conuco’

(225) *pelota-po-ma towi eli çy-ai halaw-ib-i*

ball_Sp.-CL:ROUND-TOP? tree + CL:TREE ADV4 DIST1-ADV3 roll-?-NON.FIN

bamat-in-obe

stop-PST-TAME

‘the ball at the side of the tree rolled down and stopped’

8.3.3.3 Manner

This section focuses on manner adverbial clauses. Mako makes use of a similative marker *-dãni* to convey equality of manner (§8.3.3.3.1). Additionally to the similative marker, there is a second manner adverbializer that occurs in accord clauses (§8.3.3.3.2).

8.3.3.3.1 Similative: *-dãni*

The adverbializer *-dãni* signals equality of manner. It attaches to the *-i* nominalized form of the verb, which is also inflected for person. In the examples below, all three adverbial clauses share the same verb with their respective main clauses: ‘to eat’ in (226) and (228) and ‘to walk’ in (227). The subjects of the two clauses, however, are different: the main clause subject is the agouti and the adverbial clause one is the paca in (226); the sloth and the monkey in (227), the spider monkey and the monkeys (a different kind) in (228). Notice, however, that the subjects of both clauses agree in number in all three examples.

- (226) [*tihõ* *çĩte + duwo* *u-ku-i-dãni*]¹⁹⁶
 WHO + STAND-MASC? lowland_paca 3SG.MASC-eat-NOM-SIM

hõba-ma *ku-õ-Ø* /
 that_one + CL:MASC-TOP? eat-CL:MASC-3.COP

tahi / *op-ihu*
 [filler] fruit + CL-PL

‘that one (the agouti) eats fruits, the same way the paca does’

- (227) *nihi-ni-ma* [*wawari* *k^we-Ø-atf-i-dãni-ma*]
 ground-NON.SUBJ-TOP? monkey walk-3SG.MASC-?-NOM-SIM-TOP?

k^we-b-atf-iki
 go-B-?-NEG

‘it (the sloth) does not walk on the ground, the way the monkey does’

¹⁹⁶ Additionally, in examples (226) and (228), the adverbial clause has the word *tihõ*, which seems to be composed of the question word *tĩ*, possibly the verb ‘to stay’ and the masculine classifier *-õ*. The function of this word here is not completely understood at the present time but notice that it is not absolutely necessary to have it: the adverbial clause in (227) does not have it.

- (228) *hob-adi-ma* *op-ihu* *ku-adi-Ø*
 that_one-CL:PL-TOP? fruit + CL-PL eat-CL:PL-3.COP

[*tihõ* *wãwãĩĩ-dĩ* *t^hu-ku-i-dãĩ*]
 WHO + STAND + CL:MASC? monkey-NAS + PL 3PL-eat-NOM-SIM
 ‘those ones (the spider monkeys) eat fruits, the same ways monkeys do’

This similitive marker *-dãĩ* can also attach to a noun as the examples in (229) and (230) show.

- (229) *kusi-dãĩ* *hõba-ma* *h-õ-Ø*
 pig_Sp.?-SIM that_one + CL:MASC-TOP? stand-CL:MASC-3.COP
 ‘that one (the peccary) is always like the pigs (in the mud)’

- (230) *tsãdi-dãĩ* *i-tabak^w-a-bi*
 woman + PL-SIM 3SG.MASC-be_shy-TAME-ADD
 ‘he is shy like women’

8.3.3.3.2 Accord-clause Marker: *-aɕe*

Another manner suffix is the marker *-aɕe*; there is, however, only three examples in my corpus of this suffix.

- (231) *b-emi-ma* *waedɕ-iki-na-t^hi*
 PROX-ADV2-TOP? difficult-NEG-?-EMPH?

[*Eliecer* *hĩ-Ø-an-ah-iɕ-aɕe* / “facilito”] *ta*
 PN say-3SG.MASC-DUR-?-?-ACCORD? easy_Sp. TAG
 ‘here it is not difficult, as Eliecer says, “easy-peasy”, right?’

- (232) *wahi-t-a* [*abraham* *hĩ-Ø-an-ah-iɕ-aɕe*]
 not_know-1SG-TAME PN say-3SG.MASC-DUR-?-?-ACCORD?
 ‘I don’t know, as Abraham always says’

- (233) [*tɕafi* *ɕi-Ø-aw-ah-aɕe*] *budek^w-in-i*
 PN tell-3SG.MASC-MID-?-ACCORD? cry-PST-NON.FIN

ʃu-budek^w-ab-ih-a-tə
 1SG-cry-?-PST-TAME-PST
 ‘about crying, I cried, as Chachi says’

More research and further examples are needed to provide a more complete analysis of this marker but notice, however, that both instances occur with an utterance verb: *hĩbani* ‘to say’ in (231) (232) and *ʒibawi* ‘to tell’ in (233). This suggests that it is very likely that *-aʒe* marks accord clauses (e.g., English “As we all know, ...”). If this is the case, Mako would be among the few languages (Haspelmath & Buchholz, 1998:321) to formally distinguish accord clauses from simulative clauses.

8.3.3.4 Purpose Clauses

There are two strategies to express a purpose clause: the first one is by adding the suffix *-ob* and the non-finite suffix to the verb root as shown in (234) and (235); the second one is by using a verb form inflected with the future suffix *-o* in combination with the purpose marker *hĩbani* as shown in (236) through (238).

- (234) *ʒ-ena* [foto *Piari-nĩ* *Ø-em-ob-i*]
 DIST1-ADV1 picture_Sp. PN-NON.SUBJ 3SG.MASC-take-PURP-NON.FIN

ʃũ-hũn-oʃ-a
 1SG-put-VOL-TAME
 ‘I am going to put him(it?) over there so he takes a picture of Piari’

- (235) *mama* [hesitation] *abib-i* *d-āhāk^w-ob-i* ¹⁹⁷
 mum_Sp.? ?-NON.FIN 1PL-listen-PURP-NON.FIN

¹⁹⁷ *abibi āhāk^wi* is a compound verb meaning ‘to ask’. I have not succeeded in eliciting what the first half of this compound means; the second half means ‘to listen’.

h^{wi}-d-a-tə

call-1PL-TAME-PST

‘mum, we called (you) to ask (you) some questions’

- (236) *hi-t^{hi}ts-eb-o* *hĩbani* *tʃa tʃa tʃa*
3SG.FEM-bake-?-FUT PURPOSE [onom.]

ʔwã-ʔwã-h-in-obe

RED-put_in-3SG.FEM-PST-TAME

‘she was putting in (the sifted manioc flour) in order to make cassava’

- (237) *kasoi* *hã-t-o* *hĩbani*
gasoil_Sp. do-1SG-FUT PURPOSE

h^{wi}-t-a

have_nothing-1SG-TAME

‘I don’t have anything to go collect the gasoil’¹⁹⁸

- (238) *ʔbi-t-o* *hĩbani-ma*
shoot-1SG-FUT PURPOSE-TOP?

ɕĩte

night

deh-i-da

shine_a_light-NON.FIN-CONTR?

‘to kill (them), you just have to shine a light at night’¹⁹⁹

While the suffix *-o* can occur in a main clause (see Chapter 7, §7.2.3), the use of *-ob* is restricted to this construction and cannot occur as a suffix on a finite verb (239).

- (239) **ɕ-ena* foto *Piari-nĩ* *t^h-em-ob-in-obe*]
DIST1-ADV1 picture_Sp. PN-NON.SUBJ 3SG.MASC-take-PURP-PST-TAME
(they took a picture of Piari) [intended]

¹⁹⁸ Here the ‘do’ verb is acting as an auxiliary as it does with other Spanish verbs. *gasoil* seems to have been borrowed as a verb and not a noun, possibly for *gasear* ‘put fuel in’.

¹⁹⁹ The Spanish translation of the verb root *deh-* is *alumbrar* ‘to shine a light’. It refers to a technique used when hunting for pacas: You go at night and shine a light on them and they freeze.

Notice that in both constructions the subject of the purpose clause is marked on the subordinate verb and that it does not need to coincide with the subject of the main clause as (234) above shows for the *-ob* purpose clause and (240) below, for the *hībani* purpose clause.

- (240) *ĩkena* *t^h-ehu-bia* *we-Ø-ih-a-tə*
 afterward 3PL-CL:HOUSE-PL order-3SG.MASC-PST-PST
- t^h-otid-o* *hībani*
 3PL-build-FUT PURPOSE
- ‘afterwards, he ordered that they build their houses’

More research on purpose clauses is needed to determine the structure of negative purpose clauses.

8.3.3.5 Clause Chains

The non-finite marker *-i* is used in clause chains with the form: $V_1 + V_2 + V_3 \dots$, where only the last verb is inflected for TAME and the preceding verbs are in their non-finite form. Although most examples are composed of two verbs (one non-finite and one finite) as in (243) and (244), it is possible to have more than one as (241) shows. In this example, we have three clauses; in the first two the verb is marked with the non-finite suffix *-i* and only in the last one is the verb fully finite. Notice that intervening material can occur between the different verbs.

- (241) *pelota-po-ma* *me-b-i* Clause I
 ball_Sp.-CL:ROUND-TOP? fall-B-NON.FIN
- b-ai-k^wi* *itf-ib-i* Clause II
 PROX-ADV3-VEN come-?-NON.FIN

bamat-in-obe

Clause III

stop-PAST-TAME

‘the ball fell, then came towards here, (and) stopped’

(242) *pelota-po* /

ball-CL.ROUND

hale-ʔdo *a-po-ma* /

hole.CL? ROOT?-CL.ROUND-TOP?

its-ẽkõ *ok^wa-t^{hi}*

DUMMY_ROOT-CL.SQUARE inside-EMPH?

la-b-eb-i

bamat-in-obe

exit-B-?-NON.FIN

stop-PAST-

TAME *nihi-be*

ground-ALL

‘the ball, the one with the hole, exited the square and stopped moving on the ground/lower part (of the screen)’

(243) *ĩkena-ma*

h-ãn-i

ĩĩ-wais-atf-ih-a-tə

afterwards-TOP?

stand-DUR?-NON.FIN

1SG-know-?-PST-TAME-PST

‘afterwards, I learned while living there’

Clause chains are used to express sequential (241) (242) or simultaneous (243) actions.

In sequential chains, the order of events is reflected in the order of the chains with the

last event being encoded by the finite verb. However, examples like (244) pose a

problem for this claim since here the motion event must have happened before the

“picking” event. More examples are needed—preferably without motion verbs—to

elucidate whether the reading here should be one of simultaneity (i.e., “picked while he

went”) or whether clause chains can express purpose or intent (i.e., “went there in order

to pick”).

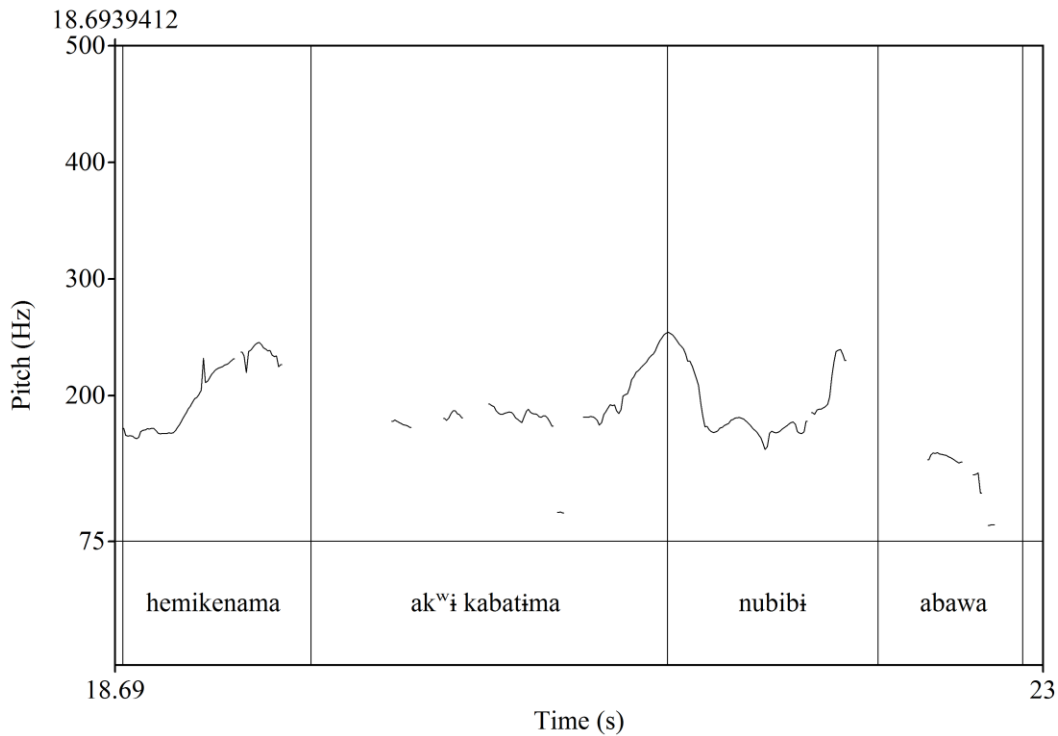
- (244) *ahaɕi-ma* *papa* *dẽ-b-i* *ĩ-ʔɕ-ĩh-a-tə* *buberi*
 first-TOP? dad_Sp. pick-B-NON.FIN 3SG.MASC-go-PST-TAME-PST *seje*
 ‘first dad went to pick *seje*’

The prosodic integration of clause chains is shown below in Figure 60. Here, the phrase in (245) constitutes a single intonation unit; the dependent nature of the first two clauses is signaled by the non-final rising intonation after *hemikename*, *kabatima*, and *nubibi* and the independent nature of the last clause signaled by the falling intonation of *abawa*.

- (245) *hemikena-ma* *ak^w-i* *ka-b-at-i-ma*
 after-TOP? weave-NON.FIN finish-B-?-NON.FIN-TOP?

nub-ib-i *ab-aw-a*
 tie-?-NON.FIN sleep-MID-TAME
 ‘after you finish weaving, you tie (it = the hammock) and then go to sleep’

FIGURE 60 Pitch contour for clause chain in (245)



8.3.3.5.1 The Non-finite Marker in Main Clauses

Example (245) is extracted from a short procedural text on how to make a hammock transcribed in its entirety in (246).

(246) ‘How to make a hammock’

a. *eʔd-i*

pick-NON.FIN

‘you pick’

b. *buk^w-i*

weave-NON.FIN

‘you weave’

c. *buk^w-ib-i*

weave-?-NON.FIN

/

ak^w-ib-i

weave-NON.FIN

buk^w-i

weave-NON.FIN

/

eʔd-i

pick-NON.FIN

buk^w-aw-a

weave-MID-TAME

‘you weave, you prepare and weave, you pick and you weave’

d. *hemikena-ma*

after-TOP?

ak^w-i

weave-NON.FIN

ka-b-at-i-ma

finish-B-?-NON.FIN-TOP?

nub-ib-i

tie-?-NON.FIN

ab-aw-a

sleep-MID-TAME

‘after you finish weaving, you tie (it = the hammock) and sleep’

A first inspection of the text might suggest, based on the number of finite verb forms, that there are but two clauses here. However, there are more than two independent clauses here. There are in fact, five clauses here: the examples in (a) and (b) are clauses on their own and do not depend on a finite verb as the non-finite verb forms in (c) and (d) do. This is corroborated by the falling intonation contours in Figure 58. If we compare Figure 61 with Figure 60 above and Figure 62 below, we see that the non-

finite verb forms in Figure 60 and Figure 62 have a rising intonation while the non-finite verb forms in Figure 61 have a falling intonation.

FIGURE 61 Pitch contour for chain clause in (246)a-b

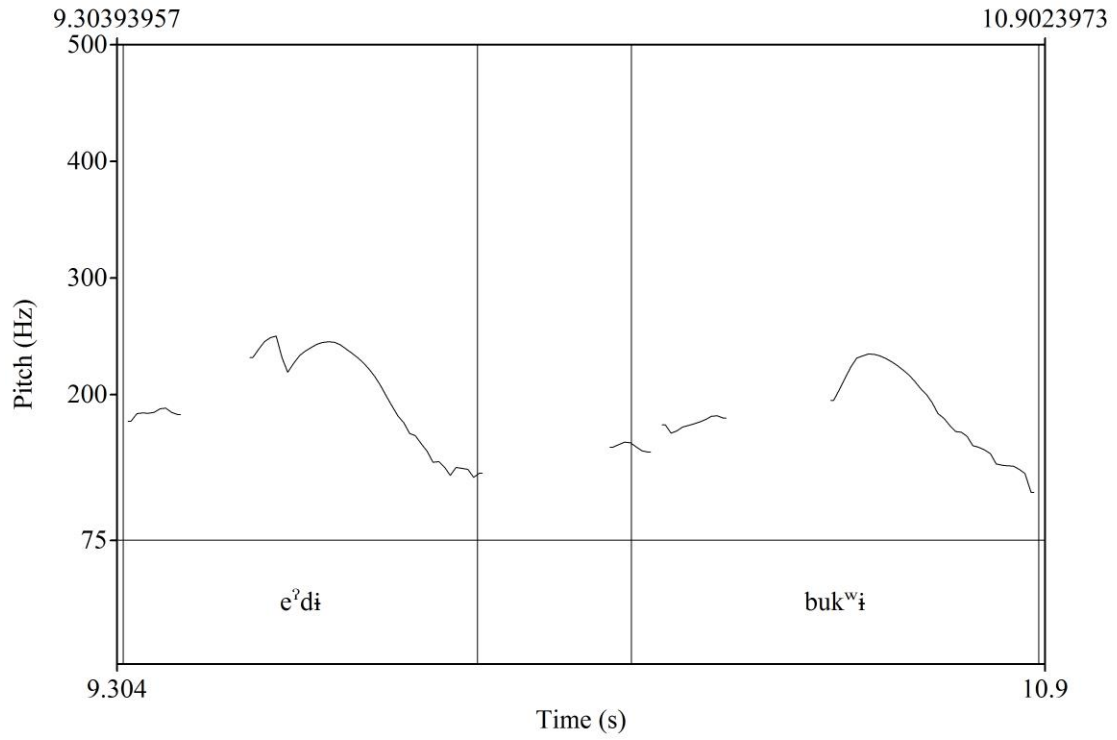
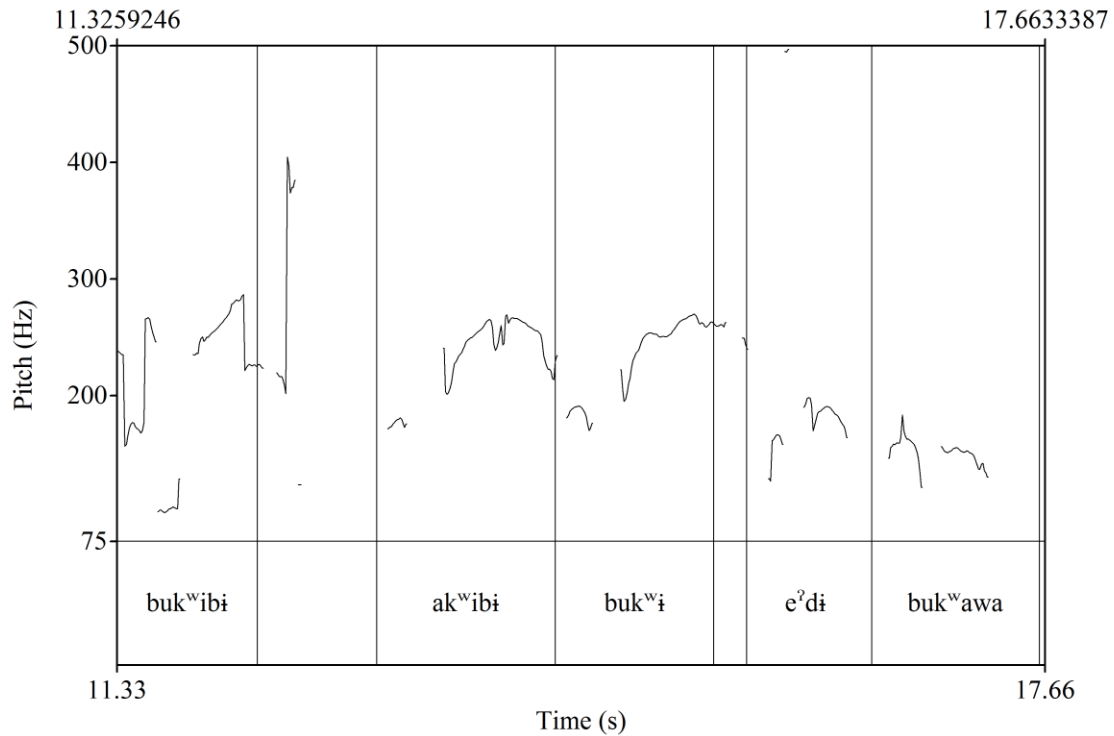


FIGURE 62 Pitch contour for clause chain in (246)c



This analysis of (246)a and (246)b is confirmed by further examples of non-finite verb forms as independent clauses in the procedural text in (247). As can be seen, there is not a single finite form in this text. Two of the forms are formally marked as semantically dependent: *tit^hak^wedɿ* bears the future marker and is nominalized as we saw above that “before” clauses are; *pok^wobɿ* has the *-ob* suffix typical of purpose clauses. All the other verb forms have only the non-finite marker *-ɿ*.

Figure 63 through Figure 66 show that *ʔdebi*, *ɕutawɿ*, and *tsobɿ* all have sentence-final falling intonation while the other forms marked with *-ɿ* have rising intonation. This allows me to say that for discursive reasons, at least in procedural texts, the non-finite marker can be used to mark independent clauses (see Mithun (2008) for other examples

of non-finite markers expanding to main clauses in Navajo and Central Alaskan Yup'ik).

(247) How to make a *conuco*²⁰⁰

- a. *wi-b-i* / *h^wi-b-i*
 fell-B-NON.FIN slash-NON.FIN

hemikena-ma lek^we lid-an-ib-i
 after-TOP? time pass-DUR-?-NON.FIN
 ‘you fell, you cut down, and after time passes’

- b. *huw-i* / *ti-b-i*
 burn-NON.FIN plant-B-NON.FIN

ti-t^h-ak^w-edi ile õh^wĩçça [?]de-b-i
 plant-3PL-FUT-CL:PL manioc weeds pull_out-B-NON.FIN
 ‘then you burn, you plant but before you plant, you pull out the weeds’

- c. *hemikena-ma [?]de-b-i ka-b-at-i*
 after-TOP? pull_out-B-NON.FIN finish-B-?-NON.FIN

nihi tso-b-i çutaw-i
 ground dig-B-NON.FIN put_in-NON.FIN
 ‘after, once you have finished pulling out (the weeds), you dig the soil
 and then you put in (the manioc plant chunks)’

- d. *tso-b-i*
 dig-B-NON.FIN
 ‘you dig’

- e. *pok^w-ob-i*
 grow-PURP-NON.FIN
 ‘so they grow’

²⁰⁰ vegetable garden

FIGURE 63 Pitch contour for clause chain in (247)a

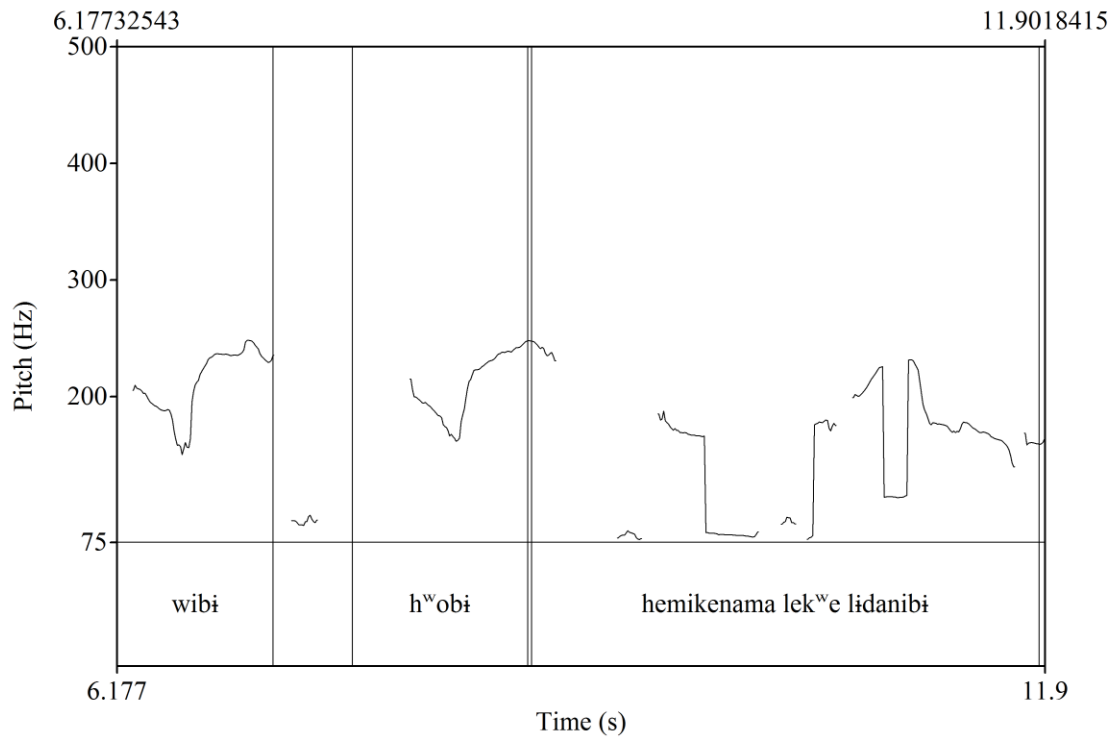


FIGURE 64 Pitch contour for clause chain in (247)b

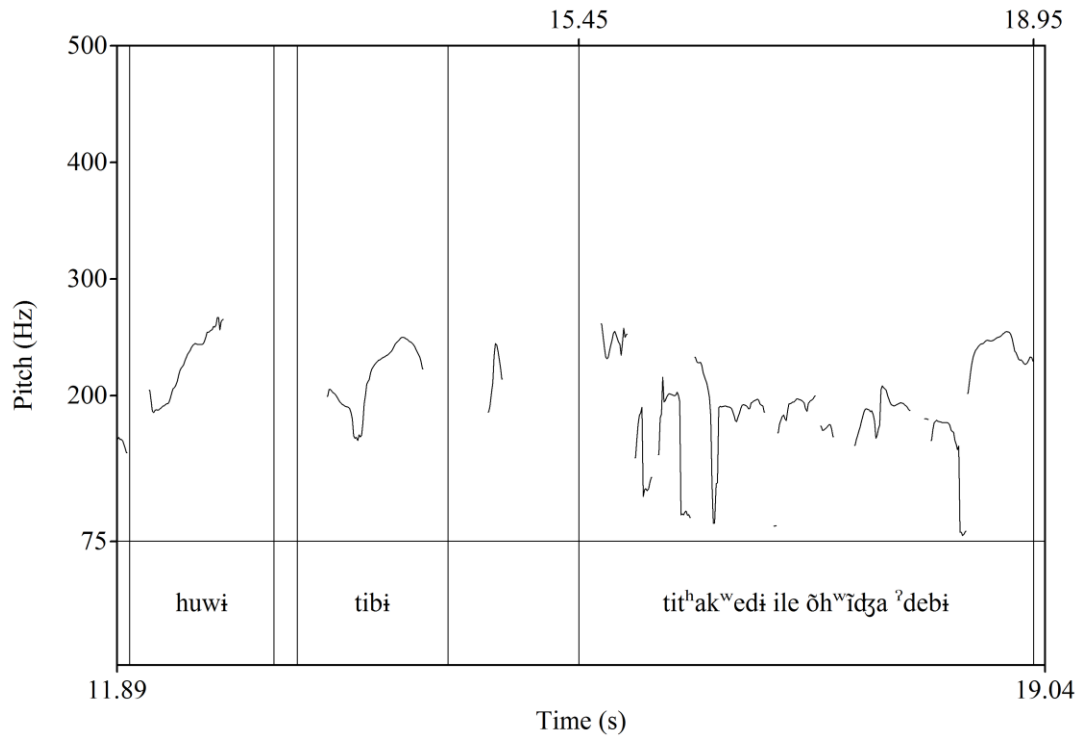


FIGURE 65 Pitch contour for clause chain in (247)c

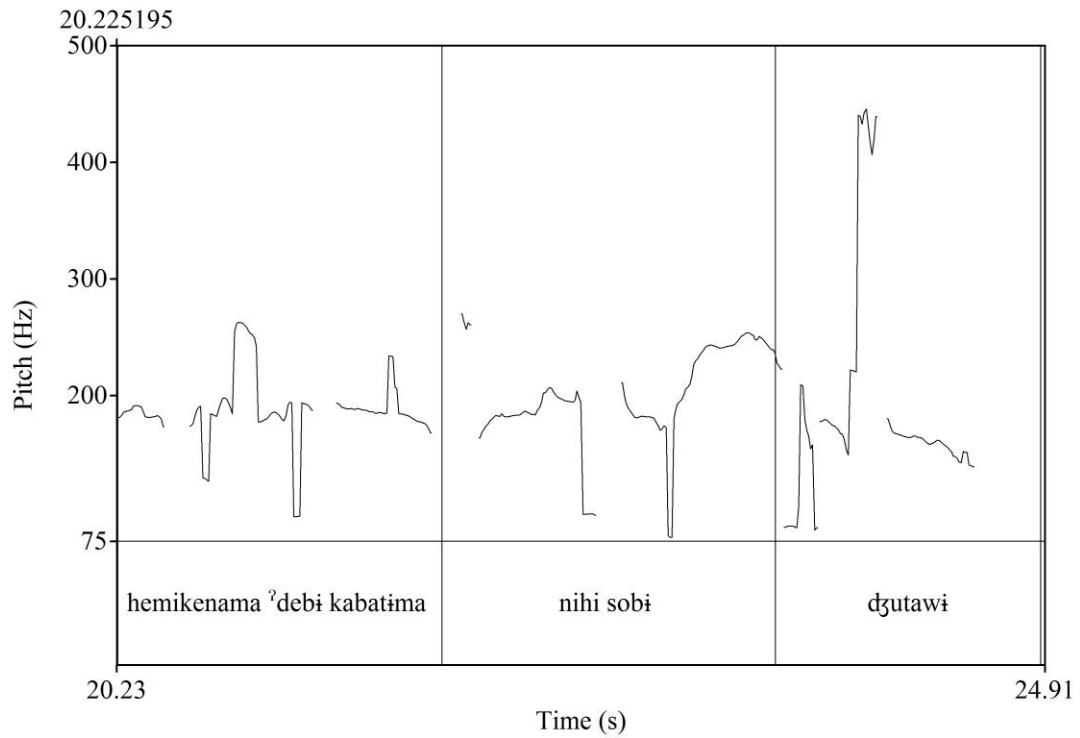
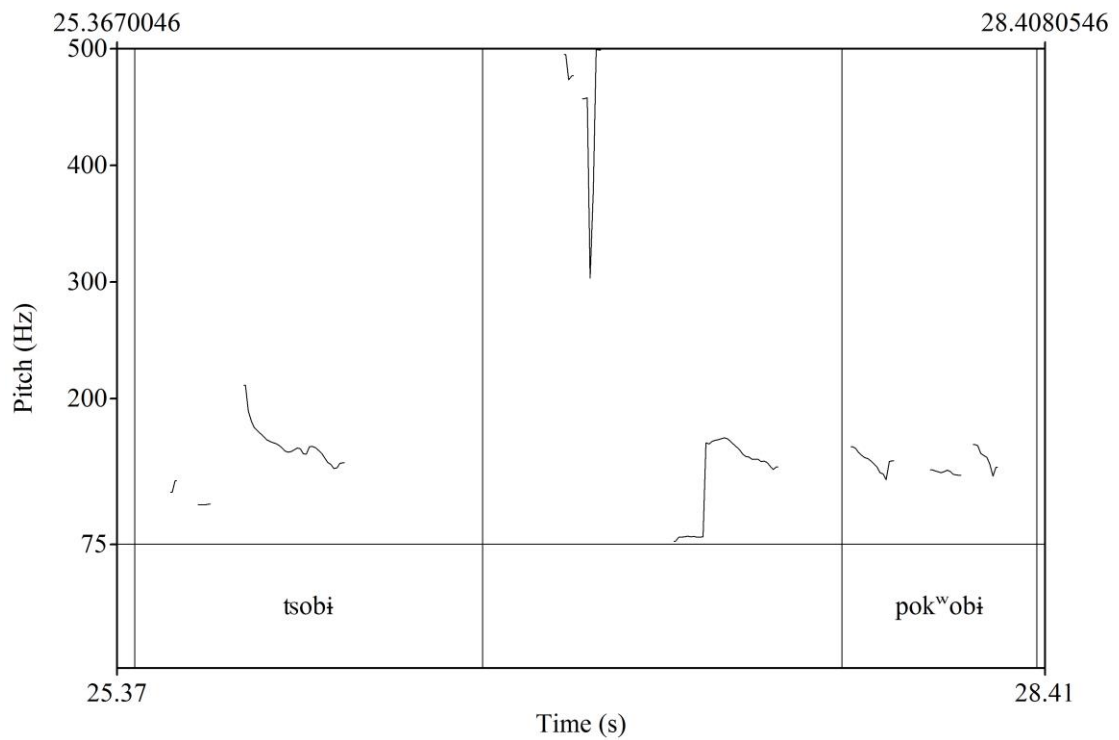


FIGURE 66 Pitch contour for clause chain in (247)d-e



8.3.4 Summary

In this section, I have discussed the different types of complex sentences present in Mako. A complex sentence was defined here as a sentence with two or more verbs, where at least one is independent. The relation between the dependent and independent clauses in a complex clause is one of subordination; that is, the dependent clause depends on the independent clause for its realization. There are three main types of subordinate clauses in Mako: complement clauses, relative clauses, and adverbial clauses. Complement clauses are in some way similar to quotation: their subordinate status is not formally marked and they resemble main clauses. Their distinguishing characteristic is that they occur as the complement of a complement-taking verb, be it an utterance verb or a different type. Relative clauses modify NPs and serve to specify the referent of the noun or to add some information about it. More research is needed to fully understand complementation and relativization strategies in Mako but this section served as an introduction to the topic. Adverbial clauses, unlike complement clauses and relative clauses, relate to the main clause as a whole. As shown above, there are different types of adverbial relations expressed by these clauses: time, location, manner, purpose, simultaneity and sequentiality. A key contribution of this section is the mention of the use of a non-finite verb form in an independent clause.

More research on conditional clauses and other minor adverbial clause types is needed such as circumstantial clauses (e.g., English *by* and *without* as in ‘he got into the army by lying about his age’ and ‘she carried the punch into the living room without spilling a drop’), concessive clauses (i.e., “a clause that makes a concession, against which the proposition in the main clause is contrasted” (Thompson et al., 2007:262); e.g., English

clauses marked with *although* and those that signal the meaning of “no matter what” or “whatever”, e.g., ‘whoever he is, I am not opening that door’), substitutive clauses (e.g., English *instead of* or *rather than*), and additive clauses (i.e., clauses that express one state of affairs in addition to another, e.g., English *besides*, *in addition to*).

8.4 Conclusions

This chapter provides a description of Mako syntax. It focuses on both simple and complex clauses.

Mako simple clauses can be of two main types: nominal and verbal. Nonverbal clauses are those whose predicate nucleus is a nominal; verbal clauses, on the contrary, have a verb as their nucleus. As shown above, verbal clauses can have one (S), two (A & P) or three (A, T & R) core arguments as well as a number of other arguments. Animate subjects of verbal clauses are always cross-referenced on the verb; while animate objects are not obligatorily marked on the verb. On the other hand, subject nominals are never marked for their syntactic role, while object nominals can. The non-subject marker *-ni* can go on the single non-subject argument of a transitive verb and on either of the two non-subject arguments of a ditransitive verb as well as on an instrumental, a location or a goal of movement.

There are three clause-combining strategies: complementation, relativization, and adverbialization. Mako complement clauses with utterance verbs are formally unmarked for their role but stand as one of the arguments of the main clause verb. Relative and adverbial clauses, however, take a verb form that is formally marked for its role as the modifier of a noun (relatives) or as a modifier of the clause (adverbials). The strategies

of marking adverbial clauses are numerous and usually consist of non-finite markers on the verb. One of these non-finite markers, namely *-i*, has gone on to mark independent clauses in procedural texts.

Chapter 9

9 Information Structure and Discourse Organization

This chapter represents a first approximation to the grammar of discourse in Mako. In Section 9.1, I present the morphology associated with information structure in Mako. Although much more remains to be done in this area, presentation of the relevant morphology in this chapter will serve as a starting point for future studies. In Section 9.2, I present briefly the morphology of coordination and sequentiality. Section 9.3 concludes the chapter.

9.1 Morphology Coding Information Structure

The suffixes *-ma*, *-da*, and *-t^{hi}* code discourse-level information. The first two code information structure related information such as (perhaps) topic continuity and contrast/focus, and *-t^{hi}* seems to code emphasis. The evidence from this group of suffixes coding discourse-level information comes from not only their semantic contribution to the context—which requires further investigation—but also from their morphosyntactic behaviour: 1) they can attach to any part of speech, and 2) their scope lies beyond the clause since, as will be shown below, their use can be motivated by information given in preceding discourse. Each of these suffixes is discussed in turn below.

9.1.1 *-ma*

It is unclear at this stage what the suffix *-ma* codes but I hypothesize that it codes topics. More research is, however, needed to (dis)confirm this hypothesis so in this section I focus on the distributional properties of *-ma*.

The suffix *-ma* often attaches to clause constituents in first position in the clause. Given that the basic word order of the language is SV and AOV, what tends to come first in a clause is the subject of the sentence. Therefore, *-ma* is most commonly found attached to subjects (1) (2). However, examples like those in (3) and (4) show that this is not a subject marker: in both these examples, *-ma* is attached to a noun already marked for its function as object of the verb. In (3), the speaker explains that the agouti does not hide inside hollow tree trunks and the word for ‘hole’ bears the object marker *-ni* and is additionally marked with *-ma*. In (4) the speaker asks his mother ‘the elders that pray, what are they called?’ and the word for ‘elders’ has the object marker *-ni* and the *-ma* suffix too. Notice that in both cases the *-ma* attaches to the last word of the NP.

- (1) *hob-adi-ma* *ku-adi-Ø* *op-ihu*
 that_one-CL:PL-TOP? eat-CL:PL-3.COP fruit + CL-PL
 ‘those ones eat fruit’
- (2) *hōba-ma* *duw-ō-Ø*
 that_one- + CL:MASC-TOP? be.red-CL:MASC-3.COP
 ‘it (a kind of monkey) is red’
- (3) *wāt^hō-da* *lahu-ni-ma* *tsi-b-ib-iki*
 hollow_tree-CONTR hole-NON.SUBJ-TOP? go_in-B-?-NEG
 ‘they don’t hide inside hollow trees’
- (4) *bo-b-adi* *k^{wa}’di-ni-ma* *i-t^h-abik^{wi}-dihe*
 pray-B-CL:PL elders-NON.SUBJ-TOP? call-3PL-?-?
 ‘the elders that pray, what are they called?’

In examples (1) through (4), *-ma* attaches to nouns (or anaphoric pronouns) but this suffix also attaches to other parts of speech such as verbs. In (5), *-ma* is attached to purpose marker *hībani* (For more on this construction, see Chapter 8, §8.3.3.4). In (6), *-ma* is attached to the verb *k^webaffi* at the end of the temporal adverbial clause

marked by *-ena*. Notice again that in both of these cases the suffix *-ma* attaches to the last word in the constituent.

- (5) *ʔbi-t-o* *hiʔbani-ma* / [...]
 kill-1SG-FUT PURPOSE-TOP?
 ‘to kill them, (you have to...)’
- (6) *mi-ni* *kʷe-Ø-af-ena-ma* / *u-ku-a*
 high-NON.SUBJ walk-3SG.MASC-ADV1-TOP? 3SG.MASC-eat-TAME
 ‘when he is high up, he eats’

9.1.2 *-da*

Just like *-ma*, the suffix *-da* generally attaches to nouns. The specific function of this suffix in the discourse is unclear²⁰¹ thus far but its different uses are shown in the examples that follow.

In (7), the speaker answers a question about what a couple could eat after having a baby. She says “only crabs (and) *viejitas*”.²⁰² The presupposition here is that people in general eat all sorts of things so the speaker corrects this presupposition by saying that only these two items could be eaten; both items are marked with *-da*. In (8), the speaker marks the word for ‘hills’ with *-da*. In the immediately preceding discourse, he has established that the tapir lives in hilly ground and goes on to say that it does not sleep on flat ground. So the utterance in (7) could be said to stand in opposition with the previous statement: the speaker clarifies that the tapir only lives in the hilly terrain and as opposed to flat ground and he reinforces this by also repeating “just in the hills”.

²⁰¹ In the future, I hope to look at the exact distribution of this marker.

²⁰² A kind of fish, possibly *apistogramma viejita*.

Although the semantics of *-da* seem to be associated with the idea of “only, just”, notice that this could rather be a result of its focus semantics. ‘only, just’ is expressed via the word *tsule* (7) and, although *-da* is often associated with it, this need not be the case (8).

- (7) *tsule* *āwĩḱũ-dī-nī-da* / *balewo-nī-da*
only_Sp. crab-PL-NON.SUBJ-CONTR? *viejita*-NON.SUBJ-CONTR?
'only crabs, *viejitas* (a kind of fish)'
- (8) *hōba-ma* *mī=ts-a[?]o-nī-da*
that_one + CL:MASC-TOP? high = DUMMY_ROOT-CL-NON.SUBJ-CONTR?
- h-ō-Ø*
stand-CL:MASC-3.COP
- mī=ts-a[?]o-nī-da*
high = DUMMY_ROOT-CL-NON.SUBJ-CONTR?
'that one lives only in the hills, just in the hills'

In (7) and (8), *-da* is attached to a noun that is a non-subject argument (notice the *-ni* marker). It can, however, also attach to nouns that are subjects. This is the case for all the occurrences of the word for ‘grandfather’ in (9). In (9), the speaker answers to the question of whether they (=she and her family) used to live along the Yawara River. She replies in the negative but clarifies that, in contrast, the interviewer’s grandfather used to live there.

- (9) A: *k^w-a[?]di-da* *ĩ-h-ĩn-obe*
 2SG-grandfather-CONTR? 3SG-stand-PST-TAME
 ‘Your grandfather used to live there’
- B: aaah
 [vocalization]
- A: *k^w-a[?]di-mine-da* / *k^w-abe[?]do* Ø-*abe[?]do-da*
 grandfather-DEC-CONTR? 2SG-father 3SG.MASC.father-CONTR?

ik^wiđi-ma hobe-ma dī-h-īkī
 1PL.PRO-TOP? over_there-TOP? 1PL-stand-NEG
 ‘your late grandfather, your father’s father, we didn’t live there’

In the examples above, *-da* attaches to nouns but, as explained before, it can attach to other parts of speech such as verbs (10). In these two instances of the suffix, *-da* is attached to the non-finite form of the verb for ‘to pray’ and it serves the same contrastive function that was shown above for instances with nouns. In (10), the interviewer asks the speaker how the shamans used to transport themselves (with their minds) using the verb *k^webatfī* and she responds in the negative (i.e., counters his proposition) and clarifies that all they did was pray.

- (10) *k^we-t^h-atf-ikī bo-b-i-da*
 walk-3PL-?-NEG pray-B-NON.FIN-CONTR?

bo-b-i-da t^h-iha-tə
 pray-B-NON.FIN-CONTR? 3PL-COP-TAME
 ‘they didn’t walk (move around), only pray, they only prayed’

9.1.3 *-t^hi*

The suffix *-t^hi* can occur attached to a noun as with the noun phrase for ‘library’ in (11) and with a numeral in (12) but it also attaches to verbs as the verbs in (11).

- (11) A: *t^hi-[?]d-aw-in-obe t^hībi-nī*
 3PL-delouse-MID-PST-TAME lice-NON.SUBJ
 ‘they were delousing themselves’

 B: *t^hībi-nī i-[?]d-an-in-obe-t^hi*
 lice-NON.SUBJ 3SG.MASC-delouse-DUR-PST-TAME-EMPH?

k^wiçalu-[?]dia hūk^w-ēkō-t^hi
 notebook-CL:PL live-CL:SQUARE-EMPH?
 ‘he was taking lice out (of the hair of someone else) in the library
 (lit. the book room)’

- (12) A: *its-uhu* *bak^w-uhu*
 DUMMY_ROOT-CL:FEM one-CL:FEM
 ‘(there is) one woman’
- B: *dũhũtaha-t^hi*
 two.ANIM-EMPH?
 ‘two (women)!’

The emphatic function of *-t^hi* seems to be more evident in examples (11) and (12). Both examples were produced during a stimuli elicitation session where the participants were being shown short clips and were asked to describe what they saw in the videos. Right before the speakers produced the examples in (11), the school teacher had told them that they needed to be specific about the location in which the clips were taking place and that just saying the action was not enough. In spite of this, speaker A in (11), however, fails to do as asked and speaker B corrects her. Notice that not only the locational phrase is emphasized but also the verb itself. The emphasis on the verb is to point out that it was not a reflexive action by the speakers but that one person was delousing the other: notice speaker B corrects speaker A by using the verb without the middle *-aw*. In (12), the speakers were discussing whether the people in the clips were women or men and speaker A says that there was one woman and immediately, speaker B corrects her and stresses the fact that it was two women and not one that they were watching.

9.2 Coordination and Sequentiality in Discourse

Because of their importance in discourse organization, I discuss in this section the coordinative marker *-bi* and the use of *ĩkena* to signal sequential events in narratives and procedural texts.

9.2.1 -bi

The function of the suffix *-bi* is one of coordination. This suffix can attach to nouns when speakers are enumerating a series of nouns and serves a conjunctive function similar to ‘and’ or ‘too’ (13).

- (13) ... *aɕu-bi* / *bale-bi* / *noho-bi* / *ɕawiri-bi*
 fruit_a_kind_of-ADD plantain-ADD sugar_cane-ADD cashew-ADD
 ‘(a kind of) fruit too, plantains too, sugar cane too, cashew too’

- (14) *hob-adi-ma* *ok^woh^wini-da* *uhh*
 that_one-CL:PL-TOP? everywhere-CONTR? [hesitation]

mi = ts-a?o-ni-bi *tebo-ni-bi*
 high = DUMMY_ROOT-CL-NON.SUBJ-ADD woods-NON.SUBJ-ADD

oh^we wãme-bi
 river on_top_of-ADD

hob-adi-ma *hũk^w-adi-Ø*
 that_one-CL:PL-TOP? live-CL:PL-3.COP

‘they (live) everywhere [hesitation], they live on the hills, and in the woods, and by the river (lit. on top of the river)’

Although in most cases, *-bi* is used in lists as in the examples above where all the nouns are inside the same sentence, the suffix *-bi* sometimes coordinates elements that are in different clauses (15) or across sentences (16), (17).

- (15) *hõba-ma* *tebo-ni* *h-õ-Ø* /
 that_one + CL:MASC-TOP? woods-NON.SUBJ stand-CL:MASC-3.COP

oh^we-ni-bi
 river-NON.SUBJ-ADD

‘that one lives in the woods, in the river too’

- (16) *hõba-ma* *mi-ni* *k^we-b-atf-õ-Ø*
 that_one + CL:MASC-TOP? high-NON.SUBJ go-B-?-CL:MASC-3.COP

o nihi-ni-bi h-ō-Ø
 or_Sp. ground-NON.SUBJ-ADD stand-CL:MASC-3.COP

hōba-ma
 that_one + CL:MASC-TOP?

‘he lives in the heights or he also lives on the ground’

(17) *h-ilek^w-e-bi u-ku-iki-ni*
 3SG.FEM-spouse-MASC-ADD 3SG.MASC-eat-NEG-NON.SUBJ

ihu-da-bi hu-ku-iki-ni-da
 3SG.FEM.PRO-CONTR?-ADD 3SG.FEM-eat-NEG-NON.SUBJ-CONTR?

‘Neither she nor her husband did not eat (that)’ (lit. her husband also didn’t eat, she herself also didn’t eat that)

-bi can occur with constituents other than nouns as the example in (18) below shows. In this example, what is being coordinated are two temporal clauses.

(18) *o ǫǫt^h-bi oh^{wi}ǫo ok^wat-ena-bi /*
 or_Sp. thus-ADD water + CL rise-ADV1-ADD

o a... awiri lu... lu-ena-bi
 or_Sp. [false start] dog [false start] hunt-ADV1-ADD

hēt^h... hēt^h-da hōba-ma k^wa-t-ik^we
 [false start] thus-CONTR? that_one + CL:MASC-TOP? hit-1SG-TAME

‘Or thus too, when the water rises, or when the dogs hunt (them); in that way I kill (by hitting) that one (the agouti)’

9.2.2 *ikenā/hemikēna*

As shown above, sequentiality can be expressed via temporal clauses (see Chapter 8, §8.3.3.1.1) or via clause chaining (see Chapter 8, §8.3.3.5). However, another way to express sequentiality is to use the adverb *ikenā*, which sometimes occurs attached to the locative adverb *hemi*. These two adverbs function at a level beyond the sentence to organize events that either usually come after each other (procedures) or that occurred

after each other (narratives). The examples below show the use of *ikenā/hemikēna* in each of these contexts.

The excerpt from a procedural text in (19) shows the three strategies for expressing sequentiality in use. In the first line, there is an after-temporal clause (underlined) with the verb ‘weed’, three other after-temporal clauses follow with ‘leave’, ‘peel’ and ‘put’. The “after-clause” with the verb ‘leave’ also shows the strategy for clause chaining (double-underlined) where the verb ‘leave’ combines with the verb ‘pull’. Throughout the description of this procedure, the speaker also uses *ikenā* and *hemikēna* (both bolded) to signal intersentential sequentiality.

- (19) ^ʔ*ɕe-b-i* *aa...* // *k^wa-b-ah-adi-ma* ^ʔ*ɕe-b-i* //
- pull-B-NON.FIN [false start] weed-B-MOT-CL:PL-TOP? pull-B-NON.FIN
- hemikēna-da*** ^ʔ*ɕe-b-i* *ẽwāh-ah-adi-ma*
- after_that-CONTR? pull-B-NON.FIN leave-MOT-CL:PL-TOP?
- ^ʔ*dẽ-b-i* //
- peel-B-NON.FIN
- ^ʔ*dẽ-b-ah-adi-ma* ***ikenā-ma*** *hi-b-i* //
- peel-B-MOT-CL:PL-TOP? after-TOP? grate-B-NON.FIN
- ate* *murihi* *hũn-ah-adi-ma*
- [ideophone] ferment put- MOT-CL:PL-TOP?
- ‘you pull... [false start] after you have weeded, you pull (the manioc roots out of the ground); **afterwards**, after you come back from pulling, you peel; after you have peeled, **afterwards**, you grate. darn! after you have left (it) in the ferment’

The example in (30) shows the use of *hemikēna* as a device for marking intersentential sequentiality in a narrative. Here the speaker is describing how the village of Santa Inés was founded first and then after that they founded Arena Blanca.

- (20) *santaine* *ahac̣gi-ni* funda *hã-t^h-in-emi* //
- PN first-NON.SUBJ found_Sp. do-3PL-PST-ADV2
- hemikena-ma* *b-ena* *hã-t^h-in-obe* *arenablanca-ni* //
- after_that-TOP? PROX-ADV1 do-3PL-PST-TAME PN-NON.SUBJ
- hemikena-ma* [interrupted]
- after_that-TOP?
- ‘First, it was the foundation of Santa Inés; **after that**, here they did (i.e., founded) Arena Blanca; **after that**...’

9.3 Conclusions

This chapter has focused on the grammar of information structure and discourse organization. Much more remains to be done in the area of information structure but I hope to have shown here that Mako has a rich system where three different markers (*-ma*, *-da*, and *-t^h*) serve to encode pragmatic information in a given clause. I also hope to have shown with this chapter that Mako speakers exploit several organizational strategies to achieve coherence in a given discourse. While the suffix *-bi* serves to coordinate parallel structures both inside and beyond the sentence, *ikenā/hemikena* encode sequentiality between sentences. This last strategy complements other strategies for expressing sequentiality such as “after-clauses” and clause chaining.

Chapter 10

10 Proto-Sáliban Subject Marking: Morphological Evidence for the Classification of Mako within the Sáliban Family²⁰³

As shown in Chapter 1, Section 1.2, the classifications that group together the Sáliban languages rely primarily on resemblances between lexical items with no regular sound changes having been proposed to date and do not include all three languages. Although the aim of this chapter is to understand the origin of the Mako subject-marking system described in Chapter 7, its primary contribution lies in providing firm morphological evidence for the relationship of Mako, Piaroa and Sáliba.

10.1 Marking of (Human) Animate Subjects on the Sáliban Verb

In what follows, I look at how (human)²⁰⁴ animate subjects are marked in all three languages using my own Mako fieldwork data and Piaroa and Sáliba data from

²⁰³ This chapter has been submitted to—and accepted for publication in—the International Journal of American Linguistics. The comments/suggestions of two anonymous reviewers as well as an IJAL associate editor are gratefully acknowledged. A number of other people also read previous drafts of this chapter and provided comments, I thank Doris Payne, Scott DeLancey, and Spike Gildea for their insightful comments.

²⁰⁴ As shown before in Chapter 7, §7.2.1.1.1 and Chapter 8, §8.1.2.1.1, the subjects markers in Mako are used for both human and non-human animates. Given that the only available examples from Sáliba and Piaroa have human subjects, it is not possible to say at this point that these are *animate* subject markers for all three languages. I will, therefore, use the word “animate” from now on to describe the affixes dealt with in this chapter but will also include human (between parentheses) when talking about the data for Sáliba and Piaroa.

published sources (§10.1.1 through §10.1.3) and offer a comparison and a reconstruction of the proto-system (§10.2 and §10.3).

10.1.1 Marking of Animate Subjects on the Mako Verb

As discussed above in Chapter 7, inanimate subjects in Mako are not cross-referenced on the verb while animate subjects are. This cross-referencing is accomplished via two sets of affixes: a set of prefixes for Class I verbs (i.e., verbs with roots ending in a consonant) and a set of suffixes for Class II verbs (i.e., verbs with roots ending in a vowel). The two sets of affixes are clearly related to each other as evidenced by the similarity in their phonological form (i.e., same consonant for all of them except for 1SG). Additionally, the set of prefixes can also be used to mark the possessor on a possessed noun (see Chapter 6, §6.1.1.1.1). All the Mako subject affixes are given in Table 61.

TABLE 61 Mako Class I and Class II verbal subject markers

Person	Singular		Plural	
	Prefix Set	Suffix Set	Prefix Set	Suffix Set
1	tʃ(V)-	-t	d(V)-	-d
2	k ^w (V)-	-kib/-k ^{cw}	k ^w (V)-...-adu	-kib/-k ^{cw} ...-adu
3.MASC	(V)-	-Ø	t ^h (V)-	-t ^h
3.FEM	h(V)-	-h		

Although the fact that possessor marking is accomplished by the same set of affixes that are used to encode (one of the) core arguments of a verb is cross-linguistically common (see Siewierska (1998))—and especially so in Amazonia (Dixon & Aikhenvald (1999:9)—, the Mako system is rare in having two distinct sets of verbal subject affixes whose use is determined by the phonology of the verb. In the sections that follow, I

show that Mako shares this unique system with Piaroa (§10.1.2) and Sáliba (§10.1.3) and that both the subject marking system and the two verb classes are reconstructable and have, therefore, been inherited from Proto-Sáliban (§10.2 and §10.3).

10.1.2 Marking of (Human) Animate Subjects on the Piaroa Verb

Mosonyi (2000:662-663), who follows closely Remiro (1988), describes person marking morphology in the Piaroa future tense as being “*mucho más complicada y hasta irregular* [much more complicated and even irregular]” than for other tenses because it can be accomplished by using 1) a set of prefixes “*muy similar a los que se usan con los sustantivos poseídos* [very similar to those used with possessed nouns]” used with vowel-initial verb roots as in (1)²⁰⁵ for *aditi* ‘to work’ and 2) a set of “infixes” when the verb roots start with a consonant as in (2) for *pæʔi* ‘to say’:

(1)	<u>Person</u>	<u>Form:</u>	<u>Translation</u>
	1SG.MASC	ʃ - <i>ādīt</i> - æ ^w <i>k</i> ^w <i>ā-sæ</i>	‘I (male) will work’
	2SG.MASC	kʷ - <i>ādīt</i> - æ ^w <i>k</i> ^w <i>ā-hæ</i>	‘you (male) [SG] will work’
	3SG.MASC	<i>ādīt</i> - æ ^w <i>k</i> ^w <i>ā</i>	‘he will work’
	3SG.FEM	k^h - <i>adit</i> - æ ^w <i>a-hu</i>	‘she will work’
	1PL	t - <i>adit</i> - æ ^w <i>otihæ</i>	‘we will work’
	2PL	k^w - <i>adit</i> - æ ^w <i>otihæ</i>	‘you [PL] will work’
	3PL	t^h - <i>adit</i> - æ ^w <i>oti</i>	‘they will work’

(Mosonyi, 2000: 662-663)

²⁰⁵ The examples given by Mosonyi (2000) are not glossed and I will therefore not offer glosses here but the relevant affixes have been boldfaced.

(2)	<u>Person</u>	<u>Form</u>	<u>Translation</u>
	1SG.MASC	<i>pæ-d-æ'k^wã-sã</i>	'I (male) will say'
	2SG.MASC	<i>pæ-k^w-æ'k^wã-hã</i>	'you (male) [SG] will say'
	3SG.MASC	<i>pæ-ʔ-æk^wã</i>	'he (male) will say'
	3SG.FEM	<i>pæ-h-æ'k^wa-hu</i>	'she will say'
	1PL	<i>pæ-t-æk^wo'tihã</i>	'we will say'
	2PL	<i>pæ-k^w-æk^wo'tihã</i>	'you [PL] will say'
	3PL	<i>pæ-t^h-æk^wotihã</i>	'they will say'

(Mosonyi, 2000: 663)

There are a few differences between the Piaroa and the Mako systems. Firstly, what gets “substituted” in the Piaroa non-finite form of the verb ‘to say’ is *-ʔ* and not *-b* as in Mako: both *aditi* and *pæʔi* employ an *-i* suffix, cognate with the Mako non-finite suffix, which allows the root for ‘to say’ to be glossed as *pæ-ʔ-i* ROOT-ʔ-NON.FIN ‘to say’. If the root for ‘to say’ ends in a vowel, then affix selection (and hence verb class membership) could also be analyzed as, following the same pattern as in Mako, depending on whether a root ends with a consonant (the root for ‘to work’ ends in a consonant and takes a prefix) or a vowel (the root for ‘to say’ ends in a vowel and takes a suffix)²⁰⁶. Secondly, the subject affixes are only used in future tense in Piaroa while they have a wider distribution in Mako (present, past and future)²⁰⁷. Thirdly, the first person markers in the suffix set seem to be “swapped”: Mako 1SG is marked with a *-t* while Piaroa 1SG is marked with a *-d* and Mako 1PL is marked with a *-d* and the Piaroa 1PL marker is a *-t*. The difference in the 1PL forms of the prefix set is also a voicing contrast, i.e., Mako *d*

²⁰⁶ More conjugated examples are needed to confirm this hypothesis.

²⁰⁷ In fact, as shown above in Chapter 8, §8.1.2.1.2, they occur in all TAM combinations except for the habitual present, which comes from an old copular construction and has the form ROOT-CL-COP. In these verb forms, person is indicated by the old copular suffix.

vs. Piaroa *t-*. Fourthly, 3SG.MASC in the suffix set is marked by a glottal stop in Piaroa but it is the absence of any marking that characterizes the Mako 3SG.MASC form in the suffix set. And lastly, the Piaroa data provided by Mosonyi differs from the Mako data in that there is no *-adu* marker for 2PL. In Piaroa the verb ends with *-otihæ̃* but this is also true of 1PL and a shorter form *-otĩ* is present in 3PL.

The set of prefixes in the paradigm in (1) is also used to mark possession as shown in the examples in (3) below for the noun ‘son/child’. This function of the prefixes is also present in Mako (see Chapter 6).

(3)		<u>SINGULAR</u>	<u>PLURAL</u>
	1	<i>tʃ-ĩtʰĩ</i>	<i>t-ĩtʰĩ d-ĩŋĩ</i>
	2	<i>kʷ-ĩtʰĩ</i>	<i>kʷ-ĩtʰĩ</i>
	3.FEM	<i>h-ĩtʰĩ</i>	<i>tʰ-ĩtʰĩ</i>
	3.MASC	<i>ĩtʰĩ</i>	

(Mosonyi, 2000: 661)

As mentioned before, Mosonyi (2000) indicates that the verbal prefixes are only used for vowel-initial verb roots and hence their phonological form is *C-*; this differs from the Mako prefixes whose phonological form is *C(V)-* (see Table 61). However, when used in nominal possession, the Piaroa prefixes may occur on consonant-initial roots, where they have a CV form. The vowel of this allomorph harmonizes—just like it does in Mako—with the first vowel of the stem:

- (4) *rēhẽ* ‘land’ *ʔi-rēhẽ* ‘my land’
kurodæ ‘machete’ *ʔu-kurɔdæ* ‘my machete’
nawɔdæ ‘knife’ *ʔi-nawɔdæ*²⁰⁸ ‘my knife’
(Mosonyi, 2000: 661)

Summing up, Piaroa shares with Mako the fact that there are two sets of affixes that code the (human) animate subject of a verb and can occur immediately before or after the verb root. Additionally, the Piaroa prefixes, like the Mako ones, are also used to mark the possessor on the possessed noun. The forms of the verbal affixes provided by Mosonyi (2000) for Piaroa can be summarized as follows:

TABLE 62 Piaroa future tense subject markers according to Mosonyi (2000)

Person	Singular		Plural	
	Prefix Set	Suffix Set	Prefix Set	Suffix Set
1	ʔf-	-d	t-	-t
2	k ^w -	-k ^w	k ^w -	-k ^w
3.MASC	∅-	-ʔ	t ^h -	-t ^h
3.FEM	h-	-h		

10.1.3 Marking of (Human) Animate Subjects on the Sáliba Verb

This section describes the Sáliba subject marking system and compares it to the Mako and Piaroa ones (§10.1.3.2) but before doing so, I highlight the differences between different descriptions of this system and attempt to explain their origin (§10.1.3.1). To conclude, I offer a modified subject marking system for Sáliba (§10.1.3.3).

²⁰⁸ Notice that this is unlike Mako harmony, where a stem whose first vowel is /a/ will take an /i/ in the prefix. See Chapter 4, §4.1.4.

10.1.3.1 Differing Descriptions of the Sáliba (Human) Animate Subject Markers

There are some discrepancies between the three main modern published descriptions of Sáliba as shown in Tables 63, 64 and 65 below.²⁰⁹

TABLE 63 Sáliba according to Estrada Ramírez (1996:84)

Person	Singular	Plural
1	c-/-d-	t-/-t-
2	k ^w -/k-/-g-	k ^w -/k-/-g -do
3.MASC	Ø-/h-	h-
3.FEM	x-	(collective)

TABLE 64 Sáliba according to Estrada Ramírez (2000:695)

Person	Singular	Plural
1	c-/-c-/-d-	t-/-t-
2	k ^w -/k-/-g-	k ^w -/k-/-g -do
3.MASC	Ø-/h-/-h-/ɲ	h-, -h-
3.FEM	x-/-x-	(collective)

TABLE 65 Sáliba according to Morse & Frank (1997:45)

Person	Singular	Plural
1	tʃ~d	t
2	k ^w ~g	k ^w ~g...ʔdo
3.MASC	Ø	h
3.FEM	x~h	

Firstly, the main difference between the descriptions of the Sáliba subject markers presented above is the number of affixes provided for each person, with Estrada

²⁰⁹ See the paragraph that immediately follows the tables for an explanation of the notations employed by Estrada Ramírez and Morse & Frank.

Ramírez giving two or three forms per each person (but one form for 3SG.FEM and 3PL in 1996, see below) while Morse & Frank (1997) give only one form for 3SG.MASC, 1PL, and 3PL. This difference, however, can be attributed to Morse & Frank's decision to not represent the fact that the markers are sometimes prefixes and other times suffixes (even though examples of both prefixes and suffixes can be found in their data). Estrada Ramírez (1996, 2000), on the other hand, indicates the prefixal vs. suffixal nature of the affixes by marking prefixes with a single (following) dash and suffixes with two dashes (one preceding and one following).

Secondly, there are two differences that are phonetic/phonological: 1) Morse & Frank describe the 1SG prefix as an affricate *tʃ*- and Estrada Ramírez as a stop *c*-, and 2) the form of the suffix that differentiates 2SG from 2PL is preglottalized for Morse & Frank but not for Estrada Ramírez. These differences could be attributed to the fact that Morse & Frank and Estrada Ramírez worked in two different locales²¹⁰ and that there might be some dialectal variation in the speech of these communities²¹¹ or they could be attributed to a difference in the researchers' auditory perception (and therefore the description) of these sounds.

²¹⁰ From 1993 to 2000, Estrada Ramírez worked with speakers from the Colombian Sáliba communities “*Paravare, El Duya, y San Juanito (Municipio Orocué)* [Paravare, El Duya, and San Juanito (Orocué Municipality)]” near the Meta River (Estrada Ramírez, 2005:601) while Nancy Morse and, before her, Taik Benaissa worked in Morichito, which is in the Hato Corozal Municipality (Colombia).

²¹¹ These differences between the speech of the different Orocué communities and the Morichito community are primarily phonetic/phonological but can also be lexical. See Estrada Ramírez (2005) for discussion of some of these differences.

Lastly, there is the addition of a number of affixes by Estrada Ramírez in Table 64 (as compared to Table 63). As noted before, there are only prefixal forms given for 3SG.MASC, 3SG.FEM and 3PL in the 1996 table but two in the 2000 one. This is a presentational issue: Estrada Ramírez (1996, 2000) argues that the prefixes are used with vowel-initial verb roots and the suffixes with consonant-initial verb roots.²¹² Therefore, each person has both prefix and suffix forms (including 3SG.MASC, 3SG.FEM and 3PL), the choice of them depending on the phonological shape of the root. More intriguing, however, is the addition of a *-c* suffix for 1SG and of a *ɲ* (with no dashes before or after) for 3SG.MASC. These two last affixes are treated in the following section where I describe the Sáliba subject marking system by means of examples and attempt to account for some of the differences between the different descriptions of the system.

10.1.3.2 Marking (Human) Animate Subjects in Sáliba

No full verb paradigm is available for Sáliba in Estrada Ramírez (1996, 2000) or Morse & Frank (1997) but examples are provided below for each person in both singular and plural. The order of presentation is 1SG, 1PL, 2SG, 2PL, 3SG.MASC, 3SG.FEM and finally

²¹² According to Estrada Ramírez (1996:114-115), there is at least one exception to this (See her examples 4.53e-h): the verb ‘to say’ starts with a vowel but still takes a suffix (iii), arguably to differentiate from the verb ‘to sleep’ (iv):

(iii) <i>a-x-a</i>	(iv) <i>x-a-a</i>
say-3SF.FEM-REAL	3SG.FEM-sleep- REAL
‘she says’	‘she sleeps’

Close inspection of the Sáliba verbs in Estrada (1996, 2000) and Morse & Frank (1997) suggests to me that affix selection (and hence class membership) is based on the final sound of the root and not its initial sound as it is in Mako and (possibly) in Piaroa (see discussion in §10.1.2). However, there seem to be a few exceptions to this generalization. More research on Sáliba is needed to be able to support this claim.

3PL. I discuss the main differences between the Sáliba system and the Mako and Piaroa systems as I go along (as well as some of the discrepancies mentioned in §10.1.3.1 for Sáliba).

Estrada Ramírez (1996:29) says that there is an alternation /c/ ~ /d/ (the /c/ being a palatal voiceless stop) for the 1SG and that that alternation is conditioned as follows: /c/ can occur as a prefix with vowel-initial verb roots (5)²¹³ and as a suffix with dissyllabic consonant-initial verb roots (6), but it becomes a /d/ when it occurs with monosyllabic consonant-initial verb roots (7).

- (5) *c-om-a*
1SG-come-REAL
‘I come’
(Estrada Ramírez, 2000:695)

- (6) *maɲu-c-a*
work-1SG-REAL
‘I worked/work’

(Estrada Ramírez, 1996:29)

- (7) *gu-d-a*
walk-1SG-REAL
‘I walk’, ‘I go’

(Estrada Ramírez, 2000:695)

The difference between Estrada Ramírez’s descriptions and Morse & Frank’s (1997) is that Morse & Frank give the voiceless affricate /tʃ/ as the form of the prefix and they

²¹³ I have reglossed Estrada Ramírez’s examples and added an English translation. In all cases, I have done my best to stay close to the original gloss and translation given by this author.

make no mention of—nor provide any examples for—there being a suffix with the same phonological form. For 1PL, however, both agree that the verb is marked with a prefix /t/ (8) or a suffix /t/ (9).

- (8) *ũku-gi hĩsi-gi t-ik^w-a*
 2sg-SOC 1SG-SOC 1PL-eat-REAL
 ‘you and I eat’

(Estrada Ramírez, 1996:120)

- (9) *deo-t-in-a*
 fat-1PL-DUR-REAL
 ‘we are getting fat’

(Estrada Ramírez, 1996:147)

Estrada Ramírez (1996:29-30) says that the choice of marker for the second person is phonologically conditioned and that the difference between SG and PL is the absence vs. presence of the suffix *-do*. The phonological conditioning is as follows: a /k/ stays a /k/ with vowel-initial verb roots that start with a back vowel (o, u), as in (10) and (13), but occurs as a labialized voiceless velar stop /k^w/ prefix with vowel-initial verb roots that start with a front vowel (i, e, a) and as a labialized voiceless velar stop /k^w/ suffix with monosyllabic consonant-initial verb roots, as in (11) and (14). Dissyllabic verb roots take a voiced velar suffix /g/, as in (12) and (15).

- (10) *k-om-a-ga*
 2SG-venir-?-VIRT
 ‘you [SG] will come’

- (11) *gu-k^w-in-a*
 walk-2SG-DUR-REAL
 ‘you [SG] were walking’

- (12) *maɲu-g-a*
 work-2SG-REAL
 ‘you [SG] work/worked’
- (13) *k-om-a-gã-do*
 2PL-come-?-VIRT-2PL
 ‘you [PL] will come’
- (14) *gu-kʷ-in-ã-do*
 walk-2PL-DUR-REAL-2PL
 ‘you [PL] are walking’
- (15) *maɲu-g-ã-do*
 work-2PL-REAL-2PL
 ‘you [PL] work/worked’

Estrada Ramírez (1996:29-30)

No examples of the prefix *kʷ-* are given but presumably it could occur with the verb ‘to eat’: #*kʷ-ikʷ-a* 2SG-eat-REAL ‘you [SG] eat’ and #*kʷ-ikʷ-ã-do* 2PL-eat-REAL-2PL ‘you [PL] eat’ (The hashtag here represents that the form is not attested in the available data but rather has been constructed by me based on the rules provided by Estrada Ramírez.). The attested form for the singular, however, is *k-ukʷ-a* ‘you [SG] eat’ (Estrada Ramírez, 2000:48). Additionally, Tables 63 and 64 above are missing the labialized suffixal allomorph *-kʷ* for singular and the combination *-kʷ...-do* for plural that are present in examples (11) and (14). The primary difference between this description of 2SG and 2PL and Morse & Frank’s (1997) is that the latter do not include a non-labialized voiceless velar and that, as mentioned above, the suffix that differentiates 2SG from 2PL is preglottalized for Morse & Frank.

According to Estrada Ramírez (2000), 3SG.MASC is marked with either a \emptyset -prefix, a *h*-prefix, a *-h*-suffix or a *ɲ* affix (no dashes before or after given). However, Morse & Frank (1997) only give a \emptyset as the marker for 3SG.MASC. In Estrada Ramírez's data, the \emptyset allomorph occurs with both vowel-initial verb roots (16) and with monosyllabic consonant-initial verb roots (17). I have not come across any examples for 3SG.MASC that employ the prefix *h*-; the suffix *-h* is only employed in one example and that is given in (18) below (see possible alternative analysis below in §10.1.3.3).

- (16) *baba* *kaʔ-o* \emptyset -*omadiã-xa* *nẽẽ-di*
dad hat-CN.18 3SG.MASC-buy-3SG.FEM child-DAT
‘my dad bought the girl a hat’

(Estrada Ramírez, 2000:689)

- (17) *hũã* *gu- \emptyset -a* *duʒa-da* *suk^wa-nabeda*
Juan walk-3SG.MASC-REAL Duya-ABL town-ALL
‘Juan walks from Duya to Orocué’

(Estrada Ramírez, 2000:690)

- (18) *sa-h-e-a*
go_out-3SG.MASC-?-REAL
‘he went out/goes out’

(Estrada Ramírez, 1996:116)

I also have found no examples of the *ɲ* marker included in Table 64 for 3SG.MASC. In the only two examples I have found (exx. 4.73d and 4.75f in Estrada Ramírez (1996:137,140)), *ɲ* is glossed as 1SG and it agrees with a 1SG free pronoun as the example below shows:

- (19) *hĩsi hi-p-a-hã-gi gu-k^w-in-a-na*
 1SG see-1SG-?-?-2SG walk-2SG-DUR-REAL-?
 ‘I saw him [sic]²¹⁴ walking’

(Estrada Ramírez, 1996:137)

For Estrada Ramírez (1996, 2000), the 3SG.FEM subject is marked with either a *x*-prefix (20) or a *-x* suffix (21). Morse & Frank (1997), however, give a *h* as well as a *x* for 3SG.FEM. They explain that this is a phonologically-conditioned allophonic variation due to the impossibility of /x/ ever occurring word-initially, where it is pronounced as [h] (Morse & Frank, 1997:45:footnote 30).

- (20) *malia suk^w-a-da x-om-in-a*
 María town-ABL 3SG.FEM-come-DUR-REAL
 ‘María comes from town’

(Estrada Ramírez, 2000:690)

- (21) *malia hũã-di po-x-ã-di*
 María Juan-DAT hit-3SG.FEM-REAL-3SG.MASC
 ‘María hit Juan’

(Estrada Ramírez, 1996:93)

Estrada Ramírez (2000) gives a prefix *h-* and a suffix *-h* as markers for 3PL, which is in agreement with Morse & Frank’s (1997) description. Both affixes are exemplified in (22) and (23) below.

²¹⁴ The marker on the verb ‘to walk’ is the second person singular suffix *-k^w*, the Spanish translation provided is *lo vi caminando* ‘I saw him walking’ and thus suggests that the agent of ‘to walk’ and the object of ‘to see’ is a third person singular masculine *lo*. This is likely a translation mistake and the sentence actually means ‘I saw you walking’.

- (22) *hi-tu* *koha* *rĩ-h-a*
 DEM-CN.3a song sing-3PL-REAL
 ‘they sing’

(Estrada Ramírez, 2000:694)

- (23) *h-ik^w-in-ã*
 3PL-eat-PST-IND
 ‘they are eating’

(Morse & Frank, 1997:31)

Examples (24) through (29) below show that the Sáliba prefixes serve the function of marking nominal possession²¹⁵, just like they do in Mako, and in Piaroa in (3) and (4).

²¹⁵ Estrada Ramírez also shows examples where the suffixes *-d* (v-vi) and *-c* (vii) for 1SG can also be used to mark possession.

- | | |
|--|---|
| (v) <i>da-d-e</i>
grandparent-1SG-CL.1a
‘my grandfather’ | (vi) <i>da-d-o</i>
grandparent-1SG-CL.2b
‘my grandmother’ |
|--|---|

(Estrada Ramírez, 1996:85-86)

- (vii) *g^wã-c-e*
 brother-1SG-CL.1a
 ‘my older brother’

(Estrada Ramírez, 1996:58)

Examples (v) through (vii) seem to differ from what has been shown thus far for Piaroa and Mako, namely that only the markers in the prefix set can be used to mark nominal possession. However, Morse & Frank (1997:63-64) claim that *dã?do* is the vocative for grandmother and *dã?de* is the vocative for grandfather in Sáliba; the possessible forms they give for grandmother and grandfather are *ãso* and *ãse* respectively and as they show, these take prefixes to indicate the possessor (e.g., *ɬ-* for 1SG). For (vii), it seems to me that, if one compares this example with example (24), the morpheme break is likely to be *g^w-ãc-e* rather than *g^wã-c-e*, considering that the root *ac-* is used for ‘sister’ in (24). Example (vi) could then mean something like ‘your older brother’, where *g^w-* indicates a 2SG possessor. This analysis is not, however, unproblematic seeing as the second person labialized velar stop marker is always voiceless and not voiced as would be the case here. The form, however, does not appear in Morse & Frank’s (1997) list

- (24) *ɕ-ac-u*
1SG-sister-CN.2a
'my older sister'

(Estrada Ramírez, 1996:58)

- (25) *k^w-a-e*
2SG-father-CN.1a
'your [SG] father'

(Estrada Ramírez, 1996:85)

- (26) *k-o-xu*
2SG-mother-CN.2a
'your [SG] mother'

(Estrada Ramírez, 1996:85)

- (27) *h-a-e*²¹⁶
3SG.MASC-father-CN.1a
'his father'

(Estrada Ramírez, 1996:85)

- (28) *x-o-xu*
3SG.FEM-mother-CN.2a
'her mother'

(Estrada Ramírez, 1996:85)

of kinship terms: for 'older brother' they give the root *úm-* and show its possession paradigm with the prefix set (p. 66). The form given by Estrada Ramírez could perhaps be a vocative.

²¹⁶ Note that the *h-* could refer here to a 3PL possessor. See explanation below in §10.1.3.3.

- (29) *t-i-fu*
 1PL-head-CN.18
 ‘our heads’

(Estrada Ramírez, 1996:88)

Additional paradigmatic examples for the word ‘wife’ come from Morse & Frank (1997:65) and are provided below:

(30)		<u>SINGULAR</u>	<u>PLURAL</u>
	1	<i>tfěxǎxu</i>	<i>těxǎxu</i>
	2	<i>k^wěxǎxu</i>	<i>k^wěxǎxu?do</i>
	3.MASC	<i>ěxǎxu</i>	<i>hěxǎxu</i>

10.1.3.3 Summary

As the discussion in the preceding section indicates, the Sáliba data seems to come from a system that either needs a more in-depth description or that is more irregular and complex than the system I have described for Mako (Chapter 8 above, summarized here in §10.1.1) and that Mosonyi (2000) describes for Piaroa (discussed here in §10.1.2). For the sake of the comparison and reconstruction in §10.2, I am going to consider the following as quirks in the system or its description and put them aside for the time being until a better understanding of these complexities is reached:

- *-c/-tf* as a verbal 1SG suffix: As discussed above, Morse & Frank (1997) provide no examples of this and make no mention of the affricate ever following a root. In the published data from Estrada Ramírez, this suffix only occurs with the root *mapu-* ‘to work’ (and see how different this root is from Mako *otidĩ* ‘to work’ and Piaroa *aditĩ* ‘to work’); however, according to Estrada Ramírez (2013, pers. comm.) this is a frequent phenomenon. An example from the 18th century

grammar of Sáliba with no known author reproduced in M. M. Suárez (1977) supports the claim that the affricate/palatal stop prefix also occurs as a suffix when it provides the form *querecha* ‘I do/make’ for 1SG (p. 27). This quirk of the Sáliba person-marking grammar requires more research.

- *-g* for 2SG and *-g ... -do* for 2PL as suffixes for disyllabic verb roots: These are only shown by Estrada Ramírez with the verb *mapu-* ‘to work’ (remember how different this verb is from the Mako and Piaroa verbs for ‘to work’ *adit-* and *otid-* respectively) and the context given for them is consonant-initial disyllabic verbs. Morse & Frank (1997) agree with this distribution of the voiced second person allomorphs and provide some support for this claim with their example for ‘to carry’:

(31) *koko-g-á-di-g-ǎ*
 carry-2SG-carry-NEG-FUT-IND
 ‘You won’t be carrying’

(Morse & Frank, 1997:45:footnote 28)

If this is in fact the present-day context of *-g* and *-g ... -do*, these voiced suffixes may be the result of a recent sound change: 1) there is no voiced velar stop in either Mako or Piaroa and 2) the 18th century grammar mentioned above shows the following two-syllable verb with a voiceless second person suffix:

- (32) a. *querecua*²¹⁷ ‘you [SG] do/make’
 b. *querecuado* ‘you [PL] do/make’

(M. M. Suárez, 1977:27)

- *h-* and *-h* for 3SG.MASC: there are no examples of *h-* in Estrada Ramírez’s data for 3SG.MASC and Morse & Frank (1997) do not list a *h-* nor a *-h* for 3SG.MASC. So, perhaps, these could be better analyzed as part of the 3PL. A look at the 18th century grammar in M. M. Suárez (1977) seems to support this idea:

<u>3SG.MASC</u>	<u>3PL</u>
(33) a. <i>quereá</i>	b. <i>quereja</i> ‘to do or make’
c. <i>empá</i>	d. <i>jempo</i> ‘to carry or take’
e. <i>icha</i>	f. <i>jicha</i> ‘to give’
g. <i>omua</i>	h. <i>jomua</i> ‘to want’
i. <i>usdaqua</i>	j. <i>jiudaqua</i> ‘to carry or take’

(M. M. Suárez, 1977:27, 33, 35, 37-38, 40 respectively)

There seems to be only two counterexamples to this:

<u>3SG.MASC</u>	<u>3PL</u>
(34) a. <i>no jada</i>	b. <i>nojada</i> ‘to grab’
b. <i>pajá</i>	d. <i>pajá</i> ‘to say’

(M. M. Suárez, 1977:42, 43 respectively)

²¹⁷ The data in the 18th grammar reproduced in M. M. Suárez (1977) follows Spanish spelling conventions. For readers unfamiliar with Spanish consonant spelling conventions, the sequences <ca>, <co>, <cu> and <que>, <qui> and <ga>, <go>, <gu> and <gue>, <gui> represent the Spanish voiceless and voiced velar (respectively) plus a vowel; a <j> is always used for the glottal voiceless fricative /h/; and a <ch> is used for the voiceless affricate /tʃ/. Here, then, the <cu> possibly represents a /k^w/ or a sequence /kw/.

However, the 3SG.MASC present form for ‘to grab’ is alternatively given as *noada* (p. 42) and in the future it is given as ‘*noadacodise*’ (p. 43), where the *j* does not occur. There are no other third person forms for ‘to say’.

- *ɲ* for 3SG.MASC: There are no examples of it being used with a 3SG.MASC but Estrada Ramírez uses it with a 1SG (see (19)). The author has told me that this suffix occurs rarely in her data²¹⁸ and that more research is needed to understand its distribution (Estrada Ramírez, 2013, pers. comm).

Leaving out these markers and adding in the attested markers that were omitted from Table 63 and Table 64 (namely, the 2SG and 2PL *-k^w* and *-k^w...-do* in (11) and (14) and the 3SG.MASC *-Ø* suffix in (17)) as well as the possibility that the 1SG prefix marker is an affricate rather than a stop would give the following person marking system for Sáliba:

TABLE 66 Subject markers in Sáliba (modified)

Person	Singular		Plural	
	Prefix Set	Suffix Set	Prefix Set	Suffix Set
1	c- ~ tʃ-	-d	t-	-t
2	k ^w -/k-	-k ^w	k ^w -/k-...-do	-k ^w ...-do
3.FEM	Ø-	-Ø	h-	-h
3.MASC	x-	-x		

²¹⁸ She described it as “*muy muy raro* [very very rare]” and said that it “*aparece en muy pocos verbos* [appears in very few verbs]”.

10.2 Comparison and Reconstruction of the Sáliban Subject Markers

Thus far, I have shown the existence of two distinct strategies for marking animate subjects on the verb in all of the three generally-accepted Sáliban languages (i.e., Sáliba, Piaroa and Mako): one strategy consists of adding a prefix immediately before the verb root and a second strategy consists of adding a suffix immediately after the verb root. I turn now to the comparison of these strategies within languages and across languages as well as to the reconstruction of the Proto-Sáliban system.

Inspection of Table 61, Table 62 and Table 66 above reveal clear correspondences between the consonants in the two sets of person markers within each language. That same information is summarized here in Table 67 for ease of comparison.

TABLE 67 Marking of (human) animate subjects on the Sáliban verbs

	Mako		Piaroa		Sáliba	
	Prefix	Suffix	Prefix	Suffix	Prefix	Suffix
1SG	tʃ(V)-	-t	tʃ-	-d	c- ~ tʃ-	-d
2SG	kʷ(V)-	-kʷ/-kɪb	kʷ-	-kʷ	kʷ-/k-	-kʷ
3SG.MASC	(V)-	-Ø	Ø-	-ʔ	Ø-	-Ø
3SG.FEM	h(V)-	-h	kʰ -	-h	x-	-x
1PL	d(V)-	-d	t-	-t	t-	-t
2PL	kʷ(V)-...-adu	-kʷ/-kɪb...-adu	kʷ-	-kʷ	kʷ-/k-...-do	-kʷ...-do
3PL	tʰ(V)-	tʰ-	tʰ-	-tʰ	h-	-h-

The major difference between the forms in the two sets concerns the 1SG markers:

Mako *tʃ-* vs. *-t*, Piaroa *tʃ-* vs. *-d*, and Sáliba *c-* or *tʃ-* vs. *-d*. The other two differences are found within Piaroa where the 3SG.MASC prefix is precisely the lack of a consonant while the suffix is a glottal stop and the 3SG.FEM prefix is an aspirated voiceless velar

stop and the suffix is a glottal fricative. I do not have a plausible explanation for the within-language correspondence *tf:t* in Mako, *tf:d* in Piaroa and *c~tf:d* in Sáliba but a look at the comparative evidence for sound correspondences between the consonants of each affix shed some light on the alternations with 3SG.MASC and 3SG.FEM in Piaroa. I turn to this evidence now.

Tables 68 and 69 present the two set of markers across languages as well as provide reconstructed protoforms (penultimate column) for the consonants in each of the subject marking affixes; these are based on the observed sound correspondences (last column) and the lexical data presented below.

TABLE 68 Marking of (human) animate subjects on the Sáliban verbs: Prefix sets

	Prefix Set				Sound
	Mako	Piaroa	Sáliba	Proto-Sáliban	Correspondence
1SG	tf(V)-	tf-	c- ~ tf-	* tf-	tf:tf:c~tf
2SG	k ^w (V)-	k ^w -	k ^w -/k-	*k ^(w) -	k ^w : k ^w : k ^w /k
3SG.MASC	(V)-	Ø-	Ø-	*Ø-	Ø:Ø:Ø
3SG.FEM	h(V)-	k ^h -	x-	*k ^h -	h:k ^h :x
1PL	d(V)-	t-	t-	*t-	d:t:t
2PL	k ^w (V)-...-adu	k ^w -	k ^w -/k- ... -do	*k ^w -	k ^w : k ^w : k ^w /k
3PL	t ^h (V)-	t ^h -	h-	*t ^h -	t ^h :t ^h :h

TABLE 69 Marking of (human) animate subjects on the Sáliban verbs: Suffix sets

	Suffix Set				Sound correspondence
	Mako	Piaroa	Sáliba	Proto-Sáliban	
1SG	-t	-d	-d	*-d	t:d:d
2SG	-k ^(w) /-kib	-k ^w	-k ^w	*-k ^w	k ^(w) /k:k ^w :k ^w
3SG.MASC	-Ø	-ʔ	-Ø	*-Ø	Ø:ʔ:Ø
3SG.FEM	-h	-h	-x	*-k ^h	h:h:x
1PL	-d	-t	-t	*-t	d:t:t
2PL	-k ^(w) /-kib...-adu	-k ^w	-k ^w ...-do	*-k ^w	k ^(w) /k:k ^w :k ^w
3PL	-t ^h	-t ^h	-h	*-t ^h	t ^h :t ^h :h

I explore next some of the sound correspondences observed and show that they are in fact the result of regular sound changes,²¹⁹ thus allowing the verification of the reconstructed Proto-Sáliban forms offered above for both sets of affixes.

For the correspondence tʃ:tʃ:c~tʃ (1SG, prefix set), the only difference lies in the possibility of the Sáliba marker being a plain stop /c/ as Estrada Ramírez (1996, 2000) describes it. However, this sound is described as an affricate by both Benaissa (1979) and Morse & Frank (1997). A phonetic study is needed to settle this question but I think it safe to say that the 1SG prefixes are cognate.

²¹⁹ The cognate lexical sets offered in this section come primarily from a comparison of the Swadesh list data in Estrada Ramírez (2000) and Mosonyi (2000) and a similar Swadesh list collected from a Mako speaker by me in June 2013. To a lesser extent, I have supplemented this comparison with data in M. M. Suárez (1977) and Benaissa (1991). A more systematic comparison of more materials is likely to yield better results but I trust the number of cognates given here will convince the skeptical comparativist.

Some of the cognates were identified using the software RefLex:

<https://sites.google.com/site/referencelexicon/> .

Except for the plural markers *-adu* in Mako and *-do* in Sáliba (which are not the object of the comparison and reconstruction offered here), the markers for 2SG and 2PL in the prefix sets are not only cognate but they are almost identical as shown by the consonant sound correspondence $k^{(w)}:k^w:k^w/k$ and the same goes for the suffixes whose consonant sound correspondence is $k^{(w)}/k:k^w:k^w/k$.

The forms for 3SG.MASC are also almost identical too: The prefix sets show the correspondence $\emptyset:\emptyset:\emptyset$ while the suffix sets show the correspondence $\emptyset:ʔ:\emptyset$. I suspect the glottal stop in the Piaroa 3SG.MASC suffix might be a transcription error but further research is needed here and possibly some acoustic data to clarify the question.

As for the 3PL markers in both the prefix and the suffix sets, the only difference in the sound correspondence—i.e., Piaroa and Mako $/t^h/$ vs. Sáliba $/h/$ —requires further research since the Piaroa and Mako $/t^h/$ seem to occur in a very small number of lexical items outside of the verb system, e.g., only six times in the Piaroa Swadesh list offered by Mosonyi (2000) and none of the words that contain them have cognates in Sáliba according to the list in Estrada Ramírez (2000).²²⁰ However, a change from Proto-

²²⁰ The table below shows the six items from Mosonyi (2000) that include an aspirated voiceless alveolar stop and the Sáliba items that share their meaning provided by Estrada Ramírez (2000) [Translations of the glosses into English for both Mosonyi's and Estrada's data are mine.]. As can be seen, there are no cognates for any of the six items between Sáliba and Piaroa. In the last column, I present the corresponding data elicited by me for Mako. The only correspondence is for the form for 'I' between Mako and Piaroa.

Sáliba (Estrada, 2000)			Piaroa (Mosonyi, 2000)			Mako	
9	because	/ameta/	8	because	[-aʔat ^h i]	--	--
84	as	/ameha/	75	how?	[t ^h ãʔãni]	how?	[daik ^w i]
38	I	/hĩsi/	78	how?	[t ^h i]	I	[it ^h i]

Sáliban /t^h/ to Sáliban /h/ would not be unlikely; there are a number of cross-linguistic examples for debuccalization of aspirated stops.²²¹

The biggest differences are in the 3SG.FEM affixes (sound correspondence h:k^h:x for the prefixes and h:h:x for the suffixes) and in the 1SG prefixes and the 1PL prefixes and suffixes (t:d:d and d:t:t respectively). There is, however, evidence that these differences are the result of regular sound changes in the languages' lexica. For the first set of sound correspondences, there is:

(35) h:k^h:x (3SG.FEM, Prefix Set)

Mako	Piaroa	Sáliba	
[<u>h</u> amati]	[<u>k</u> ^h ãmadĩ]	--	'to stand up'
[<u>h</u> ãni]	[<u>k</u> ^h ĩ]	--	'to live'
[<u>h</u> ãwõ]	[<u>k</u> ^h ãwã]	/hohote/	'sun'
[<u>h</u> ibebi]	[<u>k</u> ^h i?opu]	--	'to push'
[<u>h</u> alawi] ²²²	[<u>k</u> ^h æri]	--	'to turn around'

(fieldwork : Mosonyi 2000, pp. 666-668: Estrada Ramírez 2000, pp. 700-702)

[<u>h</u> ana]	[<u>k</u> ^h ana]	< <i>jana</i> >	'pineapple'
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(fieldwork : fieldwork : Benaissa, 1991, p.81)

90	if (cond)	--	80	if	[-t ^h imæ]	--	--
102	liver	/odode/	91	liver	[tʃat ^h ijæ]	liver	[ok ^w eheba]
123	person	/hoho/	111	person	[t ^h ihã ãsã]	person	[hoho]
	--	--	132	sew	[t ^h i?i]	sew	[nibi]

²²¹ Including the debuccalization of Proto-Saliban /k^h/ to present-day Mako /h/. See examples below in (36).

²²² The /aw/ sequence in this form is a suffix: compare *diffĩ* 'to wash' and *diffawi* 'to wash oneself'

If we then look for the sound correspondence between the suffixes, namely h:h:x, the next set of words could be used as supporting cognates:

(36) h:h:x (3SG.FEM, Suffix Set)

<u>Mako</u>	<u>Piaroa</u>	<u>Sáliba</u>	
[mĩlẽ <u>h</u> ẽ]	[morõlẽ <u>h</u> ẽ]	[sẽ <u>x</u> ẽ]	‘sky’ ²²³
[itsu <u>h</u> u]	[isa <u>h</u> u]	[na <u>x</u> u]	‘woman’ ²²⁴

(fieldwork : Mosonyi, 2000, p.667 : Estrada Ramírez 2000, pp. 700-702)

Additionally, there is evidence for the prefix *x*- and the suffix *-x* in Sáliba having been a velar stop-like sound at some point in the language’s history. The 18th century grammar published in M. M. Suárez (1977) shows the following forms for 3SG.FEM in the paradigms of the verbs such as ‘to carry or take’ and ‘to want’, both of which take a prefix *K*- (37); and in the paradigms of the verbs ‘to do or to make’ and ‘to say’, both of which take a suffix *-K* (38):

- (37) a. *Kempa* ‘she carries/takes’
b. *Komua* ‘she wants’

(M. M. Suárez, 1977:33, 37)

- (38) a. *paKá* ‘she says’
b. *quere Ká* ‘she does/makes’

(M. M. Suárez, 1977:27, 43)

Furthermore, this <K> could be argued to be aspirated or at least somehow different from a plain (unaspirated) voiceless velar since the orthography employed by the author

²²³ The Mako and Piaroa words are composite: e.g, in Mako *mĩ* ‘high’ + *lẽhẽ* ‘soil, ground’ and see the Piaroa word for ‘land’ in (4) (§10.1.2). The word *sẽxẽ* in Sáliba also means ‘soil, ground’ according to Estrada Ramírez (2012:542).

²²⁴ The Sáliba form seems to not be cognate with the Piaroa and Mako form but the focus here is on the *hu:hu:yu*, a cognate suffix in all three languages that is used to indicate ‘feminine’.

of this grammar already uses the Spanish spelling for a voiceless velar stop <c> or <qu>²²⁵ in other lexical items; for example in the first syllable of the verb ‘to do/make’ in (32). Synchronic variation in Piaroa lends support to the idea of fricativization of the Proto-Sáliban aspirated voiceless velar stop: this consonant is allophonically “released with an especially noisy quality, occasionally approaching a voiceless velar affricated stop [k^x] or, in allegro speech, a voiceless velar fricative [x]” (Krute, 1989:44).

A reconstructed **k^h* for Proto-Sáliban and the fact that its Mako reflex is *h* helps to explain the fact that in Piaroa the 3SG.FEM prefix is *k^h*- but the suffix is *-h*. This could be the result of a language internal sound change (that Mako took a step further and applied to word-initial contexts as well).

For the sound correspondences t:d:d (1SG, Suffix Set) and d:t:t (1PL, Prefix Set and Suffix Set), the lexical evidence in the wordlists examined is more robust as shown in (39) and (40) below:

(39) t:d:d (1SG, Suffix Set)

<u>Mako</u>	<u>Piaroa</u>	<u>Sáliba</u>	
[tebo]	[deʔa]	--	‘woods’
[tubi]	[duaʔa]	/dua/	‘hot’ ²²⁶
[tijua]	[dijawaʔa]	/dia/	‘cold’
[ti]	[di]	/ãdiha/	‘who?’
[tahi]	[dæhe]	/ãdaha/	‘what?’
[towi]	[dau]	--	‘tree’

²²⁵ See footnote 217 above for an explanation of Spanish spelling conventions.

²²⁶ Possibly [duwobe] vs. [tũãʔã] vs. /dua/ ‘red (yellow)’ and [dẽwĩ] vs. [teʔa] vs. /dea/ ‘white’ as well.

[i <u>t</u> ebia]	[tʃi <u>d</u> epæ]	/d <u>e</u> a/	‘meat’
[bi <u>t</u> e]	[pi <u>d</u> e]	/pi <u>d</u> i/	‘this’
[omuk ^w a <u>t</u> i]	[amuk ^w æ <u>d</u> i]	--	‘to think’
[o <u>t</u> iwaŋō]	[a <u>d</u> iwaŋa]	--	‘good’
[ɕ <u>t</u> i]	[jɾ <u>d</u> ɾ]	--	‘night’
[hamat <u>i</u>]	[k ^h ãma <u>d</u> i]	--	‘to stand up’
[o <u>t</u> idi]	[a <u>d</u> iti]	--	‘to work’
[e <u>t</u> ek ^w awi]	[e <u>d</u> ēku]	--	‘to vomit’

(fieldwork : Mosonyi 2000, pp. 666-668: Estrada Ramírez 2000, pp. 700-702)

(40) d:t:t (1PL, Prefix Set & Suffix Set)

<u>Mako</u>	<u>Piaroa</u>	<u>Sáliba</u>	
[<u>d</u> ena]	[tɾ]	/t <u>e</u> naha/	‘where?’
[i <u>d</u> i]	[h ^w a <u>t</u> i]	--	‘they’
[i <u>d</u> i]	[ɾtɾ]	/o <u>t</u> o/	‘far’
[oti <u>d</u> i]	[adi <u>t</u> i]	--	‘to work’

(fieldwork : Mosonyi 2000, pp. 666-668: Estrada Ramírez 2000, pp. 700-702)

[<u>d</u> uwo]	[t <u>u</u> wa]	--	‘paca (a certain rodent)’
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(fieldwork : Zent, n.d, p.2 : --)

As shown above in §10.1.1 through §10.1.3, all three Sáliban languages employ both prefixes and suffixes to mark the animate subject of a verb, which allows the division of the verbs in each of the languages into two verb classes (Class I for verbs that take prefixes and Class II for those that take suffixes). Additionally and as shown in this section, the subject markers are all cognate and, therefore, the reflex of an older system, i.e., the Proto-Sáliban system. These two facts allow positing that these two verb classes were already present in Proto-Sáliban but further evidence needs to be marshalled to support this claim. I hypothesize that if the Class II verbs were already present in the protolanguage, the *-b* suffix in the Mako non-finite form of the verbs should also be

reconstructable. I proceed to the reconstruction of this marker and two verb classes for Proto-Sáliban in the next section.

10.3 Reconstruction of the Proto-Sáliban Verb Classes

As shown in Chapter 7, Section 7.2.1.1.1.2, the Mako Class II verbs take a *-b* suffix in the non-finite form and this suffix is “substituted” in the finite forms with the animate subject suffixes. In Piaroa, however, what gets “substituted” in the non-finite form is the glottal stop (see discussion in §10.1.2 regarding the non-finite form of ‘to say’ *pæʔi*). Mosonyi (2000:666-668) offers a few other verbs with an intervocalic glottal stop in their non-finite form as part of his elicited Swadesh list. I show in (41) the Mako cognates for four of them—all of which show the correspondence *b:ʔ*—and show with the last two etyma that the corresponding sound in Sáliba is a *p*.

(41)	<u>Mako</u>	<u>Piaroa</u>	<u>Sáliba</u>	
	[k i <u>b</u> i]	[kʷ ʔ i]	--	‘to fly’
	[a b i]	[æ ʔ i]	--	‘to sleep’
	[hi b ebi]	[k ^h i ʔ opu]	--	‘to push’
	[p ^h u b i]	[p ^h u ʔ u]	[hu p e]	‘to blow’
	[tsu b i]	--	[su p e]	‘to spit’

(fieldwork : Mosonyi 2000, p.666-667 : Estrada Ramírez 2000, pp. 700-702)

There is also lexical evidence for this correspondence outside of the verb system; said evidence supports the claim that *p* is the corresponding Sáliba sound of Mako intervocalic *b* and Piaroa *ʔ* (42):

(42) b:ʔ:p (word-medially)

<u>Mako</u>	<u>Piaroa</u>	<u>Sáliba</u>	
[tʰi b ahale]	[tʃiʔæhære]	/p a hute/	‘eye’
[te b o]	[deʔa]	--	‘woods’
[itsã b ũ]	[æʔu]	[sebap u]	‘flower.CL’ ²²⁷

(fieldwork : Mosonyi 2000, pp. 666-668 : Estrada Ramírez 2000, pp. 700-702)

[kɪ b o]	[kuʔa]	[kup o]	‘alligator’
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(fieldwork : fieldwork : Estrada Ramírez 2000, p.683)

The question remains of whether the *p* in the Sáliba verb forms in (41) can be shown to be a separate morpheme and if so, whether such a morpheme adds a non-finite meaning to the verb form in which it occurs. The non-finite form of the Sáliba verb has not been investigated in depth (Estrada Ramírez, 2013, pers. comm.). However, Morse & Frank (1997) give a few examples of non-finite verb forms with a *p* marker that they call “*sustantivizador*” [nominalizer].

(43) *φé-p-ad-o*

sweep-NOM-sweep-FEM
‘she who sweeps’

(44) *φé-p-ad-e*

sweep-NOM-sweep-MASC
‘he who sweeps’

²²⁷ The first part of these forms seems to not be cognate but the focus here is on the *bu:ʔu:pu*, a cognate classifier in all three languages.

- (45) *φé-p-ad-a?du*
 sweep-NOM-sweep-PL
 ‘they who sweep’

(Morse & Frank, 1997:37)

This evidence supports the existence of a suffix in the non-finite form of the Proto-Sáliban Class II verbs, whose form I posit to be **-p*. The evidence in support of the voiceless bilabial stop as the proto-form for this suffix comes from the regular sound correspondence between the three languages and from the voicing contrast in the correspondences t:d:d and d:t:t discussed and exemplified above.

The regular sound correspondence for the Class II non-finite verb form marker in the present-day Sáliban languages is b:?:p but this does not hold word-initially. As the following examples show, the correspondence is b:p:p word-initially.

- (46) b:p:p (word-initially)
- | <u>Mako</u> | <u>Piaroa</u> | <u>Sáliba</u> | |
|-----------------|-----------------|---------------|--------|
| [<u>b</u> ãĩ] | [<u>p</u> ĩĩ] | /pahĩdi/ | ‘fish’ |
| [<u>b</u> ena] | [<u>p</u> ene] | /pena/ | ‘here’ |
| [<u>b</u> ite] | [<u>p</u> ide] | /pidi/ | ‘this’ |

(fieldwork : Mosonyi 2000, pp. 666-668 : Estrada Ramírez 2000, pp. 700-702)

If the correspondences t:d:d and d:t:t in (39) and (40) above are considered alongside the b:p:p correspondence in (46), a **p* seems to be justified as the proto-form for the Class II non-finite form ‘place-holder’ suffix.²²⁸

²²⁸ More research is needed here but I hypothesize that Mako underwent a voicing sound change that affected all of its voiceless stops including the glottalic ones (except for /k/), whereby Proto-Sáliban /p/ > /b/, /t/ > /d/, /pʔ/ > /bʔ/, /tʔ/ > /dʔ/, and /tʃʔ/ > /dʃʔ/. This in turn must have affected the former

10.4 Conclusions

As discussed above as well as in Chapter 1, §1.2, the Sáliban languages have been variably classified in the literature but there seems to be a consensus for the inclusion of three languages: Sáliba, Piaroa and Mako. This consensus rests on the evidence supplied by Rivet (1920), Loutkotka (1949) and Estrada Ramírez (2008, 2012) and perhaps to a lesser extent on Humboldt (1824), Koch-Grünberg (1913) and Hammarström (2011). All these authors, however, have only pointed out resemblances among items in short wordlists and no regular sound changes have been identified or any reconstruction (lexical or grammatical) has been done to date, which has arguably led some to not recognize the genetic link between these languages (e.g., Mosonyi (2003:103ff) says the languages are unclassified and Aikhenvald (2012:123) treats Sáliba and Piaroa as isolates).

However, the investigation of the subject-marking system of these languages presented here, based on recently published sources for Sáliba and Piaroa and on fieldwork data for Mako, shows that there are two distinct classes of verbs (Class I & Class II) in all three languages and that these classes can be distinguished based on the existence of two distinct slots for marking a (human) animate subject: one prefixal (Class I), the other one suffixal (Class II). Additionally, the prefix set of markers can also be used to mark nominal possession in all three languages. To this, we need to add the fact that

voiced stops /b/ and /d/ which then turned into /p/ and /t/ to preserve their “distinctiveness”. A systematic lexical comparison between the three languages will shed light on this hypothesis.

both sets of affixes show clear sound correspondences in their initial consonants and that these correspondences are the product of regular sound changes, and therefore, reflexes of an older system, i.e., the system of a common ancestor to Sáliba, Piaroa and Mako (= Proto-Sáliban).

The existence of these two distinct animate subject marker sets in Proto-Sáliban and the reconstruction of a proto-suffix for the non-finite forms of Class II verbs, i.e., *-*p*, shows that the two verb classes were also part of Proto-Sáliban.

The facts that 1) complete paradigms, and especially person paradigms, are among the least likely grammatical phenomena to be borrowed cross-linguistically—thus constituting one of “the surest indicators of a genetic relationship” (Dixon, 1997:22)—and 2) the system of verbal animate subject markers reconstructed here is idiosyncratic enough to not be easily explainable as the product of borrowing/diffusion (cf. Campbell (2008)) provide strong evidence for the “relatedness” of the Sáliban languages.

Chapter 11

11 Conclusions

In the preceding chapters, I have presented and summarized the results of my Mako documentation and description project. The key goals of this research were 1) to document the Mako language as it is used by its speakers in the Mako communities along the Ventuari River, 2) to assess the vitality of the language, 3) to describe the grammar of the language, and 4) to provide evidence for the classification of Mako as a Sáliban language. In this final chapter, I would like to highlight those characteristics that Mako shares with other Amazonian languages and suggest a possible source for the diffusion of such shared features.

11.1 Mako as an Amazonian Language²²⁹

In 1986, Desmond Derbyshire and Geoffrey Pullum are the first to suggest the existence of an Amazonian linguistic area (see Derbyshire & Pullum (1986:1)). In 1987, Derbyshire discusses more in-depth a number of morphosyntactic similarities between several genetically-unrelated Amazonian language families and isolates thus providing evidence in support of Amazonia as a linguistic area (see Derbyshire (1987)). A number of other researchers would shortly thereafter provide additional evidence for this claim (see David Payne (1990), Derbyshire & (Doris) Payne (1990), and (Doris) Payne

²²⁹ Amazonia is defined here as the lowland and forest areas of the Guianas and Venezuela, Eastern Bolivia, Colombia, Ecuador, Peru and the North and center of Brazil; in other words, the lands that are part of the Amazon and Orinoco river basins.

(1990)). All of the above authors agree in that, although the observed similarities point to the existence of an Amazonian linguistic area, it is hard to demonstrate that the bilingualism/multilingualism and sustained contact conditions necessary for the diffusion of linguistic traits among non-related languages and language families ever existed in the region. It is possible that this resulted in other researchers adopting a narrower focus when looking at possible areal features of Amazonian languages, thus focusing on smaller areas—such as the Vaupés (see Aikhenvald (1996, 1999, 2002), among others), the region between the Napo, Putumayo, Amazonas, Marañón and Ucayali Rivers (see Doris Payne (1987), Doris Payne & Seifart (2007)), the Xingu National Park (see Seki (1999)) and, more recently, the region between the Guaporé and Mamoré rivers (see Crevels & van der Voort (2011))—for which it is easier to argue that the commonalities observed are the result of a diffusion process due to sustained contact among the speakers of the languages spoken in these areas.

Regardless of whether sustained contact and extensive bilingualism/multilingualism can be demonstrated for the Amazon as a whole, there is agreement in the literature regarding the existence of a number of linguistic traits that are shared across Amazonia (as opposed, for example, to the Andes) and what these traits are. In the sections that follow, I take the list of Amazonian language traits in van Gijn (2014)²³⁰ and discuss the absence or presence of each trait in Mako.

²³⁰ There are a number of lists of proposed shared Amazonian traits (e.g., Payne (1990), Derbyshire (1987), among others); I choose van Gijn (2014) because the list this author proposes takes into account all the previous proposed lists. Given that van Gijn tries to distinguish between Andean and Amazonian languages, some traits in the tables below are positive (e.g., presence of a high central vowel) and some

11.1.1 Phonology

The phonology features that are shared among Amazonian languages are summarized here in Table 70.

TABLE 70 The phonological features (adapted from van Gijn (2014:111))

Feature	AMZ	MAKO
1 Central high vowel	Y	Y
2 Phonemic mid vowels	Y	Y
3 Contrastive vowel nasalization	Y	Y
4 Palatal nasal	N	N
5 Velar–uvular opposition for stops	N	N
6 Retroflex affricates	N	N
7 More Affricates than fricatives	Y	Y
8 Single liquid phoneme	Y	Y
9 Closed syllables	A (0-30)	A (0)
10 Nasal spread	Y	Y
11 Glottalized stops (Peru, Bolivia)	N	Y
12 Aspirated stops (Peru, Bolivia)	N	Y

Mako presents all three Amazonian traits pertaining to vowels: the Mako vowel system includes a high central vowel /i/, it also includes two phonemic mid-vowels /e/ and /o/, and it has contrastive nasal vowels.

With respect to consonants, Mako shows some Amazonian traits and some that are not typically Amazonian. First, the language has no phonemic palatal nasal—although as we saw in Chapter 4, there is a phonetic palatal nasal—, there is no velar-uvular opposition for stops and there are no retroflex affricates. These are all Amazonian traits. With

are negative (e.g., absence of a palatal nasal). Other traits like “closed syllables” are quantifiable and therefore the author proposes grades based on percentages, for example in this case he proposes A if zero to 30% of consonants can appear in coda position, B if 30 to 60% and C if 60 to 90%.

respect to the number of affricates being higher than the number of fricatives and to the number of liquid phonemes (a single one), Mako shows a typical Amazonian profile: there are three affricates /tʃ/, /ts/, and /ɖʒ/ but only one fricative /h/²³¹ and there is a single liquid phoneme /l/—remember that the tap only occurs intervocally in front of /i/. Where Mako does not behave as other Amazonian languages is in the presence of both glottalized and aspirated stops. As discussed above (Chapter 4, §4.2), Mako has aspirated /p^h/ and /t^h/ and glottalized /^ʔb/, /^ʔd/, and /^ʔɖʒ/.

The presence of glottalized voiced stops is in fact an interesting typological feature of Mako. Glottalized resonants are cross-linguistically rare (Maddieson, 1984b, 2013; Ladefoged & Maddieson, 1996; Gordon & Ladefoged, 2001): for example, in a sample of 567 languages used in the *World Atlas of Linguistic Structures* (Dryer & Haspelmath, 2013), only 29 languages have this type of sound; the majority of these languages can be found in the Americas (20/29) (Maddieson 2013). In the Amazon, outside of Saliban, glottalized resonants have been described for Nadahup (see Epps (2008) for Hup and Martins (2004) for Dâw) and Chapacuran (see Everett & Kern (1997) for Wari' and Angenot-de-Lima (2002) for Moré). Contact between these languages is not attested today and the present-day location of the groups (Mako and the other two Sáliban languages on the Orinoco/Ventuari Rivers, Nadahup on the Vaupés and Chapacuran on the border between the Brazilian State of Rondonia and Bolivia)

²³¹ The presence of a /h/ as the only fricative in the language goes against the statistical universal that “if a language has a single fricative, it is most likely a sibilant” (Maddieson, 1984a). As we saw above (Chapter 4, §4.2.6), however, the /h/ comes from *k^h.

makes Nadahup-Sáliban contact in the past more likely than contact between Sáliban or Nadahup and Chapacuran, whose proto-home is believed to have been near the region where they are today (Birchall, pers. comm.)

The other two phonological characteristics relevant for the Amazonian linguistic area are a small number of consonants allowed as codas and the presence of nasal spread. Mako presents both of these characteristics. In fact, Mako does not allow codas at all. Nasal spread is, as we have seen, part of plural formation for animate nouns.

11.1.2 Morphosyntax

Table 71 summarizes the morphosyntactic features that have been considered as definitional for an Amazonian linguistic area. Each one is discussed in turn below.

TABLE 71 The morphosyntactic features (adapted from van Gijn (2014:114))

Feature	AMZ	MAKO
13 Pronominal prefixes	Y	Y
14 Isomorphism of possessor and core verbal argument person markers	Y	Y
15 Elaborate case marking system.	A (0-4)	A (4)
16 Core case	N	N
17 Accusative alignment in simple clauses	N	Y
18 Dependent marking for possession	N	N
19 Classifier or gender systems	Y	Y

Mako only makes use of prefixes to mark the possessor on a possessed noun and to mark the subject of Class I verbs and, in fact, there is isomorphism between these two sets of prefixes. Like other Amazonian languages, Mako does not present an elaborate case-marking system since it only has four case markers (namely, *-ni* ‘NON.SUBJ’, *-k^{wi}* ‘SOC’, *-be* ‘ALL’ and *-k^{wi}* ‘VEN’), none of which marks a core case (defined by van Gijn (2014) as nominative and accusative or ergative and absolutive).

Mako differs from other Amazonian languages in that simple clauses follow a nominative-accusative alignment pattern. Ergativity in simple clauses is a feature of the Cariban, Macro-Jê, and Tupian language families as well as of languages from smaller language families (e.g., Tacanan) and some isolates (e.g., Trumai) (Queixalós & Gildea, 2010). Unlike these languages, Mako main clause grammar is nominative-accusative as shown by subject marking on the verb where both S and A are cross-referenced via a set of prefixes (Class I) or suffixes (Class II).

The last two remaining morphosyntactic features in Table 71 are dependent marking for possession and classifier or gender systems. Mako marks possession on the possessed (head-marking) and has a complex system of noun classification that includes both classifiers (gender and shape classifiers alike) and gender marking via the suffixes *-e* and *-o* and via the third person possessor prefixes and the third person subject affixes.

11.1.3 Other Features

van Gijn (2014) discusses four other features: two related to constituent order (Table 72) and two to the lexicon (Table 73).

TABLE 72 The constituent order features (van Gijn (2014:114))

Feature	AMZ	MAKO
20 O before S constituent order	Y	N
21 AdjN order	Y	N/A

TABLE 73 The lexicon features (van Gijn (2014:115))

Feature	AMZ	MAKO
22 Numerals >9	N	N
23 Ideophones	Y	Y

Mako has flexible main-clause word order. However, if a most basic word order can be argued for, it would be S(O)V. In other words, Mako does not show O before S constituent order in main clauses. With respect to the AdjN word order, Mako does not have a distinct class of adjectives; therefore, this feature cannot be discussed for Mako. If we take other noun modifiers as representing the Adj, we can say that demonstratives and other nouns tend to come before the head of a noun phrase while numerals and nominalizations follow nouns.

Most Amazonian languages have small numeral systems and large inventories of ideophones. Mako numerals occur freely up to ‘3’ and numerals ‘4’ and ‘5’ can be elicited but numerals larger than ‘5’ are Spanish borrowings. As for ideophones, as shown in Chapter 5, these are used frequently in discourse and there is in fact a large number of them.

As the above discussion shows, Mako—only differing with the Amazonian profile in the presence of glottalized and aspirated stops and in having nominative-accusative main clause grammar—shows a high number of linguistic features that have been claimed to be “typically” Amazonian,. This suggests that, at some point, in the language’s history there was sustained contact with other groups that led to a diffusion of particular traits.

Another sign of contact and diffusion between Mako and other Amazonian languages is the presence of (at least) two Amazonian wanderwörter in the language. Epps (2014) presents a number of forms that have spread to several languages and language families in the region. Two of these forms are also present in Mako.

The first one is the word for ‘macaw’ for which Epps (2014) gives the form %ara.²³²

This word, which in Mako is *ala*, is reconstructed for Tupi-Guarani by Mello (2000:156) as **arar*- and, according to Epps (2014), it is also attested in the North Arawak languages Baniwa (*áadaɔo*), Yukuna (*laʔarú*), Tariana (*ádaru*), Resígaro (*anáadó*), Kabiyaí (*narú*), Mandawaka (*adá:lu*), and possibly Wapishana (*kazara*), as well as in the North Cariban languages Akawaio and Pemon (*wayara*), and Carijona (*ara*). She posits that it must have spread from either North Arawak or North Cariban to the Yanomaman languages (Ninam *arasi*, Yanomam, Yanomami *ara*, Sanuma *ala*). As we can see, the form in Mako is identical to the form in Sanuma and if we take into account the r:l correspondence between Mako and Piaroa (*æræ* ‘macaw’ according to Zent (n.d.:12)),²³³ it would be also the form in Yanoman and Yanomami and in Carijona.

The second word is the word for ‘jaguar’ (or in some cases ‘dog’), which Epps (2014) gives as %jawi. She argues that similar forms have been or can be reconstructed for Proto-Tupi-Guarani, Proto-Tukanoan, Proto-North Arawak, Proto-Guahiban, and Proto-Jivaroan and that it appears as loans in Nadahup, Sáliban, Hoti, and Ticuna. In Mako,

²³² The form is given with the % symbol by Epps (2014), I suspect it marks it as being the form with the most common distribution (similar to using a * with proto-forms).

²³³ Sáliba seems to have borrowed the Spanish word for ‘macaw’. According to the online dictionary of this language published by the Instituto Caro y Cuervo, the form is /g^wakamai/, cf. Spanish *guacamayo*. Source: <http://saliba.caroycuervo.com/guacamayo>

this form is *ɕɔawɨ*; and in Piaroa, *yæwi* (Zent n.d.:3). In Sáliba, however, the form is not cognate: *ũpu* ‘jaguar’ (Huber & Reed, 1992:98).²³⁴

11.2 Mako and the Sáliban Languages in their Wider Regional Context Pre- and Post-contact

As I have shown in the previous section, Mako can be said to be a “typically” Amazonian language, which is suggestive of diffusion processes due to sustained contact and multilingualism. The question remains, however, as to when this stage of sustained contact and multilingualism took place given that these conditions are not present today.

Present-day Mako speakers have very limited regular contact with other indigenous languages of Southern Venezuela.²³⁵ The community of Porvenir II is in contact with Kurripako (North Arawak), the language of the communities of Porvenir III (also known as Laguna) and Porvenir I and in the Parú River there is contact between Mako and Ye'kwana (Cariban) speakers. Aside from regular contact with these two other groups, the Mako are only in regular contact with Piaroa, with whom they live in several communities (Fundo Chicho, San José de Yureba, Morocoto, among others) or whom they have as neighbours (the Piaroa communities of Picúa at the mouth of the

²³⁴ Also in the Caro y Cuervo online dictionary, which adds the dialectal variant *~ĩpu* (<http://saliba.caroycuervo.com/tigre>). However, see the first part of the form *llaguíte* for ‘ocelot’ (Sp. *cunaguaró*) in Benaissa (1991:28).

²³⁵ See the ethnolinguistic map of Venezuela in Figure 1 (page 3) and the location of the different communities along the Middle Ventuari River and its tributaries in Figure 5 (page 117) for a better understanding of the contact situations described here.

Guapuchí River and the community of Macabana on the Ventuari River are both inside the Mako area). This present-day contact has led to situations of passive bilingualism (e.g., Kurripako-Mako in one family in Porvenir II) and to situations of active bilingualism Piaroa-Mako according to speaker reports.²³⁶

The above-described situation suggests that sustained contact with other indigenous groups of the area and possibly multilingualism must have occurred in the past. Several researchers have demonstrated the existence of a vast exchange and trade network in the Middle Orinoco (see Morey (1975), Biord-Castillo (1985));²³⁷ this network was documented during the early colonial period but must have existed long before the arrival of Europeans to the region. Some of the characteristics of this system strongly point towards sustained contact and multilingualism in the area.

First, Morey (1975)—reviewing all the literature written by missionaries and explorers during the colonial period—describes a system with five important trade centers that were visited by groups all along the (Lower, Middle and Upper) Orinoco, two of which were frequented by Sáliban speakers: 1) the fish market of the Atures rapids where the

²³⁶ It is however unclear at this point whether this reported bilingualism is in fact passive (rather an active) bilingualism on part of both groups which can communicate in their own language with each other due to a high degree of intelligibility.

²³⁷ This Middle Orinoco trade network had also connections with other trade networks to both the West and the East. From the highlands in the West came salt which was traded through the Llanos and across the Orinoco (Morey 1975); from East came the Ye'kwana blowguns and to the East travelled the Piaroa curare (see Coppens (1971) and Butt Colson (1973)). I will focus on the Middle Orinoco only here.

Ature²³⁸ sold their fish during the rainy season, and 2) the curare market of the Upper Orinoco where Piaroa curare—a type of poison—was possibly sold. In these places, there were trade fairs that would be attended by many groups of the area to exchange and trade their products. These trade centers were also visited by Sálibas who “preferred to live near the Orinoco River to be near the trade centers” where they could trade the yellow and red dyes and yucca graters for which they were known (Morey, 1975:269). For this trade to take place, there could well have existed either a trading language or languages, or languages that were widely spoken in a specific region. Sáliba seems to have been the language commonly used along the middle Orinoco where it was used by all groups in the area when these came together (see Rey Fajardo (1971:110)).

Secondly, during this same early colonial period there were trading expeditions of people who went from village to village. These have been reported as common among the Sáliba (Morey, 1975:273). Visitors to a village were received with a ceremony known as “mirray” (Morey, 1975:274; Biord-Castillo, 1985:96). According to Morey (1975), this ceremony consisted of long ritualized speeches given by the head of the village and the leader of the guests and “it was polite to use the language of the group to which you were speaking”. However, most groups preferred to speak their own languages which according to Morey (1975:275) did not pose problems since “everyone

²³⁸ Remember that the Ature (see Chapter 1) have been argued to be an extinct independent Sáliban group or a subgroup of the Piaroa; whatever the case may have been, we are still dealing with a Sáliban variety.

understood some others [languages], and it was not unusual for an individual to know as many as five languages”.

The claim that commerce was an important source of linguistic diffusion in the area may also find support in the fact that both the *wanderwörter*, namely the words for ‘macaw’ and ‘jaguar’, discussed in the preceding section were trade items for their plumage and skins (Morey, 1975:267).

It is not clear what role the Mako may have played in this trade network—especially since Mako and Piaroa were grouped together in the literature until recently—, but it seems safe to assume that like other Sáliban groups they were also part of this complex trade and exchange network and that they must have had sustained contact with other groups of the area both before and after the contact with the Europeans. It could have been as a result of these interactions with members of other language groups in this network that diffusion of the linguistic traits discussed in Section 11.1 occurred.

11.3 The Road thus Far and from Here on

This concluding chapter has served to situate Mako in the wider context of Amazonian languages and linguistics and to propose a new avenue of research worthy of further exploration, namely contact between Mako and other languages now and in the past. It also has served as a way of highlighting the key features of the language presented in the grammar that constitutes the core of this dissertation (Chapters 4 to 9). This grammar is a first approximation to the structures of the Mako language and I hope it will serve as a basis both for future linguistic research on Mako and the other two Sáliban languages (i.e., Sáliba and Piaroa), and for the development of literacy materials

for language maintenance in the Mako communities of the Ventuari River. In this latter area, the corpus that stemmed from the documentation aspect of my project will hopefully prove useful.

Résumé en français de la thèse

La langue Mako : vitalité, grammaire et classification

Soumise aux universités

The University of Western Ontario et Université Lumière-Lyon 2

par

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Introduction

Dans le cadre d'un projet de documentation et description linguistique, cette thèse se concentre sur la langue mako [ISO 639-3 : wpc], parlée dans l'Amazonie vénézuélienne par à peu près 1000 locuteurs. Les objectifs du projet de documentation et description du mako ont été de :

- 1) créer un corpus audio-vidéo de la langue telle que parlée par ses locuteurs
- 2) déterminer la vitalité de la langue dans les communautés où elle est parlée
- 3) décrire la grammaire de la langue, et
- 4) montrer l'appartenance du mako à la famille linguistique sáliba et en même temps fournir des indices plus forts pour le regroupement des trois langues sáliba, c'est-à-dire le mako, le piaroa [ISO 639-3 : pid], et le sáliba [ISO 639-3 : slc].

Synthèse de la littérature

Le Chapitre 1 propose une synthèse de la littérature existante sur les langues sáliba et discute la documentation et description disponible pour ces langues, leur vitalité et leur classification.

Au niveau de la documentation et la description de ces trois langues, cette synthèse montre que :

- 1) le mako n'est pas du tout décrit, sa documentation est limitée à 38 mots et quelques ressources publiées localement par New Tribes Mission. Aucune des descriptions du sáliba et du piaroa publiées jusqu'à présent ne se rapproche du niveau de détail des grammaires de références modernes.
- 2) il n'y a pas de dictionnaire pour le piaroa ni le mako. Le sáliba compte avec un dictionnaire en ligne avec des archives audio (Caro y Cuervo, 2014).
- 3) on ne trouve quasiment pas de corpus textuels annotés pour ces trois langues (sauf 13 textes pour le sáliba (12 dans Morse & Frank (1998) et un dans Estrada Ramírez (1996, 2000)) et un pour le piaroa dans Krute (1989)).

La synthèse de la littérature sur la vitalité des langues au monde, en Amérique du Sud et au Venezuela (par exemple, dans Moseley (2010), Crevels (2012) et Mattéi-Müller (2006) respectivement) montre que le sáliba et le mako ont été identifiés comme étant en grave danger de disparition alors que le piaroa est dit être stable dû à sa population de plus de 15000 personnes.

En ce qui concerne la classification de cette famille, ce chapitre montre que le traitement de la famille sáliba dans la littérature change considérablement d'une source à l'autre avec comme principales différences le nombre des membres de la famille, le statut de ces membres à l'intérieur de la famille et l'appartenance de la famille sáliba à une unité génétique plus grande. Ce chapitre montre que quelques unes des langues qui ont été incluses dans la famille sáliba appartiennent vraiment à d'autres familles (par

exemple, quaqua, ye'kwana, guinau), que l'inclusion d'autres langues, telle que le jodi, mérite plus d'attention, et que l'inclusion de la famille dans une unité plus grande n'est pas étayée par les données empiriques disponibles. La famille sáliba serait donc composée de trois langues: le sáliba, le piaroa et le mako.

Cependant, les arguments pour le regroupement de ces trois langues en une famille linguistique sont assez limités, les travaux les plus solides (notamment Rivet (1920) et Estrada Ramírez (2008, 2012)) ne donnant que des données lexicales sans proposer de changements réguliers des sons et/ou des reconstructions.

Documentation et Vitalité

Le projet de documentation et description dont cette thèse fait partie repose sur les avancées de la théorisation de la documentation et description des langues pendant la dernière quinzaine d'années. La première partie du Chapitre 2 discute les différences entre la documentation et la description des langues et les avantages et inconvénients de chaque activité pour des projets de recherche sur les langues minoritaires (et souvent en danger). Je conclus qu'il vaudrait mieux combiner les deux approches vu leur complémentarité. La deuxième partie du chapitre offre une « méta-documentation » (voir Austin (2013:6)) en discutant les antécédents du projet, les différents terrains faits pendant les quatre dernières années, les participants, la méthodologie et l'équipement utilisés pour la collecte des données, et les résultats du projet, dont cette thèse.

Dans le Chapitre 3, j'utilise les neuf facteurs proposés par Brenzinger et al. (2003) pour déterminer la vitalité des langues et montre comment le mako se comporte pour chacun de ces facteurs :

Tableau 1 Sommaire des neuf facteurs de l'UNESCO pour le mako

	Facteur	Valeur	État
1	Transmission intergénérationnelle de la langue	5-	stable mais menacée
2	Nombre absolu de locuteurs	~1078 (en 2011)	
3	Proportion de locuteurs sur l'ensemble de la population	4	menacée
4	Usage de la langue dans les domaines existants	4	parité multilingue
5	Réponse face aux nouveaux domaines et aux medias	1	minimale
6	Matériaux pour l'éducation et l'alphabétisation	2	
7	Langues du gouvernement et des institutions et politiques langagières, y compris le statut officiel	4/5	support différencié
8	Attitude des membres de la communauté envers leur propre langue	4	
9	Type et qualité de la documentation	1	inadéquate

Au contraire de ce que la littérature sur la vitalité des langues avait affirmé pour le mako, je montre dans ce chapitre que la transmission de la langue n'a pas cessé et que les enfants parlent encore le mako. Ceci, de concert avec le cadre juridique particulièrement favorable aux langues indigènes présentement en place au Venezuela et les dispositions du système d'éducation interculturel bilingue (EIB), permettent de classer le mako dans l'échelon 'sûr' de l'échelle de l'UNESCO. Cependant, la petite taille de la population (voir Whalen & Simons (2012) pour la corrélation entre taille et état de danger), la présence croissante de l'espagnol et du piaroa dans les communautés mako, le contact plus intense avec la société vénézuélienne, et le manque de médias, de matériaux éducatifs et de documentation sur la langue mako rendent la langue vulnérable et moins susceptible d'être maintenue active à long-terme. L'attention devrait donc être placée sur les facteurs où le mako est plus faible : Facteur 5 Réponse face à des nouveaux domaines et aux medias, Facteur 6 Ressources pour l'éducation et l'alphabétisation, et Facteur 9 Type et qualité de la documentation.

Grammaire

Les Chapitres 4 à 9 offrent une première description de la grammaire de la langue mako au niveau de la phonétique-phonologie (Chapitre 4), des classes de mots (Chapitre 5), de la morphologie nominale et verbale (Chapitre 6 et 7), de la syntaxe (Chapitre 8) et du discours (Chapitre 9). Les aspects les plus saillants de la langue sont mis en relief ici en utilisant les caractéristiques qui ont été proposées comme propres aux langues amazoniennes dans les études en typologie aréale résumées par van Gijn (2014).

Phonologie

Le Tableau 2 liste les traits phonologiques caractéristiques des langues amazoniennes.

Tableau 2 Les traits phonologiques (adapté de van Gijn (2014:111))

Trait	AMZ	MAKO
1 Voyelle centrale haute	Oui	Oui
2 Voyelles moyennes phonologiques	Oui	Oui
3 Nasalisation contrastive des voyelles	Oui	Oui
4 Palatales nasales	Non	Non
5 Opposition vélaire-uvulaire pour les occlusives	Non	Non
6 Affriquées rétroflexes	Non	Non
7 Plus d'affriquées que de fricatives	Oui	Oui
8 Un seul phonème liquide	Oui	Oui
9 Syllabes fermées	A (0-30)	A (0)
10 Propagation nasale	Oui	Oui
11 Occlusives glottalisées (Pérou, Bolivie)	Non	Oui
12 Occlusives aspirées (Pérou, Bolivie)	Non	Oui

Au niveau phonologique, le mako présente les trois caractéristiques considérées comme typiques des langues amazoniennes : le système vocalique du mako inclut une voyelle centrale haute /i/ comme le montre le Tableau 3 ci-dessous; il inclut aussi des voyelles moyennes /e/ et /o/ et il a des voyelles nasales au niveau phonologique.

Tableau 3 Système vocalique du mako

	antérieures	centrales	postérieures
fermées	i ĩ	ɨ ɜ̃	u ũ
moyennes	e ě	ə	o õ
ouvertes		a ă	

Tableau 4 Les consonnes du mako et leur allophones

	bilabiales	alvéolaires	palatales	vélaires	glottale
OCCLUSIVES					
aspirées non-voisées	p ^h	t ^h			
labialisée non-voisée				k ^w	
non-voisées	p	t		k	ʔ
voisées	b	d			
voisées pré-glottalisées	ʔb	ʔd			
FRICATIVES					
simples		(s) (ʃ)			h
labialisées					h ^w
AFFRIQUÉES					
non-voisées		ts	tʃ		
voisée			ɕ		
voisée pré-glottalisée			ʔɕ		
NASALES					
voisées	m	n	(ɲ)		
non-voisées	(m̥)	(n̥)	(ɲ̥)		
pré-glottalisées	(ʔm)	(ʔn)	(ʔɲ)		
LIQUIDE					
		l (ɾ)			
APPROXIMANTES					
simple	w				
pré-glottalisée	ʔw				

En ce qui concerne le système consonantique—présenté dans le Tableau 4 ci-dessus—, le mako montre des traits qui sont caractéristiques des langues amazoniennes mais aussi des traits non-amazoniens. Premièrement, le système n’inclut pas de nasale palatale au

niveau phonologique—mais elle est présente au niveau phonétique en tant que variante nasalisée de l’affriquée voisée /ɖ͡/—, il n’y a pas de contraste vélaire-uvulaire, et il n’y a pas d’affriquées rétroflexes. Toutes ces caractéristiques sont typiquement amazoniennes. Au niveau des affriquées, fricatives et liquides, le mako se comporte aussi comme d’autres langues amazoniennes: il a trois affriquées, i.e., /t͡ʃ/, /ts/, et /ɖ͡/, mais une seule fricative, et il n’a qu’une seule consonne liquide /l/—qui peut être prononcée comme une battue [r] devant les voyelles /i/ et /ĩ/. Le système consonantique du mako comporte deux traits qui ne sont pas typiquement amazoniens : la présence de deux consonnes aspirées /p^h/ et /t^h/, et la présence des consonnes glottalisées /^ʔb/, /^ʔd/, et /^ʔɖ͡/.

La présence des consonnes voisées glottalisées est en effet une caractéristique typologiquement intéressante du mako à cause de la relative rareté de ce type de consonne (Maddieson, 1984, 2013; Ladefoged & Maddieson, 1996; Gordon & Ladefoged, 2001). Dans l’échantillon de 567 langues dans le *World Atlas of Linguistic Structures* (Dryer & Haspelmath, 2013), seulement 29 langues ont ce type de son, la majorité d’entre elles se trouvant dans les Amériques (20/29) (Maddieson, 2013). En Amazonie, les consonnes voisées glottalisées n’ont été décrites que dans les familles sáliba (voir Morse & Frank (1998) pour le sáliba et Caula (1999) pour le piaroa), nadahup (voir Epps (2008) pour la langue hup et Martins (2004) pour le dâw) et chapacure (voir Everett & Kern (1997) pour le wari’ et Angenot-de-Lima (2002) pour le moré).

Les deux autres caractéristiques dans le Tableau 2 sont un petit nombre de consonnes qui peuvent occuper la position coda et la présence de propagation nasale. Le mako présente ces deux caractéristiques: la structure du mako est (C)V et aucune consonne ne peut occuper la position coda, et la propagation nasale sert à pluraliser quelques noms animés (1).

	<u>SINGULIER</u>		<u>PLURIEL</u>
(1)	a. [kɪbo] ‘aligator’	b.	[kɪbõ] ‘aligators’
	c. [iwo] ‘paresseux’	d.	[ĩwõ] ‘paresseux.PL’
	e. [ʔɕawe] ‘moustique’	f.	[ʔɲawẽ] ‘moustiques’

Morphosyntaxe

Le Tableau 5 résume les traits morphosyntaxiques qui ont été caractérisés comme définitionnels pour l’aire linguistique amazonienne. Ils sont discutés ci-dessous.

Tableau 5 Les traits morphosyntaxiques (adapté de van Gijn (2014:114))

Trait	AMZ	MAKO
13 Préfixes pronominaux	Oui	Oui
14 Isomorphisme du possesseur et des marques de personne sur le verbe	Oui	Oui
15 Système élaboré de marquage de cas	A (0-4)	A (4)
16 Cas nucléaire	Non	Non
17 Alignement nominatif-accusatif dans les phrases simples	Non	Oui
18 Marquage de la possession sur le possesseur	Non	Non
19 Système de classificateurs ou de genre	Oui	Oui

Le mako utilise des préfixes seulement pour marquer le possesseur sur le possédé (2) et pour marquer le sujet sur les verbes de la Classe I (3) et, en effet, ces deux groupes de préfixes sont isomorphiques (comparez le marquage pour la première personne du singulier dans le nom ‘père’ en (2) et dans le verbe ‘penser’ en (3)).

- (2) *ʃf-abe[?]do-ma* *b-ai-k^{wi}* *itf-eh-eb-i*
 1SG-père-TOP PROX-ADV3-VEN venir-MOT?-?-NON.FIN

Ø-otid-in-obe-a

3SG.MASC-travailler-PST-TAME-TAME

‘Mon père l’a construit quand il nous a emmenés ici.’ (lit. en nous emmenant ici)

- (3) *wahi-t-a* / *it^{hi}-ma* *ʃf-omuk^wat-ok-obe*
 ne_pas_savoir-1SG-TAME 1SG.PRO-TOP? 1SG-penser-NEG-TAME
 ‘Je ne sais pas, je ne m’en souviens pas.’

Comme dans d’autres langues amazoniennes, le mako ne présente pas un système élaboré de marquage de cas puisque il n’a que quatre marques de cas, à savoir *-ni* ‘OBJ’ (56), *-k^{wi}* ‘SOC’ (81), *-be* ‘ALL’ (87) et *-k^{wi}* ‘VEN’ (89). Aucune de ces marques ne un cas nucléaire (défini par van Gijn (2014) comme accusatif et nominatif ou ergatif et absolutif), vue que le marqueur de non-sujet *-ni* peut s’attacher à différents types d’arguments du verbe (comparez (56) avec (59) et (68) ci-dessous).

- (4) *k^{wā}dō-ni* *ʒi-b-aw-ah-i*
 grand-mère-NON.SUBJ appeler-B-MID-MOT-IMP
 ‘Va appeler ta grand-mère!’

- (5) *h-ilek^w-e-k^{wi}* *hĩ-b-ĩn-obe* *hĩ-t-an-a*
 3SG.FEM-mari-MASC-SOC 3SG.FEM-s’asseoir-PST-TAME dire-1SG-DUR-TAME
 ‘Je dis qu’elle est assise avec son mari.’

- (6) *dok^{wa} iha* *Atabapo-be* *ahaʒi-ni*
 HOW1 COP.PST Atabapo-ALL premier-NON.SUBJ

k^{wĩ}-ʒ-ĩn-ena-ma

2SG-aller-PST-ADV1-TOP?

‘Comment ça a été quand tu es allée à Atabapo pour la première fois?’

- (7) *itf-i* *b-ai-kʷi*
venir-IMP PROX-ADV3-VEN
‘Viens ici!’
- (8) *its-uhu-ni* *lẽrõ* *ts-iʔi*
RACINE_VIDE-CL:FEM-NON.SUBJ montre_Sp. RACINE_VIDE-CL
- Ø-idɔ̃-in-obe*
3SG.MASC-donner-PST-TAME
‘Il donnait la montre à la femme.’
- (9) *hõba-ma* *tebo-ni* *h-õ-Ø*
ce + CL:MASC-TOP? forêt-NON.SUBJ être_debout-CL:MASC-3.COP
‘Il vit dans la forêt.’ (lit. ‘il reste toujours dans la forêt’)

Le mako se distingue d’autres langues amazoniennes par son alignement nominatif-accusatif dans les phrases simples. L’ergativité dans les phrases simples est un trait assez répandu parmi les langues amazoniennes, y inclus des grandes familles comme les familles caribe, macro-jê, et tupi et aussi des familles plus petites (par exemple, la famille tacana) et quelques langues isolées (par exemple, le trumai) (Queixalós & Gildea, 2010). Contrairement à ces langues, l’alignement des phrases simples en mako est nominatif-accusatif comme le montre le marquage de S, A et O dans les phrases ci-dessous. Dans les exemples de (94) à (14), S et A sont marqués de la même manière, soit avec un préfixe (94) (11), soit avec un suffixe (238) (4). La différence de ces marquages obéit à la phonologie des racines verbales : celles qui finissent par une consonne prennent un préfixe immédiatement avant la racine (Classe I), celles qui finissent par une voyelle prennent un suffixe immédiatement après la racine (Classe II). Les objets, au contraire, sont marqués à la droite du verbe après les suffixes de TAME (14).

- (10) *itek^wai-ma* *ʃ-ɪʃ-ak^w-obe*
 demain-TOP? 1SG-venir-FUT-TAME
 ‘Je viens demain.’
- (11) *it^hi* *ʃ-em-in-obe*
 1SG.PRO 1SG-acheter-PST-TAME
- iridi-ɕa* Maria *hu-buk^w-in-aɕa-ma*
 hamac-CL PN 3SG.FEM-tisser-PST-CL-TOP?
 ‘J’ai acheté le hamac que Maria a tissé.’
- (12) *ʔbi-t-o* *hɪbanɪ-ma*
 tirer-1SG-FUT BUT-TOP?
- ɕɪte* *deh-i-da*
 nuit éclairer-NON.FIN-CONTR?
 ‘Pour (les) tuer, on éclaire (avec une lanterne) pendant la nuit.’
- (13) *wahi-t-a* *it^hi-ma*
 ne_pas_savoir-1SG-TAME 1SG.PRO-TOP?
 ‘Je ne sais pas.’
- (14) *ida* *ɕi-b-aw-ab-ih-i-ni*
 allez dire-B-MID-?-MOT-IMP-3SG.MASC.O
 ‘Allez! Va lui dire!’

Les deux derniers traits morphosyntaxiques dans le Tableau 5 sont le marquage de la possession sur le dépendant et les systèmes de classificateurs ou genre. Comme on a vu ci-dessus dans l’exemple (2) la possession en mako est marquée sur le possédé (soit sur la tête de la phrase), comme dans d’autres langues amazoniennes. Comme beaucoup d’autres langues amazoniennes, la mako a un système de genre (6) et aussi un système de classificateurs qui peuvent se trouver sur un nom (45), un numéral (56), un démonstratif (18) et un verbe (19) ainsi que dans autres environnements.

- (15) a. *ilek^w-e* époux-MASC ‘mari’
b. *ilek^w-o* époux-FEM ‘femme’
- (16) *balule* / *tsonodĩ* *balule-ʔbo* *idĩ-aʔbo*
banane *cambur* banane-CL:OBLONG être_grand-CL:OBLONG
‘une banane, une grande banane *cambur*’
- (17) *wãp < iʔi > k^wa* lapi-*iʔi* *b-ãh-ã*
trois < CL:POINTU > crayon_Sp.-CL:POINTU s’asseoir-MOT-TAME
‘Il y a trois crayons là.’
- (18) *dok^wa* *nĩ-nĩ* *kũ-hũk^w-adu-obe-t^{hi}*
COMMENT1 beaucoup-NON.SUBJ 2PL-habiter-2PL-TAME-EMPH?

b-ehu-nĩ-ma
PROX-CL:MAISON-NON.SUBJ-TOP?
‘Combien de personnes habitent cette maison?’
- (19) *ow-aw-ãʔdõ* *ʔda-in-obe*
boire-MID-CL:RÉCIPIENT se_casser-PST-TAME
‘Le verre s’est cassé.’

Ordre des constituants et lexique

van Gijn (2014) discute quatre autres traits amazoniens: deux concernant l’ordre des constituants (Tableau 6) et deux concernant le lexique (Tableau 7).

Tableau 6 Traits concernant l’ordre des constituants (adapté de van Gijn (2014:114))

Trait	AMZ	MAKO
20 Ordre des constituants O devant S	Oui	Non
21 Ordre Adj/Nom	Oui	N/A

Tableau 7 Traits concernant le lexique (adapté de van Gijn (2014:115))

Trait	AMZ	MAKO
22 Nombres >9	Non	Non
23 Idéophones	Oui	Oui

Le mako a un ordre des constituants flexible dans les phrases principales. Cependant, s'il y a un ordre "plus basique", ce serait S(O)V (20). Autrement dit, le mako ne montre pas l'ordre O devant S. En ce qui concerne l'ordre adjectif/nom, ce trait ne peut pas être discuté pour le mako, qui n'a pas une classe d'adjectifs. Si on prend les autres modificateurs du nom comme représentant l'adjectif du trait #21, on peut dire que les démonstratifs et les autres noms précèdent souvent le nom principal alors que les numéraux et les nominalisations le suivent.

	S	O	V
(20)	<i>Beatriz-ma</i>	<i>ile</i>	<i>hõ-kõkod-in-obe</i>
	PN-TOP?	manioc	3SG.FEM-entrer-PST-TAME
	'Beatriz a entré les galettes de manioc.'		

La majorité de langues amazoniennes ont des petits systèmes de numéraux et des grands inventaires d'idéophones. C'est aussi le cas pour le mako. Les nombres '1', '2' et '3' sont employés fréquemment par les locuteurs de la langue et les nombres '4' et '5' peuvent être élicités aisément, mais pour les nombres au-delà du '5', les locuteurs du mako emploient des emprunts à l'espagnol. En ce qui concerne les idéophones, ils sont employés pour transmettre des notions de l'imagerie sensorielle (visuelle dans le cas en (21)) comme le décrit Dingemanse (2012:655).

(21)	<i>atso::</i>	<i>ed-i</i>		
	[ideophone]	voir-IMP		
	<i>its-uhu-ni</i>	<i>?wi-b-i</i>	<i>t^h-ik^w-in-obe</i>	
	RACINE_VIDE-CL:FEM-NON.SUBJ	couper-B-NON.FIN	3PL-AUX-PST-TAME	
	'Quelle beauté! regarde! Ils coupent (les cheveux de la femme).'			

Classification

Vu les différentes classifications proposées pour les langues sáliba et le manque d'indices sur lesquels ce regroupement s'appuie jusqu'à présent, le Chapitre 10 de cette thèse présente une comparaison des marqueurs des sujets dans les trois langues sáliba et montre que toutes les trois ont deux classes distinctes de verbes (Classe I et Classe II) et que ces deux classes verbales peuvent être distinguées par l'existence de deux positions différentes pour la marque de sujet: les verbes de la Classe I prennent des préfixes sujets et ceux de la Classe II des suffixes sujets. En plus, les préfixes des verbes de la Classe I sont aussi utilisés pour marquer le possesseur sur le nom possédé.

Non seulement ce système est cognat dans les trois langues, mais les formes aussi. Le chapitre 10 montre que les préfixes comme les suffixes de sujet ont des correspondances des sons régulières qui sont le résultat des changements de sons réguliers au niveau du lexique en général et qui, donc, peuvent être reconstruits comme des formes du proto-sáliba.

L'existence de ces deux séries distinctes de marques de sujet en proto-sáliba et la reconstruction du proto-suffixe **-p* pour les formes non-finies des verbes de la Classe II montrent que ces deux classes de verbes étaient déjà présentes en proto-sáliba.

Vu que 1) des paradigmes complets, et plus particulièrement des paradigmes pronominaux, sont parmi les phénomènes grammaticaux les moins “empruntables”—donc constituent un des “*surest indicators of a genetic relationship*” (Dixon, 1997:22)—et que 2) le système de marquage de sujets animés reconstruit dans ce chapitre est suffisamment idiosyncratique pour ne pas pouvoir être expliqué comme le résultat d'un

emprunt ou de diffusion, l'argument en faveur de la relation génétique entre les langues sáliba que je fournis ici est très convaincant.

Conclusions

Le Chapitre 11 offre une discussion de certains traits du mako comme langue amazonienne—similaire à celle qui a été présenté ici dans les sections précédentes. Il suggère que les caractéristiques partagées entre le mako et d'autres langues amazoniennes pourraient résulter de la diffusion de traits linguistiques par contact avec d'autres langues de la région, dans le cadre du réseau d'échange et de commerce de la région de l'Orénoque (tel que proposé par, entre autres, Morey (1975)).

Cette thèse propose une première description de la grammaire de la langue mako qui, j'espère, servira de base pour 1) des recherches futures sur le mako et aussi sur le sáliba et le piaroa, et 2) le développement de ressources éducatives pour les écoles des communautés mako en conjonction avec le corpus documentaire des enregistrements audio et vidéo.

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Appendices

Appendix 1 Inventory of Audio and Video Recordings

SUMMER 2012					
ID	Topic	Duration	TT	Duration	Video
SCEs					
Stimuli					
Eliseo005	Topological relations	1:33:28	Yes	24:00:09	No
SCE001	Kariña Cassava making, <i>Somos Mako</i>	0:57:15	No		Yes
Reciprocals	Reciprocal constructions	0:49:33	Yes	20:55:48	Yes
Procedures					
Martin001	How to make a <i>nasa</i>	0:03:58	Yes	1:11:41	No
Martin002	How to go fishing?	0:01:26	Yes	00:38:30	No
Madrid001	How to make a <i>curiara</i>	0:01:18	Yes	02:14:44	No
Eliecer001	How to build a house	0:01:00	Yes		No
Eliecer001	How to make a <i>conuco</i>	0:01:00	Yes		No
CarmenCarolina001	How to make cassava	0:04:07	Yes	01:49:44	Yes
CarmenCarolina002	How to make a <i>catumare</i>	0:01:31	Yes	01:09:54	Yes
CarmenCarolina003	How to make a <i>budare</i>	0:00:33	Yes	00:18:35	Yes
CarmenCarolina004	How to make <i>mañoco</i>	0:01:13	Yes	00:57:31	Yes
CarmenCarolina005	How to make <i>almidón</i>	0:01:02	Yes	01:44:40	Yes
CarmenCarolina006	How to make <i>yucuta</i>	0:01:12	Yes	00:28:38	Yes
CarmenCarolina007	How to plant yucca	0:00:50	Yes	00:56:02	Yes
SCE002	Instructions to play a game on my phone	1:10:54	No		No
Census					
Armando001	Census interview	0:17:15	Yes	06:15:47	Yes
Madrid002	Census interview + time in Atabapo	0:14:38	Yes	05:30:59	Yes
Martin003	Census interview + <i>conuco</i> making	0:17:24	Yes	06:30:36	Yes
Rumeno001	Census interview	0:18:44	Yes	07:48:04	Yes

Pedro001	Census interview + <i>promotor</i> duties + Urutu project ²³⁹	0:12:02	Yes	01:31:17	Yes
Neifo002	Census interview	0:09:19	Yes	01:04:47	Yes
Miguel001	Census interview + cassava making	0:17:07	Yes	02:11:30	Yes
Narratives					
Alirio001	Time in Atabapo	0:03:40	Yes	02:12:33	Yes
Flora001	Time in Atabapo + <i>seje</i> oil making	0:04:59	Yes	03:55:06	Yes
Eliseo007	Beliefs about what animals announce death	0:02:51	Yes	01:14:32	No
Rosalba002	A dream she had	0:03:21	Yes	1:44:40	No
SCE003	Family Problems Picture Task	0:26:39	Yes	04:06:53	Yes
Elicitation					
Eliseo001	Swadesh 200 wordlist	0:53:51	N/A		No
Eliseo002	Verb paradigm for “to eat”	1:10:50	N/A		No
Neifo001	Words that start with the letter ‘a’	1:04:08	N/A		No
Cartillas					
Eliseo006	Cartilla 1	0:14:29		20:16:30	No
Eliseo008	Cartilla 2	0:13:05			No
Eliseo009	Cartilla 3	0:13:59			No
Eliseo012	Cartilla 4	0:17:55			No
FALL 2012					
ID	Topic	Duration	TT	Duration	Video
<u>SCEs</u>					
Census					
Miranda001	Census Dario's household	0:21:22	No		Yes
Isla_bomba001	Census Isla Bomba	0:23:01	No		Yes
Caifa003	Census interview	0:12:02	No		Yes
Stimuli					
Eliseo015	ECOM task	0:37:20	Yes	5:55:40	Yes

²³⁹ Only 00:03:35 transcribed and translated, the ones corresponding to the two small texts on the duties of a *promotor* and the Urutu project.

Eliseo016	Enter/exit singular forms	0:38:33	Yes	2:13:34	Yes
Eliseo017	Motion verbs	0:22:00	Yes	4:02:47	Yes
Eliseo018	Put project	0:21:49	Yes	2:47:17	Yes
Eliseo019	Caused positions	0:15:39	Yes	2:17:38	Yes
Eliseo020	Cut and break	0:22:29	Yes	6:13:49	Yes
Eliseo022	Enter/exit plural forms	0:19:05	Yes	1:53:12	Yes
Eliseo031	Cassava making	0:08:40	N/A		
SCE004	Mako bird names	0:51:45	No		Yes
Narratives					
Eliseo013	Pear Film	0:08:39	Yes	0:59:07	No
Eliseo014	Frog, where are you?	0:05:06	Yes	1:14:43	No
Eliseo023	Pear film 2	0:02:35	Yes	0:36:14	No
Eliseo024	Feeding spiders to children	0:01:16	Yes	0:22:10	No
Eliseo025	What to do when a snake bites someone	0:01:20	Yes	0:26:06	No
Eliseo026	Taboo about fishing for the first time	0:01:11	Yes	0:28:22	No
Eliseo027	Taboo about drinking water that has been outside all night	0:00:54	Yes	0:17:30	No
Eliseo028	Taboo about leaving clothes outside	0:00:38	Yes	0:08:29	No
Eliseo033	Visit to the dentist	0:01:05	No		No
OCEs					
Meetings					
OCE001	Preparing for Liborio's visit	0:57:30	No		Yes
OCE003	Meeting with school teacher + discussion of archiving + <i>promotor</i>	2:14:06	Yes (partly)	11:03:32	Yes
OCE004	Meeting with the <i>promotor</i>	1:35:47	Yes (partly)	11:48:07	Yes
Governor's visit					
OCE002	Making a bark skirt	0:14:56	No		Yes (only)
OCE003	Playing with marbles	0:52:24	No		Yes (only)
OCE004	Sweets for the children	0:14:05	No		Yes (only)
OCE005	Liborio in Arena Blanca	0:24:26	No		Yes (only)
OCE006	Around the table	0:40:42	No		Yes

					(only)
At the school					
Escuela001	<i>Formación</i> 31-10-2012	0:13:34	No		No
Escuela002	Class observation 31-10-2012	1:50:30	No		No
Escuela003	Class observation 31-10-2012	2:32:38	No		No
Escuela004	Class observation 31-10-2012	1:42:47	No		No
Escuela005	<i>Formación</i> 1-11-2012	0:14:40	No		No
Escuela006	Class observation 1-11-2012	2:04:13	No		No
Escuela007	Class observation 1-11-2012	1:19:56	No		No
Escuela008	Class observation 1-11-2012	1:18:28	No		No
Escuela009	Class observation 1-11-2012	1:26:45	No		No
Escuela010	<i>Formación</i> 2-11-2012	0:29:47	No		No
Escuela011	Organizing cleaning 2-11-2012	0:56:59	No		No
Escuela012	Class observation 2-11-2012	1:42:02	No		No
Escuela013	Class observation 2-11-2013	0:29:49	No		No
Escuela014	<i>Formación</i> 05-11-2012	0:25:49	No		No
Escuela015	Class observation 05-11-2012	2:04:13	No		No
Escuela016	Class observation 05-11-2012	2:04:13	No		No
Escuela017	Class observation 05-11-2012	0:13:52	No		No
Escuela020	<i>Formación</i> 6-11-2012	0:12:22	No		No
Escuela021	Class observation 6-11-2012	2:04:13	No		No
Escuela022	Class observation 6-11-2012	0:20:31	No		No
Escuela023	Class observation 6-11-2012	1:47:06	No		No
Elicitation					
Eliseo021	Wordlist of Campoverde (2012)	0:41:23	N/A		No
Eliseo029	Kinship, family tree diagram	0:36:10	N/A		No
Eliseo030	Body parts	1:01:43	N/A		No

Eliseo032	Body parts and numerals	0:10:25	N/A		No
FALL 2013					
ID	Topic	Duration	TT	Duration	Video
<u>SCEs</u>					
Narratives					
Nepo001	Killing a snake x 2	00:06:19	Yes	01:30:46	No
Nepo002	“Toninas”	00:02:07	No		No
Nepo003	How to avoid a bear	00:02:50	No		No
Nepo004	Uses for “caraña”	00:01:17	No		No
Nepo015	“Zamuros”	00:02:25	No		No
Procedural Texts					
Francisco001	How to make cassava	00:08:17	No		No
Virgilia001	How to make cassava	00:14:28	No		No
Amanda001	How to make seje juice	00:00:37	No		No
Virgilia002	Reciprocal videos	00:05:12	No		No
Virgilia003	How to make a manare	00:00:32	Yes	00:11:40	No
Virgilia004	How to make a conuco	00:00:30	Yes	00:22:50	No
Virgilia005	How to fish with barbasco	00:00:47	Yes	00:22:59	No
Virgilia006	Taboo about pregnant women and food	00:01:19	No		No
Virgilia007	How to make a sebucán	00:01:10	Yes	00:22:16	No
Virgilia008	How to make a chinchorro	00:00:25	Yes	00:09:52	No
Virgilia009	How to make a curiara	00:00:40	Yes	00:25:29	No
Virgilia010	How to build a house	00:00:41	Yes	00:22:34	No
Virgilia011	What did houses look like in the olden times?	00:00:43	No		No
Virgilia012	How to make a catumare	00:00:30	Yes	00:22:18	No
Virgilia013	How to make mañoco	00:00:57	Yes	00:34:54	No
Virgilia014	How to make a	00:01:05	Yes		No

	budare				
Virgilia015	What do you have in your conuco?	00:00:49	No		No
Virgilia016	Medicinal plant used for toothache	00:00:58	No		No
Virgilia017	How to make a fire fan	00:00:17	No		No
Virgilia018	What games do children play?	00:00:39	No		No
Virgilia019	How to name X	00:06:42	No		No
Virgilia020	Where does the tiger live?	00:03:21	No		No
Virgilia021	How to hunt for wild board	00:00:41	No		No
Virgilia022	What animals can't be eaten	00:01:06	No		No
Ramon001	Wapa weaving	00:16:28	No		Yes
PedroPerez003	Ají al sol	00:00:44	No		Yes
PedroPerez004	How to make X	00:07:11	No		Yes
Animal Stories					
Nepo005	<i>tapir (mako)</i>	00:04:33	Yes	00:33:09	No
Nepo006	<i>báquiro</i>	00:02:48	Yes	00:41:48	No
Nepo007	<i>lapa</i>	00:02:27	Yes	00:26:33	No
Nepo008	<i>picure</i>	00:02:25	Yes	00:37:58	No
Nepo009	<i>oso palmero</i>	00:03:03	Yes	01:01:55	No
Nepo010	<i>pereza</i>	00:01:52	Yes	00:23:18	No
Nepo011	<i>capuchino</i>	00:02:30	Yes	00:22:39	No
Nepo012	<i>marimunda</i>	00:02:55	Yes	00:36:17	No
Nepo013	<i>araguato</i>	00:02:54	Yes	00:34:15	No
Nepo014	<i>perro de agua</i>	00:01:38	Yes	00:20:57	No
Interviews					
Ramon002	Old times, pendare, etc.	00:32:59	No		Yes
NepoCarmen001	Old times and customs	00:15:35	Yes	14:56:50	Yes
NepoCarmenMarina001	Discussion of selected topics	00:48:12	No		Yes
PedroPerez001	Old times, pendare, etc.	00:35:36	No		Yes
PedroPerez002	Old times (cont'd)	00:04:41	No		Yes
OCEs					
Meetings					

Meeting_3Nov2013		02:00:47	No		Yes
Meeting_24Nov2013		02:04:50	No		Yes
Elicitation					
Verbs_2Nov2013	Verb paradigms	02:23:03	N/A		No
Nonverbal_pred001	Non verbal predication	01:32:52	N/A		No
Nepo016	Reciprocals	00:25:59	N/A		No
Vowel_study001	Vowels	00:05:47	N/A		No
Vowel_study002	Vowels	00:12:12	N/A		No
Nepo017	Discussion of verbs/adverbs	01:04:21	N/A		No
Eliseo034	Swadesh list completion	00:04:06	N/A		No
Nepo&Gabriel001	Deictics	00:08:00	N/A		No
FALL 2014					
ID	Topic	Duration	TT	Duration	Video
Elicitation					
Jhonatan001	Question formation	0:56:39	N/A		No
Jhonatan002	Adjective/adverb comparison	0:39:00	N/A		No
Jhonatan003	Relative clauses	0:58:29	N/A		No
Jhonatan004	Relative clauses	0:25:22	N/A		No
Jhonatan005	Relative clauses	0:11:25	N/A		No
Jhonatan006	Complement clauses	1:05:40	N/A		No
Nepo018	Relative clauses	1:11:22	N/A		No
Nepo019	Complement clauses	1:14:47	N/A		No
Nepo020	If-clauses	0:16:52	No		No
Nepo021	Complement clauses	1:27:20	N/A		No

Appendix 2 Community Census Questionnaire (Adapted from Campoverde (2012))

Datos para censo

- 1.- ¿Cuántas personas viven aquí?
- 2.- ¿Con quién vive usted aquí?
- 3.- Edad aproximada de las personas
- 4.- Las personas de la casa de al lado, ¿quiénes son?

Información sobre padres del entrevistado/a

- 5.- ¿Quiénes son sus padres?

Madre _____ Etnia _____

Padre _____ Etnia _____

¿Dónde nació su madre?

¿Dónde nació su padre?

¿Dónde queda eso?

¿Dónde queda eso?

¿Aún existe ese sitio?

¿Aún existe ese sitio?

Su madre vive sí ____ no ____

Su madre vive sí ____ no ____

Información sobre el entrevistado

- 6.- ¿Usted dónde nació?

a) ¿Dónde queda eso?

b) ¿Todavía existe ese lugar?

c) ¿Recuerda cuentos sobre la fundación de ese lugar?

d) ¿En qué otros sitios, comunidades, caños, fundos, cerros ha vivido?

Información sobre vínculos con otras comunidades

- 7.- ¿Tiene familia en otras comunidades?

Nombre _____ Etnia _____

¿Dónde vive?

Relación de parentesco con usted:

Idiomas

- 8.1.- Personas que hablan castellano en la casa

a) ¿Dónde lo aprendió?

c) ¿Quién ha ido a estudiar en Atabapo?

b) ¿Qué grados estudió en la escuela?

- 8.2.- ¿Cree que es importante que los niños aprendan

a) a hablar Mako?

a) a hablar Español?

b) a escribir en Mako?

b) a escribir en Español?

c) a leer en Mako

c) a leer en Español

- 8.3.- ¿Con quién usa el castellano?

Historias

9. ¿Recuerda historias, cuentos, mitos de los antiguos sobre piedras, caños, etc.?

10. ¿Conoce alguna historia sobre el origen de los Jojodö?

Appendix 3 UNESCO “Nine Factors” Grades (from Brenzinger et al. (2003))

Factor # 1 Intergenerational Language Transmission

Safe (5): The language is spoken by *all generations*. There is no sign of linguistic threat from any other language, and the intergenerational transmission of the language seems uninterrupted.

Stable yet threatened (5-): The language is spoken in most contexts by all generations with unbroken intergenerational transmission, yet multilingualism in the native language and one or more dominant language(s) has usurped certain important communication contexts. Note that multilingualism alone is not necessarily a threat to languages.

Unsafe (4): Most but not all children or families of a particular community speak their language as their first language, but it may be restricted to specific social domains (such as at home where children interact with their parents and grandparents).

Definitively endangered (3): The language is no longer being learned as the mother tongue by children in the home. The youngest speakers are thus of the *parental generation*. At this stage, parents may still speak their language to their children, but their children do not typically respond in the language.

Severely endangered (2): The language is *spoken* only by *grandparents and older generations*; while the parent generation may still *understand* the language, they typically do not speak it to their children.

Critically endangered (1): The youngest speakers are in the *great-grandparental generation*, and the language is not used for everyday interactions. These older people often *remember* only part of the language but *do not use* it, since there may not be anyone to speak with.

Extinct (0): There is no one who can speak or remember the language.

Factor # 3 Proportion of Speakers within the Total Population

Universal use (5): The language of the ethnolinguistic group is the language of interaction, identity, thinking, creativity, and entertainment, and is actively used in all discourse domains for all purposes.

Multilingual parity (4): One or more dominant languages, rather than the language of the ethnolinguistic group, is/are the primary language(s) in most official domains: government, public offices, and educational institutions. The language in question, however, may well continue to be integral to a number of public domains, especially in traditional religious institutions, local stores, and those places where members of the community socialize. The coexistence of the dominant and non-dominant languages results in speakers' using each language for a different function (*diglossia*), whereby the non-dominant language is used in informal and home contexts and the dominant language is used in official and public contexts. Speakers may consider the dominant language to be the language of social and economic opportunity. However, older members of the community may continue to use only their own minority language. Note that multilingualism, common throughout the world, does not necessarily lead to language loss.

Dwindling domains (3): The non-dominant language loses ground and, at home, parents begin to use the dominant language in their everyday interactions with their children, and children become *semi-speakers* of their own language (*receptive bilinguals*). Parents and older members of the community tend to be productively bilingual in the dominant and indigenous languages: they understand and speak both. Bilingual children may exist in families where the indigenous language is actively used.

Limited or formal domains (2): The non-dominant language is used only in highly formal domains, as especially in ritual and administration. The language may also still be used at the community centre, at festivals, and at ceremonial occasions where these older members of the community have a chance to meet. The limited domain may also include homes where grandparents and other older extended family members reside, and other traditional gathering places of the

elderly. Many people can understand the language but cannot speak it.

Highly limited domain (1): The non-dominant language is used in very restricted domains at special occasions, usually by very few individuals in a community, e.g., ritual leaders on ceremonial occasions. Some other individuals may remember at least some of the language (*rememberers*).

Extinct (0): The language is not spoken at any place at any time.

Factor # 4 Proportion of Speakers within the Total Population

Degree of Endangerment	Grade	Domains and Functions
<i>universal use</i>	5	The language is used in all domains and for all functions
<i>multilingual parity</i>	4	Two or more languages may be used in most social domains and for most functions.
<i>dwindling domains</i>	3	The language is in home domains and for many functions, but the dominant language begins to penetrate even home domains.
<i>limited or formal domains</i>	2	The language is used in limited social domains and for several functions
<i>highly limited domains</i>	1	The language is used only in a very restricted domains and for a very few functions
<i>extinct</i>	0	The language is not used in any domain and for any function

Factor # 5 Response to New Domains and Media

Degree of Endangerment	Grade	New Domains and Media Accepted by the Endangered Language
<i>dynamic</i>	5	The language is used in all new domains.
<i>robust/active</i>	4	The language is used in most new domains.
<i>receptive</i>	3	The language is used in many domains.
<i>coping</i>	2	The language is used in some new domains.
<i>minimal</i>	1	The language is used only in a few new domains.
<i>inactive</i>	0	The language is not used in any new domains.

Factor # 6 Materials for Language Education and Literacy

Grade	Accessibility of Written Materials
5	There is an established orthography, literacy tradition with grammars, dictionaries, texts, literature, and everyday media. Writing in the language is used in administration and education.
4	Written materials exist, and at school, children are developing literacy in the language. Writing in the language is not used in administration.
3	Written materials exist and children may be exposed to the written form at school. Literacy is not promoted through print media.
2	Written materials exist, but they may only be useful for some members of the community; and for others, they may have a symbolic significance. Literacy education in the language is not a part of the school curriculum.
1	A practical orthography is known to the community and some material is being written.
0	No orthography available to the community.

Factor # 7 Governmental and Institutional Language Attitudes And Policies, Including Official Status and Use

Equal support (5): All of a country's languages are valued as assets. All languages are protected by law, and the government encourages the maintenance of all languages by implementing explicit policies.

Differentiated support (4): Non-dominant languages are explicitly protected by the government, but there are clear differences in the contexts in which the dominant/official language(s) and non-dominant (protected) language(s) are used. The government encourages ethnolinguistic groups to maintain and use their languages, most often in private domains (as the home language), rather than in public domains (e.g., in schools). Some of the domains of non-dominant language use enjoy high prestige (e.g., at ceremonial occasions).

Passive assimilation (3): The dominant group is indifferent as to whether or not minority languages are spoken, as long as the dominant group's language is the language of interaction. Though this is not an explicit language policy, the dominant group's language is the *de facto* official language. Most domains of

non-dominant language use do not enjoy high prestige.

Active assimilation (2): The government encourages minority groups to abandon their own languages by providing education for the minority group members in the dominant language. Speaking and/or writing in non-dominant languages is not encouraged.

Forced assimilation (1): The government has an explicit language policy declaring the dominant group's language to be the only official national language, while the languages of subordinate groups are neither recognized nor supported.

Prohibition (0): Minority languages are prohibited from use in any domain. Languages may be tolerated in private domains.

Factor # 8 Community Members' Attitudes toward Their Own Language

Grade	Community Members' Attitudes toward Language
5	<i>All</i> members value their language and wish to see it promoted.
4	<i>Most</i> members support language maintenance.
3	<i>Many</i> members support language maintenance; others are indifferent or may even support language loss.
2	<i>Some</i> members support language maintenance; others are indifferent or may even support language loss.
1	Only <i>a few</i> members support language maintenance; others are indifferent or may even support language loss.
0	<i>No one</i> cares if the language is lost; all prefer to use a dominant language.

Factor # 9 Community Members' Attitudes toward Their Own Language

Nature of Documentation	Grade	Language Documentation
<i>superlative</i>	5	There are comprehensive grammars and dictionaries, extensive texts; constant flow of language materials. Abundant annotated high-quality audio and video recordings exist.
<i>good</i>	4	There are one good grammar and a number of adequate grammars, dictionaries, texts, literature, and occasionally updated everyday media; adequate annotated high-quality audio and video recordings.
<i>fair</i>	3	There may be an adequate grammar or sufficient amount of grammars, dictionaries, and texts, but no everyday media; audio and video recordings may exist in varying quality or degree of annotation.
<i>fragmentary</i>	2	There are some grammatical sketches, word-lists, and texts useful for limited linguistic research but with inadequate coverage. Audio and video recordings may exist in varying quality, with or without any annotation.
<i>inadequate</i>	1	Only a few grammatical sketches, short word-lists, and fragmentary texts. Audio and video recordings do not exist, are of unusable quality, or are completely un-annotated.
<i>undocumented</i>	0	No material exists.

Appendix 4 Classifiers

Classifier	Gloss	Nouns it occurs with
- <i>owi</i>	‘TREE’	<i>towi</i> ‘tree’, <i>itsowi</i> ‘curiara’
- <i>ite</i>	‘PLANK’	<i>itsowi tsite</i> ‘canalete, oar’
- <i>ĩpĩ</i>		<i>mĩpĩ</i> ‘arch’, <i>maçopĩ</i> ‘rainbow’, <i>itsĩpĩ</i> ‘bucket handle’
- <i>ĩ?ã</i>		<i>otomĩ?ã</i> ‘ax’
- <i>idi</i>	‘RIVER’	<i>oh^we tsidi</i> ‘small river, cañito’
- <i>?o</i>		<i>towi?o</i> ‘tree trunk’
- <i>po</i>	‘ROUND’	<i>içapo</i> ‘egg’, <i>t^hilaçapo</i> ‘their scrotum’, <i>k^wenepo</i> ‘mushroom’, <i>itsapo</i> ‘round fruit’, <i>apo</i> ‘beak (of a toucan)’, <i>opo</i> ‘fruit’
- <i>?wo</i>		<i>sachu</i> ‘salt’, <i>sabana?wo</i> ‘sheet’, <i>ukua?wo</i> ‘belly’, <i>itsa?wo</i> ‘bag/garbage?’
- <i>?do</i>	‘CONTAINER’	<i>uku tsa?do</i> ‘match box’, <i>pālāka?do</i> ‘washbasin’, <i>o?do</i> ‘bucket’, <i>itsa?do</i> ‘container’
- <i>lo</i>	JELLY-LIKE	<i>itsalo</i> ‘egg white’, ‘jelly-like’, <i>tīt^helo</i> ‘fish scale’
- <i>tso</i>	‘GROUP’	<i>itsatso</i> ‘pack of wild boars’
- <i>?bo</i>	‘OBLONG’	<i>iwari?bo</i> ‘tail’, <i>bale?bo</i> ‘plantain fruit’, <i>luwa?bo</i> ‘guama fruit’, <i>t^hihē?bo</i> ‘thigh’
- <i>dō</i>		<i>balule itsēdō</i> ‘plantain peel’, <i>kamihidō</i> ‘shirt, clothes’, <i>itsēdō</i> ‘human skin’
- <i>p^ho</i>		<i>imiup^ho</i> ‘cloud’, <i>oh^wiçō tsap^ho</i> ‘cloud’, <i>?dolup^ho</i> ‘(rubber/plastic) container’, <i>inap^ho</i> ‘catumare’
- <i>do</i>		<i>ap^hado</i> ‘ribbon’
- <i>t^ho</i>		<i>bat^ho</i> ‘conuco’, <i>walet^ho</i> ‘scab’
- <i>?o</i>		<i>t^hoto?o</i> ‘buttock’, <i>iwe?o</i> ‘bone’, <i>mĩtsa?o</i> ‘hill’, <i>uhulu tsa?o</i> ‘muscle’, <i>wāçō?o</i> ‘honeycomb’, <i>ibēh^wã tsa?o</i> ‘hoof of a tapir’
- <i>çō</i>		<i>oh^wiçō</i> ‘water’, <i>voladora</i> ‘lightweight boat’, <i>lo?oçō</i> ‘catara’
- <i>wo</i>		<i>t^hilawo</i> ‘placenta/water’
- <i>t^hō</i>	‘HOLLOW’	<i>wāt^hō</i> ‘hollow trunk’, <i>?dālēt^hō</i> ‘snail (shell?)’

-f̥o	‘BUNCH’	<i>buberif̥o</i> ‘seje bunch’, <i>nunuf̥af̥o</i> ‘cucurito bunch’, <i>itsaf̥o</i> ‘bunch’
-ʔdō		<i>dēhāʔdō</i> ‘glass’
-ko	‘CLUSTER’	<i>baluleko</i> ‘plantain cluster’
-obu	‘LIQUID’	<i>nesti tsobu</i> ‘Nestea drink’, <i>gasolina tsobu</i> ‘gasoline’, <i>itsobu</i> ‘lake, lagoon,’
-bũ		<i>itsābũ</i> ‘flower’
-nu	‘CANE-LIKE’	<i>ḡõmunu</i> ‘corn plant’, <i>nohonu</i> ‘sugar cane plant’, <i>mālũnu</i> ‘flute’
-hu	‘HOLE’	<i>itsahu</i> ‘hole’
-ḡũ		<i>tʰiḡũ</i> ‘nose’
-ḡu		<i>u</i> ‘head’, <i>otohoḡu</i> ‘frying pan/pot’, <i>ilakiḡu</i> ‘his ear’
-āpũ		<i>tsobiāpũ</i> ‘beach’
-pu	‘SHELL’	<i>ulupu</i> ‘cucurito bunch shell’
-pe	‘BUNDLE’	<i>itsape</i> ‘something in a bundle’, ‘ <i>ayaca</i> ’
-ʔḡe		<i>kʷiḡaluʔḡe</i> ‘notebook’, <i>tʰiwiʔḡe</i> ‘hair’
-ne		<i>inene</i> ‘tongue’
-de	‘ROUND_SMALL’	<i>ʔdūlāmēde</i> ‘niña fruit’, <i>buberide</i> ‘seje fruit’, <i>õmude</i> ‘a grain of corn’ <i>itade</i> ‘penis’ <i>its-ade</i> ‘anything small and round’
-me		<i>mehe</i> ‘plain’, ‘year’ (no word but the numerals work with it)
-le		<i>tʰibahale</i> ‘their eye’, <i>itsale</i> ‘alphabet letter’
-ālẽ		<i>itsālẽ</i> ‘button’
-āpi	‘FLAT’	<i>maku-pi</i> ‘mango seed’, <i>kʷene-pi</i> ‘(oyster) mushroom’, <i>balada tsapi</i> ‘coin’,
-ʔdi	‘DOUGH-LIKE’	<i>leteʔdi</i> ‘mud’, <i>ileʔdi</i> ‘yucca dough’
-ola		<i>ikʷila</i> ‘fire’, <i>tʰola</i> ‘port’
-op ^h a	‘ROPE-LIKE’	<i>wibip^ha</i> ‘bejuco’, <i>itsop^ha</i> ‘rope’
-oʔda		<i>dowoʔda</i> ‘pestle’
-pa		<i>luʔdu-pa</i> ‘manare’, <i>apa</i> ‘nest’, <i>umetupa</i> ‘side of the body, rack of ribs’, <i>itsapa</i> ‘eggs in a carton’
-ʔda	‘ROW’	<i>ḡõmu-ʔda</i> ‘ear of corn’ <i>its-aʔda</i> ‘row of seje’

-lā		ālā ‘sebucán’
-ba	‘FLAT’	bale-ba ‘plantain tree’, t̥fiba ‘my face, forehead’ itsaba ‘slab/budare’, bah ^w ĩ-ba ‘wasp nest (flat)’
-ka		koluka ‘car’, iwi ^ʔ d̥eka ‘horn’, t ^h ĩbaɕaka ‘scissors’, iwe ^ʔ o tsaka ‘spine’, its-aka ‘chair/motor/ladder’
- ^ʔ dā	‘TUBER’	ile ^ʔ dā ‘manioc root’, wiriɕa ^ʔ dā ‘sweet potato root’, h ^w ale ^ʔ dā ‘yam root’
-āpa		dēhāpa ‘plate’
-ɕa		t̥fa ‘my mouth’, taɕa ‘rapids, small waterfall’, iridiɕa ‘hammock’
-wa		inawa ‘stone’
-iji		koko ɲiji ‘coconut tree’, bāhālā ɲiji ‘pijiguao palm’ iɲiji ‘palm’
-iʔi	‘POINTED’	siriʔi ‘star’, lapi tsiʔi ‘pencil’, bāhā tsiʔi ‘thorn’, clavo tsiʔi ‘nail’, iʔiʔi ‘spike’
-ehu	‘HOUSE’	ōdo ‘house’
-o ^ʔ d̥e		t ^h o ^ʔ d̥e ‘their tooth’, āh ^w a tso ^ʔ d̥e ‘fishing hook’
-owa		its-owa ‘crack on wood’
-ihe		inehe ‘nail, claw’
-ihẽ		tsōbĩhẽ ‘comb’
-iʔa		t ^h ĩtiʔa ‘finger’
-iha	‘LEAF’	its-ihā ‘leaf’, wālẽ ts-ihā ‘tobacco leaf’, t ^h ihā ‘their arm’
-ōma		ik ^w ila ɲōma ‘ash’
- ^ʔ be		‘masa de yucca’

Appendix 5 List of Symbols and Abbreviations

#	unattested example
/	end of intonation unit
1	first person
2	second person
3	third person
A	agent-like argument of canonical transitive verb
ADD	additive
ADV	adverbial
ALL	allative
AUX	auxiliary
CL	classifier
COP	copula
CONTR	contrastive
DIST	distal
DUR	durative
EMPH	emphatic
EPENTH	epenthesis
FEM	feminine
FUT	future
IMP	imperative
MASC	masculine
MID	middle
MOT	motion
NON.FIN	non-finite

NEG	negative
NOM	nominalizer
OBJ	object
O/P	patient-like argument of canonical transitive verb, object suffix
PL	plural
PN	proper name
POSS	possessive
PRS	present
PRO	pronoun
PROH	prohibitive
PROX	proximate
PST	past
PURP	purposive
Q	question particle/marker
RECIP	reciprocal
S	single argument of canonical intransitive verb
Sp.	Spanish
SG	singular
SOC	sociative
SUBJ	subject
TAME	tense/aspect/mood/evidentiality
TOP	topic
UNCERT	uncertainty
VEN	venitive
VOL	volitional

Appendix 6 Texts

The following are a sample of texts from my Mako corpus. This small sample seeks to represent the main types of texts collected as part of my project. The first text “The otter” is part of a collection of 10 short texts on local mammals that have been included in a reading primer for the communities and it is primarily descriptive in nature. The second text “Pear Story” is a narration. There are two types of narrations in my corpus: narration of past events and narrations based on stimuli. This text represents the latter type and uses the Pear Story film. The five short “How to X” texts following the Pear Story are also representative of another major type of text in my corpus: procedural texts. Finally, I offer two other sample texts: “Cut and Break Events” and “Cassava Making”. These two texts have in common the fact that they both represent descriptions of short clips/pictures. They differ, however, in the nature of the stimuli used: non-local vs. local. In the first case, the stimuli used were devised by the Language and Cognition department at the Max Planck Institute for Psycholinguistics and have been variably used with languages all over the world. I used the MPI stimuli successfully in three configurations: 1) with a single consultant, 2) with two or more consultants simultaneously, and 3) with a single primary consultant but with other people around. The third configuration is represented here and has the advantage of representing also short stretches of conversation (Video 9, Video 11-15). The second type of stimuli were locally produced and included pictures and videos of everyday activities in the community. The sample text offered here is the description of the different steps of the process of cassava making as photographed by me in Arena Blanca.

Animal Story

The otter -- ID: Nepo014

hōba-ma *dabu* *mik^w-ō-Ø*
that_one + CL:MASC-TOP? otter be_called-CL:MASC-3.COP
'that one is called otter',²⁴⁰

dabu *mik^w-ō-ma* *oh^we-ni-da* *h-ō-Ø*
otter be_called-CL:MASC-TOP? river-NON.SUBJ-CONTR? stand-CL:MASC-3.COP
'that one called otter lives on the river'

ab-i-ma *its-ahu-ni* *ab-ō-Ø*
sleep-NON.FIN-TOP? DUMMY_ROOT-CL-NON.SUBJ sleep-CL:MASC-3.COP

oh^we *wāme*
river on_top_of
'as for sleeping, it sleeps in holes on the banks of the river' (lit. on top of the river)

hōba-ma *bāi-ni-da* *ku-ō-Ø*
that_one + CL:MASC-TOP? fish.PL-NON.SUBJ-CONTR? eat-CL:MASC-3.COP
'it eats fish'

hōba-ma *tsulehawa-ma* *ku-iki*
that_one + CL:MASC-TOP? other_things?-TOP? eat-NEG
'it doesn't eat other things'

oh^we-ni-da *hũk^wabet^hi* *h-ō-Ø* *milē* *peĩki*
river-NON.SUBJ-CONTR? that_s_why stand-CL:MASC-3.COP day all
'that's why it stays on the river all day'

bāi = ts-ō-ni *u-ku-ena-ma*
fish.PL = DUMMY_ROOT-CL:MASC-NON.SUBJ 3SG.MASC-eat-ADV1-TOP?

²⁴⁰ *pteronura brasiliensis*

tebo-nĩ *wãm-ib-ĩ* *ku-õ-Ø*
 woods-NON.SUBJ exits_river-?-NON.FIN eat-CL:MASC-3.COP
 ‘when it eats a fish, it eats it exiting the river into the woods’

oh^we-nĩ-bi *nan-ĩ* *ku-õ-Ø*
 river-NON.SUBJ-ADD float-NON.FIN eat-CL:MASC-3.COP
 ‘or it eats it floating on the river’

hõba-ma *ɕẽ-ap^ho-b-õ-Ø*
 that_one + CL:MASC-TOP? be_black-A_LITTLE?-B?-CL:MASC-3.COP
 ‘it is kind of black’

dew-ĩ-bi *dew-ikĩ*
 be_white-NON.FIN-ADD be_white-NEG
 ‘but white, it is not white’

a-ka *ts-ĩte-da* *duw-ap^ho-b-õ-Ø*
 mouth-CL DUMMY_ROOT-CL-CONTR? be_red-A_LITTLE?-B?-CL:MASC-3.COP
 ‘its jaw is a little red’

bãĩ *ku-õ-Ø*
 fish eat-CL:MASC-3.COP
 ‘it eats fish’

tsulehawa-ma *ku-ikĩ*
 other_things?-TOP? eat-NEG
 ‘it doesn’t eat other things’

op-ihu *ku-ikĩ*
 fruit + CL-PL eat-NEG
 ‘it doesn’t eat fruits’

hõba-ma *ku-ak^w-aw-ikĩ*
 that_one + CL:MASC-TOP? eat-?-MID-NEG
 ‘one doesn’t eat that one’

Narrative

Pear Story (second retelling) -- ID: Eliseo023

its-ō-ma

DUMMY_ROOT-CL:MASC-TOP?

‘the boy’

ahaɕi-ni-ma

akala

h^wi-ena

first-NON.SUBJ-TOP? rooster call-ADV1

‘first, when the rooster crows’

itf-i

ʔdi-Ø-in-obe-tiha

pera

come-NON.FIN pick-3SG.MASC-PST-TAME-? pear_Sp.

‘he came to pick pears’

ʔdi-Ø-obe-ma

cestaa

pick-3SG.MASC-TAME-TOP? basket_Sp.

‘he picks with a basket’

oʔdō-ni

an-ab-an-i

a_few-NON.SUBJ put_inside-?-DUR-NON.FIN

an-ab-an-i

ʔdi-Ø-ena

put_inside-?-DUR-NON.FIN pick-3SG.MASC-ADV1

‘putting a few (pears in the basket), when he is picking and putting (them in the basket)’

bak^w-ō

Ø-itf-in-obe-tiha

one-CL:MASC 3SG.MASC-come-PST-TAME-?

‘one (boy) came’

bicicleta-ni

tsẽmu

bike_Sp.-NON.SUBJ children + PL

‘in a bike, the children’

hẽt^hĩ

itf-ah-ō-ma

thus come-?-CL:MASC-TOP?

‘thus, the one who came’

mi-ak^{wi} *ed-ab-an-emi*
 high-TOWARDS look-?-DUR-ADV2
 ‘looking upwards’

h^{wi}-Ø-af-i *ik^w-ik^w-e-ma*
 come_down-3SG.MASC-?-NOM? AUX-?-TAME-TOP?
 ‘he doesn’t get down’

tahi *canasta* *ts-aka*
 [filler] basket_Sp. DUMMY_ROOT-CL
 ‘eh, the basket’

an-ib-i
 put-?-NON.FIN
 ‘putting’

Ø-ẽwãh-in-obe-tiha
 3SG.MASC-leave-PST-TAME-?
 ‘he left’

hemikena-ma *burro*
 afterwards-TOP? donkey_Sp.
 ‘afterwards, the donkey’

ʔɕ-ãh-eb-i *i-baled-õ-ni-bi* *Ø-ed-in-ok-obe-tiha*
 go-MOT?-?-NON.FIN 3SG.MASC-pass-CL:MASC 3SG.MASC-see-PST-NEG-TAME-?
 ‘he also didn’t see the one that went by with the donkey’

canasta *an-ib-i* *ẽwãh-i*
 basket_Sp. put_inside-?-NON.FIN leave-NON.FIN
 ‘while leaving after putting (the pears) inside the basket’

haʔi-t^{hi}
 middle-EMPH?
 ‘in the middle’

mm mm *me-Ø-in-obe-tiha* bicicleta *okoh^wini*
 [vocalization] fall-3SG.MASC-PST-TAME-? bike_Sp. everything
 ‘he fell with the bike and everything else’

canasta-bi *wã-b-ib-i*
 basket_Sp.-ADD spill-B-?-NON.FIN
 ‘also the basket spilling’

ĩkena *hẽt^{hĩ}* *me-iɕ-aw-i-ma* *hu^ʔw-iɕi* *tsẽmu*
 afterwards thus fall-?-OBJ_PL?-TOP? other-CL:PL children + PL
 ‘afterwards, the ones that fell, other children’

badik^w-i
 find-NON.FIN
 ‘finding (him)’

p^ha-t^h-at-in-obe-tiha *e^ʔd-i*
 help-3PL-?-PST-TAME-? pick-NON.FIN
 ‘helped (him) picking up (the pears)’

hemikena-ma *i-mid-in-obe-tiha* *hawa* *opo-ni-da*
 afterwards-TOP? 3SG.MASC-pay-PST-TAME-? thing fruit + CL-NON.SUBJ-CONTR?

i-nak^w-ãh-ã *opo-ni-da*
 3SG.MASC-steal-?-? fruit + CL-NON.SUBJ-CONTR?
 ‘afterwards, he paid (them) with that thing, the fruit, the fruit he had stolen’

hẽt^{hĩ} *mid-i* *mid-eb-i* *ẽwãh-on-i*
 thus pay-NON.FIN pay-?-NON.FIN leave-?-NON.FIN

i-kaɕua-ʔo *bĩb-ah-obe-tiha*
 3SG.MASC-cap-CL stay_behind-?-TAME-?
 ‘thus paying, almost leaving and paying, the cap stayed behind’

hemikena-ma *h^wi-b-i* *t^hi-t^hat-ih-a-tə*
 afterwards-TOP? call-B-NON.FIN 3PL-return-PST-TAME-PST
 ‘afterwards, calling (him), they returned (it)’

hēt^hĩ t^hĩ-t^hat-ah-obe ok-obe-ma
thus 3PL-return-?-TAME NEG-COP-TOP?

hũwĩ Ø- ěwãh-in-obe-tiha
well 3SG.MASC-leave-PST-TAME-?
‘thus after they returned it, well, he left’

tupa-k^wĩ
forward-VEN
‘(going) forward’

Procedural Texts

How to make a sieve -- ID: Virgilia003

lu[?]du-pa

sieve-CL

‘sieve’

buk^w-aw-apa lu[?]dupa-ma

weave-MID-CL sieve-TOP?

‘the sieve one weaves’

eb-i

take_out_fiber-NON.FIN

‘you take out the fiber’

di-b-i

scrape-NON.FIN

‘you scrape (it)’

e[?]d-i

ik^w-i

ok^wa hawa

take_out-NON.FIN AUX-NON.FIN inside thing

‘you take out the thing inside’

em-i

buk^w-aw-a

grab-NON.FIN weave-MID-TAME

‘you grab and weave’

buk^w-i

weave-NON.FIN

‘you weave’

ɕõ-b-eb-i

tie_around-B-?-NON.FIN

‘you tie around (a circle)’

<i>h^wa-h^wa-b-i</i>	<i>hã-aw-a</i>	<i>lu[?]du-pa</i>
RED-tie_around-B-NON.FIN	do-MID-TAME	sieve-CL
‘tying, one makes a sieve’		

How to prepare a garden -- ID: Virgilia 004

h^wi-b-i
 slash-B-NON.FIN
 ‘you slash’

<i>ah</i>	<i>h^wi-aw-a-ma</i>	<i>iki</i>
[vocalization]	slash-MID-TAME-TOP?	NEG
‘it is not “you slash” (yet)’		

wi-b-i
 fell-B-NON.FIN
 ‘you fell’

h^wi-b-i
 slash-B-NON.FIN
 ‘you slash’

hemikena-ma
 afterwards-TOP?
 ‘afterwards’

<i>lek^we</i>	<i>lid-an-ib-i</i>
time	let_time_pass-DUR-?-NON.FIN
‘you let some time pass’	

huw-i
 burn-NON.FIN
 ‘you burn’

ti-b-i
 plant-B-NON.FIN
 ‘you plant’

ti-t^h-ak^w-edí-ma *ile* *õh^{wĩ}ǵa* *ʔde-b-í*
 plant-3PL-FUT-CL:PL-TOP? manioc plants take_out-B-NON.FIN
 ‘before you plant, you take out the manioc plants’

hemikena-ma *ʔde-b-í* *ka-b-at-í*
 afterwards-TOP? take_out-B-NON.FIN finish-B-?-NON.FIN

níhi *tso-b-í* *ǵutaw-í*
 ground dig-B-NON.FIN put_in-NON.FIN
 ‘afterwards, when you are done taking out (the plants), you dig in the ground and you put in (the manioc)’

tso-b-í
 dig-B-NON.FIN
 ‘you dig’

pok^w-ob-í
 grow-PURP-NON.FIN
 ‘so they grow’

How to fish with barbasco -- ID: Virgilia005

tso-b-í
 dig-B-NON.FIN
 ‘you dig’

níhi-ní *b-ãh-í* *tahi* *wetu*
 ground-NON.SUBJ sit-?-NOM [filler] *barbasco*
 ‘the barbasco that is in the ground’²⁴¹

tso-b-ah-adí-ma *ʔdo-b-í* *its-ãwõ* *baiban-í*
 dig-B-MOT?-CL:PL-TOP? hit-B-NON.FIN DUMMY_ROOT-CL result-NON.FIN
 ‘after you dig (it), you hit until it is like a fluff’

²⁴¹ *Jacquinia barbasco*, a bush that is used to create a substance to stun fish

ĩkena-ma *ʔdo-b-ĩ* *ka-b-at-ĩ-ma*
 afterwards-TOP? hit-B-NON.FIN finish-B-?-NON.FIN-TOP?
 ‘afterwards, when you finish hitting it’

nihĩ *oh^we-t^hĩ* *deluw-an-ĩ* *deluʔd-ib-ĩ* *metf-ĩ*
 ground river-EMPH? dirty-DUR-NON.FIN dirty-?-NON.FIN put_poison-NON.FIN
 ‘afterwards, when you dirty the river with mud, you dirty it and put poison’

hemikena-ma *t^h-ow-obe* *bãĩ*
 afterwards-TOP? 3PL-drink-TAME fish.PL
 ‘afterwards, the fish drink’

nĩ-ena *ʔduk^watf-aw-ĩ* *pele-b-adĩ*
 be_many-ADV1 be_drunk-MID-NON.FIN get_crazy-B-CL:PL
 ‘when there are many, they get drunk and crazy’

hemikena-ma *bãĩ* *em-ĩ*
 afterwards-TOP? fish.PL grab-NON.FIN
 ‘afterwards, you grab the fish’

tfu-ku-an-ĩ
 1SG-eat-DUR-NON.FIN
 ‘I eat (them)’

to-b-ĩ *ku-an-ĩ*
 cook-B-NON.FIN eat-DUR-NON.FIN
 ‘you cook and you eat’

wĩ-b-ĩ *ku-ak^w-aw-a* *tebo-be* *ʔɕ-ãh-adĩ-ma*
 roast-B-NON.FIN eat-?-MID-TAM woods-ALL go-MOT-CL:PL-TOP?
 ‘you roast and you can eat when going to the woods’

ah *ãlã* *buk^{w-i}*
[vocalization] sebucán weave-NON.FIN
'ah weaving the sebucán',²⁴²

ak^{w-at-i} *towi-ni*
hang-NON.FIN tree + CL-NON.SUBJ
'you hang (it) on a tree'

[after correction from Piaroa school teacher]

ahaɕi-ni *wi-b-i* *ãwãh-i*
first-NON.SUBJ fell-B-NON.FIN return-NON.FIN
'first, you go and fell'

e^{ʔd-i} *ok^{w-a}* *hawa* *em-i* *ik^{w-i}*
take_out-NON.FIN inside thing grab-NON.FIN AUX-NON.FIN
'first, you take out the inside thing and grab it'

ĩkena-ma
afterwards-TOP?
'afterwards'

e^{ʔd-i} *ka-b-at-i* *buk^{w-i}*
take_out-NON.FIN finish-B-?-NON.FIN weave-NON.FIN
'when you finish taking out, you weave'

wĩ-b-at-i *nũ^{ʔɕ-i}*
reduce-B-?-NON.FIN tie-NON.FIN
'you reduce (it) and tie (it)'

²⁴² manioc squeezer

an-aw-a

put_inside-MID-TAME

‘you put (something) inside’

hemikena-ma an-i

afterwards-TOP? put-MID-TAME

‘afterwards, you put (something) inside’

ãlã baiban-i

sebucán result-NON.FIN

‘until it is like a sebucán’

How to build a canoe -- ID: Virgilia009

h^wi-b-i

slash-B-NON.FIN

‘you slash’

h^wi-b-i lid-i

slash-B-NON.FIN let_time_pass-NON.FIN

‘you slash and you let some time pass’

hemikena-ma wil-eb-i

afterwards-TOP? cut_in_pieces-?-NON.FIN

‘afterwards, you cut it in pieces’

hemikena-ma

afterwards-TOP?

‘afterwards’

p^ho-b-i its-owi

dig-B-NON.FIN DUMMY_ROOT-CL:TREE

‘you dig the canoe’

hemikena-ma p^ho-b-i ka-b-at-i-ma

afterwards-TOP? dig-B-NON.FIN finish-B-?-NON.FIN-TOP?

‘afterwards, when you are done digging’

ok^wa *p^ho-b-ah-adi-ma* *wāme* *tsaɕʒud-i*
inside dig-B-MOT?-CL:PL-TOP? on_top_of polish-NON.FIN
‘after you have dug inside, you polish on top’

ok^wa *tso-b-i*
inside dig-B-NON.FIN
‘you dig inside’

h^wo-b-i *lo-b-i*
take_out- B-NON.FIN throw_out-B-NON.FIN
‘you take (it) out and throw (it) out’

hemikena-ma *wɨ-b-i*
afterwards-TOP? burn-B-NON.FIN
‘afterwards, you burn (it)’

ok^wa *tso-b-i*
inside dig-B-NON.FIN
‘you dig inside’

tsed-i
open_a_canoe-NON.FIN
‘you open a canoe’

ka-b-at-i *its-api* *hun-i*
finish-B-?-NON.FIN DUMMY_ROOT-CL put-NON.FIN
‘finishing, you put a plank (as a seat)’

k^we-af-ak^w-aw-a *its-owi-ma*
go-?-?-MID-TAME DUMMY_ROOT-CL
‘one can go around in the canoe’

Video elicitation

Cut and Break Events²⁴³ -- ID: Eliseo016

Video 1

kamihi-do hĩ-kěb-obe
clothes-CL 3SG.FEM-tear-TAME
'she was tearing the clothes'

Video 2

kũnãũh^wa-nĩ *ʔdo-b-i* *ʔdĩ-Ø-eb-obe*
iron_rod-NON.SUBJ hit-B-NON.FIN break-3SG.MASC-?-TAME
'he breaks (it) hitting it with an iron rod'

Video 3

towi iwe-ʔo tsafĩ bul-i Ø-ik^w-in-obe
tree branch-CL chunks cut-NON.FIN 3SG.MASC-AUX-PST-TAME

k^wĩlĩte-nĩ
machete-NON.SUBJ
'he was cutting the tree branch in chunks with a machete'

Video 4

its-ãpĩ-nĩ *ʔwi-b-i* *ʔdĩ-Ø-eb-in-obe* *kamihi-do*
DUMMY_ROOT-CL-NON.SUBJ cut-B-NON.FIN break-3SG.MASC-?-PST-TAME clothes-CL
'he was breaking the clothes cutting (them) with a knife'

²⁴³ Bohnemeyer, Bowerman & Brown (2001)

Video 5

its-ĩ?ã *ʔdel-aw-ĩ* *Ø-ik^w-in-obe*
 DUMMY_ROOT-CL-NON.SUBJ snap-MID-NON.FIN 3SG.MASC-AUX-PST-TAME
 ‘he was snapping the twigs’

Video 6

zanahoria *u-bul-ab-in-obe*
 carrot_Sp. 3SG.MASC-cut-?-PST-TAME

 mesa *ts-ite* *wãme* *wan-an-ĩ*
 table_Sp. DUMMY_ROOT-CL on_top_of leave-DUR-NON.FIN
 ‘he was cutting the carrot that was on the table’

Video 7

mesa-*nĩ* / mesa *p^hea-nĩ* *wah-ah-õ* *hi-Ø-atf-ib-in-obe*
 table_Sp. table_Sp. beside-NON.SUBJ sit-?-CL:MASC move-3SG.MASC-?-PST-TAME
 ‘he was sitting on the table, beside the table [self-correction], and moved’

Video 8

kamihi-do *omuna* *bahadi* *kẽʔɕ-atf-in-obe*
 clothes_Sp.-CL alone break-?-PST-TAME
 ‘the clothes were breaking by themselves’

Video 9

S: zanahoria-*nĩ*
 carrot_Sp.-NON.SUBJ
 ‘carrot’

 E: zanahoria *ĩwehe-nĩ* *natf-eb-ĩ* *ĩ-wan-in-obe*
 carrot_Sp. middle-NON.SUBJ cut-?-NON.FIN 3SG.MASC-leave-PST-TAME
 ‘he left the carrot cutting it in half’

S: mesa *tahi-ni* / tabla *ts-ite*
 table_Sp. WHAT-NON.SUBJ plank_Sp. DUMMY_ROOT-CL
 ‘on the table, on the plank’

E: mesa-*ni*
 table_Sp.-NON.SUBJ
 ‘on the table’

Video 10

zanahoria *ʔwi-Ø-in-obe* / o *ʔwi-h-in-obe* será
 carrot_Sp. cut-3SG.MASC-PST-TAME or_Sp. cut-3SG.FEM-PST-TAME will_be_Sp.
 ‘he was cutting the carrots. Or is it “she was cutting”?’

Video 11

E: vaso-*ʔdõ* *ti-h-eb-in-obe*
 glass_Sp.-CL move_aside-3SG.FEM-?-PST-TAME
 ‘she moved the glass aside’

S: *dēhã-ʔd-ihu* *ti-h-eb-in-obe*
 container-CL-PL move_aside-3SG.FEM-?-PST-TAME
 ‘she moved the glasses aside’

E: vaso *hũk^waobeat^{hĩ}*
 glass_Sp. that_s_why
 ‘that’s why (I said) glass’

S: uhmm
 [vocalization]

E: *dēhã-ʔd-ihu* *wahi-t-a*
 container-CL-PL not_know-1SG-TAME
 ‘glasses, I don’t know’

Y: *dēhã-ʔd-ihu*
container-CL-PL
'glasses'

Video 12

E: *its-ãpĩ*
DUMMY_ROOT-CL
'knife'

Women: [unintelligible talk in background]

E: *ʔwi-tʰ-eb-in-obe* *kamihi-do* *dũhũtaha*
cut-3PL-?-PST-TAME clothes-CL two.ANIM
'they two were cutting the clothes'

[unintelligible voice]

Y: *wainĩ* *its-ãpĩ* *h-em-a*
? DUMMY_ROOT-CL 3SG.FEM-grab-TAME
'she grabs the knife'

E: *di-b-ib-ah-i*
move-B-?-MOT-IMP
'move!'

S: [unintelligible]

[people laugh]

Video 13

E: *otom-ĩʔã* *ʔwi-Ø-eb-in-obe* / o *ʔwi-h-in-obe*
ax-CL cut-3SG.MASC-PST-TAME or_Sp. cut-3SG.FEM-PST-TAME
'he was cutting (it) with an ax. Or she was cutting (it)'

Y: *metu[?]wo* *k^{wi}-h-obe*
 pregnancy 2SG-stand-TAME
 ‘are you pregnant?’

Y: *hihi* *metu[?]wo* *tfi-h-obe* / *hele-[?]wo*
 yes pregnancy 1SG-stand-TAME another-CL

tsãdi *de-aw-iki*
 women not_have-MID-NEG
 ‘yes, I am pregnant, another one. Women always are’

Video 14

A: *ed-ih-a* *batilla-po*
 look-?-? water_melon_Sp.-CL:ROUND
 ‘look at the water melon!’

Y: *tfo-wow-e*
 1SG-want-TAME
 ‘I want (some)’

E: *batilla-po* *[?]wi-h-eb-in-obe* *omuna-da*
 water_melon_Sp.-CL:ROUND cut-3SG.FEM-?-PST-TAME barely-CONTR?
 ‘she was barely cutting the water melon’

S: [unintelligible]

Video 15

E: *serruchu-ni* *li-Ø-in-obe* *its-i?-ia*
 handsaw_Sp.-non.subj saw-3SG.MASC-PST-TAME DUMMY_ROOT-CL-PL
 ‘he was sawing the twigs with a handsaw’

Picture elicitation

Cassava Making -- ID: Eliseo031

CM_00

b-ena-ma *Negra* *h-amat-in-obe* *ile*
PROX-ADV1-TOP? PN 3SG.FEM-squeeze-PST-TAME manioc
'here Negra was squeezing the manioc'

CM_01

b-ena-ma *ile* *amat-ak^w-aw-a*
PROX-ADV1-TOP? manioc squeeze-?-MID-TAME

ãlã *p^{he}d-at-i* *hun-aw-in-obe*
sebucán hang-?-NON.FIN put-MID-PST-TAME
'here the manioc was being squeezed. The sebucán was put there hanging.'

CM_04

b-ena-ma *ile* *p^hõ-h-eb-in-obe* *lu²dupa-ni*
PROX-ADV1-TOP? manioc sift-3SG.FEM-?-PST-TAME sieve-NON.SUBJ
'here she was sifting the manioc with the sieve'

CM_05

b-ena-ma *its-õmã* *hã-ab-uhu* *p^hõ-h-eb-in-obe*
PROX-ADV1-TOP? DUMMY_ROOT-CL do-?-CL:FEM sift-3SG.FEM-?-PST-TAME
'here she was sifting the powder she makes'

CM_07

b-ena-ma *p^hõ-b-eb-i* *ka-h-at-in-obe*
PROX-ADV1-TOP? sift-B-?-NON.FIN finish-3SG.FEM-?-PST-TAME
'here she finished sifting'

CM 012

b-ena-ma *daʔu* *ile* *hi-tʰits-eb-o* *hĩbani*
PROX-ADV1-TOP? PN manioc 3SG.FEM-bake-?-FUT PURPOSE

ʔwã-h-eb-inobe

pour-3SG.FEM-?-PST-TAME

‘here Daʔu was pouring (the manioc) to make cassava’

CM 13

b-ena-ma *ile* *tʰits-eb-i* *hã-h-in-obe*
PROX-ADV1-TOP? manioc bake-?-NON.FIN do-3SG.FEM-PST-TAME

its-api-ni *ka-ek^w-api-k^wi*

DUMMY_ROOT-CL turn-?-CL-SOC

‘here she was baking the cassava with the plank used to turn (it)’

CM_14

b-ena-ma *its-ĩpĩ-ni* *bahadani* *hi-tʰits-eb-in-obe*
PROX-ADV1-TOP? DUMMY_ROOT-CL-NON.SUBJ carefully 3SG.FEM-bake-?-PST-TAME
‘here she was baking the cassava carefully with the ring’

CM 15

b-ena-ma *ile* *tʰits-eb-i* *ka-b-at-ib-i*
PROX-ADV1-TOP? manioc bake-?-NON.FIN finish-B-?-?-NON.FIN

ka-h-eb-in-obe /

turn-3SG.FEM-?-PST-TAME

its-ĩpĩ *em-i* *h-ik^w-in-obe*

DUMMY_ROOT-CL grab-NON.FIN 3SG.FEM-AUX-PST-TAME

‘here she was turning the cassava when she is finished baking it. She grabs the ring’

CM 17

b-ena-ma *ile* *ʔbi-h-in-obe*
PROX-ADV1-TOP? manioc accommodate-3SG.FEM-PST-TAME

its-api-ni *ka-ek^w-api-ni*
DUMMY_ROOT-CL-NON.SUBJ turn-?-CL-NON.SUBJ
‘here she was accommodating the manioc with the plank, the plank you use to turn (it)’

CM 18

b-ena-ma *t^hits-eb-i* *ka-h-at-in-obe* *daki*
PROX-ADV1-TOP? bake-?-NON.FIN finish-3SG.FEM-?-PST-TAME already

k^wame-o *hĩbani*
toast-FUT PURPOSE
‘here she finished baking already so that it toasts well’

CM 19

b-ena-ma *daki* *w-ãn-i* *ka-b-at-i* *hã-h-in-obe*
PROX-ADV1-TOP? already stay-DUR-NON.FIN finish-B-?-NON.FIN do-3SG.FEM-PST-TAME

ho-p^hor-in-obe
3SG.FEM-put_aside-PST-TAME
‘here she was putting it aside when she finished making it’

CM 20

b-ena-ma *hi-bil-at-in-obe* *ile-ka*
PROX-ADV1-TOP? 3SG.FEM-turn_over-?-PST-TAME manioc-CL
‘here she was turning over the cassava’

CM 21

b-ena-ma *b-ena-ma* *ile* *ile-ka* *bił-at-i*
PROX-ADV1-TOP? PROX-ADV1-TOP? manioc manioc-CL turn_over-?-NON.FIN

ka-h-at-in-obe

finish-3SG.FEM-?-PST-TAME

‘here, here [repetition], she finished turning over the manioc, the cassava [self-correction]’

CM 22

b-ena-ma *b-ena-ma* *hu-p^huts-eb-in-obe*
PROX-ADV1-TOP? PROX-ADV1-TOP? 3SG.FEM-sweep-?-PST-TAME

ile *p^huts-ek^w-ã[?]ǫũ-nĩ*
manioc sweep-?-CL-NON.SUBJ

‘here, here [repetition] she was sweeping with the broom that is used when you make cassava’

CM 23

b-ena-ma *p^huts-i* *hã-h-ĩn-obe*
PROX-ADV1-TOP? sweep-NON.FIN do-?-PST-TAME

ile *p^huts-aw-ã[?]ǫũ-nĩ*
manioc sweep-MID-CL-NON.SUBJ

‘here she was sweeping with the broom that is used when you make cassava’

CM 24

b-ena-ma *ile* *hi-kikid-o* *hĩbani*
PROX-ADV1-TOP? manioc 3SG.FEM-dry-FUT PURPOSE

hi-d-in-obe *ih-ia* *wãme*
3SG.FEM-take_out-PST-TAME leaf-PL on_top_of

‘here she was taking out the cassava so that it dries on top of the leaves’

CM 25

b-ena-ma *Beatriz* *kikid-i* *hĩ-ʔɕ-ĩn-obe*
PROX-ADV1-TOP? PN dry-NON.FIN 3SG.FEM-go-PST-TAME
‘here she was going to dry the cassava’

CM 27

b-ena-ma *ile* *hi-bil-in-obe*
PROX-ADV1-TOP? manioc 3SG.FEM-turn_over-PST-TAME
‘here she was turning over the cassava’

CM 28

b-ena-ma *Beatriz-ma* *ile* *hõ-kõkod-in-obe*
PROX-ADV1-TOP? PN-top? manioc 3SG.FEM-pick_up-PST-TAME
‘here Beatriz was picking up the cassava’

CM 29

b-emi-ma *õdo* *ok^{wa}* *te-h-at-in-obe*
PROX-ADV2-TOP? house inside enter-3SG.FEM-?-PST-TAME
‘here she was bringing (the cassava) inside the house’

Appendix 7 Ethics Approval – UWO NMREB



Use of Human Participants - Ethics Approval Notice

Principal Investigator: Dr. Tania Granadillo
Review Number: 18581S
Review Level: Full Board
Approved Local Adult Participants: 0
Approved Local Minor Participants: 0
Protocol Title: Collaborative Documentation and Description of Maco, a Salivan language of Venezuela
Department & Institution: Anthropology, University of Western Ontario
Sponsor: Social Sciences and Humanities Research Council

Ethics Approval Date: December 01, 2011

Expiry Date: August 31, 2014

Documents Reviewed & Approved & Documents Received for Information:

Document Name	Comments	Version Date
UWO Protocol		
Letter of Information & Consent	English	
Letter of Information & Consent	Spanish	
Other	Assent Letter - English	
Other	Assent Letter - Spanish	

This is to notify you that The University of Western Ontario Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the applicable laws and regulations of Ontario has granted approval to the above named research study on the approval date noted above.

This approval shall remain valid until the expiry date noted above assuming timely and acceptable responses to the NMREB's periodic requests for surveillance and monitoring information.

Members of the NMREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussions related to, nor vote on, such studies when they are presented to the NMREB.

The Chair of the NMREB is Dr. Riley Hinson. The UWO NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

(redacted signature)
Signature

Ethics Officer to Contact for Further Information

Grace Kelly (grace.kelly@uwo.ca)	Janice Sutherland (jsutherl@uwo.ca)
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This is an official document. Please retain the original in your files.

The University of Western Ontario

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Curriculum Vitae

Name: Jorge Emilio Rosés Labrada

Post-secondary Education and Degrees: University of Western Ontario & Université Lumière-Lyon 2
London, Ontario, Canada & Lyon, France
2010 – 2015 PhD (Candidate)

The University of Western Ontario
London, Ontario, Canada
2009 M.A. (Direct transfer to PhD)

University of Holguín “Oscar Lucero Moya”
Holguín, Cuba
2001-2007 B.A.

Honours/Awards: Start-up grant for project “Historical-comparative analysis of a Sáliban reference lexicon”. WP 2. LabEx ASLAN (*Études avancées sur la complexité du langage* - Advanced Studies on LANguage complexity).
2014-2015

Bourse de mobilité WP 4. LabEx ASLAN (*Études avancées sur la complexité du langage* - Advanced Studies on LANguage complexity).
2014-2015

Vanier Canada Graduate Scholarship
2012-2015

EDLP Individual Graduate Scholarship (successful, not awarded)
2012-2014

Ontario Graduate Scholarship (declined)
2012-2013

Global Opportunities Award, University of Western Ontario
2012

Western Graduate Thesis Research Award, Faculty of Arts and Humanities, University of Western Ontario
2012

Mary Routledge Fellowship, Faculty of Arts and Humanities, University of Western Ontario
2011

**Related Work
Experience**

Co-instructor
Personal Well-being in Minority Language Communities, CoLang 2014, The University of Texas at Arlington
2014

Co-instructor
Life in Communities, CoLang 2014, The University of Texas at Arlington
2014

Instructor
LING 4XL3 The Structure of Amazonian Languages. McMaster University
2014

Instructor
FR 1010 Intermediate French. The University of Western Ontario
2011-2012

Instructor
FR 1010 Intermediate French. The University of Western Ontario
2009-2010

Publications:

- EDITED** Dyck, C., T. Granadillo, K. Rice and J. E. Rosés Labrada (2014).
BOOKS *Dialogue on Dialect Standardization*. Newcastle, UK: Cambridge Scholars Publishing.

Pérez Báez, G., C. Rogers and **J. E. Rosés Labrada** (Under review). *Latin American Contexts for Language Documentation and Revitalization*. De Gruyter Mouton. Trends in Linguistics: Studies and Monographs Series.

- JOURNAL ARTICLES** **Rosés Labrada, J.E.** (Accepted w/ revisions). The Sáliban Languages: Their Classification and their Typology. *Language and Linguistics Compass (Typology)*. 51-page ms. (single-spaced)
- Rosés Labrada, J.E.** (Accepted). Proto-Sáliban Verb Classes. *International Journal of American Linguistics*.
- Rosés Labrada, J.E.** (2013). Los marcadores de persona del mako: universalidad, arealidad o herencia genética. *Boletín de Lingüística UCV* 25 (39-40): 217-237
- Rosés Labrada, J. E.** (2012). Variation of third-person object pronouns in Zamora-province Spanish, according to the ALPI data. *Dialectologia. Special Issue III, 2012*: 157-176. URL: <http://www.publications.ub.edu/revistes/dialectogiasp2012/>
- Rosés Labrada, J. E.** (2011) Maintenance and Revitalization in Bolivia: Complexities of Implementing a National Language Policy. *Bilingual Basics* 12 (1). URL: <http://newsmanager.commpartners.com/tesolbeis/issues/2011-02-23/6.html>
- BOOK CHAPTERS** Dyck, C., T. Granadillo, K. Rice and **J. E. Rosés Labrada**. (2014). Introduction. In *Dialogue on Dialect Standardization*, ed. C. Dyck, T. Granadillo, K. Rice and J. E. Rosés Labrada, 1-8. Newcastle, UK: Cambridge Scholars Publishing.
- BOOK REVIEWS** **Rosés Labrada, J. E.** (2013) Review of L. Grenoble and L. Furbee (2010) 'Language Documentation: Practice and values'. *Language Documentation and Conservation* 7 (2013): 168-176. URL: <http://hdl.handle.net/10125/4594>