

THE PHONOLOGY AND MORPHOLOGY OF SIRIANO
A GRAMMAR SKETCH

by

Tianyi Ni

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DEDICATION

To my husband, Raymond Gale Jones, who always supports me with no excuse.

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ABBREVIATIONS

1	first person	IFUT	intentional future
2	second person	IRR	irrealis
3	third person	IMP	imperative
ADD	additive	INAN	inanimate
AN	animate	INCHO	inchoative
ANTP	anticipation	INSTR	instructive
ASP	aspect	LOC	locative
AUX	auxiliary	MASC	masculine
CAUS	causative	MOD	modality
CLS	classifier	NEG	negative
CMPL	completive	NOM	nominator
DEM	demonstrative	OBJ	object
DES	desiderate	PASS	passive
DIM	diminutive	PL	plural
EMPH	emphasis	PRES	present tense
EVID	evidential	PST	distant past tense
FEM	feminine	REF	reflexive
FUT	future tense	RPST	recent past tense
FRUS	frustrative	SG	singular
GEN	genitive	TEMP	temporal

ABSTRACT

The Phonology and Morphology of Siriano: A Grammar Sketch

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This thesis presents a linguistic description of the phonology and morphology of SIRIANO, an endangered Amazonian language traditionally spoken in the Vaupés River region of northwest Amazon, in Brazil and Colombia. There is little extant documentation of Siriano; therefore, the description is primarily based on the data gathered by the thesis chair Dr. Wilson de Lima Silva.

Siriano is a typical Eastern Tukanoan language in terms of its typological characteristics. It has relatively small phonemic inventory, and most of the phonemes, both vowels and consonants, have nasalized counterparts. The syllable structure is very simple. The glottal stop and fricative are phonetically realized in a careful speech to modify the syllable structure. Siriano has a two-tone system, with high and low tones. They can be lexical tones, but some of them are not and change accordingly with the morphological processes. Stress is also shown to interact with tone patterns. Nasal spreading is very commonly seen, but the oral inherent morphemes block this phonological process. It has plentiful nominal categories and noun-related suffixes, with simple morphological processes. Verbs require tense, aspect, modality, and evidential marking in the form of suffix attachment. Overt evidential marking is used to distinguish the present and distant past tense.

CHAPTER 1

THE SIRIANO COMMUNITY, AND THE LANGUAGE

This thesis is intended as a phonological and morphological description of Siriano, an Eastern Tukanoan language spoken in Colombia and Brazil. There were a number of research activities, some pedagogy works in the 1980s (see Brandrup & Criswell 1988; Gardner 1976), and some works of oral literature (see Madrid 1977; Estrada 1988; Criswell 1992). The only linguistic description available is a short grammatical sketch done by Criswell & Brandrup (2000). Hereby, Siriano remains one of the most under-documented languages in the Tukanoan language family. It is hoped that this thesis will represent one more step toward addressing this deficiency.

1.1 The Linguistic Setting

1.1.1 Genetic Affiliation and Sociolinguistic Situation

Siriano is an Amazonian indigenous language, the language of Siriano people. The word *Siriano* refers to both Siriano people and the Siriano language, although sometimes some other names are used in the literature, such as Siriana, Siriane, Suryana, and Surianá (Campbell & Grondona, 2012). The Siriano people call themselves *sura-mārā* 'the Siriano people' (*sura* 'Sirianos' + *mārā* 'people'), and name the language *sura-ja*.¹ Siriano people live in the communities along the Paca river and Caño Viña,² in Colombia, as shown in the map (see Figure 1.1). The Tukanoan language family consists of 24 languages, divided into two sub-groups: the Western and Eastern branches (see Figure 1.2). Siriano is a member of the Eastern branch of the family. The languages of the Eastern branch are spoken in the Vaupés River region of northwest Amazonia, in Brazil and Colombia.

1. -ja is a classifier, representing 'a language', refer to Table 3.3 for detailed information.

2. It is a river in Mitú, Vaupés, Colombia.



Figure 1.1: Geographical distribution of Eastern Tukanoan languages (part)³

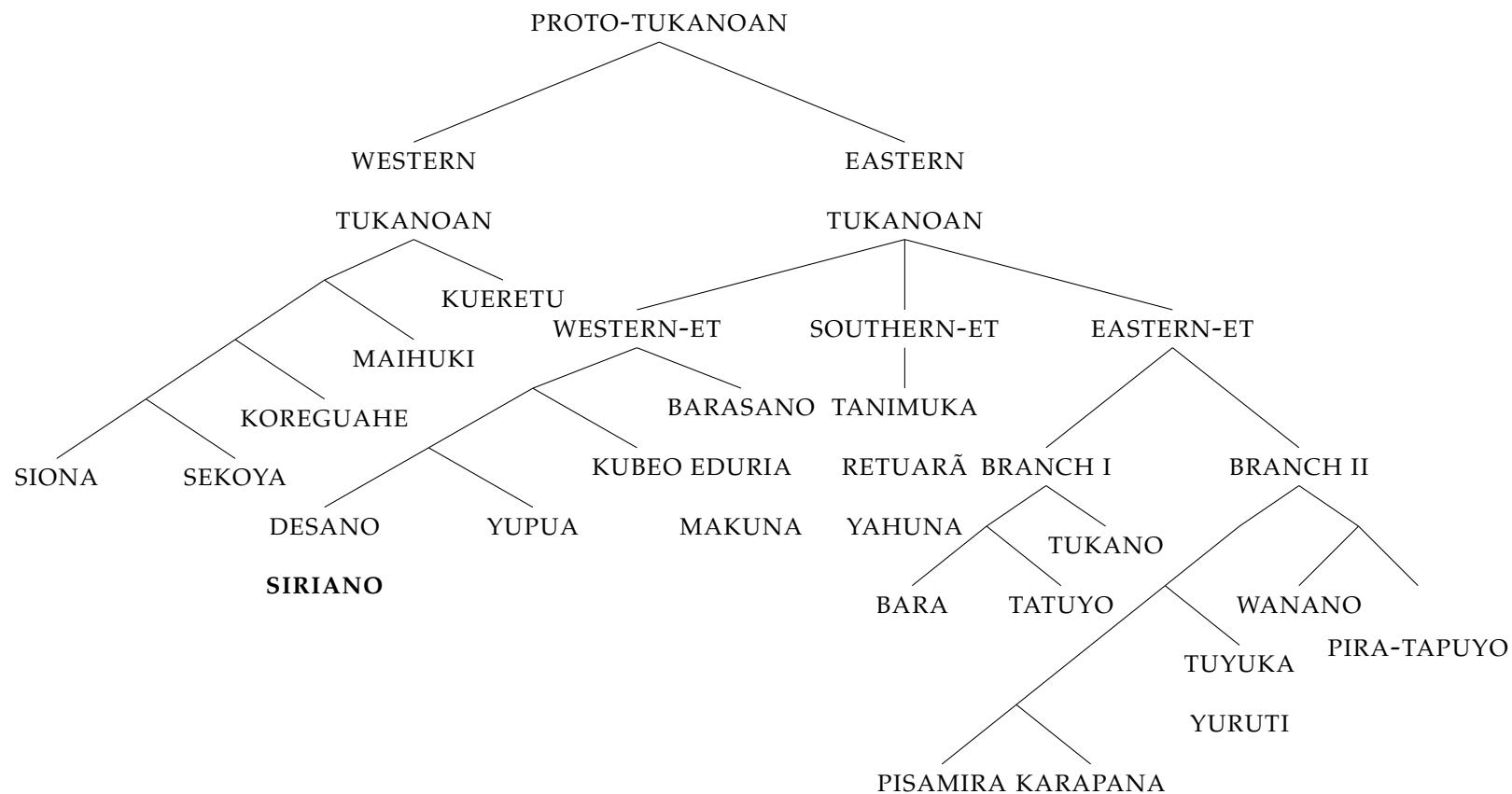


Figure 1.2: The Tukanoan Language Family

3. Both Figure 1.1 and Figure 1.2 are adapted from Chacon (2014).

According to Ethnologue (2015), there are 749 Siriano people living in Colombia, and 71 in Brazil, who are considered as the native speakers of this language. Due to the practice of linguistic exogamy, where an individual must marry someone who speaks a different language, children learn both their father's and mother's language (Sorensen, 1969). As a result, most people are multilingual, or at least bilingual. In addition to their own indigenous languages, they can speak Spanish and Portuguese owing to their residence in Colombia and Brazil, respectively. Siriano is very closely related to Desano, but mutually unintelligible (Sorensen, 1967). Some linguists regard both languages as possibly dialects of each other (Grimes, 1985), though some people disagree (Campbell, 1997), and believe that they are *a little further apart* than Romance languages (Sorensen, 1967).

1.1.2 Typological Profile of Siriano

The basic constituent order of Siriano is SV for intransitive clauses and SOV for transitive utterances. In Silva (2019), a large amount of data show that the speaker tends to use SVO as well. The language exhibits a NOMINATIVE-ACCUSATIVE alignment system; generally, the accusative case is marked by the suffix *-re*.⁴ Pronouns, specifically pronominal subjects and direct objects, can be omitted in discourse when they are recoverable from the context and agreement suffixes.

Siriano shows many phonological and morphological characteristics that are common to Tukanoan language varieties (Ardila, 2004). Siriano is a highly agglutinative language. The nouns encode animacy and thus are broadly divided into two main classes of animate and inanimate. The animate nouns mark gender and number, while the inanimate nouns carry classifiers and number. The verbs mark tense, aspect, number, person, gender, epistemic modality, and evidential in the form of suffixes. Phonologically, Siriano has

4. This suffix has multiple functions in Siriano, which will be discussed in the following chapters.

two tones: high and low. The vowel inventory consists of six vowels and each of them has a nasalized allophone. The consonant inventory includes 11 contrastive segments, including the glottal fricative and stop. It also has a simple syllabic structure: **(C)V**.

1.2 Previous Research

Since the 1950s, research on Amazonian languages and linguistics has never stopped. Much research talks about Eastern Tukanoan languages as a whole from different aspects, such as Eastern Tukanoan language contact and sociolinguistics (Grimes, 1985; Aikhenvald, 1999; Ardila, 2004), multilingualism (Ardila, 1989; Apráez, 2018; Silva, 2020), historical linguistics of the Eastern Tukanoan languages (Malone, 1988), the Eastern Tukanoan language typology (Aikhenvald & Dixon, 1998), the Eastern Tukanoan language phonology and phonetics (Ardila, 1998), in which some Siriano examples are used and explained. Some comparative dictionaries and vocabulary studies among the Eastern Tukanoan languages have also been done since then (Mountain, 1978; Nimuendajú, 1955; Huber & Reed, 1992).

Most of the published work available for Siriano was done by SIL linguists. For example, Nagler & Brandrup (1979) presents an analysis of Siriano phonology, followed by the first Siriano-Spanish dictionary edited by Brandrup (1980). Criswell & Brandrup (2000) published a short Siriano grammar sketch for the first time. A new Siriano-Spanish dictionary with detailed explanation and examples was archived by SIL in 2011. Last but not least, Ibáñez Fonseca (1972, 1978) provides brief descriptions of the Siriano people and their culture.

1.3 The Data

There are two sources of data used in this thesis. **1)** the SIL publications, which has been discussed in section 1.2. I will cite each of them in the last line of each example. **2)** the

fieldwork done by Wilson Silva in 2019. I will cite them as Silva (2019). Note that, all the audio data are from Silva (2019).

1.4 The Orthography

There is no standard writing system to write Siriano. In the literature, the graphemes of the practical orthography is used for the Siriano examples, Siriano teaching materials, and Siriano story books. Some few works use phonetic transcription as the writing system as well. Most Siriano texts are written with the mixture of the surface and the underlying representation. For example, as shown in (1), /b/ is realized as [m], when it is nasalized, and thus is written in the form of the nasal grapheme *m*, while the following vowel is written using the oral grapheme *i*, even though it is also nasalized, which would be [i] if closely transcribed in IPA.

- (1) Buu ãäȓ̩mi ñ̑.

In order to avoid possible ambiguities, in the remainder of this thesis, I am using phonetic transcriptions as my writing system. For the sentence examples, I give the four-line interlinear glossing, as shown in (2). The surface representation is written in the first line, followed by the phonological representation in the second line. Segmentable morphemes are separated by hyphens in the phonological representation. If the morpheme is nasalized in the surface representation, a pre-morphological tilde (~) is given. Regarding lengthened vowels, I am writing them twice, e.g. /aa/, instead of /a:/-. In the third line, I give the morpheme-by-morpheme correspondence gloss, followed by the translation of the sentence in the last line.

- (2) Buu ˜a˜rim˜ ˜i˜
- | | | |
|-----|------------------|------|
| buu | ~aadi-~bi | ~ii |
| buu | be-EVID.3SG.PRES | this |
- 'This is Buu (one kind of fish).' (Gardner, 1976)

1.5 The Organization of This Thesis

This thesis can be divided into two primary parts: the first deals with the sound system, in terms of the interface of phonology and phonetics; the second with morphology.

In chapter 2, I describe the segmental phonological properties of the sound system, including the phonemic inventory, and the nasal allophones. Then, in the second part of chapter 2, the description of suprasegmental phonology is given, in which I discuss the syllable structures and its weight, the tone patterns, the nasal spreading, and the glottalization.

Starting from chapter 3, I describe the morphology of Siriano. Chapter 3 describes the nominal morphology. Chapter 4 describes the verbal morphology. The morphology part is much longer than the phonology part because of the profuse varieties of the suffixes in Siriano.

CHAPTER 2

PHONETICS AND PHONOLOGY

This chapter presents an overview of the sounds and their organization in Siriano. Section 2.1 presents the segmental phonology, which includes a detailed description of the vowel and the consonant inventories. Section 2.2 explains the suprasegmental phonology. It discusses the syllable structures, the tones, the nasalization, and the glottalization. The audio data in this chapter are all based on the field transcriptions done by Silva (2019). The acoustic analyses of the speech recordings are done with the help of Praat.

2.1 Segmental Phonology

2.1.1 Vowels

Table 2.1 shows that the Siriano vowel system consists of six underlying contrastive vowel segments. Table 2.2 illustrates the vowel distinctions according to the features [BACK], [FRONT], [HIGH], [ROUND]. The six vowels in Siriano follow the proto-vowel system of the Tukanoan languages (Barnes, 1999). In order to provide a quantitative description of the six vowels in Siriano, I followed the method suggested in Ladefoged (2003), which plots the vowels in a vowel space defined by the first two formants, as shown in Figure 2.1. The vowel segments are chosen via Praat from the six words listed in Table 2.3.

	FRONT	CENTRAL	BACK
HIGH	i/i:	ɯ/ɯ̄	u/u:
MID	e/e:		o/o:
LOW		a/a:	

Table 2.1: Vowel inventory

	/i/	/e/	/ɯ/	/u/	/o/	/a/
[BACK]	-	-	-	+	+	+
[FRONT]	+	+	-	-	-	-
[HIGH]	+	-	+	+	-	-
[ROUND]	-	-	-	+	+	-

Table 2.2: Siriano vowel phonemes

VOWEL	WORDS	FORMANT 1	FORMANT 2
/i/	[pui] 'basket'	355	2142
/ɯ/	[jɯɯ] 'T'	399	1461
/e/	[oreri] 'cry'	471	1895
/a/	[barawe] 'dog tooth'	744	1328
/o/	[opari] 'have'	623	917
/u/	[bahuri] 'doll'	390	848

Table 2.3: The illustration of Siriano vowels and the formant measures

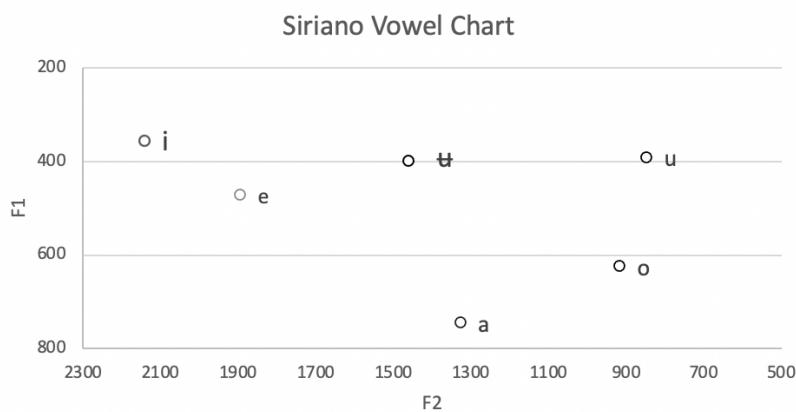


Figure 2.1: Formant plots of the six vowels of Siriano

	FRONT	CENTRAL	BACK
HIGH	ĩ	ɯ	ũ
MID	ẽ		õ
LOW		ã	

Table 2.4: Nasalized vowel counterparts

2.1.1.1 The Nasalized Counterparts

All vowels have their nasalized vowel counterparts, as listed in Table 2.4. However, this does not mean that Siriano vowel segments must be marked as either oral or nasal. Nasalization is one of the suprasegmental features in Siriano, which will be discussed in detail in section 2.2.3. The minimal pairs and the near minimal pairs are used to help show the clear contrast in the vowel phonemes of Siriano. The oral six vowel minimal pairs are shown in Table 2.5, and the counterpart nasalized ones are listed in 2.6.

i	ɯ	e	a	o	u
/-bi/	/-bu/	/-be-/	/-ba/	/-bo/	/-bu/
[-bi]	[-bu]	[-be-]	[-ba]	[-bo]	[-bu]
'not doing'	'PAST'	'NEG'	'IMP'	'ANTP'	'COND'
/-di/		/-de/		/-do/	/-du/
[-fi]		[-re]		[-ro]	[-ru]
'PL'		'OBJ'		'NOM'	'CLS:round'
/ju/	/je/		/ja-/	/ju-/	
[juu]	[je]		[ja-]	[ju-]	
'I'	'tiger'		'to do'	'to wait'	

Table 2.5: Six vowels and their minimal pairs

<i>ĩ</i>	<i>ꝑ</i>	<i>ẽ</i>	<i>ã</i>	<i>᷑</i>	<i>ꝑ</i>
/ ~bu/	/ ~be-/	/ ~ba/		/ ~bu-/	
[mũ]	[mẽ-]	[mã]		[mū-]	
'you'	'small'	'tube'		'turn up'	
/ ~dii/	/ ~dee/	/ ~daa/	/ ~doo/	/ ~du-/	
[n̩̄]	[n̩̄ē]	[n̩̄ā̄]	[n̩̄ō̄]	[n̩̄ū-]	
'what/which'	'mirití fruit'	'to visit'	'where'	'to paint'	
/ ~ji/	/ ~jee/	/ ~jaa/			
[j̩̄ī]	[j̩̄ē]	[j̩̄ā̄]			
'black'	'what'	'one kind of tree'			

Table 2.6: The six vowels' nasalized counterparts and their minimal pairs

2.1.1.2 Vowel Clusters

Due to the simple syllable structures of Siriano, CV and V,¹ we can often see two vowels in hiatus, which belong to two separate syllables. In example (1), *do.a.ro* 'bench' consists of three syllables.² The second syllable does not have an onset, causing two vowels *o* and *a* forming a vowel cluster *oa*.

- (1) a. doaro [do.á.ro] 'bench'
 b. pui [pu.í] 'batura'
 c. ~doa [n̩̄o.á̄] 'who'

Nagler & Brandrup (1979) discusses the vowel cluster in Siriano and proposes that only certain combinations of vowels may form vowel clusters. For example, you will never

1. For the syllable structures of Siriano, please refer to 2.2.1 for a detailed explanation.

2. The dot symbol . in *do.a.ro* represents syllable boundary. So is in the following examples.

find a word with *uu* or *ie* in Siriano. Table 2.7 shows all the vowel cluster possibilities.

	i	u	e	a	o	u
i	wii 'house'	-	-	bia 'pepper'	dio 'older sister'	diu 'egg'
u	sū̄i 'snail'	jū̄u 'I'	-	bupua 'spiders'	-	-
e	-	-	jiē̄e 'what'	pea 'firewood'	nē̄ō 'first time'	-
a	waai 'fish'	aū̄ 'dad'	-	aari- 'to come'	-	sauru 'Saturday'
o	-	-	iripoe 'at this time'	-koā 'often'	gōo 'flower'	-
u	pui 'batura'	-	bue- 'to study'	bua- 'close eyes'	-	buui 'eel'

Table 2.7: The vowel clusters

2.1.2 Consonants

The Siriano consonant inventory is inherited from proto-Tukanoan (Barnes, 1999), as shown in Table 2.8. Of the ten consonants, /b p d t g k s h w j/ occur initially and are fully contrastive. The minimal and near minimal pairs are given in (15). There are also three special segments, /r ? h/, which are not always treated as segments in the literature of Siriano (Nagler & Brandrup, 1979; Criswell & Brandrup, 1998). In the following two subsections, I will discuss the reasons why I treat them as *special segments*.

		BILABIAL	ALVEOLAR	PALATAL	VELAR	GLOTTAL
PLOSIVES	[+VOICE]	b	d		g	
	[-VOICE]	p	t		k	(?)
TAP			(r)			
FRICATIVE			s			(h)
APPROXIMATE		w		j		

Table 2.8: Consonant inventory

(2) ten contrastive consonants

- a. /baa-/ [baa-] ‘to eat’
- b. /paa-/ [paa-] ‘to crawl’
- c. /waa-/ [waa-] ‘to pass’
- d. /jaa/ [jaa] ‘my’
- e. /dea-/ [dea-] ‘to crush’
- f. /tea-/ [tea-] ‘to take’
- g. /sea-/ [sea-] ‘to recognize’
- h. /goe-/ [goe-] ‘be dangerous’
- i. /koe-/ [koe-] ‘to wash’

2.1.2.1 The Relationship between *d* and *r*

Nagler & Brandrup (1979) states that /d/ and /r/ are *contrastive*, the minimal pair given in (3).

- (3) a. mū̄re ~bū̄-de
you-ADD ‘you, as well’
- b. mū̄re ~bū̄-re
you-OBJ ‘you’

But this contrastive distribution is limited and only occurs underlyingly when /d/ and /r/ are in the suffix-initial position. As in example (3), /d/ occurs in the suffix-initial position of additive suffix *-de*, while /r/ is seen in the suffix-initial position of the referential marker *-re*.

On the other hand, in morpheme-medial position, /d/ is typically pronounced as a flap sound [ɾ], as shown in (4).

- (4) a. dukka [dükka] 'fruit'
b. dududo [dururo] 'always'
c. doebidi [doebiri] 'cargo'
d. dado [daro] 'old'

The intervocalic flap [ɾ] can show several different patterns in its phonetic realization (Son, 2008). Generally, it has an extremely brief stop closure, and sometimes the closure is too short to observe. Figure 2.2 shows the closure duration of the flap sound [ɾ]. The closure duration of [ɾ] is much shorter than any other segments in the word *bari*. Articulatorily, when the speaker produces a flap, the tongue gesture might not reach full closure. Thus the gesture may be smaller so that the tongue moves only a little, and the flap is realized as a *reduced flap* [ɾ̩] (Tucker, 2007). Figure 2.3 provides a contrasting spectrogram and waveform of a flap and a reduced flap in one word.

2.1.2.2 The Status of the Glottals: ? and h

The glottal stop ? and glottal fricative h are special consonants in Siriano. They can be analyzed as *contrastive segments* or *laryngealization*, an independent suprasegmental feature of roots. In this section, I will describe the case where they are treated as separate segments. Laryngealization will be discussed separately in section 2.2.4.

Both /?/ and /h/ are treated as the contrastive consonant segments in most Eastern

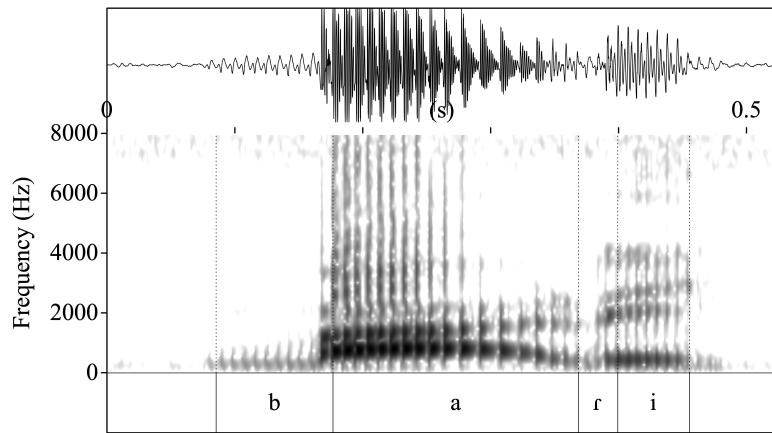


Figure 2.2: The spectrogram and waveform of the intervocalic flap [ɾ] in *bəri* ('food')

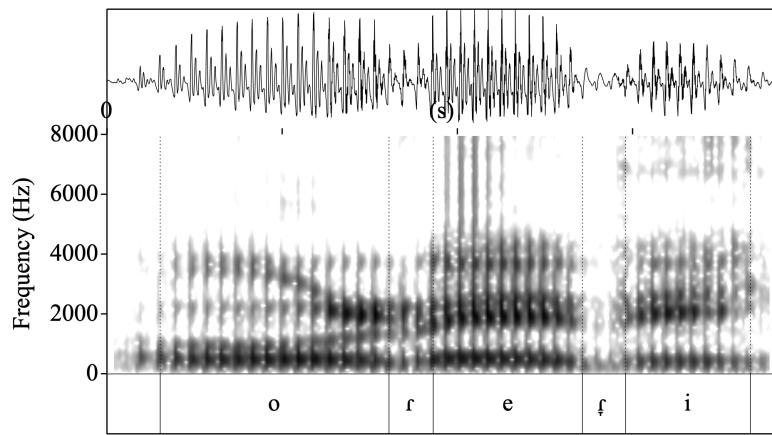


Figure 2.3: The spectrogram and waveform of the flaps in *oreri* ('food'), realized as [ɾ] and [ɻ]

Tukanoan languages (cf. Desano: Silva 2012; Wanano: Stenzel 2004, etc). In the literature of Siriano, no previous research ever includes /?/ as one of the consonant segments. However, Criswell & Brandrup (1998) lists the minimal pair, in (5), to prove that /h/ can be considered as a full segment.

- (5) /s/ [bosó] ‘tintín (quadruped rodent)’
 /h/ [bohó] ‘blowgun’

Following the same idea, we can find a minimal pair between /?/ and /k/, as listed in (6).

- (6) /k/ [māká] ‘village’
 /?/ [māʔá] ‘path’

Most obviously, we can compare the minimal pair in (7) to show that /?/ and /h/ are contrastive and we can regard them as two full consonant segments.

- (7) /h/ [māhá] ‘macaw’
 /?/ [māʔá] ‘path’

2.1.3 Nasal Allophones of Consonants and Vowels

As shown in Table 2.4, all the oral vowel segments have nasal counterparts. All the voiced stops /b d g/, the allophone of /d/, [ɾ], and the two approximants /j w/ can be nasalized, and have their counterparts. The minimal pairs contrasting oral and nasal consonants are given in (8). All the voiced stop sounds and their nasal counterparts share the same place of articulation. That is, /b, d, g/ are nasalized to [m, n, ɲ]. Similarly, the approximant /j/ has its nasal counterpart [ɲ]. In addition, it is also possible that the vocalic flap sound [ɾ] and the labial approximant [w] be realized as a nasal flap [ñ] and a nasal labiovelar approximant [˜w]. Whether a nasal glottal fricative sound [h̩] is phonetically realized in

certain phonological context is still unclear.

(8) Oral/nasal minimal pairs

- | | | | | | | | |
|----|----------|-----|--------|---------------|------|-------|------------|
| a. | [b]/[~b] | ba | [baa-] | 'to eat' | ~ba | [māā] | 'path' |
| b. | [d]/[~d] | doa | [doa-] | 'to sit' | ~doa | [nōā] | 'who' |
| c. | [g]/[~g] | goe | [goe-] | 'to be brave' | ~goa | [ŋōā] | 'bone' |
| d. | [j]/[~j] | ja | [jaa] | 'my' | ~ya | [jāā] | 'tree' |
| e. | [w]/[~w] | wa | [wa-] | 'to be big' | ~wa- | [wā-] | 'to light' |

Table 2.9 shows the consonant, vowel segments and their nasal counterparts. The nasal counterparts are highlighted in gray. In terms of where these nasal counterparts come from, I will discuss it in the next section.

CONSONANTS							VOWELS						
	LABIAL		CORONAL			VELAR		FRONT		BACK			
	b	m	d	n	g	ŋ	i	ɪ	u	ʊ	u	ʊ	
PLOSIVE	b	m	d	n	g	ŋ							
FLAP			r	ɾ									
APPROXIMANT	w	̃w	j	ɲ							a	̃a	

Table 2.9: Nasal allophones of consonants and vowels

2.2 Suprasegmental Phonology

Various suprasegmental features are found in Siriano: *nasalization, tone, stress*. They interact with each other, and with syllable structure. In this section, I will start with the syllable structures of Siriano, and then discuss the three suprasegmental features.

2.2.1 Syllable Structures

Siriano syllable structure is predominantly **1)** one consonant in onset and one vowel in the nucleus, i.e., CV; **2)** one single vowel stands as a syllable, i.e., V. Only /ʔ/ and /h/ are seen in the coda position. This same syllable structure has been found in other Eastern Tukanoan languages (cf. see Wanano in Stenzel 2004; Desano in Silva 2012). The basic syllable shapes are exemplified in (9).

(9) The basic syllable shapes: CV and V

a. bui [bu.i] 'agouti'

CV.V

b. gasido [ga.si.ro] 'nail'

CV.CV.CV

As shown in section 2.1.2.2, two successive identical vowels within one syllable as a lengthened vowel are optionally divided into two separate syllables by laryngealization, as illustrated in (10).

(10) CV changes to CV.CV

a. wii [wi.ʔi] 'house'

CV.CV

b. juu [ju.ʔu] 'I'

CV.CV

2.2.1.1 Association Rules

Based on the principles of syllabification as outlined by Dobrovolsky & Czaykowska-Higgins (2001), we can establish the following association rules for Siriano.

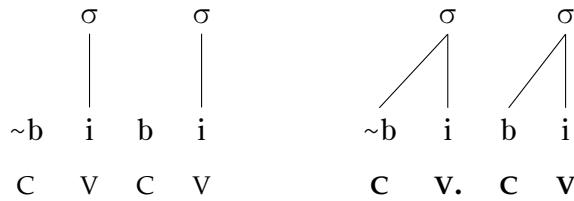
- Nucleus (N) formation: identify the vowel as the nucleus of the syllable;

- Onset formation: following the onset principle, associate any C with the nucleus to its right, forming the onset (O);
- Coda (Cd) and Rhyme (R) formation: associate any remaining unassociated C (in Siriano, this can only be either the glottal fricative /h/ or the glottal stop /?/ with the nucleus to its left).

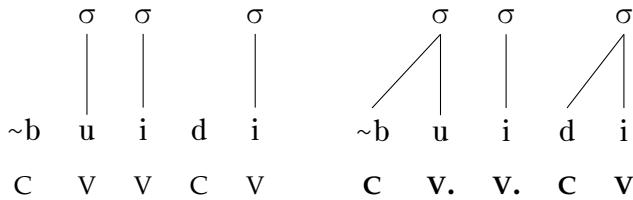
(11) a. boe [boé] ‘eel’



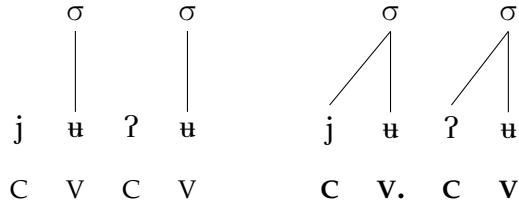
b. ~bibi [m̩im̩i] ‘hummingbird’



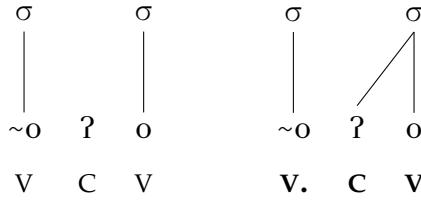
c. buidi [buidi] ‘(fishing) web’



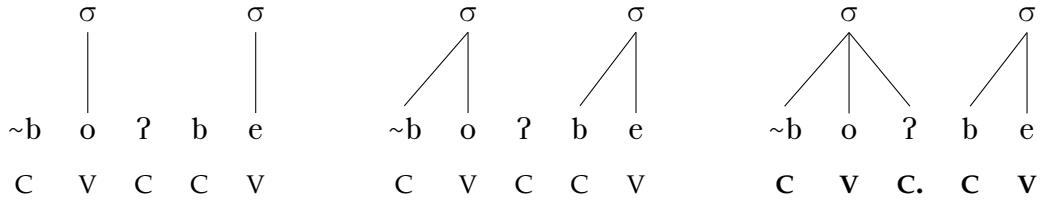
(12) a. juu [ju?u] ‘T’



b. ~oo [ə?ə] 'here'



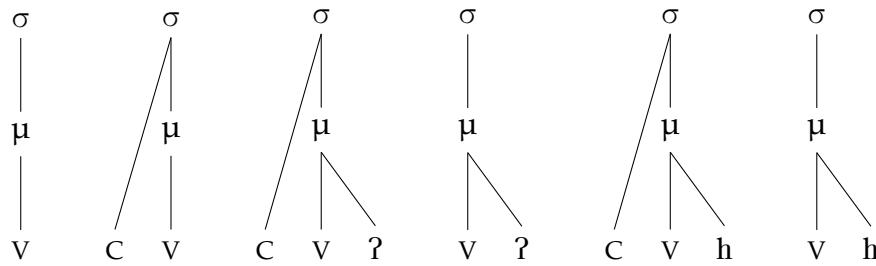
c. ~bobe [mə?mə] 'bee'



2.2.1.2 Syllable Quantity and Weight

We have seen the basic syllable structures of Siriano, implying that Siriano is a *near-codaless* language. Only in some special cases, such as the association rules shown in (12-c), the glottal stop *?* and the glottal fricative *h* can fulfill the coda position in the first syllable. The rhyme is formed by a single vowel. Each rhyme is assigned to a single mora. If the syllable contains an onset, then the onset is directly linked to the syllable, since onsets are extra-moraic (cf. Hayes 1995:53). In addition, the possible coda *?* and *h* do not have any effect on weight, because whether the glottals are phonetically realized or not, the metrical structure is never changing. Thus, they share the same mora with their corresponding nuclei. Note that, when the glottals are not realized, the syllables with long vowel are thus bimoraic. The resulting syllable shapes can be found in (13).

(13) Syllable shapes and moraic association



2.2.2 Tones

In this section, I present a preliminary analysis of the tone system in Siriano. Generally, Siriano has a simple tonal system, featuring a two-way contrast: high (H) and low (L). I will use [́] (an acute accent and a vowel) to mark the high tone in the whole thesis, and the low tone does not have any acute accent. (14) shows a minimal pair with different tone patterns. In (14-a), *págú* takes high tones for both syllables (HH); and *pagú* has one low tone on its first syllable, while a high tone is assigned to the second syllable (LH).

- (14) a. [HH] *pagú* [págú] ‘take down’
 b. [LH] *pagú* [pagú] ‘father’

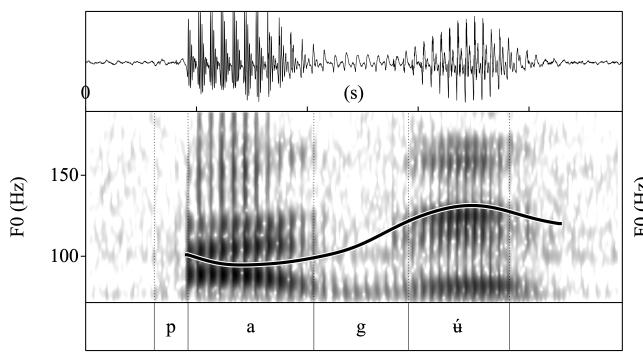


Figure 2.4: Tone pattern (F0) of [pagú]

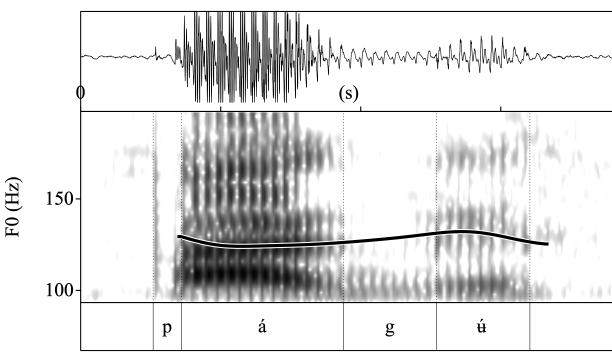


Figure 2.5: Tone pattern (F0) of [págú]

2.2.3 Nasalization

Nasalization is a suprasegmental feature in Eastern Tukanoan languages which operates at the level of the morpheme. All morphemes are lexically marked as either inherently nasal [+NASAL], inherently oral [-NASAL] or they are unmarked [\emptyset NASAL]. As noted above, all voiced segments have a nasal realization. However, it is still unclear whether the voiceless segments have distinct oral and nasal realization . Some examples of the nasalization occurring in root morphemes are given in (15).

- (15) [+NASAL] [+NASAL]
- a. ~seda [sērā] ‘pineapple’
 - b. ~bede [mērē] ‘inga (fruit)’
 - c. ~bakad \ddot{u} [mākān \ddot{u}] ‘hill’
 - d. ~ub \ddot{u} [ūm \ddot{u}] ‘man’

2.2.3.1 Nasal Spreading

The scope of nasal spreading is a phonological word. Roots are specified as being either [+NASAL] or [-NASAL]. Suffixes are mostly unmarked for nasality as in (16), although there are a number of suffixes that are specified *inherently* as [+NASAL], which is not a result of nasalization. The nasality-unmarked morphemes can be phonologically realized either as [+NASAL] or [-NASAL], depending on the specification of the preceding morpheme. The examples in (16) show some of the morphemes that are unmarked for nasality and how they are realized depending on the nasality markedness of the preceding morpheme.

(16)

[ØNASAL] MORPHEMES

		[-NASAL]		[+NASAL]
a.	-g <u>u</u>	pá-g <u>u</u>	[pág <u>u<td>~si-g<u>u</u> [síŋ<u>u</u>]</td></u>	~si-g <u>u</u> [síŋ <u>u</u>]
	3SG.MASC	put-3SG.MASC		give-3SG.MASC
b.	-di	puá-di	[puá-ri]	~ko-di [kō̃ri]
	NOMINALIZER	pinch-NOM		bite-NOM

From the examples in (16), we see the nasal feature of the root spreading to the unmarked suffix. For example, the gender marker *-gu* is unmarked for nasality until it attaches to the verb root and get the nasal feature from it. However, if the suffix is inherently marked for nasality, nasality spreading will be blocked if this suffix attaches to a root. In (17), the locative marker *-ge*, inherently marked as [-NASAL], is not affected by the preceding nominal root with [+NASAL]. Since the object marker *-re* attaches to the locative marker, *-re* inherits [+NASAL] from *-ge*.

(17) [+NASAL] [-NASAL] [ØNASAL]

~ig <u>usa</u>	-ge	-de	[íŋ <u>uságere]</u>	·to them'
----------------	-----	-----	---------------------	-----------

2.2.3.2 Homorganic Nasal Realization

The nasalization of stop sounds /b, d, g/ to [m, n, ɳ] is sometimes phonetically realized to stop consonants with prenasalization [^mb, ⁿd, ^ɳg]. This homorganic nasal realization is basically found in two positions: 1) in the nasal words or morphemes, it can be heard sometimes if the corresponding underlying consonant segment is a voiced stop, as listed in the first line of (18), (19), and (20); 2) in the oral words or morphemes, if they begin with a voiced stop, it can be heard before the stop consonant, as illustrated in the second line of (18), (19), and (20). For example, in (18), the nasal word *kīmōŋē* is realized as [kī^mbōŋē]. The waveform and spectrogram of [kī^mbōŋē] are given in Figure 2.6. Both the waveform

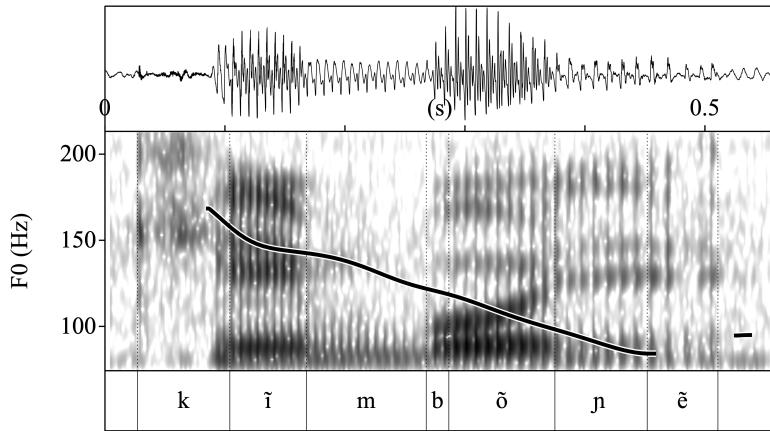


Figure 2.6: The realization of prenasalization in *kĩmõjẽ*.

and spectrogram show the energy when [m] is pronounced. In addition, the periodic waveform tells us that between [ĩ] and [b], there is voicing occurring, and the burst at the end of [m] gives the phonetic evidence of [^mb].

- (18) /b/ [^mb] ~kiboje [kĩ^mbõjẽ] 'ripe cassava'
bia [^mbiá] 'chili pepper'

- (19) /d/ [ⁿd] ~yi-dija [nĩⁿdija] 'black water'
disi [ⁿdisi] 'mouth'

- (20) /g/ [^ŋg] ~diga [nĩ^ŋga] ~ [nĩŋa] 'leg'
gasiro [^ŋga^hsiro] 'skin'

On the other hand, the voiced stop can be entirely nasalized in nasal words for the most of time, as shown in (20).

2.2.4 The Status of the Glottal Stop [?]

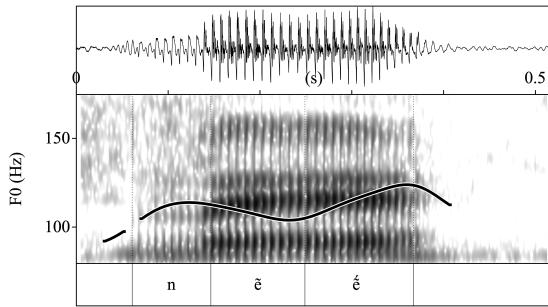
To distinguish from section 2.1.2.2, this section focuses on the suprasegmental status of the glottal stop [?]. It is found in four positions.

Position I: It is located between a sequence of two identical vowels (Criswell & Brandrup, 1998), as shown in (21). The vowels always have different tones. A low tone is assigned to the first vowel, while a high tone is assigned to the second.

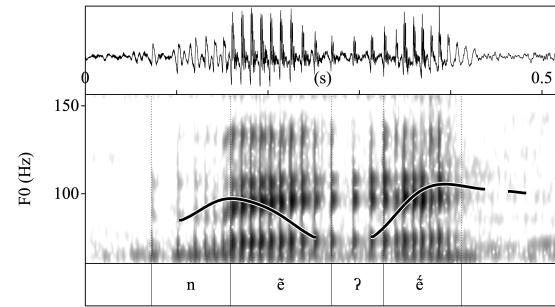
- (21) a. juú [ju?ú] 'I'
b. ~deé [nē?é] 'buriti fruit'
c. ~oó [ō?ó] 'here'
d. ~baá [mā?á] 'path'

The realization of the glottal stop is *optional*, depending on the speaker. In Figure 2.7, [nēé] (Figure 2.7(a)) and [nē?é] (Figure 2.7(b)) are the same word with different realizations under the effect of the discourse. Silva first asked how to say 'buriti fruit' in Siriano, then the speaker gave the one in Figure 2.7(a), without the glottal stop being realized. Then Silva asked him to say again, indicating that was not clear enough. The speaker tried to pronounce it clearer, as in Figure 2.7(b). The time duration in both cases is almost the same, which tells that under almost the same time duration, the glottal stop can sometimes be omitted. In order to figure out if the glottal stop really exists or if it is something else, the phonetic study between [mā?á] and [mā] is given in Figure 2.8. In Figure 2.8(a), there exists a large closure between the two vowels, while Figure 2.8(b) does not have it and only shows a single vowel with a flat F0.

Position II: It is found in some morphemes containing two different vowels, as illustrated in (22). In example (22-a), the word *waí* 'fish' has two syllables, in which the nucleus of the first syllable has a lower tone, while the following vowel has a high tone.

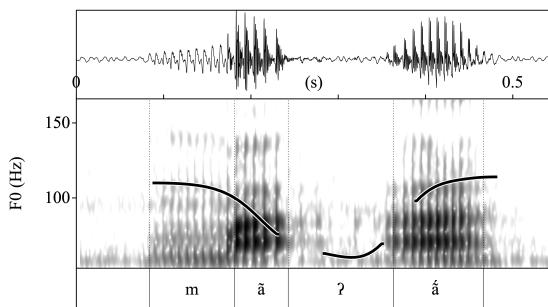


(a) [nēé̊]

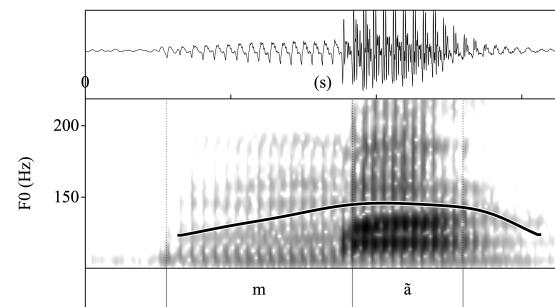


(b) [nē?é̊]

Figure 2.7: The optional realization of the glottal stop between two identical vowels



(a) [mā?á̊] 'path'



(b) [mā] 'creek'

Figure 2.8: The spectrogram and waveform of [mā?á̊] and [mā]

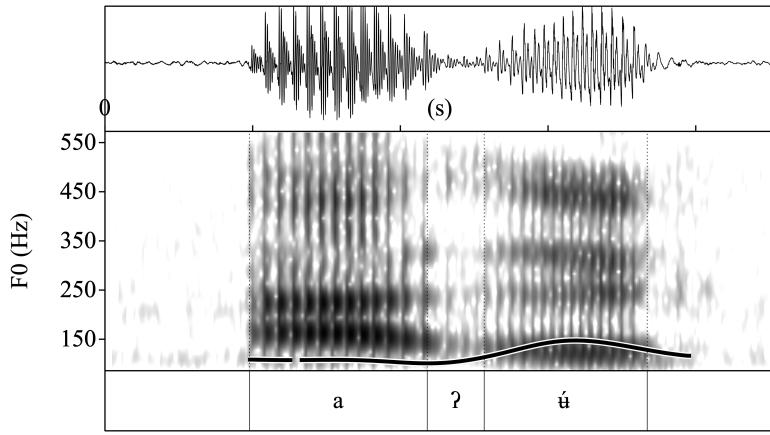


Figure 2.9: The realization of the glottal stop between two different vowels

- (22) a. waí [wa?í] 'fish'
 b. aú [a?ú] 'dad'

Figure 2.9 shows the phonetic analysis of aú 'dad'. There is a short closure between the two vowels, and the second vowel has a higher F0 than the first one. When a suffix, such as plural marker, attaches to the noun, the nominal root keeps both vowels, as in (23).

- (23) a. waire [wai?ré]
 b. [wa?í] + [-re] → [wai?ré]

The example in (23-a) is waí when used as an object in a sentence, i.e., -re is the object marker. After the object marker attaches to the nominal root, the glottal stop [?] will move to the morpheme boundary preceding the object marker. The high tone, which was originally assigned on the second vowel of the nominal root flips into a low tone. The high tone moves to the object marker, as illustrated in (23-b).

Position III: It is found in the boundary of a root and a suffix, when the suffix is attaching to the root described in position I: ending in two identical vowels. The examples are shown in (24).

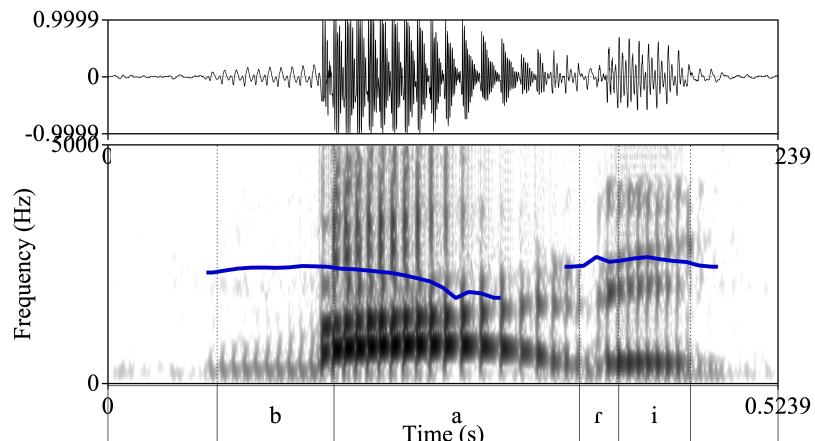
- (24) a. baa-ri [ba?ri] 'food'
 b. guu-bu [gu?bu] 'foot'

In the example (24-a), the verbal root *baa-* 'to eat' has two identical vowels. A glottal stop can be inserted between the two vowels, as in [ba?a]. When a nominalizer *-ri* attach to it, the second vowel will be dropped, and a glottal stop will be realized between the vowel and the nominalizer, as in [ba?ri]. However, the realization of the glottal stop, again, depends on the speakers. Sometimes, the realization of the glottal stop cannot be heard. On the other hand, the shortened verbal root can be noticed clearly. The graphs in 2.10 show the phonetic analysis of the syllable [ba] in [ba?ri] (Figure 2.10(a)), and [baa] (Figure 2.10(b)). Figure 2.10(a) tells us that [ba] lasts 0.177770s, while Figure 2.10(b) shows that the full realization of 'to eat' lasts 0.246826s.

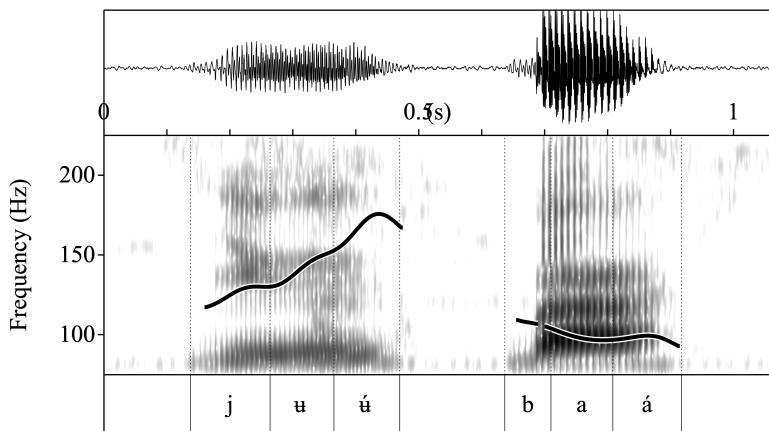
In addition, as discussed above, the two vowels have two different tones, with the first vowel having lower tone and the second vowel having higher tone, as in [baá] 'eat'. The pitch of [baá] is shown in Figure 2.10(a). When the nominalizer attaches to it, forming [bari] ~ [ba?ri], the second vowel is dropped, and the high tone from the second vowel will be assigned to the next syllable instead, as in [barí] ~ [ba?rí]. The pitch of it is shown in Figure 2.10(b).

Position IV: It is found in the beginning of a word, when this word begins with a vowel. Some examples are given in (25).

- (25) a. ~aya [?ājá] 'snake'
 b. opu [?opí] 'boss'
 c. ~ibi [?imí] 'day'



(a) [bari] 'food'



(b) [júu baa] 'I eat'

Figure 2.10: The acoustic analysis of the length of the vowels

2.2.4.1 The Status of the Glottal Fricative [h]

This section discusses the suprasegmental status of the glottal fricative [h]. It has been found in two different contexts.

Position I: It is located between a sequence of identical vowels, as shown in (26). As shown in (26-a) and (26-b), the two vowels bear different different tones. The first vowel has a low tone, while the following one has a high tone.

- (26) a. ~boó [mōhō] ‘hand’
 b. uú [uhú] ‘pacú fish’
 c. boori [bohórí] ‘dry’
 d. weeri [wehérí] ‘kill’

Figure 2.11 depicts the phonetic realization of *mōhō* ‘hand’. We can observe that the second vowel has a longer duration than the first one. Thus, the stress is assigned to the second syllable (with the longer vowel).

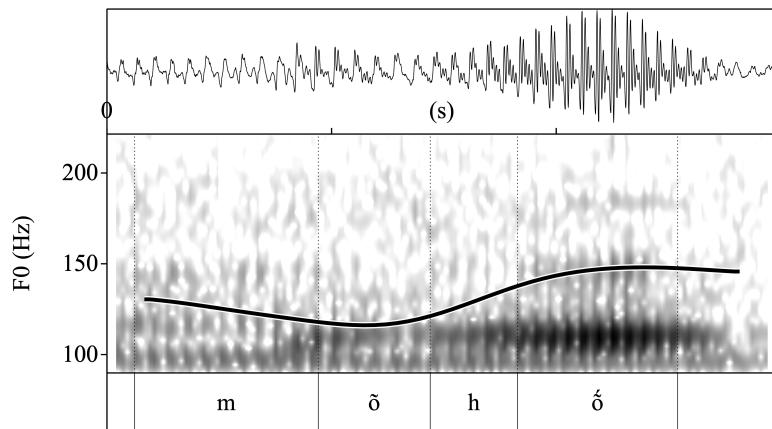


Figure 2.11: The tone pattern F0 of the identical vowels when [h] is realized

When the sequence of identical vowels happens in the verbal root, and a suffix is attached to this verbal root, an [h] is heard between the identical vowels within the root,

as shown in (26-c) and (26-d). For example, in (26-c), *boori* consists of a verbal root *boo-* ‘to dry’ and a nominalizer *-ri*. The realization of it is shown in Figure 2.12.

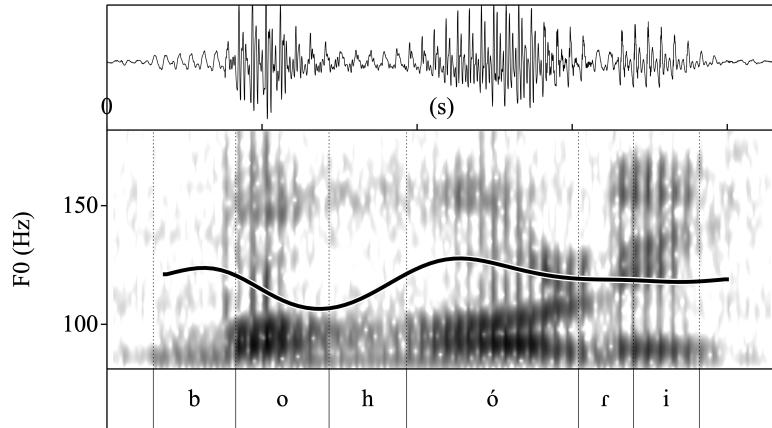


Figure 2.12: The phonetic realization of [h] inside a nominalized verbal root

From the spectrogram in Figure 2.12, we can infer that within the verbal root, the tone pattern remains LH. The nominalizer *-ri* inherits the high tone from the preceding vowel. The stress is still assigned on the second vowel within the verbal root.

Position II: It occurs before voiceless segments within the root, also called *pre-aspiration*, as shown in (27). Pre-aspiration has been widely discussed in the Eastern Tukanoan linguistics literature, and has been considered as a phonological characteristics of the Eastern Tukanoan language family (Silva, 2012). It occurs right before the voiceless segments /p, t, k, s/ in Siriano in the onset of the second syllable. For example, a pre-aspiration occurs before the second syllable *ka* as *hka* in *dokari* ‘to vomit’.

- (27) a. dokari [dohkári] ‘to vomit’
 b. ~basiri [mâhsírí] ‘to learn’
 c. gasiro [gahsíró] ‘bark of a tree’

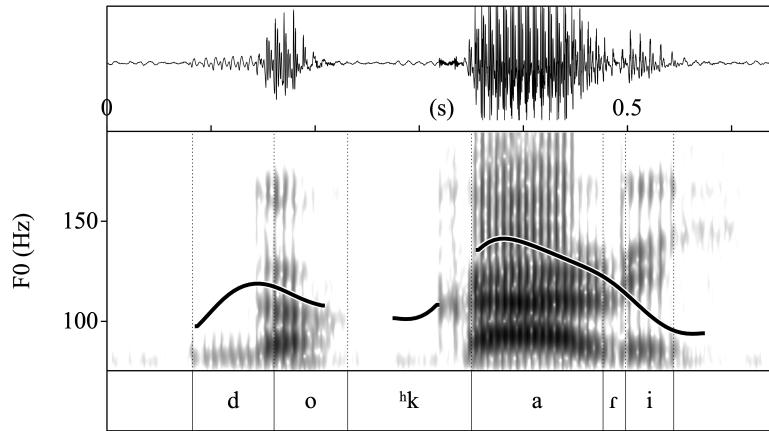


Figure 2.13: The phonetic realization of the pre-aspiration in *dokari*

The pre-aspiration occurs with any syllable structure, as long as the onset of the second syllable is voiceless, as listed in (28-a) and (28-b). It does not occur when it is voiced, as in (28-c) and (28-d).

- (28) a. $v^h C_{[-\text{voice}]} V$ [ohpari] 'have'
- b. $CV^h C_{[-\text{voice}]} V$ [jahka] 'spoon'
- c. $*v^h C_{[+\text{voice}]} V$
- d. $*CV^h C_{[+\text{voice}]} V$

The waveform and the spectrogram in Figure 2.13 illustrate the occurrence of [h] before the voiceless consonant in *dokari*. The waveform gives us a trace that before the occurrence of the burst of the velar stop [k], a long voiceless interval can be observed (Hejná, 2016). The curve represents the F0 value with respect to time. The verbal root *doka-* has two syllables, in which the first one has a low tone, while the second has a high tone. This LH tone pattern simply follows what has been discussed above. That is, the glottal fricative [h] occurs within the tone pattern LH.

CHAPTER 3

NOMINAL MORPHOLOGY

In this chapter, I discuss the morphological structure of nouns in Siriano. Section 3.1 presents the types of nouns according to animacy. Section 3.2 discusses the pronouns. In section 3.3, I discuss some of the commonly seen suffixes attaching to the nominal roots. In the last section, I discuss the modifiers of the nouns.

3.1 Type of Nouns

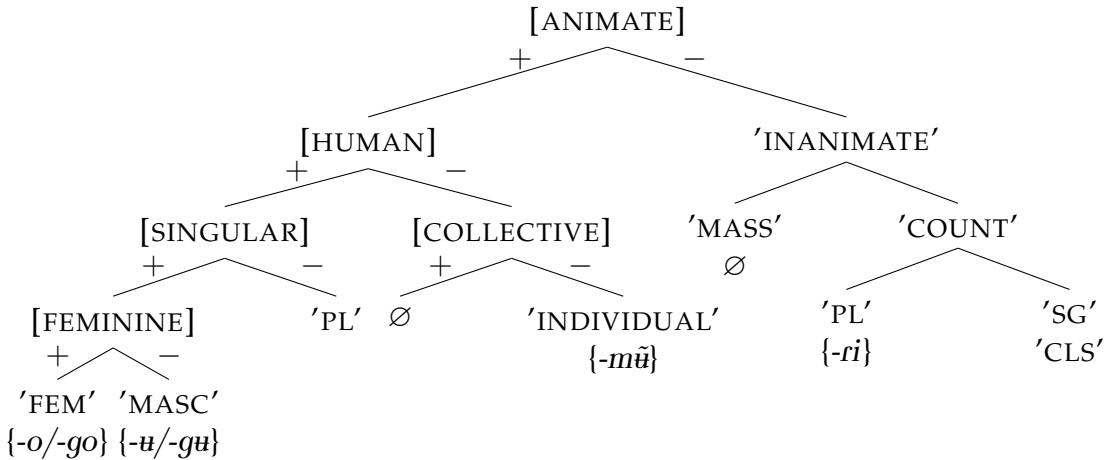
As in all Eastern Tukanoan languages, Siriano codes a distinction between animate and inanimate. It follows the traditional animacy hierarchy (Payne, 1997), as shown in (1). Animate nouns are subcategorized as *human*, and *non-human*. The non-human can be further classified into *individual*, of which each is conceived of as constituting a separate being, such as a jaguar, monkey, snake, or parrot, and *collective* animates, in which the entities live and move in groups — such as bees, termites, and minnows.

adopted from Payne (1997:150)

3.1.1 Animate

3.1.1.1 Nouns with Human Referents

The nouns with human referents divide into two grammatical types. Group I consists of all kinship terms. Group II has the members that are other human beings besides family members. Morphologically, they are all derived words. The semantics of the lexical roots determines the referent of the word. For example, *buuequ* ‘student’ consists of a verbal



root *buue-* ‘to study’, and a gender suffix *-gu* ‘MASCULINE’. The meaning of *buuegu* is literally ‘someone who studies’, which depends on the lexical root *buue-*. The lexical roots of nouns in Siriano can be either nominal or verbal. The roots denoting intransitive stative predicates in Siriano, which often translate to adjectives in English-type languages, morphologically work the same as those verbal roots (Criswell & Brandrup, 2000). In this thesis, I will include them in the verb category. I will refer to these verbs as STATIVE verbs.¹

3.1.1.1 Gender Marking

Nouns with human referents are obligatorily marked for gender. There are two pairs of gender coding suffixes. The oral and the corresponding nasal suffixes of both pairs are listed in Table 3.1. The first pair is *-gu* ‘SINGULAR MASCULINE’ and *-go* ‘SINGULAR FEMININE’. They can attach to either verbal or nominal roots to form members in both *group I* (see (2)) and *group II* (see (3)). The suffixes in PAIR I are all neutral by default. They are specified as being either [+NASAL] or [-NASAL] based on preceding morpheme they attach to.

1. For a detailed description of stative verbs, please refer to 4.1.1.

	[-NASAL]		[+NASAL]	
	MASC	FEM	MASC	FEM
PAIR I	-gu/-u	-go/-o	-gū/-ū	-gō/-ō
PAIR II	-	-	-mū	-mō

Table 3.1: The gender marking suffixes

- | | | | | | | |
|-----|-------|--------------|----------------|----------|----------------|------------|
| (2) | ROOT | MASCULINE | FEMININE | | | |
| a. | māhī- | 'child' | māhīñ <u>u</u> | 'boy' | māhīñ <u>o</u> | 'girl' |
| b. | mā- | 'progeny' | māñ <u>u</u> | 'son' | māñ <u>o</u> | 'daughter' |
| c. | pa- | 'progenitor' | p <u>ag</u> u | 'father' | p <u>ago</u> | 'mother' |
-
- | | | | | | | |
|-----|-------|------------|-----------------|----------------|-----------------|------------------|
| (3) | ROOT | MASCULINE | FEMININE | | | |
| a. | mūrēā | 'Karapana' | mūrēāñ <u>u</u> | 'Karapana man' | mūrēāñ <u>o</u> | 'Karapana woman' |
| b. | sura | 'Siriano' | s <u>urag</u> u | 'Siriano man' | s <u>urago</u> | 'Siriano woman' |
| c. | jī- | 'black' | jīñ <u>u</u> | 'black man' | jīñ <u>o</u> | 'black woman' |
| d. | gahi- | 'other' | gah <u>ig</u> u | 'other man' | gah <u>igo</u> | 'other woman' |

The ending vowels of the gender suffixes can be analyzed as the result of fusion of the gender coding suffixes on the noun root. Thus, one can sometimes see the variants as -u/o, shown in examples (4).

- | | | | | |
|-----|--------------|---------------|--------------|---------------|
| (4) | MASCULINE | FEMININE | | |
| a. | jēk <u>u</u> | 'grandfather' | jēk <u>o</u> | 'grandmother' |

These examples all belong to *group I*. They can be analyzed as being grammaticalized as inherently masculine or inherently feminine. The members in *group II* select the second pair of gender suffixes: -mū 'SINGULAR MASCULINE' and -mō 'SINGULAR FEMININE'. As shown in Table 3.1, they are inherently nasalized. The examples are given in (5).

(5)	ROOT	MASCULINE	FEMININE
a.	māā-	'road'	māām̄ū
b.	bu-	'part of'	bum̄ū
c.	mērā-	'with'	mērām̄ū

'young man' māāmō 'young woman'
 'member' bumō 'female member'
 'friend' mērāmō 'female friend'

3.1.1.1.2 Number Marking

Another defining feature of nouns with human referents is that they are obligatorily marked for number. For *plural masculine kinship* terms, the most commonly-seen suffixes are *-sāmārā* in example (6) and *-rā* in example (7). Criswell & Brandrup (1998) suggests that the AGE group determines which one to use: *-sāmārā* is used in all older people in the family, while *-rā* is used for the younger generation. However, some examples can also be found to disprove this proposal, such as *buhi-sāmārā* 'son-in-law' in (6-b), in which son-in-law is not bound to refer to old person. Silva (2012) notes that, for Desano, *sāmā* is the word for vagina, followed by the real plural marker *-rā*. He also notes that when *sāmā* is used, the whole term refers to a more general meaning, for example, in (6), the pluralized form *pagusāmārā* means *parents*, but not fathers. Due to the fact that Desano and Siriano are largely similar to each other, I conjecture that Siriano's system for Group I nouns may also work in this same way.

(6)	SINGULAR	PLURAL	
a.	pagū	'father'	pagusāmārā
b.	buhi	'son in law'	buhisāmārā
c.	mārāpū	'husband'	mārāpūsāmārā
d.	jiēkū	'grandfather'	jiēkūsāmārā

'fathers/parents'
 'sons in law'
 'husbands'
 'grandfathers/grandparents'

Some other terms, as shown in (7), are suffixed by the plural marker *rā* directly in order to be pluralized.

(7)	SINGULAR	PLURAL
a.	māhīñū 'boy'	māhīrā 'boys'
b.	tīñū 'older brother'	tīrā 'older brothers'

Kinship female plurals keeps the whole word, then takes the suffix *-sā* short for *sāmā* 'vagina', followed by the plural word *nōmē* 'women' in the last position, examples given in (8).

(8)	SINGULAR	PLURAL
a.	pago 'mother'	pagosā nōmē 'mothers'
b.	buamō 'step mother'	buamōsā nōmē 'stepmothers'
c.	mārāpō 'wife'	mārāpōsā nōmē 'wives'
d.	jēkō 'grandmother'	jēkōsā nōmē 'grandmothers'

A few words drop the feminine gender marker *-go*, but take the plural marker *-rā* instead followed by *nōmē* 'women', as the two examples in (9).

(9)	SINGULAR	PLURAL
a.	māhījō 'girl'	māhīrā nōmē 'girls'
b.	tīñō 'older sister'	tīrā nōmē 'older sisters'

Those nouns which take *-mū/mō* gender markers, drop the gender markers and select *-mārā* as their plural suffix, as illustrated in (10).

(10)	MASCULINE	FEMININE	PLURAL
a.	mērāmū 'friend'	mērāmō 'female friend'	mērāmārā 'friends'
b.	bumū 'member'	bumō 'female member'	bumārā 'members'
c.	diparimū 'indigenous man'	diparimō 'indigenous woman'	diparimārā 'indigenous people'

3.1.1.2 Non-human Animate

Non-human nouns can be subcategorized into either INDIVIDUAL nouns and COLLECTIVE nouns. The individual animate nouns refer to a single specific entity, such as monkey, fish, deer. The individual nouns can be further subclassified into HIGH LEVEL non-human animates and LOW LEVEL non-human animates. On the other hand, the collective nouns refer to a group of same entities that typically live together and are more commonly to be seen as a group. In this section, I will discuss each of them in the following order: high level individual, low level individual and collective non-human animates.

3.1.1.2.1 High Level Individual Animates

The high level individual animate category is morphologically close to animate nouns with human referents. They mark both gender and number features.

(11)	SINGULAR	FEMININE SINGULAR	PLURAL
	diajee	diaje-o	diaje-a
	dog	dog.FEM	dog.PL
	'dog'	'female dog'	'dogs'

3.1.1.2.2 Low Level Individual Animates

The members of the low level individual animates category are most of the non-human animates, i.e., animals. Members in this category do not receive gender suffixes, and they are only marked for number. There are three TYPES of the members under this category, in which the number is marked differently.

Type I: Most members fall into this type, in which the plural form is marked and coded by the suffix -a. A sample of nouns in this type are given in (12). The plural suffix -a is unmarked for nasality. It receives the nasality value from the preceding vowel.

(12)	SINGULAR	PLURAL	
a.	sẽmẽ	'paca'	sẽmẽ-ã 'pacas'
b.	waa <u>u</u>	'monkey'	waa <u>u</u> -a 'monkeys'
c.	bore	'dragonfly'	bore-a 'dragonflies'
d.	bup <u>u</u>	'spider'	bup <u>u</u> -a 'spiders'
e.	buui	'eel'	buui-a 'eels'

According to Brandrup & Criswell (1988), the members of this group are all herbivorous quadruped animals. However, there are some exceptions, for example, bupu 'spider' has 8 legs, and buui 'eel' does not have legs at all. Certain members in this category end in *a*. These words have the same form for singular and plural. The examples are given in (13).

(13)	SINGULAR	PLURAL	
a.	buha	'dove'	buha 'doves'
	buha		buha-a
b.	mãhã	'macaw bird'	mãhã 'macaw birds'
	~baha		~baha-a

Some other members in this group, ending in *i/ĩ*, undergo vowel changing before the plural suffix *-a*. The high front vowel lowers to the mid front vowel *e/ẽ*. The examples are shown in (14).

(14)	SINGULAR	PLURAL	
a.	wãtĩ	'devil'	wãtẽã 'devils'
	~wati		~wati-a
b.	nãsĩ	'toucan bird'	nãsẽã 'toucan birds'
	~dasi		~dasi-a

Type II: The members all end in MASCULINE gender marker *-gu*. The FEMININE gender

marker *-go* is never found within this category. Thus, the nouns are inherently masculine. To pluralize word, one has to drop the singular marker, and then attach the PLURAL marker *-rā* to the root. Very few members belong to this type, which are *all* listed in (15).

(15)	SINGULAR		PLURAL
a.	oog <u>u</u>	'howler monkey'	oorā
b.	seg <u>u</u>	'churuco monkey'	serā
c.	kaaug <u>u</u>	'crab'	kaaurā
d.	gapá <u>u</u>	'sparrowhawk'	gapáarā

Type III: All the words end with the masculine gender marker *-mū*. To pluralize them, one needs to drop *-mū* and attach the PLURAL marker *-mārā* to the root. Just like *type II*, there are only a few members in this type. All of them are shown in (16).

(16)	SINGULAR		PLURAL
a.	duguamū	'insect'	duguamārā
b.	karamū	'black turkey'	karamārā
c.	núrāmū	'horsefly'	núrāmārā

3.1.1.2.3 Collective animates

The collective animates refer to animals that are typically encountered in a group, or typically seen as a group. Those creatures are normally very small, such as most types of insects, and some types of fish, etc. These nouns are inherently plural, i.e., plural is the unmarked form within the category. To refer to a single member of the collective, the singularizing suffix *-mū* /*~-bu*/ is used to individuate and refer to it, as illustrated in (17).

(17)	COLLECTIVE	SINGULAR
a.	burua	'termites'
b.	diakõã	'worms'
c.	uti	'wasps'
d.	biapûrã	'ants (ONE TYPE)'
e.	duparia	'fishes (ONE TYPE)'
		burua- m̩ 'one termite'
		diakõã- m̩ 'one (piece) worm'
		uti- m̩ 'one wasp'
		biapûrã- m̩ 'one ant'
		duparia- m̩ 'one fish'

3.1.1.2.4 Linguistic coding and the hierarchy of animates

The ways in which animates are linguistically coded for gender and number in Siriano exhibit a hierarchy in which the entities higher up are coded for the greater number of features, as shown in Table 3.2. Note that, this hierarchy of animates is not unique in Siriano language. In the analysis of other Tukanoan languages, have suggested that the animate nouns can be represented in an animacy hierarchy according to the ways they are coded linguistically for both gender and number.

	HUMANS	HIGHER-LEVEL INDIV	LOWER-LEVEL INDIV	COLLECTIVES
GENDER	obligatory	optional	needless	
SG	- <i>u</i> /- <i>gu</i> /- <i>ŋu</i> - <i>o</i> /- <i>go</i> /- <i>ŋo</i>	- <i>e</i> /- <i>o</i>	root-∅/- <i>gu</i> /- <i>m̩</i>	- <i>m̩</i>
PL	- <i>ta</i>	- <i>a</i>		root-∅

Table 3.2: Hierarchy of animates in Siriano

3.1.2 Inanimates

The second major class of nouns are inanimates. The inanimate nouns include everything excluding the animate creatures and humans discussed in the previous section, such as objects, plants, etc. Following the analysis of Tukano, Wanano (Stenzel, 2004), and Desano (Silva, 2012), the inanimates can be subcategorized into the mass and the count

nouns. The count nouns refer to the things that can be counted, while those that refer to substances, like water, sand, air, wood, etc are the mass nouns.

3.1.2.1 Mass nouns

The mass nouns are not countable and thus are not marked for gender and number, as illustrated in (18). These nouns refer to an entity that are mass substances, such as liquid, powder, etc.

- (18) a. n̄t̄i 'ash'
 b. mōā 'salt'
 c. deko 'water'

By nominalizing some verbal roots with the help of the suffix *-ri* /-di/, we can get many mass nouns, as shown in (19).

- (19) a. baari 'food'
 b. iiriri 'beverage'
 c. bajari 'music'

3.1.2.2 Count nouns

The inanimate count nouns consist of two subcategories: inherently plural nouns and inherently singular nouns.

3.1.2.2.1 Generic form: inherently plural nouns

Inherently plural nouns function similarly as the collective animate nouns do. The nominal roots refer to a group of the referents, but not an individual entity. The collective objectives are more likely to be seen in a group because of their natural patterns of occurrence; On

the other hand, the inherently plural inanimate nouns refer to the **generic** concept of the object, as illustrated in (20).

(20)	GENERIC	SINGULAR
a.	awi 'needle'	awi- ru 'a needle'
b.	boho 'blowgun'	boho- ru 'a blowgun'
c.	dita 'lake'	dita- ru 'a lake'
d.	māmāū 'papaya'	māmāū- ru 'a papaya'

The examples in (20) reveal that in order to be singularized, the nominal roots have to be suffixed. The suffix *-ru* /-du/ **bolded** in (20) are classifiers. The classifiers are special operators that are used in some nouns to directly express the CLASS of the nouns in a language (Payne, 1997). In Siriano, the classifiers can express the materials, shape, or some other properties of a noun. In the examples (20), the classifier *-ru* represents 'rounded shape'. The objects that are suffixed by it belong to the class of rounded things.

The generic form takes grammatical agreement of third person singular, even though it is inherently plural. In the example (21), *juku* 'tree' is the generic form. It refers to this kind of tree in the surrounding area instead of a specific entity, which agrees with *-a*, the third person singular evidential suffix attaching to *-āārā* 'be'.

(21)	Igu juk<u>u</u> irogue cedro wāīkuri āārāa.
	igu juk<u>u</u> irogue cedro ~waik <u>u</u> -ri ~aada-a.
	this tree there cedro have.name-NOM be.3SG
	'This kind of tree over there is called el cedro.'

3.1.2.2.2 Inherently singular nouns

Most nouns in Siriano are inherently singular nouns. These nouns or nominal roots take the pluralizing suffix *-ri* in order to be pluralized, as shown in (22).

(22)	SINGULAR	PLURAL
a.	dia	'a river'
b.	diu	'an egg'
c.	wii	'a house'
d.	ñtāje	'a stone'
		ñtāye- ri
		'stones'

The nouns suffixed by the classifier *-gu* have to drop it and then take *juku* in order to be pluralized. The classifier *-gu* means 'something cylindrical and trucklike'. The pluralizer *juku* is grammaticalized from the noun *juku* 'tree'. That is the reason that all the nouns taking *juku* to get plural form are related to trees. All the nouns in this category are listed in the example (23).

(23)	SINGULAR	PLURAL
a.	pū- gū	'a hammock'
b.	dūku- gū	'a brava yuca stick'
c.	ẽmãpū- gū	'a tree (ONE KIND)'
		ẽmãpū- juku
		'trees'

The only noun taking *juku* to pluralize without being marked by the classifier *-gu* is shown in (24).

(24)	SINGULAR	PLURAL
	buidi	'a web'
		buidi- juku
		'webs'

Criswell & Brandrup (1998) proposes that some inanimate nouns suffixed by the classifier *-ru* select the infix *dupa* between the nominal root and the classifier in order to form plurality. Some samples are listed in (25).

(25)	SINGULAR	PLURAL
a.	bia- ru 'a chili pepper'	bia- dupa-ru 'chili peppers'
b.	dáta- ru 'a can'	dáta- dupa-ru 'cans'
c.	doka- ru 'a lulo fruit'	doka- dupa-ru 'lulos'
d.	doódi- ru 'a boat'	doódi- dupa-ru 'boats'
e.	duka- ru 'a fruit'	duka- dupa-ru 'fruits'

On the other hand, some other data show that the inanimate nouns suffixed by other classifiers can also take *dupa* when generating plural forms, as shown in (26).

(26)	SINGULAR	PLURAL
a.	útā- mū 'a torrent'	útā- dupa-bu 'torrents'
b.	tari- bu 'a bedroom'	tari- dupa-bu 'bedrooms'

In addition, *dupa* is also found to attach to the inherently plural nouns to pluralize them, as illustrated in (27).

(27)	SINGULAR	PLURAL
	māmāū- ru 'a papaya'	māmāū- dupa-ru 'papayas'

I think that *dupa* is used to pluralize the inherently plural nouns when the speakers focus on more than one entities which belong to the mass noun category.

To sum up this section, the classifiers in Siriano have two functions: 1) it classifies the inanimate entities in terms of shapes, and materials. Some classifiers describe the essence of the entities, such vine, pot, language, body parts, etc. 2) to singularize generic nouns. Table 3.3 lists some of the commonly seen classifiers in Siriano.

CLASSIFIER	DESCRIPTIONS	EXAMPLES	
-da	vine	kooa- da 'pumpkin wine'	gapi- da 'ayahuasca wine'
-gu	tree, bush	juku- gu 'tree'	
	long & slim objects	peá- gu 'shotgun'	bohári- gu 'pencil'
-ru	round, oval, oblong	gasi- ru 'canoe'	mãmãú- ru 'papaya'
-ja	language	sura- ja 'Siriano language'	wírã- ja 'Desano language'

Table 3.3: The commonly seen classifiers in Siriano

3.2 Pronouns

3.2.1 Personal pronouns

In Siriano, the personal pronouns are free morphemes. They distinguish three persons (first, second, and third), two numbers (singular and plural), and only in third person singular, the person pronouns distinguish gender (masculine and feminine). In the first person plural, Siriano has both inclusive and exclusive forms. All the personal pronouns are shown in Table 3.4.

	SINGULAR		PLURAL	
	MASC	FEM		
1st person	juu		mãfã inclusive	gua exclusive
2nd person	mãsã		mãsãsã	
3rd person	íñã	igo	íñãsã	

Table 3.4: Siriano personal pronouns

Note that, even though for both first and second personal pronouns, no gender information is included, when they are using in the sentences, verb agreement has to be made according to the gender of the speakers if needed.

3.2.2 Reflexive

Siriano does not have reflexive pronouns. Reflexive expressions are coded by the reflexive interpreted noun *basi*, as illustrated in (28).

(28)	J <u>uu</u> basi māsia ãr̩p̩up <u>u</u>
	j <u>uu</u> basi ~basi-a
	~adi-~jup <u>u</u>
	I REF know-EVID.PRES.1.SG say-EVID.PST.3SG.MASC

"I know myself." he said.' (Silva, 2019)

3.2.3 Demonstrative

Siriano does not differentiate between the demonstrative pronouns and the adjectives morphologically. That is, the demonstratives serve for both functions to refer to the objects in the contexts, or they can be used as a modifier and form a noun phrase with a noun. In both cases, they are free morphemes. Table 3.5 lists all of them. In this section, I will discuss both functions in the two separate subsections.

3.2.3.1 Demonstrative pronouns

Demonstratives can work as pronouns. They mark animacy, number, and in sentences sometimes they encodes gender as well. In terms of animacy, the speakers use the morphemes *ii* /~ii/ 'this' and *sii* /~sii/ 'that' to refer to animate beings and entities. When referring to an inanimate entity, *i* 'this', *iri* /idi/ 'this', and *sii* 'that' are used.

Same as other personal pronouns, the demonstrative pronouns can be suffixed by the grammatical suffixes, such as object case marker *-re*, the plural marker *-sā* and the additive marker *-de*. Some examples are given in (29) - (31).

	ANIMATE			INANIMATE
	MASCULINE	FEMININE	PLURAL	
NEAR <i>this/these</i>	ii	igo	iiſā	i/iri
DISTANT <i>that/those</i>	sii	sigo	siiſā	si

Table 3.5: Siriano demonstratives

- (29) ii a. ~ii-~do [iiño] 'this kind'

DEM.AN-like.this

- b. ~ii-de [iiđe] 'this one also'

DEM.AN-ADD

- c. ~ii-re [iiře] 'this one'

DEM.AN-OBJ

- (30) i a. i-~do [inõ] 'this kind'

DEM.INAN-like.this

- b. i-de [ide] 'this one also'

DEM.INAN-ADD

- c. i-re [ire] 'this one'

DEM.INAN-OBJ

- (31) Waai wág̥ aāřim̥ iiño.

waai wá-gu ~aadi-~bi ~ii-~do

fish big-MASC be-EVID.PRES.3SG this.kind

'This kind (of fish) is big fish.' (Gardner, 1976)

When the demonstrative pronouns refer to more than one entity, a plural suffix *-sā* attaches to the nominal root, and the evidential, and marking for tense and number, changes accordingly. Other grammatical suffixes can attach to the pluralized nominal root when

necessary, as shown in (32).

- (32) *ĩ̄sānō waaisiparu āārīmā.*
~ii-~sa-~do waaisiparu ~aadi-~ba
this-PL-like.this jura.jura.fish be-EVID.PRES.3PL
'This kind (of fish) like this is the jura-jura fish.' (Gardner, 1976)

3.2.3.2 Demonstratives as Modifiers

The demonstratives can also function as a modifier to form a noun phrase with a noun. They are always located before the nouns. The demonstrative morphemes have the same form as the personal pronouns. For animate referents, the demonstrative modifiers have to agree with the gender and the number of the head noun. For instance, in the examples (33) and (34), *kooro* 'kooro fish' is the head noun. The demonstrative modifier *ĩ̄* 'this' is pluralized by *-sā*, when the head noun becomes plural *kooroa*.

- (33) *ĩ̄ kooro baamī diakōarē.*
~ii kooro baa-~bi ~diakoa-~de
this kooro eat-EVID.PRES.3SG worm-OBJ
'This kind of kooro eat worm.' (Gardner, 1976)
- (34) *ĩ̄sā kooroā wárā āārīmā dia dekopegere*
~ii-~sa kooro-a wá-~da ~aadi-~ba dia dekope-ge-de
this-PL kooro-PL many-PL be-EVID.PRES.3PL river overflow-LOC-TEMP
'Many these kooros are in the area where the rivers overflow.' (Gardner, 1976)

On the other hand, for inanimate objects, the demonstrative modifiers have to be suffixed by the same classifiers as the one the head nouns have, as shown in (35).

- (35) a. **iri-gu** w̄ir̄imōā-ŋu 'this lemon tree'
DEM.INAN-CLS:trunk lemon-CLS:trunk

If the head noun does not have a classifier, then the demonstrative modifier does not change, as illustrated in (36).

- (36) a. **i** baja-ri 'this song'
DEM.INAN sing-NOM
b. **i** wii 'this house'
DEM.INAN house

The classifiers and other nominal suffixes are able to attach to all of the demonstratives. The classifiers are only attaching to the inanimate demonstratives, as shown in (37).

- (37) **idi** a. **idi-gu** [irigu] 'this tree'
DEM-CLS:trunk
b. **idi-poe** [iripoe] 'this time'
DEM-CLS:time
c. **idi-ku-ta** [irikuta] 'each one of this, no more'
DEM-each-EMPH
d. **idi-pā** [iripā] 'this size'
DEM-size

For the grammatical suffixes, they adjoin to the noun only. The examples are given in (38).

- (38) a. i abe-ge 'at this month'
DEM.INAN month-LOC
- b. i pū-re 'this paper'
DEM.INAN paper-OBJ

3.3 Other Nominal Morphemes

3.3.1 The Diminutive *-ŋā*

The diminutive is expressed by the suffix *-ŋā* /-~ga/. Generally, the diminutive in Siriano is not restricted to animate nouns. In addition, it may be suffixed to intransitive stative predicates and adverbs. When it attaches to nouns, it represents 'even smaller than usual', as illustrated in (39).

- (39) a. wiiri-~bahi-~ga [wiirimāhīŋā] 'small knife'
cut-CLS:long, flat-DIM
- b. dūkaru-~ga [dūkaruŋā] 'small fruit'
fruit-DIM
- c. ~bahi-~ga [māhīŋā] 'little kid'
kid-DIM
- d. wii-~ga [wiiŋā] 'little house'
house-DIM

The diminutive suffix occurs in the last position in the word stem, as shown in (40).

- (40) a. ~be-~di-~ye-~ga [mēr̩jēñā] 'the little small thing'
 small-NOM-CLS:flat-DIM
- b. ~bahigu-~ga [māh̩jūñā] 'little kid'
 kid.MASC-DIM
- c. su-go-~ga [sugon̩jā] 'one little girl/lady'
 one-FEM-DIM
- d. ~be-~da-~ga [mērāñā] 'little people'
 small-PL-DIM

The diminutive suffix may also be attached to adverbs. In (41), the suffix *-ŋā* indicates even greater precision. When referring to time, as in example (41-ab), the suffix means 'more recent'; when it attaches to a root expressing quantity, *-ŋā* adds the meaning 'fewer than a few' or 'less than a little', as in (41-c); and when *-ŋā* attaches a locative adverb, it expresses the meaning of 'even closer', as in (41-d).

- (41) a. dupuyuro-~ga [dupuyuron̩jā] 'a little bit before'
 before-DIM
- b. daporan̩-~ga [daporaj̩jā] 'in a bit/soon'
 hour-DIM
- c. ~sidu-~ga [sīrūñā] 'a very little bit'
 a.little-DIM
- d. ~oo-~ga [ōoñā] 'right here'
 here-DIM

The diminutive suffix may also occur with words referring to some specific time expressions, as in (42). Silva (2012) mentions that in Desano this phenomenon is also found, and proposes that the suffix itself seems to have lost its transparency as a grammatical morpheme and has become lexicalized. In (42-a), for example, *pāmīñā* 'morning' cannot be understood

as 'little night' or 'even closer to the nighttime' when we break the word into morphemes. Hereby, I will take this proposal from Silva (2012) and apply here in Siriano.

- (42) a. ~jabi-~ga [ɲām̩iŋ̩ā] 'morning'
night-DIM
b. dapa-~ga [dapan̩ā] 'today'
just.now-DIM

3.3.2 *mērā*

~*beda* [mērā] is a multifunctional morpheme in Siriano, as shown in Table 3.6. In general, it denotes comitative use and instrumental case marker. The comitative case expresses accompaniment by someone, as shown in examples (43), while the instrumental use tells the accompaniment by some physical objects, as in (44) - (45).

- (43) īñ̩sā mērā j̩uude waag̩a jaa.
~ig̩-~sa ~beda j̩uude waa-g̩a ja-a
he-PL INSTR I-ADD go-MASC AUX-EVID.PRES.1SG
'I am also going with them.'

- (44) Buidig̩ mērā taaumāk̩ pāhām̩ booreká.
buidi-g̩a ~beda taau-~bak̩ ~jaha-~bi booreká
web-CLS:trunk INSTR save-when enter-EVID.PRES.3SG.MASC booreka.fish
'When booreka fish enters, they catch them with web.' (Gardner, 1976)

- (45) ūdere s̩irituro mērā wēhēm̩ā.
~ii-de-re ~s̩irituro ~beda ~wehe-~ba
DEM.this-also-OBJ bow INSTR kill-EVID.PRES.3PL
'They kill it with bows.' (Gardner, 1976)

In addition, *~beda* [mērā] is also found to mean 'during a period of time', when it attaches to specific time expressions. The examples are given in (46).

- (46) Waai mērā paaumā, jāmī mērā.

waai ~beda paaau-~ba ~jabi ~beda
fish with situate.EVID.PRES.3PL night during

'During the night, they situate (the hook) with fish.' (Gardner, 1976)

It is also able to be assigned to locative information, where it means 'from some location', as illustrated in (47).

- (47) Noó mērā aariri?

noó ~beda aadi-di
where from come-INTER
'Where did you come from?'

<i>locative information</i>	<i>time</i>	<i>object</i>	<i>person</i>
from	during	INSTRUMENTAL	COMITATIVE

Table 3.6: The lexical semantics of *mērā*

3.3.3 The Locative: *-ge*

In general, the locative marker encodes both spatial and temporal information. In terms of space, the locative marker *-ge* expresses either location or direction. It attaches to a nominal root or a nominalized verb. The examples (48) - (49) represent the location, while (50) - (51) denote the direction.

- (48) Gahi otemūrā, gahi pooege otekūmā doha.
 gahi ote-~buda gahi pooe-**ge** ote-~kuba doha
 other plant-ANTP other field-LOC plant-EVID.PRES.3PL other.time
 '(They) plant in other field at other time to plant other ones.' (Madrid, 1977)
- (49) Ditarige paajamī ïñnō.
 ditadi-**ge** paaja-~bi ~ii-~do
 lake-LOC swim-EVID.PRES.3SG.MASC DEM-like.this
 'This kind of fish swims in the lake.' (Gardner, 1976)
- (50) Turigedere jāhāgoramī.
 turi-**ge**-de-re ~jaha-gora-~bi
 matapi-LOC-ADD-OBJ enter-EMPH-EVID.PRES.3SG.MASC
 '(Doe) really also enter this matapi.'² (Gardner, 1976)
- (51) Torege sājāmī.
 tore-**ge** ~saja-~bi
 hole.in.trees-LOC enter-EVID.PRES.3SG.MASC
 'He enters the hole of the tree.'

The locative marker *-ge* can also attach to adverbs that carry the information of location. Some examples are given in (52).

2. Doe is a kind of fish.

- (52) a. ~oo-ge [õõge] 'here'
 here-LOC
 b. iro-ge [iroge] 'there'
 there-LOC
 c. noo-ge [nooge] 'where'
 where-LOC
 d. oharo-ge [oharoge] 'somewhere next to villages'
 next.to.village-LOC
 e. puro-ge [puroge] 'somewhere nearby'
 near/close-LOC

On the other hand, the locative marker *-ge* is sometimes used in expressions indicating time, as shown in (53). In this case, *-ge* attaches to adverbs.

- (53) a. 4:20 weja-ge [wejage] 'almost 4:20'
 4:20 almost-LOC
 b. ~jabiga-ge [pjãm̩iŋãge] 'tomorrow in the morning'
 morning-LOC

3.3.4 The Referential: *-re*

There is no overt marking of the grammatical subject in Siriano. The object is marked by the suffix *-re* /-de/, although the object marking is not always overt. In the literature of Eastern Tukanoan languages, it has been discussed that the suffix *-de* has two basic functions from the perspective of syntax and semantics. Syntactically, it marks nonsubject arguments. Semantically, it marks the most definite or referential of the nonsubject arguments (see Silva (2012) for Desano). In Siriano, there are typically two functions that have been found. The first one is, like other Eastern Tukanoan languages, to mark the nonsubject

arguments. The second one is to work with the locative marker *-ge*. I will discuss both cases in separate subsections.

3.3.4.1 The Object Marker

The object marker *-de* marks the objects in both transitive (54) and ditransitive clauses (55) - (57). In the ditransitive clauses, both direct and indirect objects are overtly marked at the same time. Sometimes the direct object in a ditransitive clause is omitted, the indirect object is still marked, as shown in (56) and (57).

- (54) Booreká baakum̄ buruare.

booreká	baa-ku-~bi	burua- de
booreká	eat.ASP.state-EVID.PRES.3SG.MASC	termite-OBJ

'Booreká fish eats termite.' (Gardner, 1976)

- (55) Oaribogare juure sīka.

oariboga- de	juu- de	~si-ka
broom-OBJ	me-OBJ	give-IMP

'Give me the broom!' (Osorio & Gardner, 2011)

- (56) Īŋūsāgere sībirikōāka.

~igusa-ge- de	~si-biri-~ko-ka
them-LOC-OBJ	give-NEG-EMPH-IMP

'Don't give (it) to them!' (Osorio & Gardner, 2011)

- (57) Juanita sīāmō juure.

Juanita	~si-~abo	juu- de
Juanita	give-RPST	me-OBJ

'Juanita just gave (it) to me.' (Osorio & Gardner, 2011)

3.3.4.2 Marker for Spatial-temporal Information and Contrast

Very often, the referential marker *-de* and the locative marker *-ge* work together as *-gere*. This suffix combination does not work with objects, but co-occur with locative or temporal expressions. So it was proposed *-gere* can function as a marker of spatial-temporal expression (Silva, 2012).

In addition, *-gere* can also work to represent the semantic accumulation of each of the suffix member: the direction and the object, as *ījūsā* 'they' functions as both the direction and the indirect object in the example (60).

- (60) *Ínjüságere* sibirikóaka.
 ~igusa-ge-de ~si-biri-~ko-a-ka
 them-LOC-OBJ give-NEG-EMPH-IMP
 'Don't give (it) to them!' (Osorio & Gardner, 2011)

In narratives, it is noticed that *-gere* attaching to locative expressions only occurs when another locative expression was mentioned previously to form a contrast. The paragraphs are given in (61) - (62). In the example, *-gere* is used, especially the referential marker *-de*

to give a contrast. In this case, the 'kooro bird' previously mentioned is on the river, while the ones in the later sentence are big and they are in the river overflow.

- (61) Íí kooro áárimí, dia wekage áárimí. ... Íísá kooroa wará áárimá dia dekopegere.

~ii kooro ~aadi-~bi dia weka-**ge** ~aadi-~bi
this kooro be.EVID.PRES.3SG.MASC river on-LOC be.EVID.PRES.3SG.MASC

~iisa koro-a wa-řa ~aadi~ba dia dekope-ge-de
these koro-PL big-PL be.EVID.PRES.3PL river overflow-LOC-OBJ

'This is the koro bird, they are on the river... these koro birds are big and they are in **this** river overflow.'

In the example (62), the omitted subject is planting twice in two different fields. The suffix *-gere* attaches to the second *pooe* 'field' to emphasize the contrast with the previous one.

- (62) Gahi oteturā, qahi pooege otekūmā doha.... qahi oteturā iri māsāko pāmā pooegere.

gahi ote-~bura gahi pooe-ge ote-~kuba doha
other plant-ANTP other field-LOC plant-EVID.PRES.3PL other.time

gahi ote-~ba iri ~basa-koa ~paba pooe-ge-de
other plant.EVID.PST.3PL this grow.PRES finally field.LOC-OBJ

'In order to plant others, (they) plant in **other** field at other time. Having planted others, this one finally grows in **this** field.'

3.3.5 The Additive *-de*

The additive *-de* encodes a similar meaning to 'also/too' in English. It always occurs with nominals. The examples are given in (63) - (65). The additive marker does not have cognates in other Eastern Tukanoan languages. For instance, Desano has two additive

markers *-ku* and *-~sa* (cf. Silva 2012:169); Wanano uses *-k^hu* (cf. Stenzel 2004:17); Tukano has *-kẽ* and additive plural *-kẽrã* (cf. Daniel & Moravcsik 2013). Siriano does not have additive plural. The example (65) shows that *-de* attaches to a plural demonstrative pronoun without changing.

- (63) Turigedere pāhāgoram̄i.
 tari-ge-**de**-re ~jaha-gora-~bi
 matapi-LOC-ADD-OBJ enter-EMPH-EVID.PRES.3SG.MASC
 '(Doe) really also enter this matapi.' (Gardner, 1976)

- (64) Iroge āārijupo igode.
 ido-ge ~aadi-jupo igo-**de**
 there-LOC be-EVID.PST.3SG.FEM she-ADD
 'She was also there.'

- (65) ūisā**de** pagomūkūrāta āārijūrā.
 ~ii-~sa-**de** pago-~bu~ku-~da-ta ~aadi-~jura
 this-PL-ADD mother-man.of be-EVID.PST.3PL
 'They are also maternal cousins.' (Silva, 2019)

3.4 Noun Phrase Structure

3.4.1 The 'Adjectival' Intransitive Stative Verbal Modifiers

The intransitive stative roots work the same as those verbal roots in Siriano (Criswell & Brandrup, 2000:409). Indeed, according to Criswell & Brandrup (1998:2), intransitive stative roots are actually the roots of STATIVE verbs. Physical attributes or qualities are expressed in the form of STATIVE verbs, such as *be good/bad/long/short*, etc. Thus, in this thesis, I describe Siriano as lacking a lexical category of adjective. Instead, I treat these roots that express adjectival notions as stative verbs, and I will call them stative

verbs. The stative verbal root cannot stand alone. In order to modify nouns, they require nominalizing morphology. The nominalizing suffix varies according to nouns with different animacy the stative verb is modifying. The modifiers must agree with the *animacy*, *number*, and *gender* of the nouns. Table 3.7 lists all nominalizing suffixes in Siriano.

	SINGULAR		PLURAL	MASS
	MASC	FEM		
ANIMATE	-gu	-go	-ra̠	-
INANIMATE	-ri(+classifiers)			

Table 3.7: The nominalizers in Siriano

3.4.1.1 With Animate Nouns

We know that the human-related nouns carry the information of animacy, number and gender in Siriano. When human-related nouns are modified by the stative verbs, the stative verbal roots must be suffixed by the corresponding gender suffix, as shown in (66).

- | | |
|---------------------|-----------------------------|
| (66) a. María daago | b. pagut̩ij̩u daag̩u |
| María daa-go | pag̩u-~tig̩u daa-g̩u |
| María old.FEM | father.old.brother old-MASC |
| 'the old María' | 'the old uncle' |

For other animate beings, in order to modify the nouns, the DEFAULT gender suffix attaches to the verbal root. In Siriano the DEFAULT gender is -gu MASCULINE. Some examples are shown in (67). The plural animate suffix -ra̠ attaches to all kinds of verbal root, as long as the head noun is animate, no matter it is human-related or not.

- (67) a. borerā booreká
 bore-~**da** booreká
 white-AN.PL booreká.fish
 'the white booreká fish'
- b. waaipū dooro**gu**
 waaipū dooro-**gu**
 fish striped-MASC
 'the striped fish'

3.4.1.2 With Inanimate Nouns

To modify inanimate nouns, the nominalizer suffix *-di* attaches to the stative verb roots. The examples are shown in (68). For example, in (68-a), *gasiro* 'animal skin' is the inanimate entity. The stative verb *ji-* 'be black' is suffixed by the nominalizer *-di* in order to modify the head noun *gasiro*.

- (68) a. **ji**~**ri** *gasiro*
 ~ji-~**di** *gasiro*
 black-NOM animal.skin
 'the black color animal skin'
- b. **asiri** *deko*
 asi-**di** *deko*
 hot-NOM water
 'the hot water'

On the other hand, if the head noun contains the classifier, then the classifier also attaches to the nominalized stative verb, as illustrated in (69).

- (69) a. **kōmēsoro** *asirisoro*
 ~kobe-soro asi-**di**-soro
 metal-CLS:pot hot-NOM-CLS:pot
 'the hot pot'
- b. **paperaturi** *diiarituri*
 paper-a-turi diia-di-turi
 paper-CLS:pile red-NOM-CLS:pile
 'the red book'

3.4.2 The Quantitative Modifiers

3.4.2.1 The Numbers

The numbers in Siriano can be used as modifiers that generally precede the head nouns. Siriano has four simple number roots, and they are *su-*, 'one', *pe-*, 'two', *ure-*, 'three', and *wapiku-*, 'four'. Among these four number roots, *wapiku-*, 'four' also means 'to accompany'. These are the only number modifiers that are morphologically cross-coded for the features which qualify their head nouns – *number*, *gender*, *animacy*. In the cases of inanimates, the classifiers must attach to the number modifiers, if they are also found in the head nouns, which we will see in examples (70) - (73). The plural suffix *-ri* is found with head nouns when more than one head noun is referenced, but the *-ri* only attaches to the number modifier when the number is more than three.

(70)	su-	a.	sug <u>u</u>	masak <u>u</u>	'one man'
	one		su-g <u>u</u>	masak <u>u</u>	
			one-MASC	person.MASC	
	b.	sugo	masako		'one woman'
			su-go	masako	
			one-FEM	person.FEM	
	c.	sug <u>u</u>	dajee		'one dog (male)'
		su-g <u>u</u>	dajee		
		one-MASC	dog.MASC		
	d.	supa	soropa		'one plate'
		su-pa	soro-pa		
		one-CLS:plain	plate.CLS:plain		

- (71) **pe-** a. perā diajea 'two dogs'
two pe-~da diajee-a
 two-AN.PL dog.PL
- b. perā nome 'two ladies'
 pe-~da nome
 two-AN.PL lady.PL
- c. pepa soropari 'two plates'
 pe-pa soro-pa-di
 two-CLS:plain plate.CLS:plain-INAN.PL
- (72) **ure-** a. urerā masaka 'three people'
three ure-~da masaka
 three-AN.PL people.PL
- b. urepa soropari 'three plates'
 ure-pa soro-pa-di
 three-CLS:plain plate.CLS:plain-INAN.PL
- c. ureru wəriduparu 'three planes'
 ure-ru wə-di-dupa-ru
 three-CLS:round.object fly-NOM-PL-CLS:round.object
- (73) **wapiku-** a. wapikūripari soropari 'four plates'
four wapikūdi-pa-di soro-pa-di
 four-CLS:plain-INAN.PL plate.CLS:plain-INAN.PL
- b. wapikūriduparu wəriduparu 'four planes'
 wapikūdi-dupa-du wə-di-dupa-du
 four-PL-CLS:round fly-NOM-PL-CLS:round

The quantity *five* and *above* are all phrasal constructions. Specifically, *five* is *su mōhō* 'one

hand'. From *six* to *nine*, the expressions are 'one hand with additional fingers', as shown in (75). The expression for *ten* is *pe mōhō* 'two hands'. The number modifier with the amount of *five* is slightly different from *one* to *four* in that *su mōhō* 'five' takes a morpheme *-mā* before taking plural suffix *-ri* and other classifiers that must agree with the noun head. The examples are shown in (77).

For the expressions from *six* to *nine*, they are not restricted to the examples shown in (75). Some other expressions are also found, shown in (76). For example, the expressions of number *seven* in (75-c) and (76) are only syntactically different, but semantically the

same. It is still unknown how those numbers above five modify their head nouns.

- (76) su mōhō gahiro perā mērā 'seven'
 su ~boho gahiro pe-~da ~beda
 one hand other two with
 'one hand with other two fingers'

3.4.2.2 Quantity

When talking about unspecified quantities of objects and beings in Siriano, the speakers need to use indefinite quantifiers as the modifiers of the head nouns. To indicate 'many/much/a lot of', one needs to use the stative verb wá- 'big, many, much'. The stative verb wá- is used in the same way as others. It needs the suffixes of *number*, *animacy* in order to modify its head noun. Note that, when indicating 'many/much', wá- does not mark *gender*. When *gender* suffix attaches to wá-, it means something big. The examples of countable head nouns are shown in (77), and uncountable head nouns are in (78).

CHAPTER 4

VERBAL MORPHOLOGY

In this chapter, I will describe the major types of Siriano verbs, and their morphological paradigms based on different tenses, aspects, modalities that are applied by the speakers. Section 4.1 discusses the categories of the verbs. Section 4.2 describes the tense coded in Siriano and the corresponding suffixes. In section 4.3, I discuss the aspects, including lexical aspects found in Siriano verbs, and the suffixes coding aspect respectively. Section 4.4 discusses the modalities in Siriano, realis and irrealis expressions. In the realis section, I will discuss how evidentials can be used to express tenses besides the ones discussed in the tense section. In addition, in the same section, I will discuss other uses of the evidentials in Siriano. Section 4.5 talks about negation. Section 4.6 shows how to increase and decrease the valence of verbs.

4.1 Types of Verbs

There are two categories of verbs in Siriano based on their lexical semantics: NONSTATIVE and STATIVE verbs. Semantically, AUXILIARY verbs belong to NONSTATIVE verb category, but they are syntactically different from the rest of verbs in this category. Thus, the auxiliary verbs will be discussed separately. In this section, I will first discuss STATIVE verbs and NONSTATIVE verbs, followed by AUXILIARY verbs.

4.1.1 Stative Verbs

Stative verbs include intransitive stative verbs, predicate nominals, existentials, and the notions of possession. I have discussed the intransitive stative verbs in section 3.4.1. Now, I begin to discuss predicate nominals, existentials, and possessives.

4.1.1.1 Predicate Nominals

Predicate nominals typically form the predicate nominal clauses with noun phrases (NP) to express the notions of *proper inclusion* and *equation*. According to Payne (1997), proper inclusion expresses a specific entity that belongs to a class of item specified in the nominal predicate, as shown in (1) - (2).

- (1) Áporo ăārīmī ॥.

Áporo ~aadi~-bi ~ii
Áporo be-EVID.PRES.3SG.MASC DEM.this

'This is Áporo fish.' (Gardner, 1976)

- (2) ̄n̄ū kapitán ăārīmī.

~iḡu kapitán ~aadi-~di
he captain be-EVID.PRES.3SG.MASC

'He is the boss.' (Osorio & Gardner, 2011)

The copula ăārī- / ~aadi/ can also help to form the existential construction. Payne (1997) mentions that the existential construction typically requires a location or a temporal adjunct. The copula ăārī is able to connect the predicate to the subject, as shown in (3) - (4)

- (3) T̄toge ăārībemī.

t̄to-ge ~aadi-be-~bi
bank-LOC be-NEG-EVID.PRES.3SG.MASC

'It is not on the bank (of the river).' (Gardner, 1976)

- (4) Ditarugere ̄t̄aburige ăārīmā.

ditadu-ge-de ~utabu-di-ge ~aadi-~ba
lake-LOC-CONTR torrent-PL-LOC be-EVID.PRES.3PL

'They are in the torrents (but) not in the lakes.' (Gardner, 1976)

The copula ăārī- is also found in attributive clause construction, along with the nominalized

STATIVE verbs. Some examples are given in (5) - (7). In example (5), the stative verb *jī*- 'be black' is a verbal root that requires a grammatical suffix. It selects the plural suffix *-ri* to agree with the preceding subject. If the NP has a classifier, as shown in example (7), the stative verbal root will select the classifier instead in order to agree with the subject. If the subject does not carry any grammatical suffix, as given in (6), the DEFAULT gender marker, the MASCULINE gender marker *-gu* will be selected. Sometimes, the copula *āñi-* can be omitted, as in (7).

- (5) Goja poari jíří āříří.
 go-ja poa-di ~ji-~di ~aadi-a
 she-GEN hair-PL black-NOM be-EVID.PRES.3PL.INAN
 ‘Her hair is black.’ (Silva, 2019)

(6) Wāŋú ŋářrānúřú āřířířúpú.
 ~wa-~gú ~gúdadudu ~aadi-~jupú
 big-MASC dung.beetle be-EVID.PST.3SG.MASC
 ‘The dung beetle is big.’

(7) Tāřepui wāřipui.
 ~tade-pui ~wa-~di-pui
 container-CLS:basket big-CLS:basket
 ‘The basket is big. (*literally*: big basket)’ (Silva, 2019)

4.1.1.2 Nonexistence

A common feature of Eastern Tukanoan languages is that they have at least one inherently negative stative verb indication *non-existence*, or *not having*, discussed by Stenzel (2004) and Silva (2012) in Wanano and Desano respectively. Siriano also has it: *mãri-* / ~*badi-* /. The examples are given in (8) - (9).

- (8) Mārīka!

~badi-ka
no.exist-IMP

'Be gone! (*literally*: Be no existing!)'

- (9) Iripoegere, p̩ik̩ n̩ō̩ dejomār̩juro.
iri-peo-ge-de ~diku ~deo ~dejo-~madi-judo
this-time-LOC-TEMP land never seem-not.exist-PST
'At this time, the land seemed not exist.'

4.1.1.3 Stative Possession

Stative possession is coded by the transitive verb *ohpa-* /*opa-* / 'to have', as illustrated in (10) - (11). The verb *ohpa-* is used in the construction coding permanent states of possession, as in (10); or in the construction coding temporary states of possession, as in (11).

- (10) Mâh̩ij̩ ohpam̩ n̩ōm̩ ɻ̩ādiru
~bai-g̩ opa-~bi ~dobe ~jeadidu
boy have-EVID.PRES.3SG.MASC female clothes
'The boy has women's clothes.'

- (11) Juu pen̩j̩ā ohpaa
juu pe-~diga opa-a
I two-leg have-EVID.PRES.1SG
'I have two legs.'

4.1.2 Non-stative Verbs

Non-stative verbs, or active verbs, describe events that are deliberately started by an active agent as SUBJECT of the clause (cf. Givón 2001:106). The verbs in this category are divided into TRANSITIVE, as shown in (12) - (13), INTRANSITIVE, as in (14) - (15), and DITRANSITIVE verbs, as in (16) - (18).

TRANSITIVE

- (12) Booreka baakumī buruare.
 booreka baa-ku-~bi burua-de
 booreka eat-ASP.state-EVID.PRES.3SG.MASC termite-OBJ
 'Booreka fish eats termite.' (Gardner, 1976)
- (13) Māmīrā kīmōjē baamā
 ~bai-~da ~kiboje baa-~ba
 kid-PL kimboñe eat-EVID.PRES.3PL
 'The kids are eating kimboñe.' (Silva, 2019)

INTRANSITIVE

- (14) Ditarige paajamī ñmō.
 ditari-ge paaja-~bi ~iido
 lake-LOC swim-EVID.PRES.3SG.MASC DEM.this
 'This type of fish swims in the lake.' (Gardner, 1976)
- (15) Gohadi tūriākōāa.
 gohadi tūdi-~akoa-a
 pencil break
 'The pencil broke.' (Osorio & Gardner, 2011)

DITRANSITIVE

- (16) Oaribogare jure sīka.
 oadiboga-de ju-de ~si-ka
 broom-OBJ me-OBJ give-IMP
 'Give me the broom!' (Osorio & Gardner, 2011)

- (17) *Ínjuságere sibirikoáka.*
 ~igu-ge-de ~si-biri-~ko-ka
 them-LOC-OBJ give-NEG-EMPH-IMP
 'Don't give it to them.' (Osorio & Gardner, 2011)

- (18) *Juanita sīamō juu-re.*
 Juanita ~si-~abo juu-de
 Juanita give-RPST me-OBJ
 'Juanita just gave (it) to me.' (Osorio & Gardner, 2011)

4.1.3 Auxiliary Verbs

Auxiliary verbs satisfy the morphosyntactic definition of verbs, in that they are in the position of a verb and carry at least some of the inflectional information, such as subject or object agreement and tense/aspect/mode marking (Payne 1997: 84). In Siriano, there are three verbs that meet this definition: *ja-* 'to do', *iri-* 'to do', and *kārīnā-* 'seem'. *ja-* and *iri-* are important components to form clauses with progressive aspect. The example is given in (19).¹ In (19), we can find two verbal roots: the auxiliary verbal root *ja-* and the main verbal root *baa-*. The auxiliary verbal root takes the evidential inflection, while the main verbal root takes the gender marker. The auxiliary verb is always located in the final position, when forming sentences with progressive aspect.

- (19) *Baa-gu jamī.*
 baa-gu ja-~bi
 eat-MASC to.do-EVID.PRES.3SG.MASC
 'He is eating.'

The same construction can be found when *kārīnā-* is used, as shown in (20) - (21). When

1. For more details, please refer to section 4.3.1.1.

the subject is not animate, the gender marker is replaced by an inanimate noun marker *-ro*.

- (20) Igo ă̄siāñō kārñāmō
igo ~aisia-~go ~kadida-~bo
she sneeze-FEM seem-EVID.PST.3SG
'She sounded like she sneezed.'

- (21) Wūdiru ă̄rīro kārñāa
wūdiru ~aadi-ro ~kadida-a
plane come-INAN seem-EVID.PRES.3SG.INAN
'It sounds like the plane is coming.'

4.2 Tense

Siriano distinguishes *past*, *present*, and *future* tense. For past tense, the language makes a distinction between RECENT and DISTANT past. The distant past tense and the present tense are both marked by evidentials,² while Siriano has separate markers for recent past tense. In terms of the future tense, Siriano distinguishes between the simple future tense and the intentional future tense, which both express activity happening in the future. In this section, I will discuss the recent past tense and the two future tenses. Regarding the simple present tense and the distant past tense, I will discuss them in the modality section when I give the description of evidentials in section 4.4.1.

4.2.1 Recent Past

Recent or immediate past tense expresses when an event or activity happens in a few hours, or one to two days (Criswell & Brandrup, 2000:401), before the speech time. The

2. For more detail, please refer to section 4.4.1.

interfix *-a-*, along with the corresponding evidentials, is used to form the recent past, as shown in (22).

- (22) Waai wēhēām̃
waai ~wehe-~a-~bu
fish kill-RPST-EVID.PST.1SG
'I just killed some fish.' (Osorio & Gardner, 2011)

4.2.2 Future

Siriano differentiates the *simple* future tense and the *intentional* future tense. In the simple future tense, the tense marker attaches to the verb root, as shown in (23). The example (23) shows that the simple future tense marks person and number. A gender marker attaches to the verbal root to agree with the person marked by the following simple future tense suffix.

- (23) Mōāodogo aarigokūm̃.
~boa-odo-go aari-go-~kubo
when-finish-FEM come-FEM-FUT.3SG.FEM
'When she finishes, she will come.' (Osorio & Gardner, 2011)

The intentional future is different from the simple future tense in that the speakers intend to do something that is scheduled in the future. Due to the lexical semantics of intention, the speakers typically do not use the intentional future tense with inanimate subjects. Thus, the intentional future tense also marks for gender and person with only animate human-related nominal subjects. The intentional future markers are formed by two parts: **1)** the gender marking suffix; **2)** the suffix *-ra / -da /*, as illustrated in the examples (24) - (25). Table 4.1 summarizes all the suffixes of future tenses.

- (24) Aarigora
aari-go-da
 come-FEM-IFUT
 'I will surely come.'

- (25) Daapora guuag^u waag^ura.
 daapora guua-g^u waa-g^u-da
 now shower-MASC go-MASC-IFUT
 'I will go to take a shower.'

ANIMACY	PERSON		GENDER	FUTURE	INTENTIONAL FUTURE
ANIMATE	1ST/2ND	SINGULAR	MASCULINE	-gu-ko ^a	-gu-ra
			FEMININE	-go-ko ^a	-go-ra
		PLURAL	-	-ra-ko ^a	-rā-rā
	3RD	SINGULAR	MASCULINE	-gu-kūmī	-
			FEMININE	-go-kūmō	-
		PLURAL	-	-rā-kūmā	-
INANIMATE	-	SINGULAR PLURAL	-	-to-ko ^a	-

Table 4.1: Two future tenses and their suffixes

4.3 Aspect

Siriano encodes aspect. The suffixes coding aspect are located between the verbal root and the evidential suffix. Some common aspectual notions coded by independent suffixes in Siriano are presented in the following subsections.

4.3.1 Aspectual Suffixes

4.3.1.1 Progressive

The progressive could be marked both morphologically and syntactically. As discussed in section 4.1.3, with the help of the auxiliary verb *ja-* ‘to do’, Siriano can present progressiveness, as shown in (26).

- (26) Baagu jam̃i.
baa-gu ja-~bi
eat-MASC to.do-EVID.PRES.3SG.MASC
'He is eating.'

The auxiliary verb *iri-* ‘to do’ can also help present progressiveness, as shown in (27).

- (27) Baagu irik̃um̃i.
baa-gu iri-~kubi
eat-MASC to.do-EVID.PRES.3SG.MASC
'He is eating. (But that is not seen by the speaker.)'

4.3.1.2 Completive

The completive aspect refers to the completion of an event, which can be marked by the aspect suffixes, as illustrated in (28). The completive aspect does not need the help of lexical aspect of the verbs.

- (28) Hose ñj̃upñā wiire ããm̃upeokõäsiam̃i.
Hose ~igu-~ja wii-de ~aabu-peo-~ko-a-sia-~bi
José he-GEN home-OBJ fix-ASP.CMPL-EMP-ASP.CMPL-EVID.PRES.3SG.MASC
'José has already fixed his house.'

4.3.1.3 Habitual

The habitual aspect denotes an event taking place regularly or is true for an extended period. Siriano uses present tense to represent habitual aspect, as shown in (29).

- (29) Wari otekūmā iri māsā odoo dupaduparu wirikoa.
wari ote-~kuba iri ~basa odoo dupa-dupadu
many plant-EVID.PRES.1PL these grow finish two-little.fruit
wiri-ko
flower-EVID.PRES.3SG.INAN
'We plant many (pineapples). These little seeds, when finishing growing,
normally become mature and come out into flowers.'

4.3.1.4 Inchoative

The inchoative aspect encodes the beginning of an event or state. The aspectual suffix *nūŋā-* marks it, as illustrated in (30).

- (30) Buenūŋāmī¹
bue-~duga-~bi
study-ASP.INCHO-EVID.PRES.3SG.MASC
'He begins to study.'

4.3.2 Other Aspectual Suffixes

Criswell & Brandrup (2000:402) listed several aspectual suffixes, shown in Table 4.2. These aspectual suffixes all have a corresponding verbal root in Siriano. Some of them play an obvious role in changing the aspect of the events or actions, while few of them do not really change the state of the event during the extension of time. Those are all listed in the gray background.

Siriano ASPECTUAL SUFFIX	English Gloss	Siriano VERBAL ROOT	English Gloss
-purori-	a start of a series of events	purori-	to start
-nūjā-	a start	nūjū-	to start and endure
-wājā-	a start	wājā-	to start
-gore-	action moving from one place to another	gore-	to grill and punch
-poe-	to do completely	peo-	to cover
-duu-	stop doing	duu-	to lose sight
-paua-	be used to doing something	paua-	be used to doing
-odo-	finished	odo-	to finish
-tari-	an action beyond expectation	tari-	to pass
-dupuyu-	in advance	dupuyu-	to pass someone

Table 4.2: The aspectual suffixes and their corresponding verbal suffixes

	+DURATIVE	-DURATIVE
+TELIC	-ūnā	-peo-, -odo-, -duu-, -tūnū-, -tua-
-TELIC	-gore-, -paua-, -ri-, -di-, -nā-, -nēmō-	-purori-, -nūjā-, -wājā-

Table 4.3: All aspectual suffixes and their aspect properties

4.4 Modality

4.4.1 Realis Statement: Evidentials

EVIDENTIAL states the existence of a source of evidence for some information, which includes stating that there is some evidence, and also specifying what type of evidence there is: such as whether the speaker saw it, or heard it, or inferred it from indirect evidence, or even learned from someone else (Aikhenvald, 2003).

In Siriano, evidentials not only code the speakers' source of information for the statement they are making, but also play the role in marking the *present* and the *distant past* tense. Siriano has five evidentials that are overtly marked with a suffix attaching to the verbal root, plus an unmarked evidential. All the suffixes are listed in Table 4.4. Morphosyntactically, the evidential suffix is located at the end of the verb structure.

		SENSORY		INFERENTIAL		HEARSAY
		VISUAL	NONVISUAL	RESULTANT	REASONING	
PAST	1SG / PL	-bu	-kubu	-pō	-kūpō	-pūrō
	3SG	INAN	-bu	-kubu	-pō	-kūpō
		MASC	-mī		-pūmī	-pūpū
		FEM	-mō		-pūmō	-pūpō
	3PL	-mā		-pūmā	-kūpūmā	-pūpā
PRESENT	1SG / PL	-a			-ko	
	3SG	INAN	-a			-ko
		MASC	-mī			-kūmī
		FEM	-mō			-kūmō
	3PL	-mā			-kūmā	

Table 4.4: The evidential suffixes

The VISUAL evidential is marked when someone tells information about the event they saw or heard. The event the speakers are talking about can be a regular activity (marking

the present tense), or an event that happened already (marking the simple past tense). Examples (31) - (33) shows the verbs with visual evidential. Table 4.4 shows us that the visual evidential does not distinguish present and past tense morphologically. If necessary, the speaker will use the gender marker to attach to the verbal root in order to emphasize the present tense, as shown in (32) - (33).

(31) īŋū bohoemī sapero.

~igū bohoe-~bi sapedo

he break-EVID.PRES.3SG.MASC bench

'He broke the bench.'

(32) Jūū waabū.

jūū waa-bū

I go-EVID.PST.1SG

'I went.'

(33) Jūū waagū.

jūū waa-gū

I go-MASC

'I go.'

The **NON-VISUAL** evidential is used only in first person and third person inanimate, as the action or the event was carried out without intention. In many languages, if a non-visual evidential is used with a first person subject, this may imply an involuntary or uncontrolled event (see Aikhengvald 2004, Curnow 2003). Siriano is one of those languages (Criswell & Brandrup, 2000). Semantically, there should not exist any agent to make the event happen on purpose.

- (34) Juu wiirimāhñjā mērā ditiakubu.
- juu wiidi-~bahi-~ga ~beda diti-a-kubu
 I cut-CLS-DIM with cut-RPST-EVID.PST.1SG
 'I just cut myself (accidentally) with a knife.'

The **RESULTANT INFERENCE** evidential is used when the speaker did not see the event or action, but they noticed the result. In the example (35), the speaker did not see their cousin experienced a very bad life, but their cousin appeared to be bad. Thus, the speaker indicates that their cousin never went very well in their life.

- (35) Juu pagom̃ ñē wārō waabirajūm̃.
- juu pago-~bu ~de ~wado waa-bida-~jubi
 I cousin never well go-NEG-EVID.PST.3SG.MASC
 'My cousin never went well.' (Silva, 2019)

Another example is provided in Criswell & Brandrup (2000), adapted and shown in the example (36). The speaker did not see the process where the path was cleared completely and made wide. However, the speaker saw that the path was obviously not as wide as what they anticipated. As a result, the speaker implied that the listener was not doing it.

- (36) Ejári māā kēērābirajō mūū.
- eja-di ~baa ~keeda-bida-~jo ~buu
 wide-NOM path clear.completely-NEG-EVID.PST.3SG.INAN you
 'You didn't completely clear the path widely.'

The **REASONING INFERENCE** evidential encodes the situation where the speaker must assume that such an event or state has occurred based on his knowledge of general behavior patterns and the universe, or when he has received the information from another sense than sight or hearing, as illustrated in (37).

- (37) Jəpo juure pū̄rākūkūnūmō.
- jəpo juu-de ~puudakə-~kujubo
 my.mother I-OBJ give.birth-EVID.PST.3SG.MASC
 'My mother gave birth to me.'

Criswell & Brandrup (2000) points out that the first person singular of the inferential evidential marker *-ko*a also has a significant function: it can also present when the speakers has a feeling or emotion, such as thirstiness, surprise, scare, etc., or when the speakers do not feel responsible for the action, as shown in the examples (38) - (40).

- (38) Dipúru nīākoja juure.
- dipú-du ~dia-koja juu-de
 head-CLS hurt-EVID.PRES.1SG I-OBJ
 'I have a headache.'
- (39) Juu uaboagə irikoa.
- juu uaboagə idi-koja
 I have.burger-MASC to.do-EVID.PRES.1SG
 'I have burger. (I am hungry.)'
- (40) Juu bugurogora āārīkoja.
- juu bugudo-goda ~aadi-koja
 I old-INTS be-EVID.PRES.1SG
 '(I feel that) I am really old.'

The **HEARSAY** evidential is marked when someone tells the information to the listeners about the event. That being said, the event under discussion happened before the conversation. Hereby, the informative evidential only presents the past tense.

- (41) Juu muu wapikgu arabu ãrñupu ñjurẽ.
- juu ~buu-de wapikgu ada-bu ~adi-~yupu ~igu-de
 I you-OBJ invite-MASC come say-EVID.3SG.MASC he-OBJ

'(The firefly) said to him: I came to invite you.' (Silva, 2019)

- (42) Tee duhappã ñju doha
- tee duha-~jupu ~igu doha
 until return-EVID.3SG.MASC he again
- 'He returned there again.' (Silva, 2019)

The example (41) - (42) are both from Silva (2019), in which the speaker is telling/rephrasing a story. The story happened before the speaker told it. Thus, a large amount of informative evidential markers can be found.

4.4.2 Irrealis Morphemes

Siriano can express the following irrealis modalities with the help of the corresponding suffixes: *-di/adi* 'frustrative', *-dua* 'desiderative', *-māsī* 'permissive', *-dore* 'obligative', and *-mūrā* 'anticipative'. For example, in (43).

- (43) Ōoārō boremākū ñā peakūmā baamūrā.
- ~ooado bode-~baku ~iia pea-~kuba baa-~buda
 well become.mature-when these get.out.of.ground-EVID.PRES.3PL eat-ANTP
- 'When they become mature, getting out of the groudn, in order to eat.' (Madrid, 1977)

More modal suffixes can be used at the same time, example shown in (44). In the example (44), the desiderate suffix *-dua* is followed by frustrative suffix *-di*, in order to express *wish, but couldn't get*.

- (44) Juu mangore baaduaadikoa.
 juu mango-de baa-dua-di-ko
 I mango-OBJ eat-MOD.DES-MOD.FRUS-EVID.PRES.1SG
 'I want to eat mango. (but unfortunately, there is none.)'

The modal and the aspectual markers can be used at the same time, where the aspectual marker precedes the modal marker, as shown in (45).

- (45) Jurihasiabokumā.
 judiha-sia-bo-~kuba
 arrive-ASP.CMPL-MOD.IRR-EVID.PRES.3PL
 'I would have arrived.'

4.5 Negation

It was discussed in Criswell & Brandrup (1998) and Criswell & Brandrup (2000) that in total two sets of negative suffixes are found in Siriano. They are *-be/-bira*, and *-mā/-māri*. They are all located between the verbal root and the evidential suffixes or tense suffixes. That is to say, the selection of the negative suffixes depends on either the *evidential* or the *tense* of the conversation. When PRESENT tense and VISUAL evidential are used, the negative suffixes *-be* or *-mā* are used, as shown in (46) - (47). The difference between the two sets of suffixes of negation is unknown.

- (46) Opábea.
 opá-be-a
 have-NEG-EVID:VISUAL.PRES.1SG
 'I don't have (it).'

- (47) Mārāpu opamāmō.
 ~badapu opa-~ba-~bo
 husband have-NEG-EVID:VISUAL.PRES.3SG.FEM
 'I don't have a husband.'

On the other hand, when the rest of the tense and evidential inflections are used, *-be* becomes *-bira* and *mā* becomes *-māri*, as illustrated in (48) - (49).

- (48) Māsibirikoa.
 ~basi-bidi-ko
 know-NEG-EVID:INFERENTIAL.PRES.1SG
 'I don't know.'
- (49) Āārīmāsīmārābu.
 ~aadi-~basi-~bada-~a-bu
 be-know-NEG-RPST-EVID:VISUAL.PST.1PL
 'We didn't know how to behave.'

4.6 Valence Change

4.6.1 Causative

Morphological suffix attachment is the only causative construction method in Siriano. The suffix attaching to the verb root, followed by any terminal suffix is *-u-*. The example is given in (50).

- (50) Juriukōābu.
 judi-u-~ko-a-bu
 fall.down-CAUS-EMPH-EVID.PST.1SG
 'I cause (it) fall down.'

4.6.2 Passive

Personal passives are constructions for which some specific agent is implied. Speakers can decrease the valence by using passive voice. Siriano uses the suffix *-su* to represent passives, as illustrated in the example (51).

- (51) Jugu iirísubu.
jugu iidí-su-abu
my.father drink-PASS-RPST
'My father was just drunk.'
- (52) Jugu poogáre iiríabu.
jugu poogá-de iidí-abu
my.father fariña-OBJ drink-RPST
'My father just drank fariña.'

CHAPTER 5

CONCLUSION

In the preceding chapters, I have described the current state of knowledge of Siriano phonology, phonetics, and morphology. Certainly, much more work remains to be done to describe the elaborate grammar and sound system of this language more fully. Still, I remain hopeful that I have at least achieved the following main goals: synthesizing previous work on Siriano, and adding some additional data which will contribute to future documentation and understanding of Siriano.

I have presented the results of several short phonetic studies. They explore the existence of the glottal stop, the status of the glottal stop and fricative, the basic tone patterns, and the homorganic nasal realization.

The bulk of this thesis is devoted to the description of morphology. I have described in some detail the morphophonemics of the conjugation and suffixes.

Continued documentation of the Siriano language can include many things within the scope of this thesis, such as phonetic analysis of the nasalization, a more united pluralization process, metrical structure, a detailed paradigm of the interaction of tone and stress, the intonation pattern, etc. But it certainly can go beyond sounds and words to include the study of syntax, semantics, and pragmatics. No matter what we want to focus in the future, an adequate documentation of continuous natural speech across a variety of speech types remains a high priority, and a fuller understanding of the nature of Siriano will come only by looking at the language in use.

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