

# UC Berkeley

## UC Berkeley Electronic Theses and Dissertations

### Title

Caribbean Northern Arawak person marking and alignment: a comparative and diachronic analysis

### Permalink

<https://escholarship.org/uc/item/51q4j13j>

### Author

Stark, Tammy Elizabeth

### Publication Date

2018

Peer reviewed|Thesis/dissertation

Caribbean Northern Arawak Person Marking and Alignment: a Comparative and Diachronic  
Analysis

By

Tammy Elizabeth Stark

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Linguistics

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Lev Michael, Co-Chair  
Professor Line Mikkelsen, Co-Chair  
Professor Kristin Hanson

Spring 2018



## Abstract

Caribbean Northern Arawak person marking and alignment: a comparative and diachronic analysis

by

Tammy Elizabeth Stark

Doctor of Philosophy in Linguistics

University of California, Berkeley

Professor Lev Michael, Co-Chair

Professor Line Mikkelsen, Co-Chair

This dissertation examines morphosyntactic variation and change in the modern Caribbean Northern Arawak (CNA) languages in the domains of argument-marking and alignment. CNA is the northernmost group of the Arawak language family, whose members are spoken primarily in South America. The modern CNA languages include Garifuna, Lokono, Añun, and Wayúu, spoken on the Caribbean coasts of Central and South America. Members of the subgroup that are currently not spoken include Shebayo, Island Carib, and Taino.

Chapter 1 of this work introduces the CNA languages and provides background information about current language vitality and documentation status for each CNA language. In this chapter, I also discuss internal subgrouping for the branch, incorporating the results of a lexical phylogenetic study I carried out for the CNA languages. I then compare the results to earlier classifications of the language family and show that my novel subgrouping proposal is well supported. Subsequently, I examine comparative morphological evidence for subgrouping and find it to be compatible with the structure I propose. The chapter concludes with a description of argument marking and active-stative alignment in the CNA languages.

Chapter 2 examines a process of alignment change attested in the CNA languages that has been facilitated by the reanalysis of a suffixal subject nominalizer employed in relative clauses as agreement morphology encoding a syntactic subject. Properties of the modern subject construction are related to properties of nominalizations cross-linguistically. Nominalized verbs in predicate position in non-verbal predicate constructions are proposed as a bridging construction in this reanalysis, and a suffixal paradigm involved in encoding objects and stative subjects is shown to have provided an analogical template for the reanalysis of the nominalizer as agreement morphology for at least Garifuna. Finally, I demonstrate that the sole CNA language that does not exhibit the suffixal subject agreement construction, Lokono, exhibits properties that rule out the diachronic pathway I propose for the other CNA languages — only those CNA languages that lack a copula and exhibit verb initiality developed the suffixal person marking morphology examined here.

Chapter 3 investigates a shift in lexical category from adposition to auxiliary in two Northern Caribbean Arawak languages, Wayúu and Garifuna. While the emergent auxiliaries bear striking similarities in terms of distribution and argument marking — both occur post-verbally and carry prefixal and suffixal verbal agreement morphology — I argue that the innovation is not joint, but independent. I draw on comparative evidence from the adpositional systems of the other modern CNA languages to support my proposal. While Garifuna and Wayúu share a similar typological profile, comparative morphological evidence, along with extant knowledge of relatedness for the family, generally, suggests they do not form a subgroup independent of the other Caribbean Northern Arawak languages, providing support for an analysis where each language independently innovated its auxiliary system. As in the case of the development of suffixal person morphology, properties of proto-CNA appear to have made such a development available. The change from adposition to auxiliary is typologically rare, and has not been previously described or analyzed in the literature on grammaticalization. I argue here that insubordination and analogy are the formal mechanisms that allowed for this change in the CNA languages.

Chapter 4 concludes and discusses avenues for future comparative morphosyntactic research involving the CNA languages.

# Contents

<b>List of Figures</b>	<b>v</b>
<b>List of Tables</b>	<b>viii</b>
<b>Acknowledgements</b>	<b>x</b>
<b>Abbreviations</b>	<b>xi</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Arawak . . . . .	3
1.2 The Caribbean Northern Arawak group . . . . .	6
1.3 CNA subgroups and lexical phylogeny . . . . .	8
1.3.1 Dataset collection . . . . .	9
1.3.2 Form-meaning correspondence sets . . . . .	11
1.3.3 Phylogenetic analysis . . . . .	11
1.3.4 Structures returned from lexical phylogenetic analysis and discussion	12
1.3.5 Comparison with previous classifications . . . . .	12
1.3.6 Comparison with previous studies using lexical phylogeny . . . . .	17
1.3.7 Summary and discussion . . . . .	18

1.4	Person marking and alignment in Caribbean Northern Arawak . . . . .	18
<b>2</b>	<b>Nominalization and alignment change in Caribbean Northern Arawak</b>	<b>25</b>
2.1	Introduction . . . . .	25
2.2	Suffixal subject marking in Caribbean Northern Arawak . . . . .	26
2.3	The CNA subject nominalizer and its reflexes . . . . .	30
2.3.1	Clausal nominalization . . . . .	30
2.3.2	Subject nominalizer and cognacy across the CNA languages . . . . .	31
2.3.3	Summary . . . . .	39
2.4	Non-verbal predication in CNA . . . . .	39
2.5	Diachronic development . . . . .	46
2.5.1	Proto-CNA syntactic constructions . . . . .	47
2.5.2	Information structural properties of copular clauses and nominal predication . . . . .	51
2.5.3	Diachronic pathway from relativizer to agreement . . . . .	54
2.6	Conclusions . . . . .	60
<b>3</b>	<b>Auxiliation and ergativity in Caribbean Northern Arawak</b>	<b>61</b>
3.1	Introduction . . . . .	61
3.2	Marking of core arguments on loci other than lexical verbs in CNA . . . . .	66
3.2.1	Summary . . . . .	83
3.3	Historical development of Garifuna and Wayúu auxiliaries . . . . .	84
3.3.1	Insubordination . . . . .	85
3.3.2	Analogy . . . . .	88

3.4	Conclusions . . . . .	93
<b>4</b>	<b>Conclusions and future research</b>	<b>95</b>
	<b>Bibliography</b>	<b>96</b>





# List of Figures

1.1	Currently-spoken Arawak languages . . . . .	4
1.2	Arawak subgrouping according to Aikhenvald (1999) . . . . .	5
1.3	The Caribbean Northern Arawak languages . . . . .	6
1.4	Proposed structure for Caribbean Northern Arawak . . . . .	9
1.5	Classification from BEAST . . . . .	13
1.6	Traditional internal subgrouping for Caribbean Northern Arawak (Taylor and Rouse, 1955) . . . . .	13
1.7	Proposed structure for Caribbean Northern Arawak with posterior probabilities, adapted from Walker and Ribeiro (2011) . . . . .	17
3.1	Garifuna analogical reanalysis . . . . .	65
3.2	Wayúu analogical reanalysis . . . . .	65



# List of Tables

1.1	Languages included in the lexical phylogenetic analysis and percent coverage	10
1.2	Sample character state coding for the word <i>pepper</i> . . . . .	11
1.3	Northern Arawak free pronouns . . . . .	14
1.4	Northern Arawak prefixal person markers . . . . .	15
2.1	Summary of suffixal person marking in CNA . . . . .	29
2.2	Reflexes of the nominalizer . . . . .	32
2.3	Caribbean Northern Arawak coronal correspondences . . . . .	32
2.4	Caribbean Northern Arawak high vowel correspondences . . . . .	33
2.5	Garifuna nouns exhibiting the frozen nominalizer . . . . .	34
2.6	Garifuna kinship terms exhibiting the frozen nominalizer . . . . .	34
2.7	Lokono nouns exhibiting the frozen nominalizer from Pet (1987) . . . . .	36
2.8	Lokono kinship terms exhibiting the frozen nominalizer from Pet (1987) . . .	37
2.9	Wayúu nouns exhibiting the frozen nominalizer . . . . .	37
2.10	Añun nouns exhibiting the frozen nominalizer . . . . .	38
2.11	Summary of the distribution of the subject nominalizer in the CNA languages	39
2.12	Summary of nominal predication in CNA . . . . .	46
2.13	Northern Arawak word order . . . . .	48

2.14	Northern Arawak copulas . . . . .	50
2.15	Information structure in copular clauses . . . . .	52
2.16	Garifuna <i>-dina</i> suffixal person marking paradigm . . . . .	55
2.17	Garifuna <i>-tina</i> suffixal person marking paradigm . . . . .	55
2.18	Añun and Wayúu suffixal person markers unrelated to the relativize nominalizer	58
2.19	Añun and Wayúu suffixal person markers related to the relativize nominalizer	59
2.20	Caribbean Northern Arawak set 2 coronal correspondences . . . . .	59
2.21	Caribbean Northern Arawak set 3 coronal correspondences . . . . .	59
3.1	CNA adpositions with auxiliary uses and their cognate forms . . . . .	64
3.2	Lokono adpositions related to body part terms . . . . .	68
3.3	Wayúu adpositions with auxiliary uses . . . . .	74
3.4	Garifuna adpositions . . . . .	79
3.5	Summary of auxiliary person marking, adapted from Kaufman (2010) . . . . .	80
3.6	CNA adpositions with auxiliary uses and their cognate forms . . . . .	84
3.7	Summary of auxiliary person marking adapted from Kaufman (2010) . . . . .	90

# Acknowledgements

This thesis would not be possible without the support of my dissertation committee. Lev Michael and Line Mikkelsen have equally and complementarily advised me over the course of my tenure at Berkeley, and the positive attributes of my work are very much a product of their influence. Lev's knowledge of Arawak and of South American languages generally cannot be overstated, and it is entirely due to him that I developed an interest in the Arawak language family to begin with. My first job as an academic linguist involved carrying out morphological data harvesting for the Arawak languages as Lev's research assistant in 2009. Since that experience, he has remained committed to helping me develop as an academic, reading and commenting on countless drafts of my work, and advising me in field methods and analysis. Similarly, Line came into my life as an academic advisor early in my time at Berkeley. Her commitment to helping students develop analyses for under-described languages has been integral to my academic success. Line has a gift for finding insight and clarity in sometimes messy data, and her advice has consistently improved my work. Like Lev, she's read and commented on countless drafts of my work, and she has done so tirelessly and thoughtfully. For both Lev and Line, my advising has necessitated a great deal of morale boosting, and the sometimes irrational commitment to the idea that I belong in academia, both somewhat outside the traditional bailiwick of academic supervisors, and I'm extremely grateful they were both willing to encourage me to continue. Kristin Hanson is an extremely supportive external committee member, and I'm grateful for the alternative perspective she brought to my work, both in terms of analysis and in terms of my progress as a graduate student. I could not have hoped for a more supportive, compassionate, and encouraging dissertation committee, and I am very grateful.

Much of the language data that appears in this thesis comes from work I carried out with Garifuna speakers Tim Palacio and Carlos Domingo Álvarez. Both are gracious and generous teachers, and I am grateful for their knowledge, time, and patience. Tim and Carlos care deeply about the Garifuna language and its speakers, and I am inspired by the work they do. Language data presented here also comes from speakers of Arawak languages who were willing to share their time and knowledge with other linguists. I am very grateful to these speakers, as well as to those linguists who have made this knowledge available in grammars, dictionaries and other works. Comparative morphosyntax depends on the availability of such resources, and I am grateful these exist. My engagement with the Caribbean Northern Arawak languages began as result of a 2011-2012 field methods course led by Lev Michael.

I am grateful to him and the other members of that course, Chundra Cathcart, I-hsuan Chen, Emily Cibelli, Kristin Hanson, Shinea Kang, Eric Prendergast, Christine Sheil, and Elise Stickles, for the descriptive and analytical work carried out there, and for leading my research in the direction it has taken. Additionally, my undergraduate research assistant, Sophie Kohne, contributed to the dissertation by carrying out data harvesting, translation, and analytical tasks that improved the quality and timeliness of my thesis. Apart from his role in the Garifuna field methods course, Chundra Cathcart contributed significantly to my dissertation, especially with his assistance in computational modeling at several stages of the project. I am very grateful for his help and support.

At Berkeley, my work product, my general wellbeing, and my happiness were supported and improved by the graduate students and faculty members in the department. I especially thank Nicholas Baier, Sarah Bakst, Kayla Begay, Chundra Cathcart, Will Chang, Jessica Cleary-Kemp, Oana David, Erin Donnelly, Andrew Garrett, Sharon Inkelas, Florian Lionnet, Kelsey Neely, Zachary O'Hagan, Eric Prendergast, Daisy Rosenblum, and Christine Sheil for their friendship and interest in my work over the years (with apologies to the important people I know I've forgotten to thank). Sharon Inkelas and Andrew Garrett have been deeply involved in creating a welcoming and positive environment in the Department of Linguistics at UC Berkeley. I am lucky to know them, and UC Berkeley is lucky to have them. Additionally, I have been particularly supported by Jessica Cleary-Kemp and Christine Sheil. I am grateful to them both for feeding me, listening to me, helping me with childcare, and modeling a healthy work-life balance.

Finally, support from my family has allowed me to make decisions and take risks that I could not have without them. My son, Harold, has offered me patience, companionship, understanding, and love throughout my time as a graduate student. I am more grateful than I can express for his presence in my life. Having Harold helped me to decide to pursue my education in the first place, and his precocious level of compassion and patience toward me has allowed me to sometimes provide him with less attention than he deserves to engage in my work. I am also grateful that he has developed into a person I so enjoy spending time with, and that he still likes to spend time with me, even though he is now a teenager. My siblings, Rebecca, Laura, Rachel, and Garren are of critical importance to me. Their belief in my success has been unwavering throughout my life, and especially in graduate school. Each of them is remarkable in their own right. Collectively, they anchor me and provide me and Harold with a deep and loving sense of family. I could not have better role models or friends, and I recognize what a gift that is. My father, Greg, his wife, Cindy, and my mother, Shirley, have all uniquely contributed to my success, and I'm grateful to them, as well.

# Abbreviations

1	first person	FUT	future
2	second person	INAN	inanimate
3	third person	INSTR	instrumental
PL	plural	LOC	locative
SG	singular	MAL	malafactive
F	feminine	MASC	masculine
M	masculine	MS	masculine speech
AOR	aorist	MULT	iterative
ASP	aspectual morphology	NEG	negation
AT	attributive	NF	nonfeminine
AUM	augmentative	NOMZ	nominalizer
AUX	auxiliary	PASS	passive
BEN	benefactive	PERF	perfective
CAUS	causative	PL	plural
COM	comitative	POSS	possessive
COMP	complementizer	PRES	present
CONT	continuative	PRIV	privative
DAT	dative	PROC	in process
DECL	declarative	PROG	progressive
DEF	definite	PST	past
DEM	demonstrative	REL	relativizer
DET	determiner	SUB	subordinate
DIST	distal	SUPR	superessive
FOC	focus	TOP	topic
FS	feminine speech	VIS	visual evidential





# Chapter 1

## Introduction

This work examines issues of structural inheritance, variation, and change in the grammars of the languages of the Caribbean subgroup of Northern Arawak (CNA), with a focus on the members of the branch still spoken today: Lokono, Añun, Wayúu, and Garifuna.<sup>1</sup>

Major contributions of this work are 1) a novel internal classification for Caribbean Northern Arawak based on lexical phylogenetics, and supported by previously unobserved morphological evidence, and 2) a close analysis of two patterns of morphosyntactic change in the CNA languages. The Arawak languages (and indeed, many languages of South America) generally exhibit subordinate structures that are analyzable as nominalizations — that is, verbs in subordinate clauses carry morphology that serves the function of morphologically deriving nouns from verbs (Campbell and Grondona, 2012). I show here that at least two patterns of argument marking found in CNA main clauses have developed from the reanalysis of such structures as main clauses. Nominalized relative clauses have been reanalyzed as main-clause verbal predicates carrying suffixal agreement morphology, and main clause auxiliaries have developed their modern argument-marking patterns from subordinate-clause constructions. The former change allows for any syntactic subject to be morphologically encoded by a verbal agreement suffix in some circumstances. This change neutralizes a robust pattern of active-stative agreement marking, where the subject of a transitive verb and the subject of an active predicate are normally encoded prefixally for the CNA languages. The latter change has led to the main clause use of auxiliaries for Garifuna, and to the development of auxiliaries from adpositions in this language. This auxiliiation has also resulted in an ergative alignment pattern for argument marking on auxiliaries. Only the subject of a transitive predicate is marked prefixally on Garifuna auxiliaries. I also show that Wayúu has undergone a similar change in its grammar, though insubordination seems not to have played a role. These historical changes are of broad typological interest because they are not well attested

---

<sup>1</sup>The language data in this thesis comes either from my joint elicitation and analysis with my colleagues at UC Berkeley in collaboration with Garifuna speakers, or from published sources. Citations for examples are given throughout. I maintain the original author’s glossing conventions and orthography except when I compare phonological forms for the purpose of reconstruction.

in the literature, but there is strong morphological evidence for their occurrence in the history of the CNA languages.

The development of ergative alignment is generally thought to be facilitated by passivization — generally, an oblique marker that reintroduces an external argument is reanalyzed as ergative case, and subject marking for a promoted object is reanalyzed as absolutive marking (Garrett, 1990). For Garifuna and Wayúu, passivization has played no role in the development of ergative alignment in their auxiliary systems. Instead, for Garifuna, I argue that the main clause use of subordinate clause structures allowed for the extension of subordinate clause argument marking patterns to main clauses, resulting in ergative alignment. For Wayúu, I argue the analogical extension of verbal argument-marking patterns to adpositions must have played a role in the development of auxiliaries.

Insubordination appears to be a strong driver of syntactic change in the South American context. For the Cariban languages, spoken in close proximity to the CNA languages, Gildea (1998) shows that ergative alignment also emerged without an intermediate step of passivization, though the trajectory differs from the one I propose for CNA here. While such a development is attested in languages outside South America, it is not observed to be cross-linguistically common (Garrett, 1990). The fact that ergative alignment has developed similarly in at least two language families spoken in such close proximity suggests the possibility that language contact may have played a role. Given that the CNA languages are similar in typological profile to many other South American languages, I expect close comparative studies of variation in the person marking and alignment systems of other languages families of South America, and in other branches of Arawak, in particular, to reveal similar patterns of change. The CNA languages, and many other languages of South America, are strongly head marking, and it is areally very common for subordination to be carried out via nominalization (Campbell and Grondona, 2012). I suspect that these two typological traits taken together make the changes in argument marking patterns examined here highly available for these languages.

Aside from the investigation into mechanisms active in argument marking and alignment change in CNA, this dissertation advances methodologically rigorous comparative studies of the Arawak language family. While Arawak has long been widely accepted as a linguistic group, and while there is reasonable consensus about the classification of many low-level groups, there is lack of consensus about the internal structures of these groups, and about how they are related to one another. Additionally, studies that employ the comparative method in reconstructing the phonological inventory and pronominal systems of proto-Arawak have been received cautiously by experts in the family, mainly due to a lack of complete descriptions of the Arawak languages.<sup>2</sup>

Much high-quality descriptive work has been carried out for the languages of the Arawak

---

<sup>2</sup>For example, Payne (1991a) points out that Matteson (1972), while more principled than earlier reconstructions of Arawak, relies on underdeveloped phonological analyses of Arawak languages to diagnose cognacy. Kaufman (1994) makes similar criticisms of (Valenti, 1986).

family over the last several decades. Combined with the burgeoning availability of rigorous reconstructions of these systems for subgroups of the family, this situates researchers to address this state of affairs. The lexical phylogenetic work presented here is a step toward understanding the internal structure of Arawak generally, and one being taken for other branches of Arawak by other linguists. The creation of a large comparative wordlist and cognate sets for this group of Arawak will advance a reconstruction of the phonological inventory of proto-CNA, moving a phonological reconstruction for proto-Arawak up a branch in the tree. Additionally, collaboration with other Arawakanists in creating similar datasets for other branches of Arawak will eventually allow for a much larger-scale lexical phylogenetic analysis. Finally, the analyses in Chapters 2 and 3 rely on the branching structure produced by the lexical phylogenetic analysis presented in this chapter, and claims of cognacy across morphological data presented here rely on the correspondence sets built on the basis of cognates identified for the phylogenetic analysis.

The rest of this chapter provides an introduction to the Caribbean group of Northern Arawak, its languages, and its position within the larger Arawak language family. I propose a novel branching structure for CNA on the basis of a lexical phylogenetic study I carried out in support of the comparative morphosyntactic work described in the rest of the thesis. I additionally describe active-stative alignment for the modern CNA languages because Chapters 2 and 3 rely on a basic knowledge of this alignment pattern for their analyses. Chapter 2 examines a suffixal agreement pattern that I argue has developed from a suffixal subject nominalizer in three of the four CNA languages: Añun, Wayúu, and Garifuna. Chapter 3 examines patterns of agreement involving auxiliaries for the CNA languages, and the historical processes involved in auxiliatation in these languages.

## 1.1 Arawak

The Arawak language family is the largest linguistic group in South America, with some fifty living members. The Arawak languages are geographically widespread, with members of the family distributed from the Caribbean coast of Central America, to the south of Brazil, to the western part of Peru, and to the Atlantic coast of northern Brazil. Locations for the currently-spoken members of the family are labeled in Figure 1.1, with locations for the non-CNA Arawak languages shown in grey.

Subgrouping within Arawak has been based partly on geographically defined groups, along with low-level comparative studies of languages in the family, resulting in a rake-like structure with well-established low-level clades that all connect to a single ancestor language. Following Michael (2011), I adopt Aikhenvald’s (1999) proposed internal branching for Arawak, shown in Figure 1.2, as a starting point for the comparative work presented here. This decision is also supported by other work carried out in lexical phylogenetics (Walker and Ribeiro, 2011), as discussed in §1.3 of this chapter. This structure has implications for the languages for which lexical data was included in the phylogenetic analysis of CNA — Aikhenvald (1999)



Figure 1.1: Currently-spoken Arawak languages

proposes five subgroups within Northern Arawak, and one language from each of the non-CNA groups was included in the study as outgroup languages.

The group under study here is the Caribbean group of Northern Arawak, whose currently spoken members include Garifuna, Lokono, Wayúu, and Añun. Outgroup languages sampled in this work for lexical phylogeny include Wapishana, Palikur, Achagua, and Baniwa, representing Aikhenvald's Rio Branco, Palikur, Colombian, and Rio Negro branches of Northern Arawak, respectively. Data from other Arawak languages appears throughout this work when morphological evidence from outgroup languages is relevant to the analysis.

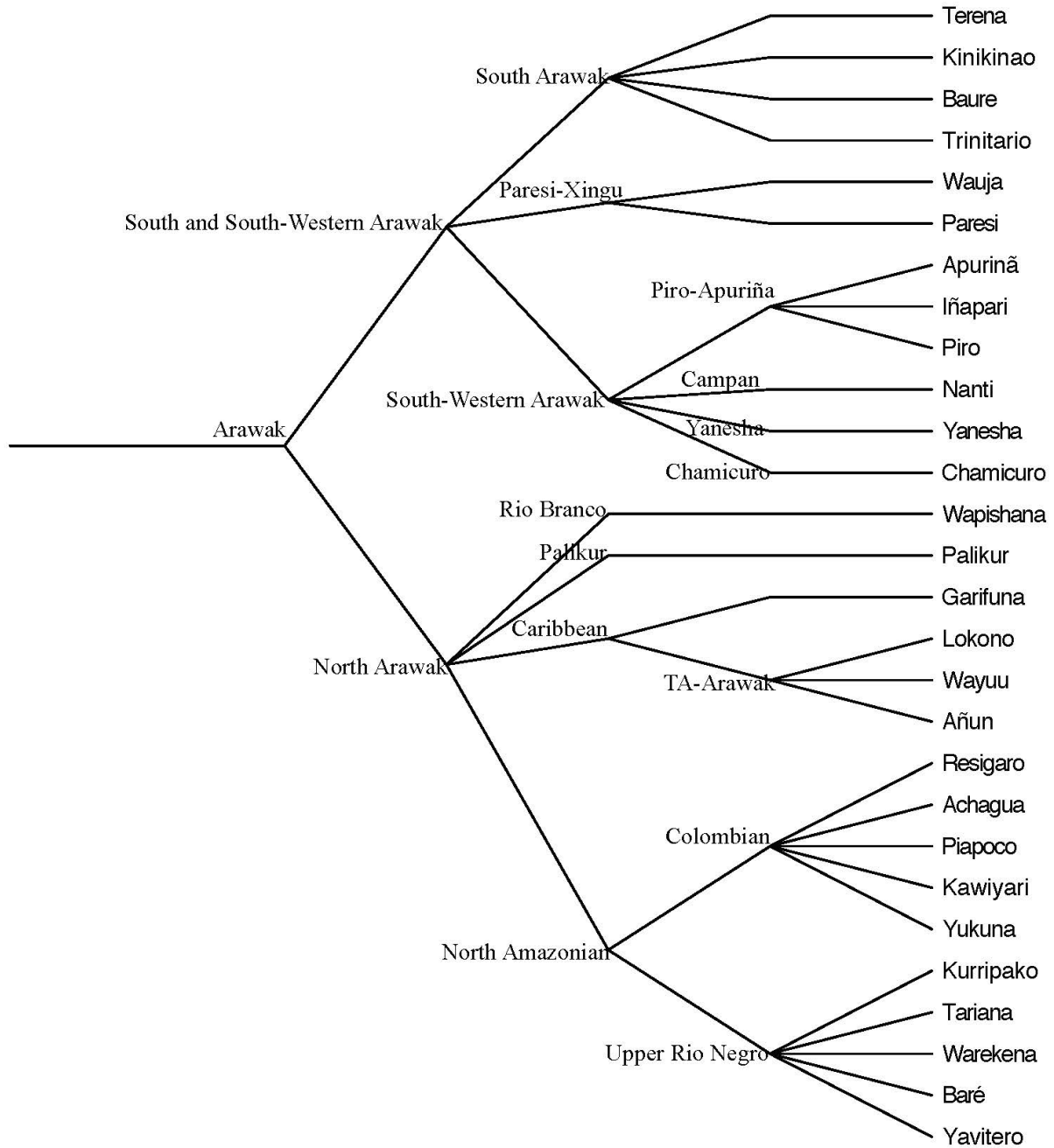


Figure 1.2: Arawak subgrouping according to Aikhenvald (1999)

## 1.2 The Caribbean Northern Arawak group

The Caribbean<sup>3</sup> group of Northern Arawak is composed of languages historically spoken along the Caribbean coasts of Central and South America and the Antilles Islands, namely Taino†, Island Carib†, Garifuna, Shebayo†, Lokono, Añun, and Wayúu. The locations of the Caribbean Northern Arawak languages are shown in Figure 1.3.



Figure 1.3: The Caribbean Northern Arawak languages

Taino, Island Carib, and Shebayo are not currently spoken, and have limited documentation: a few wordlists for Taino, a single wordlist containing 17 items for Shebayo (Aikhenvald, 1999), and a colonial-era grammatical sketch, dictionary, and catechism for Island Carib (Breton, 1900).

At the time of European contact, Taino was spoken throughout the Greater Antilles islands (modern-day Cuba, Jamaica, Haiti, and the Dominican Republic). Shebayo was spoken in Trinidad, just off the north-eastern coast of Venezuela. The arrival of the Spanish in the late 15th century led to the rapid and complete loss of both these languages (Rouse, 1993). Island Carib, historically spoken on the Lesser Antilles islands fared much better, surviving into the early part of the 20th century on the island of Dominica (Taylor, 1935).

Garifuna is spoken today by somewhere between 100,000-200,000 people around the world

---

<sup>3</sup>This group of Arawak is also referred to as “Circum-Caribbean” (Walker and Ribeiro, 2011; Payne, 1991a), “Maritime” (in which case it also contains Wapishana) (Campbell, 2012), and “Caribbean-Venezuela” (Ramirez, 2001).

(Lewis et al., 2016). Directly descended from a variety of Island Carib spoken in St. Vincent, Garifuna is now spoken along the Caribbean coast of Central America, spanning across Nicaragua, Honduras, Belize, and Guatemala, and by diaspora speakers throughout the United States. The Garifuna people have experienced a history of contact that is reflected by their language, which contains loanwords from at least Kariña (Cariban), Spanish, French, and English.

The Arawaks native to the Lesser Antilles were in contact with Cariban groups prior to European contact, intermarrying with Cariban men who arrived there around the 12th century, resulting in the name *Island Carib* for the group. During the 17th century, escaped Africans transported to the Caribbean during the slave trade intermarried with the Island Carib people of St. Vincent, and in the late 18th century, black speakers of Island Carib were forcibly exiled from St. Vincent to the coast of Honduras by British colonial forces (Taylor, 2012). The name *Garifuna* is derived from the native words meaning ‘Carib’ and ‘red’. Documentation of Garifuna has been carried out with diaspora speakers in the United States by several linguists, including Pamela Monroe and Daniel Kaufman (Kaufman, 2010; Munro, 2007, 2014). In-situ documentation has been carried out in Honduras by at least Douglas Taylor and Steffen Haurholm-Larsen (Taylor, 1951, 1977; Haurholm-Larsen, 2015, 2016). Community language activists have been successful in creating two extensive dictionaries of the language (Cayetano, 1993; Reyes, 2012), as well as teaching materials for language learners.

Lokono is endangered — the language is reported to have some 700 remaining speakers, living near the northern Atlantic coast of South America in communities across the Guianas, Suriname, and Venezuela. Fluent speakers of Lokono are generally over fifty (Lewis et al., 2016). Extant documentation of the language includes a dictionary (Patte, 2011) and several descriptive articles by Marie France Patte, as well as a grammar of the language by William Pet (Pet, 1987), and a recent PhD dissertation on Lokono by Konrad Rybka (Rybka, 2016).

Anñun is still spoken by a handful of people living in northwestern Venezuela near the Colombian border, and revitalization efforts are in place to teach Anñun as a second language (Álvarez, 2008). Extant documentation includes a grammatical sketch by Marie France Patte (Patte, 1989), updated by José Álvarez in 2008 for language teaching purposes, as well as a dictionary (Álvarez and Bravo, 2008).

Wayúu remains widely spoken along the northwestern coast of Colombia. Ethnologue estimates that Wayúu is still spoken by some 122,000 people (Lewis et al., 2016). Grammatical descriptions of varying degrees of thoroughness are available for Wayúu (Zubiri and Jusayu, 1978; Uriana and Ipuana, 2000; Ehrman, 1972). These have been updated by the language maintenance work that José Álvarez has carried out in Wayúu communities (Álvarez, 2014). There are also dictionaries of the language available (Captain and Captain, 2005; Jusayu and Zubiri, 1981).



### 1.3 CNA subgroups and lexical phylogeny

A major contribution of this dissertation is a principled analysis of internal subgrouping for the Caribbean Northern Arawak languages based on lexical data. Since the rest of the dissertation tracks morphosyntactic variation and change within this group, understanding internal subgrouping for the clade allows for a better understanding of morphological retentions and innovations within the CNA languages. In this section, I motivate the structure in Figure 1.4 for the CNA languages on the basis of a Bayesian phylogenetic analysis of lexical data for the group. I then compare this structure with extant classifications of the language family.

Computational phylogenetics is a methodology that has been adapted from biology for linguistic purposes. Computational phylogenetics infers linguistic relatedness on the basis of form-meaning correspondence sets<sup>4</sup> formed from shared vocabulary items by exploring a space of genealogical trees of varying topologies. Non-Bayesian approaches, such as parsimony and maximum likelihood methods, return a tree which best fits the data, according to optimization criteria such as minimizing the number of independent innovations in the tree, or with parameters that best fit the data (see Warnow and Nichols 2008 for details). Some phylogenetic methods also infer a time depth for divergence between clades or languages on the basis of expected rates of lexical change. Bayesian phylogenetic methods make prior assumptions regarding the parameters of the tree, and use Markov Chain Monte Carlo (MCMC) to explore and sample from the posterior distribution of possible tree topologies, accepting or rejecting a proposed topology according to whether or not it is more likely to have generated the observed data. The tree sample can be summarized in a number of ways, including one that results in a maximum clade credibility tree, which assigns a probability to each clade or subgroup in the tree according to how often it appears in the sample.

The methodology relies on parallels between linguistic and biological evolution, and has proven extremely useful for investigations of genealogical relationships among languages on the basis of lexical data (Chang et al., 2015; Michael et al., 2015; Bowerman, 2010; Gray and Atkinson, 2003). The comparative morphosyntactic analyses in the chapters that follow assume the genealogical relationships reported here.

The structure proposed here reproduces low-level subgroups that are well supported by studies that apply the comparative method rigorously across closely-related languages (cf. §1.3.5), but it differs significantly from the received view of the internal structure for these languages with respect to the placement of Taino, which is traditionally thought to form a subgroup with Lokono, Añun, and Wayúu to the exclusion of Garifuna. The phylogenetic analysis carried out here is consistent with the structure produced in Walker and Ribeiro (2011)'s phylogenetic analysis with higher posterior probabilities assigned to clades with low probabilities under their analysis. I compare the structure in Figure 1.4 with extant classifications of the subgroup in §1.3.5, and I point to some methodological weaknesses in

---

<sup>4</sup>Form-meaning correspondence sets differ from traditional cognate sets in that cognate vocabulary items are only grouped if they exhibit the same meaning across languages, leaving out vocabulary items that have undergone semantic shift.

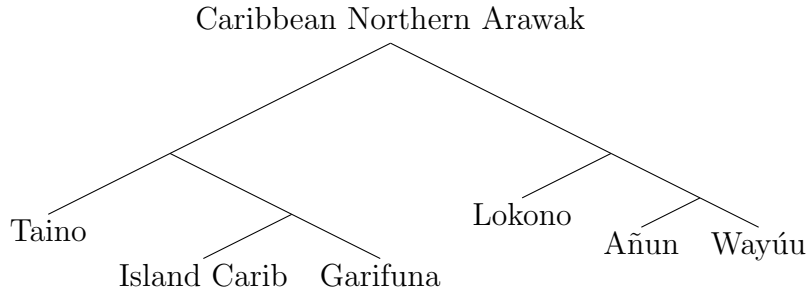


Figure 1.4: Proposed structure for Caribbean Northern Arawak

previous classifications for the group.

### 1.3.1 Dataset collection

For the lexical phylogenetic analysis of the CNA languages, a 736 item word list was collected for the four living CNA languages, as well as the four outgroup Northern Arawak languages included in the study (Wapishana, Palikur, Baniwa, and Achagua). Lexical data for the languages with limited documentation, Taino and Shebayo, were included where available; 125 Taino lexical items made it into cognate sets based on four colonial-era word lists for the language, and sixteen items for Shebayo were included in the initial study.<sup>5</sup>

The languages included in this study were chosen either because they are grouped as members of Caribbean Northern Arawak in extant classifications of Arawak, or because they are closely related outgroup languages, used for rooting. For this study, one language was sampled from each branch of Northern Arawak according to Aikhenvald (1999)’s classification of the language family (shown in Figure 1.2).

The meanings for the vocabulary items used in this study are from an expanded Swadesh list with basic vocabulary items, including terms for body parts, kinship, material culture, and flora and fauna native to South America. The list was developed by the Tupí-Guaraní group at UC Berkeley run by Lev Michael (Michael et al., 2015), and expanded for lexical work on the Tukanoan languages. The lexical items added for Tukanoan added subtle semantic distinctions for verbs, such as ‘break in half’ versus ‘break into many pieces’, distinctions relevant for lexical selection in Tukanoan. Many of these semantic distinctions are not relevant for the Northern Arawak languages, either because the same term was used across these subtly different meanings, or because no cognate terms were found across any of the ten languages included in this study for these meanings. Meanings from either of these two

<sup>5</sup>The data from Shebayo was omitted from the final analysis; fourteen of the sixteen vocabulary items available for the language were cognate across all the Caribbean Northern Arawak languages, and a single lexical item shared a cognate with Taino, only, with which it is very likely not closely related. The paucity of data for Shebayo led to a topological structure that is not well supported by comparative reconstruction or the historical record, and posterior probabilities for the clades produced by this analysis were low (.4 or under).

categories were excluded from the final phylogenetic analysis, resulting in a list of 494 core meanings for the CNA languages, and 2,238 cognate sets.

Table 1.3.1 shows the list of languages included in this study and the percentage of lexical coverage found for the 494 meanings that were analyzed. For the modern Arawak languages, coverage is much higher than it is for Shebayo and Taino, which exhibited 3% and 25% coverage, respectively. With Shebayo and Taino included in the dataset, mean lexical coverage is 66.2%. Omitting Shebayo (as was done in the final study) there is a mean coverage of 73.2%.

language	%	language	%
Achagua	64%	Palikur	80%
Añun	73%	Shebayo	3%
Baniwa	81%	Taino	25%
Garifuna	86%	Wapishana	84%
Lokono	79%	Wayúu	87%

Table 1.1: Languages included in the lexical phylogenetic analysis and percent coverage

Because of the limited nature of colonial-era wordlists, an attempt was made to include vocabulary items that were available for Taino and Shebayo that were not on the original list of meanings for the expanded Swadesh list. The terms *three*, *enemy*, *dog*, *ocean*, *mahogany*, *earring*, *hoe*, *corn*, *chigger*, *papaya*, *red*, *jewel*, *pineapple*, and *stone* were added to the list of basic meanings post hoc because they were present in the vocabulary lists available for Taino and because there were related forms for one or more of the languages in the study available for these items.

Island Carib lexical data was not included in the phylogenetic analysis, though the language is known to be extremely closely related to modern Garifuna. Ancestors to modern-day Garifuna speakers were forcibly separated from the Island Carib population by British colonial forces in the late 18th century (Taylor, 2012). However, extant lexical data for Island Carib exist in only in the form of a 17th century dictionary collected by a French priest (Breton, 1900), and the original dataset included only modern languages, and languages that could be used for a phonological reconstruction of Caribbean Northern Arawak languages. It was additionally unclear in early stages of the project whether the Island Carib lexical data truly represented a distinct language from Garifuna or an ancestral version of the modern language. Coupled with these issues, the orthographic representations of Island Carib lexical data are inconsistent and sometimes difficult to interpret, making exact form-meaning correspondences difficult to identify. Currently, efforts are underway to parse the Breton dictionary, as well as colonial-era Island Carib Catechisms, and the resulting lexical database will make it possible to include Island Carib in future versions of this study.

### 1.3.2 Form-meaning correspondence sets

After collection, lexical items were placed into form-meaning correspondence sets on the basis of regular sound correspondences across the Northern Arawak languages. These form-meaning sets were constructed in RefLex (Seeger and Flavier, 2016), a lexical database platform developed by the Laboratoire Dynamique Du Langage at the University of Lyon in France. The sets of homologous items coded for phylogenetic analysis consist of root-meaning set (Chang et al., 2015). Lexical items that are cognate but exhibit non-identical meanings are not treated as homologous for the purposes of this analysis, e.g., terms like Garifuna *dunuru* ‘bird’ and Añun *atüna* ‘arm/branch/wing’ were not treated as homologous in the CNA lexical database.

Compound words that only exhibited partial cognacy were coded as cognate, following Trask (2000)’s notion of *oblique cognacy*. For example, Garifuna *liraiü ugudi* and Lokono *koti ibira* ‘toe’ are coded as cognate because for both languages these terms include a cognate term for foot, *ugudi* in Garifuna, and *koti* in Lokono.

### 1.3.3 Phylogenetic analysis

Root-meaning sets were coded as binary character states in the character table, with presence or absence of a character coded as *1* or *0*, respectively. Lexical items that were not found for a particular language were coded as unknown, denoted by *?* in the character table. The analysis treats shared character traits as either retentions of ancestor states or as joint innovations, penalizing topological structures that treat innovations as parallel. ‘Unknown’ state values of characters do not inform the topological structure. Table 1.2 exemplifies character-state coding for the meaning *pepper*. Because the forms for this meaning correspond across all but one of the languages sampled, there are two different characters with the meaning *pepper*: *pepper 1* and *pepper 2*. Languages that exhibit a form for *pepper 1* (in this case, all the languages that exhibited a cognate form for the word ‘pepper’) are coded as exhibiting the character *pepper 1*, and not exhibiting *pepper 2*. Conversely, the language (Achagua) that exhibit a form for *pepper 2* is coded as exhibiting this character, but not *pepper 1*. Languages for which there was no data available for this meaning are coded as *?* for both characters.

	Garifuna	Taino	Lokono	Añun	Wayúu	Achagua	Baniwa	Wapishana	Palikur
pepper	ati	afi	athi	∅	hafi	ijáliaa	áati	∅	atit
pepper 1	1	1	1	?	1	0	1	?	1
pepper 2	0	0	0	?	0	1	0	?	0

Table 1.2: Sample character state coding for the word *pepper*

Taxa ages were set as present day, except for Taino, which was given a date corresponding to the colonial era, *forward -450 years* in BEAST (= 450 BP). The resulting dataset was

analyzed with BEAST v. 1.8.3 (Drummond and Rambaut, 2007), using a Stochastic Dollo model to infer phylogeny. Four chains of 10,000,000 iterations with a thinning interval of 1000 were run. Trees were summarized using TreeAnnotator. Of the 10000 trees stored in the sample, the first 2000 structures were discarded as burn-in from each chain.

### 1.3.4 Structures returned from lexical phylogenetic analysis and discussion

The structures returned by the Bayesian phylogenetic analysis show that the MCMC procedure converged well. The classification returned by BEAST is shown in Figure 1.5. Within CNA, we see that the only branch that does not have a posterior probability of 1 is the clade containing Lokono, Wayúu, and Añun, which exhibits a value of .975, and is thus still very well supported. Placement of outgroup languages is loosely consistent with Aikhenvald’s 1999 subgrouping of Arawak; Baniwa and Achagua are grouped together, returning her *North Amazonian* group of Northern Arawak. It is somewhat surprising to see Wapishana group with CNA given extant classifications of Arawak subgroups, but the language is geographically close to Lokono, so their closer relatedness is not implausible. Palikur is extremely divergent from the other Northern Arawak languages, and its status as an outgroup language is supported by previous classifications of Northern Arawak (Aikhenvald, 1999).

### 1.3.5 Comparison with previous classifications

Large-scale analyses of Arawak subgrouping have been carried out on the basis of lexicostatistics (Payne, 1991b; Ramirez, 2001), and comparative work has been carried out for subgroups of the family, including CNA (Captain and Captain, 2005; Taylor and Rouse, 1955). Early work on the internal classification of the language family was carried out by Noble (1965). On the basis of this work, linguists have proposed classifications for Arawak that group all members of CNA but Garifuna and Island Carib, as shown in Figure 1.6 (Aikhenvald, 1999; Campbell, 2012).

The structure in Figure 1.6 has been proposed in large part on the basis of the phonological shape of the first person singular pronouns and bound prefixal person markers in these languages (Taylor and Rouse, 1955). The clade labeled *TA-Arawak* is so called because it groups together those members of Caribbean Northern Arawak that exhibit some form of *ta* or *da* as the marker for first person singular, either as bound, prefixal agreement morphology, or as the first two sounds of the free first person singular pronoun. In all other Arawak languages, the bound and free first person singular marker is *nV*. This form for first person is so widespread that it has been used as a diagnostic for determining Arawak family membership. While it is widely accepted that morphological evidence is the most informative for determining issues of subgrouping, I argue here that evidence for including Taino in *TA-Arawak* to the exclusion of Garifuna is particularly thin. Rather, I argue that

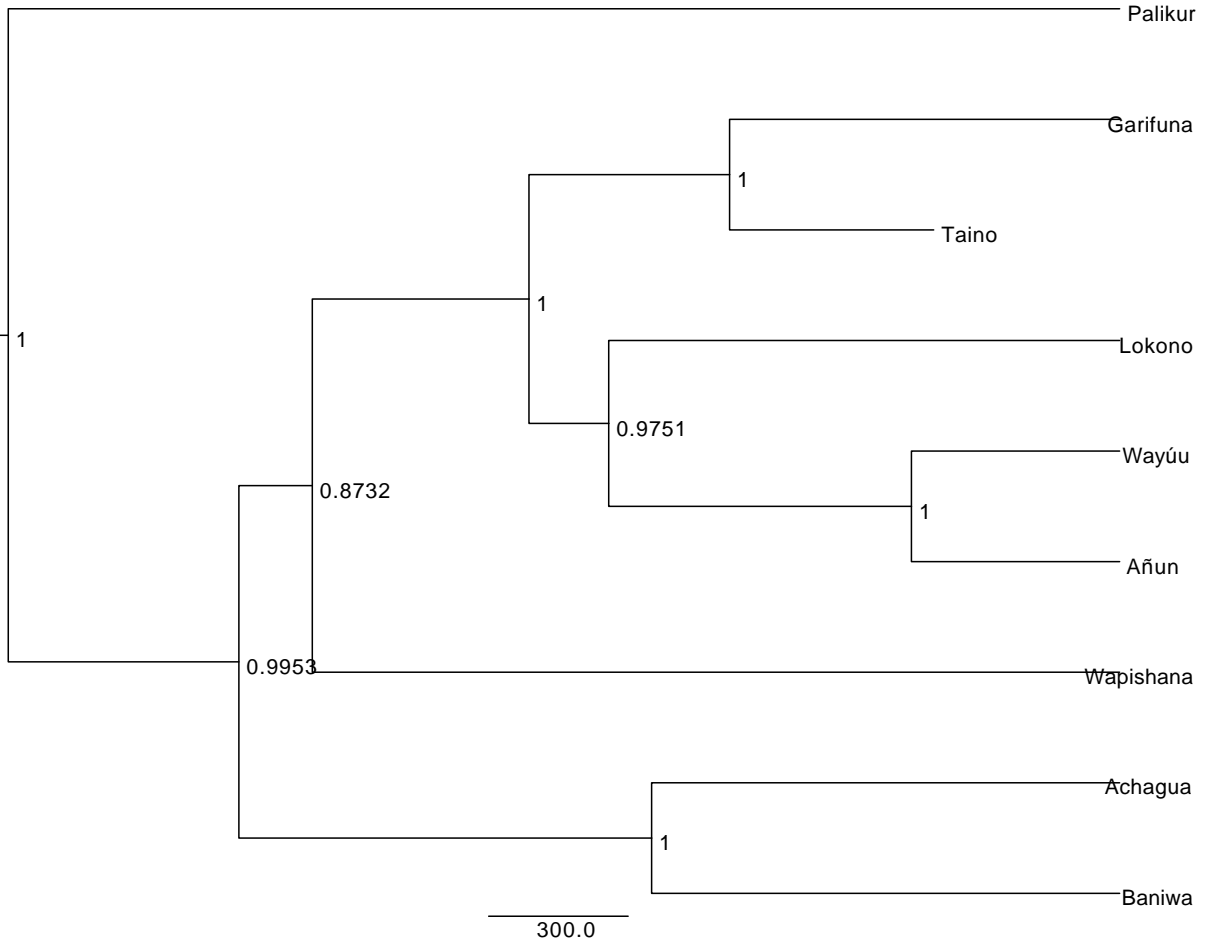


Figure 1.5: Classification from BEAST

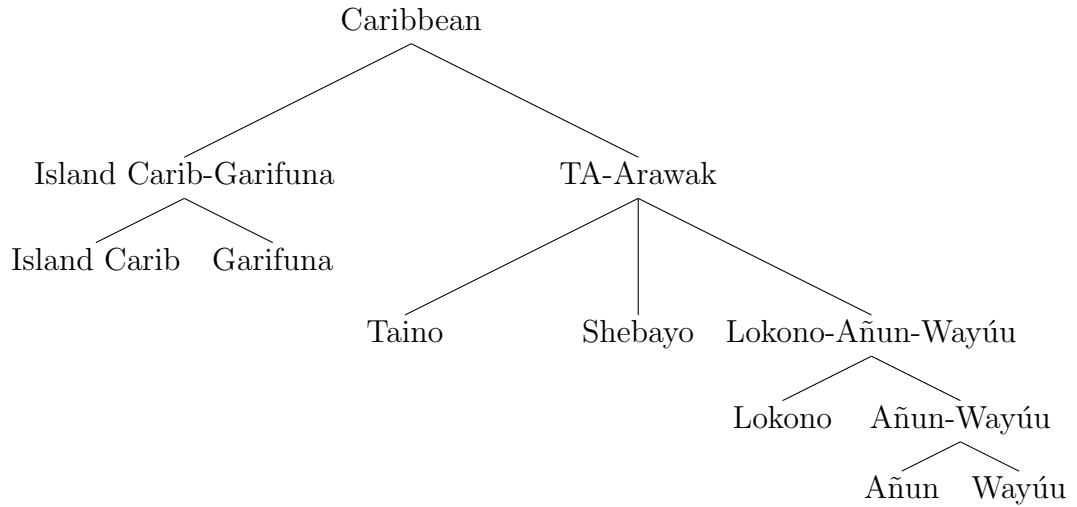


Figure 1.6: Traditional internal subgrouping for Caribbean Northern Arawak (Taylor and Rouse, 1955)

proto-CNA exhibited both *ta* and *nV* in complementary distribution, and that the *ta* form was generalized as a prefixal agreement marker in proto-Lokono-Añun-Wayúu, while the *nV* form was generalized in Garifuna and Island Carib. This analysis is supported by explicit evidence from the pronominal and prefixal person marking systems of the CNA languages, as I discuss below.

The free pronouns, and the pronominal prefixes for Caribbean Northern Arawak are summarized in Tables 1.3 and 1.4. Comparing the free pronouns in Table 1.3, we see Taino, Lokono, and Wayúu all exhibit very similar pronominal forms for the first person singular, and that Garifuna and Island Carib’s systems are nearly identical, as expected given the close history of these two languages. We observe that Garifuna and Island Carib exhibit a genderlect distinction for the first and second person singular pronouns. The masculine speech pronoun *au* is known to be of Carib origin. The forms Lokono exhibits for third person singular do not appear to be cognate with those exhibited by Wayúu, and Añun exhibits no free third person singular pronominal form.

	Garifuna	Island Carib	Taino	Lokono	Añun	Wayúu
1	nuguja, au	nukuja, ao	datʃa	dei ... de	te	taja
2	buguja, amira	bukuja, amira		bii ... bo	pía	pia
3m	ligija	likia		li ... dei	∅	nia
3f	tuguja	tokoja		t <sup>h</sup> o ... no	∅	shia/hia
1pl	wagija	wakia		wei ... we	we	waja
2pl	huguja	hokoja		hei ... hi	haña	hija/haja
3pl	hagija	nhakija		nei ... je	nana	naja

Table 1.3: Northern Arawak free pronouns

Examining the prefixal pronominal forms in Table 1.4, we find a similar pattern. Like in the free pronominal paradigm, Lokono, Añun, and Wayúu exhibit forms that appear to be related in the first person, but the Lokono form for third person singular differs from its closest relatives. Garifuna and Island Carib remain nearly identical. However, we find that the form of the first person prefix for Taino is *ni-*, bringing its prefixal pronominal system into line with Garifuna and Island Carib, rather than with TA-Arawak for this part of the pronominal system.

Comparing Tables 1.3 and 1.4, it is observed that while limited data is available for Taino, the colonial-era word lists sourced for this work include both the bound first person marker *ni-* (von Martius, 1867), and the free pronoun *datʃa* (de Goeje, 1939), a fact that appears to have been previously overlooked in discussions of subgrouping for these languages, but one that is of crucial importance for an empirically based understanding of branching within this subgroup, precisely because so much has been made of the first person morpheme in Caribbean Northern Arawak internal subgrouping.

The morphological facts of the Taino pronominal system suggest that proto-CNA exhibited at least a bound first person pronoun *nV-*, and a free first person pronoun beginning with

	Garifuna	Island Carib	Taino	Lokono	Añun	Wayúu
1	nu-	n-	ni-	da-	ta-	ta-
2	bu-	b-	ti-?	bi-	pi-	pi-
3m	li-	l-	li-	li-	ni-	ni-
3f	tu-	t-		t <sup>h</sup> i-	hi-	si-/sa-/ha-
1pl	wa-	wa-	wa-	wa-	wa-	wa-
2pl	ha-	h-		hi-	ha-	ha-/hi
3pl	ha-	nh-		na-	na-	na-

Table 1.4: Northern Arawak prefixal person markers

the phonological sequence *da-/ta*. Since *nV-* is the form for first person singular in the wider Arawak language family, its attestation in Taino and Garifuna must be due to inheritance from an ancestral language rather than an innovation, and if proto-Garifuna-Taino inherited this form, it must have inherited it from proto-CNA. Given that Garifuna and Taino form a subgroup to the exclusion of Lokono, Añun, and Wayúu in the lexical analysis presented here, I argue that proto-CNA must have also exhibited a free pronoun beginning with some form of *da/ta* that underwent lexical replacement in Garifuna.

Previous analyses have pointed to the shared form *ta* among Lokono, Wayúu, Añun, and Taino, and reasoned that this form was indicative of a shared morphological innovation among these languages — namely, the replacement of wider Arawak first person *nV* with *ta* — and therefore evidence that these languages shared a common ancestor to the exclusion of Garifuna and Island Carib. However, if proto-CNA exhibited both the free pronominal form *ta* and the bound form *nV*, as Taino clearly did, then the presence of a pronominal form *ta* in Taino is not evidence for a TA-Arawak subgroup that excludes Garifuna and Island Carib because there was no replacement of *nV* in the bound pronominal system in Taino.

If my analysis is correct, the fact that Lokono, Añun, and Wayúu all exhibit both bound and free first person morphology involving *ta-* is evidence for a TA-Arawak clade, but not evidence for one including Taino. The morphological innovation distinguishing this group is the paradigmatic leveling of *ta-* across the free and bound pronominal systems. Since joint innovations (rather than retentions of archaic forms) are informative for subgrouping, the fact that Taino exhibited a first person pronoun *datfa* does not provide evidence that the language is more closely related Lokono-Wayúu-Añun than it is to Garifuna.

Turning to the lack of a form related to *ta* in Garifuna and Island Carib, it would seem that the CNA pronominal paradigm was simply leveled in the opposite direction of TA-Arawak’s — the bound first person marker *nV* replaced the free pronoun based on *ta*, instead of generalizing *ta*.

However, it is also possible that the Garifuna-Island Carib pronominal change was circuitously driven by language contact. Both Garifuna and Island Carib exhibit a masculine speech genderlect item *au* for only the free first person pronoun. This pronoun is morphologically



unrelated to the bound first person marker, mirroring the Taino pronominal system, which also exhibits morphologically unrelated free and bound first person pronouns. The source of the Garifuna-Island Carib pronoun is demonstrably Carib, and its integration into Garifuna and Island Carib's ancestor language is attributed to pre-Colombian intermarriage between the Cariban and Arawak people of the lesser Antilles. Cariban men, specifically, are reported to have intermarried with Arawak women, and male genderlect items are of Carib origin (Taylor, 2012).

A possible explanation for the lack of a *ta*-form pronoun in Garifuna is that the Cariban form completely replaced the free first person pronoun at some stage of pre-Garifuna-Island Carib, and the feminine speech first person pronoun developed later from the bound first person pronoun and some available deictic morphology in the language.<sup>6</sup> This suggests a possible analysis where the ancestor language of Garifuna and Island Carib exhibited a bound pronominal form *nV-*, and a free pronoun based on *ta*, and just the free form underwent lexical replacement by the Cariban form *au*, fitting into a system that already existed, and not creating a new pronominal distinction.

The lower-level clades proposed for Caribbean Northern Arawak are well supported by high quality comparative work on these languages. Over the course of his career, Douglas Taylor produced a large body of work on the Caribbean Northern Arawak languages, and all current internal classifications of Arawak rely heavily on his analysis of subgrouping for Caribbean Northern Arawak, though the bulk of his comparative work primarily focused on Garifuna and Island Carib.

Taylor and Rouse (1955) is an early attempt at subgrouping within Caribbean Northern Arawak that relies on a lexicostatistic analysis of comparative vocabulary items across Lokono, Island Carib, and Taino, as well as archeological evidence for population dispersal across the Antilles. Interestingly, the archeological evidence reported in the paper support the tree in Figure 1.7, where Taino, and the precursor language to Island Carib share a common ancestor to the exclusion of the mainland Caribbean Northern Arawak languages, and not the one in Figure 1.6, but Taylor felt so strongly that the presence of the Taino form *datfa* was diagnostic of a TA-Arawak subgroup that excluded Garifuna and Island Carib that the two researchers ultimately propose an analysis where the Greater Antilles were populated by the Taino from mainland South America well after the ancestors to the Garifuna and Island Caribs had moved into the Lesser Antilles Islands.

To be certain, documentation postdating Taylor's work has significantly improved the potential for accuracy in carrying out comparative analyses of these languages, but his 1955 work is the first in a long series of publications to ignore the fact that Taino exhibited a bound prefixal first person marker *ni-*, a point that is of considerable importance considering that subgroups that exclude Garifuna from *TA-Arawak* do so on the assumption that the Taino pronominal system closely resembled Lokono's.

---

<sup>6</sup>de Carvalho (2016) argues out that the pronominal base for the TA-Arawak pronouns was such a deictic element, *\*ja*, and that the Island Carib pronominal forms containing *-kia* are unrelated to this morpheme.

### 1.3.6 Comparison with previous studies using lexical phylogeny

The topological structure returned by the analysis presented here is compatible with the structure produced independently by recent phylogenetic work on the Arawak languages. Walker and Ribeiro (2011) collected a Swadesh list of 100 basic vocabulary items for 60 Arawak languages and coded forms for cognacy across the family. They analyzed their data using BEAST v. 1.6.1 (Drummond and Rambaut, 2007) to infer a tree structure for the family, which resulted in the structure in Figure 1.7 for Caribbean Northern Arawak.

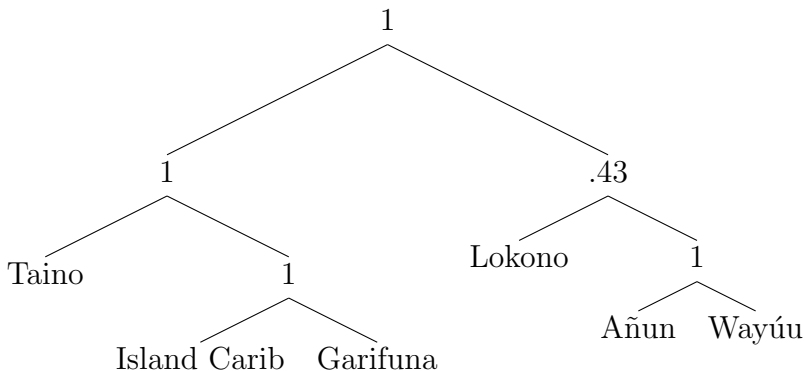


Figure 1.7: Proposed structure for Caribbean Northern Arawak with posterior probabilities, adapted from Walker and Ribeiro (2011)

Though there is very little documentation of Taino, lexical phylogenetic analysis is an appropriate methodology for the type of data that is available for the language. Walker and Ribeiro (2011) were able to find 74 of 100 Swadesh list items for Taino, which is reasonably good coverage for the language. The posterior probability of every subgroup proposed by Walker and Ribeiro (2011) is 1, with the exception of the Lokono branch, which is reported to be .43, much lower than the posterior of .975 reported by the current study, and, in fact, far below the standard threshold 0.80 posterior probability generally accepted as evidence for subgrouping in this type of analysis (Michael et al., 2015).

As demonstrated by the low posterior probability returned for the Lokono-Añun-Wayúu clade by Walker and Ribeiro's (2011) analysis, and the comparatively high posterior probability returned for this clade in the current study, lexical phylogenetic analyses can be improved significantly by expanding the number of lexical items included in such analyses when possible. For the languages of South America, in particular, the Swadesh list has been shown to have limited utility in diachronic studies of these languages, both because of widely cited complaints of the cross-cultural relevance of the items identified on the Swadesh list (Oswalt, 1971), and because generalizations about rates of lexical replacement observed for other parts of the world do not hold for South American language families. Bovern et al. (2014) shows that, contra the received view (Swadesh (1955), for example), in the context of South American languages, terms for local flora and fauna are highly stable, making these terms extremely useful to include in studies involving the Arawak language family. Taken with other core vocabulary, observing rates of replacement for these vocabulary items provides a fuller picture

of subgrouping for these languages.

Finally, it is unclear that Island Carib and Garifuna should be treated as separate languages in this type of analysis — the source used for Island Carib in Walker and Ribeiro (2011), and (where data from Island Carib is included) the present study, Breton (1900), is a 17th century dictionary of the language, during which time Island Carib and Garifuna may not have yet diverged in a meaningful way. Alternatives would be to treat Island Carib as an ancestor to Garifuna, or to omit it altogether, as was decided for the present study. Future versions of this research will include lexical data from Island Carib.

### 1.3.7 Summary and discussion

This section investigated the internal classification of Caribbean Northern Arawak on the basis of a lexical phylogenetic study. The findings from this study are consistent with extant proposals of subgrouping within CNA to varying degrees, with the most serious discrepancy in the classification of Taino, which has historically been erroneously grouped with TA-Arawak to the exclusion of Garifuna, its closest living relative.

A reexamination of colonial-era wordlists for Taino revealed that the language exhibited both the first person pronoun *datfa*, **and** the first person prefix *ni-* calling into question classifications of the family based solely on the phonological shape of the first person marker. The remaining chapters of this work presuppose the topological structure discussed in this chapter, and use it as partial support for proposals of joint morphosyntactic innovations and retentions across the CNA languages.

## 1.4 Person marking and alignment in Caribbean Northern Arawak

Here, I describe active-stative alignment for the modern CNA languages, as both Chapters 2 and 3 rely on an understanding of this alignment system as a point of reference for alignment patterns that deviate from it. The Arawak languages generally exhibit active-stative alignment systems that are expressed in their verbal agreement paradigms, where the subject of a transitive verb (an A argument) and the single argument of an active intransitive verb (an  $S_a$  argument) are both cross referenced by the same prefixal verbal person marker, and the object of a transitive verb (an O argument) and the subject of a stative intransitive verb (an  $S_o$  argument) are cross-referenced with the same suffixal verbal person marker, or with no marker at all (Aikhenvald, 1999).

The Caribbean Northern Arawak languages exhibit this core active-stative argument marking strategy, as shown for each of the currently spoken CNA languages in examples (1)–(12).

For each language, a segmentally identical prefixal person marker cross-references an A or S<sub>a</sub> argument, and a segmentally identical suffixal person marker cross-references an O or S<sub>o</sub> argument. I now illustrate this pattern for each of the CNA languages.

We see in Añun example (1) that the active transitive verb *kimaa* ‘build’ takes two arguments, an agent and a patient; the agentive argument is marked prefixally with *ta-* 1SG, while the patientive argument is marked suffixally with *-i* SG.M.

(1) *Takimaai.* Añun

ta- kimaa -i  
 1SG- build -SG.M  
 A V O

‘I build it.’  
 (Patte, 1989)

For the stative, intransitive verb *tima* ‘sleep’ in example (2), we see that the single argument is marked suffixally, just like the object in example (1)<sup>7</sup>.

(2) *Atimi.* Añun

a- tima -i  
 AT.1- sleep -M  
 V S<sub>o</sub>

‘He’s asleep.’  
 (Patte, 1989)

In example (3), we find an active, intransitive predicate, *una* ‘go’; its single, agentive argument is marked prefixally, like the A argument in (1).

---

<sup>7</sup>Patte (1989)’s glossing conventions are preserved here, where *a-* AT.1 is segmented from the verb root. She analyzes this morpheme as an attributive marker, presumably considering it to be a reflex of proto-Arawak *ka-*, carried prefixally by derived stative verbs and in complementary distribution with the prefixal person markers. In fact, in all the CNA languages, a prefix *a-* is obligatorily carried on verb forms that do not take person marking prefixes. In Garifuna, this prefix is frozen as a part of the suffixing verb root forms. In Wayúu, it is identifiable in suffixing verb stems, as well. Añun also exhibits the expected version of the attributive morpheme *ka-*, which Patte glosses as AT.2, and this morpheme functions uncontroversially as an attributive.

(3) *Wouna*.

Añun

wa- una  
1.PL go  
S<sub>a</sub> V

‘We go.’  
(Patte, 1989)

The same set of facts holds for Wayúu. We find that the A argument of the transitive predicate *e’rrér* ‘see’ is cross-referenced prefixally in example (4), and that the O argument is cross-referenced suffixally.

(4) *Te’rrérrì*.

Wayúu

t- e’rrér -rì  
1SG- see -SG.F  
A V O

‘I see her.’  
(Zubiri and Jusayu, 1978)

Just as was the case for Añun, we find suffixal marking cross-referencing the single argument of a stative predicate in example (5), where the subject of the verb *atunk* ‘sleep’ is cross-referenced with the suffix *-chi* SG.M.

(5) *Atunkeechi*.

Wayúu

atunk -ee -chi  
sleep -FUT -SG.M  
V S<sub>o</sub>

‘He will sleep.’  
(Álvarez, 2007)

In example (6), the active, morphologically intransitive verb *eki* ‘eat’ cross-references its only argument prefixally with the first person prefix, *t-*.

(6) *Tekiin.*

Wayúu

t- eki -in  
1SG eat -PROC  
S<sub>a</sub> V

‘I eat.’  
(Uriana and Ipuana, 2000)

Lokono exhibits this same pattern; in example (7) the transitive verb *simaka* ‘call’ carries the prefixal marker *by-* 2SG, which cross-references the A argument. The suffixal marker *-i* M.SG cross-references the O argument of the verb.

(7) *By-simaka-i.*

Lokono

by- simaka -i  
2SG call -M.SG  
A V O

‘You called him.’  
(Pet, 1987)

Example (8) shows that the stative intransitive verb *kawa* ‘be absent’ cross-references its single argument with the suffixal person marker *-n* 3SG.F.

(8) *Kawakan*

Lokono

kawa -ka -n  
absent -PERF -3SG.F.  
V S<sub>o</sub>

‘She’s gone.’  
(Pet, 1987)

And, as we found for Añun and Wayúu, the single argument of an active, intransitive verb is marked prefixally in example (9), where the active verb *osa* ‘go’ carries a single, prefixal person marker *l-* 3SG.M.

(9) *Losabo.*

Lokono

l-        osa -bo  
3.SG.M- go -IMPF  
S<sub>a</sub>        V

‘He is going.’  
(Pet, 1987)

Finally, we find that the same set of facts holds for Garifuna. In example (10) we find the transitive verb *alwaha* ‘look for’ cross-references two arguments: the A argument *l-* 3SG.M is marked prefixally; the O argument *-un* -3SG.F is marked suffixally.

(10) *Lalwahayon.*

Garifuna

l-        alwaha -ya    -un  
3SG.M- look.for PROG -3SG.F  
A        V                    O

‘He looks for her.’  
(Prendergast, f.n., 2012)

In example (11) the morphologically intransitive active predicate *egi* carries a single affix, the prefix *l-* 3SG.M, cross-referencing the single S<sub>a</sub> argument of this verb.

(11) *Legi Pablo*

Garifuna

l-        egi Pablo  
3SG.M- eat Pablo  
S<sub>a</sub>        V

‘Pablo eats.’  
(Stark, f.n., 2012)

Lastly, example (12) shows that the single S<sub>o</sub> argument of a stative predicate is cross-referenced with a suffixal person marker, just as it is for the other CNA languages; the stative intransitive predicate *hángi* ‘be stingy’ cross-references its single argument with the suffix *-ti* 3SG.M.

(12) *Hángiti mútu.*

Garifuna

háŋgi    -ti    mútu  
be.stingy -3SG.M person  
V        S<sub>o</sub>

‘He is stingy.’

(Munro, 2007, 117)

While these examples demonstrate the widespread active-stative alignment system found in Arawak, they do not exhaustively represent the argument marking systems of the CNA languages or wholly capture the alignment systems exhibited by these languages; Garifuna and Wayúu exhibit pockets of ergativity in certain contexts, discussed in Chapter 3, and Garifuna, Wayúu, and Añun all exhibit a suffixal person marking construction that only cross-references the subject of a predicate, neutralizing participant role in these constructions, the diachronic origins of which are the subject of Chapter 2.

Word order of overt arguments is generally irrelevant within the alignment systems of the Arawak languages, where arguments are most commonly encoded via verbal person marking, and free nominal or pronominal arguments often have marked discourse status, resulting in a variety of acceptable word orders for free arguments. Additionally, basic word order differs across the CNA languages: basic word order in Lokono is SVO, but VSO in the other three languages. For Garifuna, Wayúu, and Añun, an overt syntactic subject always follows the predicate, irrespective of predicate type.

Lokono is the only language that reflects active-stative alignment in the word order of its overt arguments, and it is the only CNA language not to exhibit the suffixal subject marking construction that is the focus of Chapter 2.

In addition to the active-stative marking exhibited in examples (7)–(9), Lokono encodes a active-stative split in its alignment system via word order, where A and S<sub>a</sub> arguments precede the verb, as seen in (13), and O and S<sub>o</sub> arguments follow the verb, as in (14). Unlike for the other CNA languages, overt arguments are not cross referenced on the verb with person markers in Lokono, as shown in example (15), where we see that the single argument of the verb, *hiaro* ‘woman’, is not marked on the verb. Pronominal arguments are encoded either with the person affixes or with free pronouns, never with both. Lokono only exhibits suffixal person markers for third person singular feminine and masculine, and for first person plural.

(13) *Li fatada de.*

Lokono

li    fatada de  
3SG hit    1SG  
A    V    O

‘He hit me.’

(Pet, 1987)



(14) *Fonasia de.* Lokono

fonasia - $\emptyset$  de  
hungry -PAST 1SG  
V S<sub>o</sub>

‘I was hungry.’  
(Pet, 1987)

(15) *To hiaro kanabafa.* Lokono

to hiaro kanaba -fa  
the woman listen -FUT  
S<sub>a</sub> V

‘The woman will listen.’  
(Pet, 1987)

Lokono word order is relevant to the analysis here because the set of properties I attribute to proto-CNA includes predicate initiality, an attribute the three other CNA languages retain. I argue for predicate initiality in proto-CNA in §2.5. Here, it is simply worth taking note of basic word order and alignment for each of these languages as a preview to the arguments made about alignment in the chapters that follow.

## Chapter 2

# Nominalization and alignment change in Caribbean Northern Arawak

This chapter examines a process of alignment change facilitated by the reanalysis of a suffixal subject nominalizer active in relativization as agreement morphology encoding a syntactic subject. Properties of the modern construction are related to properties of nominalizations, cross-linguistically. Nominalized verbs in predicate position are proposed as a bridging construction in this reanalysis, and a suffixal paradigm active in encoding objects and stative subjects are argued to have provided an analogical template for the reanalysis of the nominalizer as agreement morphology.

### 2.1 Introduction

This chapter examines the development of a suffixal person-marking strategy found in three of the four Caribbean Northern Arawak (CNA) languages, Garifuna, Wayúu, and Añun. This argument-marking strategy neutralizes the generalization that  $S_a$  and A arguments are encoded prefixally, while  $S_o$  and O arguments are encoded suffixally, as it cross-references all syntactic subjects suffixally, and does not cross-reference O arguments at all. I trace the suffixal person-marking morphemes involved in this cross-referencing strategy to a subject nominalizer that I reconstruct to proto-CNA. Given the subgrouping of the CNA languages established in Chapter 1, I argue that the suffixal subject-marking construction developed independently twice in the history of the modern CNA languages, and that these independent developments were made possible by constructions inherited by all of the Caribbean Northern Arawak languages, namely, the presence of the subject nominalization construction, the lack of a copula in clauses with non-verbal predicates, and a set of suffixal person markers used for stative subjects and syntactic objects. I additionally argue that the development of a copula from a demonstrative in Lokono blocked the suffixal subject-marking strategy from

developing in this language.

This chapter is structured as follows: §2.2 introduces the suffixal agreement strategy that is found in three of the four currently spoken CNA languages. §2.3 provides a description of the modern distribution of the subject nominalizer in the CNA languages, both in terms of where it has actively been involved in subject nominalization synchronically, and where it has been lexicalized as a part of nominal roots in the CNA languages. §2.4 describes non-verbal predication for the CNA languages, a structure I argue served as a bridging context in the reanalysis of the suffixal nominalizer as verbal person agreement. §2.5 maps the proposed diachronic development from nominalizer to agreement marker for Garifuna, Wayúu, and Añun. §2.6 concludes.

## 2.2 Suffixal subject marking in Caribbean Northern Arawak

In addition to the active-stative alignment pattern shown in (1)–(12), Garifuna, Añun, and Wayúu exhibit a construction where suffixal person markers crossreference an A or  $S_a$  argument, neutralizing participant role for arguments encoded with suffixal person markers — that is, suffixal person markers may encode any argument type in these languages, including an active subject, a stative subject, or a direct object. I argue that the suffixal subject marking exhibited in these languages is innovative and that it developed from a proto-CNA subject relativization strategy still active in Lokono.

This argument-marking strategy is shown for Garifuna in example (16), where the single  $S_a$  argument of the active verb *eremuha* ‘sing’ is encoded suffixally with the 1SG marker *-tina*.

(16) *Eremuhatina*. Garifuna suffixal subject construction

Eremuha -tina  
sing        -1SG

‘I sang.’  
(Kaufman, 2010, p. 7)

Example (17) shows the same construction in Añun, where the single argument of the active verb *amita* ‘climb’ is cross referenced with the suffixal SG.M marker *-chi*.

(17) *Amõtichi*

Añun suffixal subject construction

a- mïta -i -chi  
AT.1- climb -ASP.2 -SG.M

‘He climbed’  
(Patte, 1989, p. 97)

I will now discuss the distribution of the suffixing subject construction among the CNA languages, as I will argue that the modern distribution of this construction provides evidence for its historical origin. In the case that an A argument is encoded suffixally, the O argument is not cross-referenced on the verb. An O or  $S_o$  argument can never be marked prefixally on the verb. Suffixal A marking is further restricted within the individual languages.

For Añun and Wayúu, Álvarez (2014) states that this argument-marking strategy can only be used for transitive verbs when the complement to the verb is non-specific, shown for Wayúu in example (18), where the suffixal SG.M marker *-chi* cross references the A argument *pia* 2SG of the transitive verb *aya’lajüin* ‘buy’, and not its object, which is not cross-referenced on the verb at all. According to Álvarez, this sentence is only grammatical in the case where the speaker is talking about computers generally, and not a specific computer, as indicated in the gloss, where the definite determiner *the* is not a possible translation for the Wayúu prose.

(18) *Aya’lajüinjachi pia komputatoora.*

Wayúu suffixal subject construction

Aya’lajüin -ja -chi<sub>i</sub> pia<sub>i</sub> komputatoora<sub>j</sub>  
buy FUT -SG.M 2SG computer

‘You’re going to buy a (\*the) computer.’  
(Álvarez, 2014)

For Garifuna, the relevant discourse parameter for whether an object may not be cross-referenced on the verb is definiteness, as shown in example (19). Garifuna may encode an A argument suffixally only if the complement of the verb is indefinite. Specific, indefinite objects are not cross referenced on the verb in Garifuna, which is slightly different from, but closely related to the pattern observed for Wayúu.

(19) *Houtina keiki.*

Garifuna

hou -tina keiki  
eat 1SG cake

‘I ate (\*the) cake.’  
(Stark, 02nov2011, p.74)

Within CNA, the person, number, and gender features that are encoded with suffixal person markers vary. For Añun and Wayúu, suffixal agreement markers encode gender and number, but not person; a first or second person pronoun is compatible with these agreement markers, as long as the referent indexed by the free pronoun matches in number and gender with the person marker. Examples (20) and (21) show that the Wayúu masculine and feminine singular forms of the suffixal person markers are compatible with any singular pronoun.<sup>1</sup>

(20) *Ayonnajüşhi Kamiirü/taya/nia/pia.* Wayúu

Ayonnajü -shi Kamiirü/ taya/ nia/ pia  
 dance -SG.M Camilo 1SG 3SG.M 2SG

‘Camilo/I/he/you dance(s).’  
 (Álvarez, 2014)

(21) *Ayonnajüsü Mariia/taya/shia/pia.* Wayúu

Ayonnajü -sü Mariia/ taya/ shia/ pia  
 dance -SG.F María 1SG 3SG.F 2SG

‘María/I/she/you dance(s).’  
 (Álvarez, 2014)

Variation within the person systems of these suffixes seems to correspond to variation in co-occurrence restrictions for overt arguments for these languages. Unlike for Añun and Wayúu, Garifuna suffixal person markers encode gender, number, and person, and are incompatible with co-indexed free pronouns in main clauses.

(22) *Houtina üdüraü (\*nuguya).* Garifuna

hou -tina üdüraü (\*nuguya)  
 eat -1.SG fish 1.SG

‘I ate fish.’  
 (Stark, f.n.)

We see in (22) the suffixal person marker *-tina* 1.SG encodes person and number, and is incompatible with the free pronoun that has the same meaning *nuguya*.

In contrast to Lokono, Garifuna verbal person markers are compatible with overt arguments, as long as these are not pronominal. Example (23) shows that the 3SG.M suffix *-ti* is compatible with the co-indexed argument *Pablo*, but not the pronominal argument *ligiya*.

---

<sup>1</sup>Only the third person free pronouns encode gender, but for the use of the first or second pronoun to be felicitous in these constructions, the referent of the pronoun should correspond in gender with the suffixal agreement marker used on the verb.

(23) *Adiahati Pablo/\*ligiya.*

Garifuna

adiaha -ti Pablo/ ligiya  
 fish -3SG.MS Pablo 3SG.M

‘Pablo fishes.’  
 (Stark, f.n.)

Table 2.1 summarizes the alignment patterns and argument-marking strategies discussed in this section and §1.4. We see that Lokono is most restrictive, both in terms of which argument may be marked suffixally in main clauses (O or  $S_o$  only), and in terms of which overt arguments may be cross-referenced on the verb (none). Añun and Wayúu pattern together across the board, allowing any argument to be cross-referenced suffixally, and cross-referencing any free argument, pronominal or otherwise (specificity restrictions for objects aside). Garifuna falls in the middle, allowing for all arguments to be marked suffixally under the right conditions, and cross-referencing overt arguments so long as these are not pronominal. Finally, we see that Garifuna is the only CNA language to maintain a full range of person-marking distinctions in its suffixal person-marking paradigm.

	Añun	Wayúu	Garifuna	Lokono
suffixal O/ $S_o$	✓	✓	✓	✓
suffixal A/ $S_a$ (subject construction)	✓	✓	✓	✗
co-occurs with coreferential pronominal argument	✓	✓	✗	✗
co-occurs with coreferential non-pronominal argument	✓	✓	✓	✗
exhibits person distinctions	✗	✗	✓	✗

Table 2.1: Summary of suffixal person marking in CNA

In the following section, I will tie the suffixal A and  $S_a$  argument-marking pattern to a subject nominalization strategy used in relative clause formation that is actively retained only in Lokono. I argue that the reanalysis of a suffixal subject nominalizer as person agreement in Garifuna, Wayúu, and Añun led to the availability of the suffixal A/ $S_a$  argument-marking pattern in the first place; since the nominalizer is retained as such in Lokono, the absence of this person-marking strategy for Lokono is explained. In §2.4 I will argue that non-verbal predication provided a bridging context for the reanalysis of the suffixal nominalizer as person agreement in Garifuna, Wayúu, and Añun. These languages are predicate initial, exhibit no copula, and the nominalizer carries gender and number features for the target of relativization, making the reanalysis I propose possible in the context where a nominalized verb serves as predicate. Given the subgrouping established for the CNA languages, and the modern distribution of the morpheme in each of these languages, I argue that the parallel development of this suffixal subject-marking strategy in Garifuna and Wayúu-Añun is independent. That is, as is the case for the emergence of an ergative argument-marking strategy in Garifuna and Wayúu, as discussed in Chapter 3, it is the joint inheritance of similar morphosyntactic features that allowed for a parallel change to occur independently in these two languages, and not the inheritance of this structure from proto-CNA.

Finally, it is worth pointing out that Garifuna is the only CNA language that maintains person-marking distinctions across its suffixal person-marking paradigm, as well as the only CNA language that cannot crossreference a pronominal argument with agreement affixes. In the final section of this chapter I link these two facts analytically.

## 2.3 The CNA subject nominalizer and its reflexes

The Caribbean Northern Arawak languages all exhibit some reflex of the subject nominalizers  $*-t^hi$  (M) and  $*-t^hu$  (F)<sup>2</sup> (reconstructed below), either (1) frozen in demonstrably derived nouns, (2) functioning synchronically as a nominalizer, or (3) both. Person markers in the suffixing strategies discussed above are cognate with the third person suffixal subject nominalizer in Lokono, allowing for a straightforward analysis where these have undergone reanalysis as verbal agreement.

In this section, I present the synchronic distribution of reflexes of these suffixes in the four modern CNA languages, in all its forms, before turning to a diachronic analysis of its change from subject nominalizer to agreement marker. I begin with a brief explanation of clausal nominalization in the Amazonian context in order to elucidate how a suffixal nominalizer might be active in relative clause formation in the first place. I then present a formal comparison of the reflexes of the subject nominalizer in each of the CNA languages, providing evidence of cognacy for these reflexes across each of the CNA languages and justifying its reconstruction. I then examine the synchronic distribution of this morpheme in the the CNA languages to demonstrate that the morpheme is retained, and that it is retained in similar contexts for each of the CNA languages and that these contexts relate transparently to a historic subject nominalization construction used in relative clause formation.

### 2.3.1 Clausal nominalization

The Amazonian languages very commonly utilize nominalization in subordinate clause structures, so much so that clausal nominalization is taken to be an areal feature of the Amazonian languages (Gijn, 2014; Epps, 2012). The structural properties of these nominalizations vary depending on type of subordinate clause and language. Relative clauses often involve nominalization, and they are often headless, making their relationship to participant nominalization very tightly knit, and sometimes difficult to differentiate, leading to a lack of consensus about the structure of relative clauses, even when an overt relativized noun is present (Epps, 2012; Seki, 2000).

Comrie and Thompson (1985) presents a typology of nominalizations, making general observations about participant versus event nominalizations and the cline of verbal morphology

---

<sup>2</sup>These are probably reconstructable to proto-Arawak, as they are widespread throughout the family.

and dependents associated with each, where participant nominalizations are shown to exhibit fewer verbal properties than event nominalizations cross-linguistically. These properties include whether the nominalization exhibits tense, aspect, and mood morphology, whether the nominalized predicate can be modified with an adverb, and whether a dependent of the nominalized verb may exhibit case marking.

Baker and Vinokurova (2009) argue these properties fall out of the syntactic structure of each type of nominalization, where event nominalizations simply exhibit more verbal properties because they contain more syntactic structure cross-linguistically. They exemplify this by comparing event and agent nominalizations in English, contrasting nominalizations built off the transitive verb *find*, where ‘the finder of the wallet’ is an agent nominalization and ‘finding the wallet’ is an event nominalization.

Baker and Vinokurova posit more internal structure for the event nominalization than they do for the agent nominalization. They attribute the necessity of the preposition *of* on the direct object of the verb in the agent nominalization to a lack of syntactic structure that they take to be responsible for case-marking an object in English.

This analysis of nominalization provides a fruitful mechanism for understanding clausal nominalization in the Amazonian context, where a good deal of syntactic structure can be included in subordinate clauses that are formally nominalized, and where the optionality between headed and headless relative clause problematizes the distinction between relative clause and lexical nominalization.

I take nouns exhibiting a frozen reflex of the subject nominalizer in Garifuna, Wayúu, and Añun to be syntactically simple, carrying only gender and number agreement. I take the Lokono relativization structure to be syntactically complex because Lokono verbs carrying this nominalizer exhibit verbal properties like argument selection. Ultimately, I propose that having developed from the proto-CNA relativization construction accounts for synchronic properties of the subject suffixing construction in Garifuna, Wayúu, and Añun — specifically, the lack of object marking, lack of TAM morphology, and suffixal subject marking, itself, are a result of this historical development from a subject nominalization construction used in relative clauses with limited verbal properties.

### 2.3.2 Subject nominalizer and cognacy across the CNA languages

Reflexes of the subject nominalizer can be found in every Caribbean Northern Arawak language, and I argue that these are cognate. Table 2.2 shows the modern reflexes of the masculine and feminine forms of the subject nominalizer in the four CNA languages.

Garifuna, Lokono, Añun, and Wayúu exhibit the correspondence set /t/ - /t<sup>h</sup>/ - /t/ - /s/, as shown in Table 2.3. Añun /t/ and Wayúu /s/ palatalize adjacent to /i/, and /i/ corresponds straightforwardly across the four languages. For the masculine form of the suffix, I reconstruct



	MASCULINE	FEMININE
Wayúu	-ʃi	-si
Añun	-tʃi	-ti
Lokono	-t <sup>h</sup> i	-t <sup>h</sup> o
Garifuna	-ti	-tu

Table 2.2: Reflexes of the nominalizer

\*-t<sup>h</sup>i for proto-CNA. I reconstruct aspirated /t<sup>h</sup>/ rather than unaspirated /t/ because the corresponding segment for modern Garifuna and Lokono is aspirated.<sup>3</sup> Also, the sound change t<sup>h</sup> > tʃ is well attested cross-linguistically, and this change is exhibited by Wayúu and Añun. The /tʃ/-/ʃ/ correspondence in Aun and Wayuu suggests that \*t<sup>h</sup> palatalized to /tʃ/ in the ancestor of those two languages, with subsequent lenition to /ʃ/ in Wayuu.

Garifuna	Lokono	Añun	Wayúu	GLOSS
hitai	t <sup>h</sup> ina	–	ifa	‘blood’
hati	kat <sup>h</sup> i	keitʃi	kaʃi	‘moon’
tu-	t <sup>h</sup> i-		si-	3SG.F
ati	at <sup>h</sup> i		haʃi	‘pepper’
eyeritei	reit <sup>h</sup> i	eitʃi		‘husband’
agiti	kit <sup>h</sup> i	auwi	ouʃu	‘grandmother’
	it <sup>h</sup> i		aʃi	‘father’

Table 2.3: Caribbean Northern Arawak coronal correspondences

The reconstruction of the feminine form of the subject nominalizer is somewhat less straightforward than the reconstruction of the masculine form because there is variation in the vowel quality exhibited in its reflexes among the CNA languages. Synchronically, the reflexes of the feminine form of the subject nominalizer exhibit the vowel /u/ in Garifuna and /o/ in Lokono. The Wayúu and Añun reflexes both exhibit the vowel /i/. As shown in 2.14 Añun and Wayúu /i/ correspond regularly with Lokono /o/ and Garifuna /u/. Outside the Caribbean branch of Northern Arawak, words that are cognate to the forms presented here exhibit a round high or mid vowel, like Garifuna and Lokono (e.g., Wapishana *kashoroo* ‘bead’, *ka’u* ‘hand’, *dokozu* ‘grandfather’). Given that Añun and Wayúu form a subgroup to the exclusion of Lokono and Garifuna, and given that outside of CNA the corresponding segment is a back round vowel, I posit that the proto-CNA form of the subject nominalizer contained a round back vowel, and that Añun and Wayúu’s common ancestor underwent a regular change *u* > *i*. I reconstruct \*-t<sup>h</sup>u, rather than \*-t<sup>h</sup>o because *i* and *u* are both high vowels.

For both the masculine and feminine forms of the subject nominalizers, the exact reconstructions of the proto-CNA forms are not crucial to my analysis. However, establishing

<sup>3</sup>Modern Garifuna /t/ is aspirated, like Lokono /t<sup>h</sup>/. Aspiration is written for Lokono because it is distinctive, which is not the case for Garifuna, Añun, or Wayúu.

Garifuna	Lokono	Añun	Wayúu	GLOSS
gat <b>furu</b>	kasor <b>ho</b>		kaaʔ <b>i:rii</b>	‘bead’
at <b>fouha</b>			a: <b>fi:ha</b>	‘ferment’
wur <b>igi</b>		wi <b>ita</b>	wi <b>ttaa</b>	‘green’
uhob <b>u</b>	khab <b>o</b>	a: <b>pi</b>	ahap <b>i</b>	‘hand’
ubure <b>i</b>	bode <b>he</b>			‘fish hook’
igib <b>u</b>	fi <b>bo</b>			‘face’
asigar <b>u</b>	fi <b>kharho</b>			‘sugar cane’
buiru <b>hu</b>			pi: <b>liki</b>	‘white-lipped peccary’

Table 2.4: Caribbean Northern Arawak high vowel correspondences

cognacy, as I have done here by demonstrating regular sound correspondences across the CNA languages *does* matter for the overall argument presented here. I will demonstrate in the remainder of this section that the synchronic distribution of the subject nominalizer in each of the CNA languages provides more evidence that these morphemes are inherited from the same source.

**Garifuna** For Garifuna, *-ti* and *-tu* do not synchronically function as nominalizers. However, in addition to the use of the forms *-ti* and *-tu* as suffixal third person verbal agreement markers, many Garifuna nouns exhibit these in the form of frozen nominalizers, as shown in Table 2.5 with the verbs from which they were historically derived.<sup>4</sup>

Examining the meanings of the nouns exhibiting the frozen nominalizer, we find that the syntactic relation the derived forms hold to the verbs from which they are derived is that of subject; these cannot be understood across the board as agent nominalizations, as stative predicates like *mageira* ‘be homeless’ do not exhibit agentive subjects. It is worth noting that in modern Garifuna, constructions in which the nominalized forms serve as predicates with overt nominal subjects are synchronically ambiguous between verbal predicate marked for third person and nominal predicate with gender agreement. All other persons are distinguishable because verbal predicates take agreement morphology across all persons, and nominal predicates do not. I take this to mean that synchronically, these are two different syntactic constructions that have the same surface structure precisely because of their historical relatedness, as discussed in the following section.

Garifuna also exhibits reflexes of the frozen nominalizer in a small number of kinship terms. This pattern is more robust for the other CNA languages, but worth discussing for Garifuna, by way of preview for the discussion that follows for Lokono, Wayúu, and Añun. Table 2.6 shows an inexhaustive list of these terms.

<sup>4</sup>A number of these examples contain frozen forms of the Arawak privative *ma-* (i.e., *manounati* ‘mateless man’), the attributive *ga-* (i.e., *gaduru* ‘be guilty’), and a prefix *a-* that was at least historically required for subject relativization in Lokono. In the case of the privative and attributive, subject relativization seems to have occurred with derived stative predicates.

ROOT	MASCULINE	FEMININE	GLOSS
<i>adiaha</i> ‘to fish’	<i>adiahati</i>	<i>adiahatu</i>	‘fisher(wo)man’
<i>abinaha</i> ‘to dance’	<i>abinahati</i>	<i>abinahatu</i>	‘dancer’
<i>abürüha</i> ‘to write’	<i>abürühati</i>	<i>abürühatu</i>	‘writer’
<i>adaha</i> ‘make’	<i>adahati</i>	<i>adahatu</i>	‘maker’
<i>adugaha</i> ‘to fish for the Dügü’	<i>adugahati</i>	<i>adugahatu</i>	‘one who catches seafood’
<i>agumesera</i> ‘begin’	<i>agumeshouti</i>	<i>agumeshoutu</i>	‘beginner’
<i>ásaha</i> ‘cut hair’	<i>ásahati</i>	<i>ásahatu</i>	‘barber’
<i>chülü</i> ‘to arrive’	<i>chülüdügüti</i>	<i>chülüdügütu</i>	‘stranger’
<i>duru</i> ‘crime’ — <i>gaduru</i> ‘be guilty’	<i>gadurunheiti</i>	<i>gadurunheitu</i>	‘one who does wrong’
<i>afaraha</i> ‘to kill’	<i>gafarahati</i>	<i>gafarahatu</i>	‘murderer’
<i>ariha</i> ‘to see’	<i>garihati</i>	<i>garihatu</i>	‘beggar’
<i>ageiraiü</i> ‘homeland’	<i>mageirati</i>	<i>mageiratu</i>	‘refugee’
<i>mageira</i> ‘be homeless’			
<i>inounaiü</i> ‘spouse’	<i>manounati</i>	-	‘mateless man’
<i>meteñu</i> ‘not having parents’	<i>meteñuti</i>	<i>méteñutu</i>	‘orphan’
<i>-ougién</i> ‘above’ ( <i>preposition</i> )	<i>ougiéti</i>	<i>ougiétu</i>	‘superior person’

Table 2.5: Garifuna nouns exhibiting the frozen nominalizer

KINSHIP TERM	GLOSS
<i>áruguti</i>	‘grandfather’
<i>amarieiduti</i>	‘bridegroom’
<i>amarieidutu</i>	‘bride’

Table 2.6: Garifuna kinship terms exhibiting the frozen nominalizer

I argue that the proto-CNA subject nominalizer was available for both verbal and non-verbal predicates; the analytical meanings for *áruguti* ‘grandfather’ likely originally being ‘one who is the progenator’ historically. The terms *amarieiduti* ‘bridegroom’ and *amarieidutu* ‘bride’ are demonstrably related to the verb *amarieida* ‘marry’, so more straightforwardly relatable to the subject nominalization construction. For the other CNA languages, kinship terms more widely exhibit reflexes of the subject nominalizer. I propose the same mechanism for the conventionalization of this suffix for kinship terms for the other CNA languages.

**Lokono** Lokono is the only CNA language that productively uses reflexes of the subject nominalizers,  $-t^hi$  and  $-t^hu$  (Lokono  $-thi$  and  $-tho$ ) in subject relativization. The fact that this relativization strategy is synchronically productive in Lokono provides evidence for an analysis where this construction was present in proto-CNA. The modern distribution of the frozen reflexes the subject nominalizer in the other CNA languages falls out of attributing subject relativization to proto-CNA. Here, I discuss the modern Lokono distribution of these clauses to show they are truly relativizations.

In clauses where Lokono *-thi* and *-tho* serve as the relativizer, these suffixes appear on the relative verb, and the subject serves as the target of relativization. These constructions can be either headed or headless, allowing for a nominalization analysis. Because a verb carrying the subject nominalizer can stand in argument position without the relativized noun, it can be interpreted as the argument, itself, on some level of analysis. Example (24) shows a headed relative clause, where *li wadili* ‘the man’ is the subject of the relative verb, and the target of relativization, preceding the relative verb. The verb *dia* ‘speak’ carries the masculine version of the subject relativizer *-thi*, which agrees with the relativized noun.

- (24) *Li wadili diathi jon ...* Lokono
- li        wadili dia    -thi    jon  
 3.SG.M man    speak -REL.M there
- ‘The man who spoke there ...’  
 (Pet, 1987)

Similarly, example (25) shows a headed relative clause, this time built on the stative predicate *firo* ‘be big’, where *aba kabadaro* ‘a jaguar’, subject of the relative verb, serves the target of relativization. Here, the relative verb precedes the relativized noun, but follows its determiner, maintaining VS word order for stative predicates as in main clauses. The subject nominalizer *-tho* agrees with the feminine target of relativization.

- (25) *aba firotho kabadaro ...* Lokono
- aba firo    -tho    kabadaro  
 one be.big -REL.F jaguar.F
- ‘a big jaguar (or, a jaguar which is big)’  
 (Pet, 1987)

Example (26) shows a headed relative clause that is marked for future tense, and like in the last two examples, the target of relativization (here *hiaro* ‘woman’) is the subject of the relative verb. The relative suffix *-tho* agrees with the relativized noun in gender. The future suffix attaches outside the relative suffix.

- (26) *to hiaro sokothofa ada ...*
- to hiaro    soko -tho    -fa    ada  
 the woman chop -REL.F -FUT wood
- ‘the woman who will chop the wood...’  
 (Pet, 1987)

Finally, example (27) shows a headless relative clause based on the verb *kaky* ‘live’ and the suffixal relativizer *-tho*. The free translation ‘two women’ is available because *-tho* is marked for feminine gender, and any subject of the verb *kaky* is necessarily living; there is no overt relativized noun here.

(27) *bian kaky-tho-be*

bian kaky -tho -be  
two live -REL.F -PL

‘two women’, *literally*, ‘two female living things’  
(Pet, 1987)

Like Garifuna, Lokono additionally exhibits a number of nouns that are demonstrably related to verbs in the language and contain a frozen form of the nominalizer. Table 2.7 is a replication of a partial list of such nouns collected in Pet (1987). Like in the case of synchronic nominalizations, these carry the suffixes *-thi* and *-tho*, though the nouns they derive appear to have become conventionalized. We find that the syntactic relationship between the verb from which the noun is historically derived and the derived noun is that of subject, just as it is for Garifuna, whether or not there is an available synchronic nominalization process. Examples like these, and similar examples in the other CNA languages suggest a common source for nouns exhibiting the frozen nominalizer. Since we can show that these examples involve the nominalizer in Lokono, these examples provide evidence they do in Garifuna, as well.

VERB	NOUN
<i>malhitan</i> ‘to create’	<i>malhitathi</i> ‘creator’
<i>kakyn</i> ‘to live’	<i>kakytho</i> ‘woman’
<i>dian</i> ‘to speak’	<i>diathi</i> ‘speaker’
<i>ajomyn</i> ‘to be high’	<i>ajomynthi</i> ‘God’
<i>hehen</i> ‘to be yellow’	<i>hehethi</i> ‘yellow one’

Table 2.7: Lokono nouns exhibiting the frozen nominalizer from Pet (1987)

Finally, Pet (1987) also points out that a number of kinship terms exhibit *-thi* and *-tho* endings (shown in Table 2.8), but that the roots of these are not synchronically segmentable. For example, the Lokono word for wife *eretho* ends in *-tho*, but Lokono exhibits no verb *ere* from which the term might be derived. Wayúu, Añun, and Garifuna exhibit the cognate forms *eerüin*, *eri*, and *jierü*, respectively, though only the Lokono term exhibits the frozen nominalizer. As suggested above for Garifuna, a possible avenue of analysis for this distribution is that the subject relativize nominalizers *-thi* and *-tho* were available for relativizations built on non-verbal clauses, allowing for the suffix to appear on verbal **and** non-verbal predicates. Historically, then, the Lokono term *eretho* could have meant ‘one who is a wife’. Because the subject of a headless relative clause is null, the ambiguity that exists for relativized verbs is

also for present relativized nominal predicates, and the relative ending that carries gender and number features is available for reanalysis as nominal gender number morphology just as it is for verbal predicates.

KINSHIP TERM	GLOSS
<i>dathi</i>	‘my father’
<i>daithi</i>	‘my son’
<i>da(e)rethi</i>	‘my husband’
<i>da(e)retho</i>	‘my wife’
<i>dokithi</i>	‘my younger brother’
<i>dokitho</i>	‘my younger sister’
<i>dabokithi</i>	‘my older brother’

Table 2.8: Lokono kinship terms exhibiting the frozen nominalizer from Pet (1987)

To summarize, Lokono is both the only CNA language to exhibit a synchronic subject nominalization process utilizing the morphemes under discussion, and the only CNA language not to exhibit the suffixal subject-marking construction. Like Garifuna, the nominalizer also appears frozen in nouns that are historically related to verbs.

**Wayúu** The distribution of the nominalizer is much less widespread in Wayúu than it is in Garifuna and Lokono, but it is attested in similar domains, frozen in nouns demonstrably related to verbs with the participant role of subject, and in kinship terms. An exhaustive summary of forms exhibiting a reflex of the proto-CNA nominalizer follows in Table 2.9.

DERIVED NOUN	GLOSS
<i>achonyaashi</i>	‘adopted child (M)’
<i>achonyaasü</i>	‘adopted child (F)’
<i>aleshi</i>	‘brother-in-law’
<i>apüshi</i>	‘relative’
<i>ashi</i>	‘father’, ‘paternal uncle’
<i>atuushi</i>	‘grandfather’
<i>alaülashi</i>	‘chief (M)’
<i>alaülasü</i>	‘chief (F)’
<i>anashi</i>	‘good one (M)’
<i>outshi</i>	‘healer (M)’
<i>outsü</i>	‘healer (F)’

Table 2.9: Wayúu nouns exhibiting the frozen nominalizer

The only forms demonstrably related to verbal roots from this list are *alaülashi* and *alaülasü* ‘chief’, derived from *laülaa* ‘be old’, and *anashi* ‘good one’ from *ana* ‘be good’,

though I speculate *outshi* and *outsü* are at least historically derived from a verb for ‘heal’ — the Garifuna term for ‘to heal/treat with medicine’ is *ousera*, which is plausibly related. The list here exhibits more vocabulary items with the masculine ending than the feminine one. It is not clear if this is the result of an actual lexical gap, or an artifact of lexicographic coverage. The primary dictionary consulted (Captain and Captain, 2005) exhibits forms for both masculine and feminine lexical items when there are terms for both, but when a semantic distinction occurs given a gender difference, it is unclear whether there might exist a parallel form elsewhere in the lexicon that simply was not recorded (e.g., ‘paternal uncle’ vs. ‘paternal aunt’). Though significantly less widespread than in Garifuna and Lokono, the attestation of nouns carrying the frozen nominalizer serve as evidence that the nominalizer existed in proto-CNA, which is central to the arguments developed here.

**Añun** Nouns exhibiting a reflex of the subject nominalizer are even more sparsely attested in Añun, but those nouns that do exhibit a reflex of the nominalizer encode the same domains of meaning as those found in the other CNA languages. Specifically, most nouns exhibiting a reflex of the nominalizer in Añun are kinship terms, as seen in Table 2.10, where ‘spouse’, ‘companion’, ‘husband’, and (arguably) ‘young man’ all fall under this rubric. The other two items listed here both appear to be subject nominalizations built off the verb *jake* ‘be new’.

DERIVED NOUN	GLOSS
<i>amoyachi</i>	‘companion’
<i>eichi</i>	‘man’, ‘husband’
<i>eimüchi</i>	‘spouse’
<i>mayiichi</i>	‘young man’
<i>jakechi</i>	‘one who is new (M)’
<i>jaketü</i>	‘one who is new (F)’

Table 2.10: Añun nouns exhibiting the frozen nominalizer

The argument made for the role of relativization of non-verbal predicates in the formation of kinship terms for Lokono can be repeated here. Añun exhibits lexical items that are formally related to *amoyachi* ‘companion’ and *eichi* ‘man’, ‘husband’. The former appears to be derived from the word *amoyo* ‘navel’, and the latter appears to be derived from the word *ei* ‘father’. One can imagine a derivation where *amoyachi* once exhibited a constructional meaning like ‘one who is at the navel’ that became conventionalized to mean ‘companion’, and a similar derivation for *eichi*, where it presumably once meant ‘one who is a father’ and later developed the conventional meaning of ‘man’ or ‘husband’.

Given the close relationship between the Añun and Wayúu, it is unsurprising to find that Añun lacks a larger number of nouns containing the frozen nominalizer. Very likely, the subject nominalization construction was lost in Añun and Wayúu’s ancestor language following reanalysis as verbal morphology, resulting in its current limited distribution.

### 2.3.3 Summary

Table 2.11 summarizes the synchronic distribution of the subject nominalizer in the CNA languages. We see that every CNA language patterns together except Lokono, which still retains the subject nominalizer as such.

	Añun	Wayúu	Garifuna	Lokono
found frozen in nouns denoting subjects	✓	✓	✓	✓
found in kinship terms	✓	✓	✓	✓
synchronically active as nominalizer	✗	✗	✗	✓

Table 2.11: Summary of the distribution of the subject nominalizer in the CNA languages

## 2.4 Non-verbal predication in CNA

Non-verbal predication, and, specifically, nominal predication, in the Caribbean Northern Arawak languages is important for the reanalysis of subject nominalizer as verbal agreement morphology, the trajectory I propose for the subject agreement construction. Except for Lokono, the Caribbean Northern Arawak languages do not exhibit a copula, and nouns may serve as predicates if they are clause initial, just like verbal predicates, allowing for ambiguity between nominal gender and number agreement, and verbal agreement morphology. Nominalized verbs, in particular, facilitate this ambiguity, the formal similarity between lexical verb carrying number and gender agreement for subject and nominalized verb carrying number and gender features for referent being high in these languages.

In this section, I provide a description of nominal predication in the modern CNA languages. It is carried out in the same fashion for Garifuna, Wayúu, and Añun — a nominal predicate simply precedes its subject and exhibits no gender or number agreement unless the nominal predicate is derived. Lokono, the only language not to have developed the suffixal subject-marking strategy, employs a copula in nominal predication, and allows for either the subject or the nominal predicate to be initial.

**Garifuna** Garifuna nominal predication is carried out by nominal juxtaposition. As in clauses with verbal predicates, word order is strict, where the predicate must precede the subject, unless there is topic or focus extraction, which is morphologically marked. Garifuna is a zero-copula language. Nominal predication does not involve verbal morphology.

Example (28) shows a clause with the nominal predicate *adiahati* ‘fisherman’ (historically derived from the verb *adiaha* ‘to fish’) and the proper noun *John* as the subject. Because



the nominal predicate is derived, it carries masculine agreement morphology matching its subject.

(28) *Adiahati Pablo/au/amira/ligiya.* Garifuna

Adiahati Pable /au /amira /ligiya  
fisherman.M John 1SG.MS 2SG.MS 3SG.M

‘Pablo/I/you/he is/am/are a fisherman.’  
(Stark, notebook 1, p.84)

Similarly, example (29) exhibits the derived nominal predicate *surusiatu* ‘doctor’ and carries feminine agreement morphology that matches its subject *nitu* ‘my sister’, precisely the type of construction I argue offered the the structural ambiguity necessary for these endings to undergo reanalysis as verbal agreement morphology.

(29) *Surusiatu nitu/nuguya/buguya/tuguya.* Garifuna

surusiatu ni- tu /nuguya /buguya /tuguya  
doctor.F 1SG.POSS- sister 1SG.FS 2SG.FS 3SG.F

‘My sister/I/you/she is/am/are a doctor.’  
(Stark, notebook 1, p.83)

For both example (28) and (29), there is a surface string ambiguity with third person subjects between noun that exhibits gender agreement and verb with subject agreement, as shown for example (28), repeated below with possible interpretations.

(30) *Adiahati Pablo.*

adiahati Pablo  
fisherman.M Pablo

‘Pablo is a fisherman’

(31) *Adiahati Pablo.*

adiaha -ti Pablo  
fish -SG.M Pablo

‘Pablo fishes.’

~

Unlike what we find in the case of the Garifuna subject agreement construction, nominal agreement morphology does not encode person for Garifuna, as we see in example (29), where the suffix *-tu* agrees in number and gender with its subject, but does not vary with respect to person, regardless of the person of the subject. Agreement morphology exhibited by nominal predicates parallels agreement for the subject construction exhibited by Wayúu and Añun — gender and number alone are encoded on nouns that exhibit gender morphology, **and** nouns that exhibit this morphology are compatible with free pronominal subjects, as shown by the permissibility of the 1st, 2nd, and 3rd person pronouns in examples (28) and (29).

The historically derived nouns that serve as nominal predicates have the same distribution as other nouns in predicate position. Example (32) exhibits a noun that does not carry gender or number agreement morphology *meisturu* ‘teacher’. Like in the previous two examples, the nominal predicate precedes the subject. Here, the nominal predicate is an old Spanish loan, which might independently explain the lack of gender and number agreement on the noun. However, most nouns in Garifuna are not formally marked for gender and number. It is not a general property of the language. Rather, it is limited to those nouns that are historically derived from verbs. The nouns *irahü*, ‘boy’ *wiri*, ‘woman’, and *wügüri* ‘man’, for example, all work equally well as nominal predicates with no gender or number agreement.

- (32) *Meisturu Lev.* Garifuna
- meistro Lev  
 teacher Lev
- ‘Lev is a teacher.’  
 (Stark, notebook 1, p.83)

In summary, Garifuna is predicate initial in clauses with non-verbal predicates, just as it is in clauses with verbal predicates, and the language exhibits no copula, as I show for Wayúu and Añun below. In all three languages, only those nominal predicates exhibiting the frozen nominalizer exhibit gender and number agreement for their subjects.

**Wayúu** Nominal predication in Wayúu closely resembles the Garifuna nominal predication. Nominal predicates simply precede their subjects with no copula, as we see in examples (33)–(36). Like clauses with nominal predicates in Garifuna, these clauses take no verbal morphology, and nominal predicates exhibit no number or gender agreement unless they exhibit the suffix related to the proto-CNA nominalizer, as described in §2.3.

We see in example (33) that a first person pronoun serves as subject, following the nominal predicate *Wayúu*.

- (33) *Wayúu taya.* Wayúu
- Wayúu taya  
 Wayúu 1SG
- ‘I am Wayúu.’  
 (Álvarez, 2014)

Similarly, in example (34), the nominal predicate *alijuna* ‘creole’ precedes its subject and carries no number, gender, or person agreement morphology.

(34) *Alijuna ta'wayuusekalü.* Wayúu

alijuna t- a'wayuuse -kalü  
creole 1SG- wife DEM.SG.F

‘My wife is creole.’  
(Álvarez, 2014)

The same is true for examples (35)–(37). The generalization of predicate initiality is robust — both examples exhibit nominal predicates that are clause initial and subjects that follow these initial predicates.

(35) *Jima'ai Kamiirü.* Wayúu

jima'ai kamiirü  
boy Camilo

‘Camilo is a boy.’  
(Álvarez, 2014)

(36) *Nüchon Kamiirü pia.* Wayúu

nü- chon Kamiirü pia  
3SG- child Camilo 2SG

‘You’re Camilo’s son.’  
(Álvarez, 2014)

Example (37) exhibits a nominal predicate that carries morphology related to the proto-CNA suffixal nominalizer found in Table 2.3.2, and it agrees in number and gender with its subject.

(37) *Watuushi pia.* Wayúu

w- atuushi pia  
1PL grandfather 2SG

‘You are our grandfather.’  
(Álvarez, 2014)

Just like for Garifuna, nominal predicates exhibiting the frozen nominalizer agree with their subjects and other nominal predicates do not.

**Añun** Nominal predication in Añun patterns with nominal predication in Garifuna and Wayúu. Nominal predicates precede their subjects and exhibit no verbal morphology, as we see in examples (38)–(41).

Example (38) parallels Wayúu example (33) — a first person pronoun follows the predicate *Añun*.

- (38) *Añú te.* Añun
- Añú te  
Añun 1SG
- ‘I am Añún.’  
(Álvarez, 2008)

Example (39) shows the nominal predicate *ayounaa* ‘creole’ with the second person pronoun as subject.

- (39) *Ayounaa piya.* Añun
- ayounaa piya  
creole 2SG
- ‘You are creole.’  
(Álvarez, 2008)

Example (40) exhibits a nominal predicate with a proper noun as subject. Word order and morphology do not change — nominal predicates are initial, followed by their nominal subjects, and carry no agreement unless they are historically derived.

- (40) *Jümaayi Camilo.* Añun
- jümaayi Camilo  
boy Camilo
- ‘Camilo is a boy.’  
(Álvarez, 2008)

The same holds for Añun example (41). The nominal predicate is initial, followed by its subject.

(41) *Teimüchi piya.*

Añun

ta- eimüchi piya  
1SG husband 2SG

‘You are my husband.’  
(Álvarez, 2008)

Here, like for Garifuna and Wayúu, the predicate carries the frozen nominalizer and so agrees in person and number with its subject.

**Lokono** Nominal predication is carried out similarly in Lokono. However, word order is not strictly predicate initial, a somewhat surprising fact, given that Lokono word order is strict in clauses with verbal predicates, and stative predicates precede their subjects. I conjecture that the examples with initial subjects reported here are likely topicalization constructions, as discussed below. Lokono additionally exhibits a copula *to* which appears to be historically related to the demonstrative in the language of the same phonological shape, as discussed in the following section. As in the case of Garifuna, nominal predicates do not carry any verbal morphology. The copula itself does not carry TAM features. Notably, Lokono is the only CNA language to have developed a copula, and it is the only CNA language **not** to exhibit the subject agreement construction described in §2.2 of this chapter. The bridging construction I propose for the CNA languages that have developed the suffixal subject agreement described in this chapter is a clause with a derived nominal predicate and no copula. Because Lokono does not exhibit this construction, it was not a candidate for the development of the suffixal subject-marking construction in the first place.

We find in examples (42) and (43) predicate-initial clauses with nominal predicates, similar to the word order we find in Garifuna clauses with nominal predicates, and the expected word order for stative predicates in Lokono, as discussed in §1.4. In both cases, the form of the copula remains the same — it does not agree with the number, gender, or person of the subject of the predicate.

(42) *Nederland khondo to de ojo.*

Lokono

Nederland khondo to de ojo  
Netherlands inhabitant COP 1.SG mother

‘My mother is Dutch.’  
(Pet, 1987)

(43) *Bylhytalhin ron to dathi.* Lokono

Bylhyta -alhin ron to da -thi  
scratch -one.who.habitually.does only COP 1.SG -father

‘My father is only a writer (i.e. has no other profession).’  
(Pet, 1987)

In examples (44)–(47) the clauses are subject, and not predicate, initial. These constructions may be topic constructions with a fronted, topical subject — in every example except (44), the subject is marked with a demonstrative, which signals topicality in Lokono.

(44) *De to bylhytalhin.* Lokono

De to bylhyta -alhin  
1.sg COP write -one.who.habitually.does

‘I am a writer.’  
(Pet, 1987)

(45) *Toho to aba kakosiro.* Lokono

toho to aba kakosiro  
this COP one deer

‘This is a deer.’  
(Pet, 1987)

Examples (46) and (47) exhibit predicates that carry endings related to the suffixal nominalizer. Notably, these predicates are sentence final, and a copula intervenes between them and their subjects, making them unavailable for reanalysis as verbs — they do not appear syntactically where verbal predicates do, and they exhibit morphology not found in clauses with verbal predicates, namely, the copula *to*.

(46) *Tora hiaro to daretho.* Lokono

tora hiaro to da- retho  
that woman COP 1SG- wife

‘That woman is my wife.’  
(Pet, 1987)

(47) *Lira wadili to darethi.*

Lokono

lira wadili to da- rethi  
that man COP 1.SG- husband

‘That man is my husband.’

(Pet, 1987)

We find Lokono to be the only CNA language to exhibit a copula. This copula is diachronically related to a demonstrative, and is not exhibited by any other CNA language. If examples (44)-(47) are pragmatically unmarked, Lokono is additionally the only CNA language to exhibit subject-initial clauses with nominal predicates. However, I suspect these examples to be topic constructions, where the subject is clause initial precisely because of its topicality, and basic word order to be predicate-initial, like the other CNA languages and like other stative predicates in Lokono.

**Summary** Summarizing this section, and shown in Table 2.12, the CNA languages all exhibit clauses with nominal predicates. For Garifuna, Wayúu, and Añun, nominal predication is carried out by word order, alone, where a nominal predicate is initial and followed by its subject. Lokono is the only CNA language to exhibit a copula, and the only language to permit initial subjects in these constructions if we believe the examples from Pet (1987) to be pragmatically unmarked. Additionally, every CNA language exhibits nominal predicates that carry a reflex of the proto-CNA subject nominalizer, frozen or not. In the following section, I will use these facts to argue that proto-CNA exhibited initial nominal predicates, and that a deverbal noun carrying the subject nominalizer could serve as predicate in this clause type, and that this allowed for reanalysis of the subject nominalizer as agreement morphology.

	Añun	Wayúu	Garifuna	Lokono
copula present	✗	✗	✗	✓
predicate initial	✓	✓	✓	✓ (absent topic fronting)
person and number agreement possible	✓	✓	✓	✓

Table 2.12: Summary of nominal predication in CNA

## 2.5 Diachronic development

In this section, I propose a diachronic trajectory for the suffixal subject person-marking construction we find in the modern CNA languages and reconstruct their diachronic sources for proto-CNA. I propose that proto-CNA exhibited a subject relativization strategy like the one synchronically present in Lokono, as well as a non-verbal predication construction like the one present in modern Garifuna, Añun, and Wayúu, and that the presence of these two

constructions together allowed for the reanalysis of the suffixal subject nominalizer as verbal morphology.

I draw upon evidence from the information structural properties of copular clauses and nominalizations to support my analysis. Specifically, I argue that the use of a free relative clause as predicate in a non-verbal clause historically exhibited marked information structural properties, like those found in specificational copular clauses cross-linguistically, where a free relative often serves as a topical predicate in specificational constructions. The loss of this marked information structural status facilitated a change from nominal to verbal morphology in Añun and Wayúu. Garifuna maintains a marked information structural status, leading to the marginal nature of this construction in the language. Lokono’s development of a bonafide copula blocked the development of a suffixal subject construction altogether, and the proto-CNA relative clause construction is maintained. Topic constructions in CNA are examined to further support this analysis.

Finally, I turn to the phonological properties of the suffixal person-marking systems. The third person masculine endings are cognate across the languages that exhibit them (Garifuna, Añun, and Wayúu), but Garifuna exhibits person distinctions that none of the other CNA languages exhibit, and Añun exhibits an additional third person feminine morpheme that is unexpected given regular sound correspondence across the CNA languages. For Garifuna, I argue that the development of person-marking distinctions is an analogical change based on a suffixal verbal person-marking system not found in the other three CNA languages. Evidence for this analysis comes from suffixal person-marking paradigms in modern Garifuna, and from languages outside the CNA branch of Arawak that maintain similar strategies. For Añun, I argue the morphemes involved in suffixal subject marking spread from the verbal paradigm, and that this change may have been partially facilitated by bilingualism in Wayúu — specifically, a phonological merger in the shape of the third person masculine verbal suffix with the third person masculine subject nominalizer in Añun allowed for the third person feminine verbal marker to shift to the suffixal subject-marking construction.

### 2.5.1 Proto-CNA syntactic constructions

Crucial to my analysis is the presence of both a nominal predication strategy involving an initial predicate and no copula and a subject relativization strategy that exhibited the suffixal morpheme  $*-t^hi$  (M) and  $*-t^hu$  (F) in proto-CNA. First, I provide arguments for the analysis that proto-CNA was predicate initial, and exhibited no copula. Then, I argue that proto-CNA exhibited the subject relativization strategy discussed in §2.3. Bringing these analytical facts together, I then trace the diachronic development of the suffixal subject-marking strategy in the CNA languages.

**Predicate initiality in CNA** The reconstruction of word order for language families is somewhat controversial (Lightfoot, 1979; Harris, 2008; Campbell and Harris, 2002; Barðdal,



2013), but the time depth at which the CNA languages are related is relatively shallow (roughly 1200 years for proto-CNA, 1000 years for TA-Arawak, and 500 years for proto-Añun-Wayúu (Stark, 2017), and the branching structure of the clade is such that VSO word order (predicate initiality) is very likely a retention in Garifuna, Añun, and Wayúu, and deviations from that word order in Lokono are likely innovative. Since Lokono, Añun, and Wayúu form a subgroup to the exclusion of Garifuna, the likelihood that a deviation in word order happened in Lokono, only, is a more parsimonious scenario in a simple majority-rules-style analysis.

Lokono has been shown to have undergone an analogical process in its pronominal system, where bound person markers have influenced the free pronominal paradigm, leading to a active-stative split encoded in Lokono’s word order (§1.4). Prefixal person markers that encoded an A or  $S_a$  argument have been shown to have influenced word order in free nominal arguments (de Carvalho, 2016), providing good support for an analysis where proto-CNA was historically predicate initial like Garifuna, Wayúu, and Añun. Further, every CNA language exhibits nominal predicate constructions that are predicate initial, even if Lokono also allows for subject initiality in these constructions.

Looking outside Northern Arawak, we find that predicate initiality is the overwhelming pattern exhibited by the language family, though a marked discourse allows for a variety of word orders in most Arawak languages (Aikhenvald, 1999). However, the Northern Arawak languages tend not to be predicate-initial, with many exhibiting the Lokono pattern of SVO in transitive clauses, SV in active intransitive clauses, and VS in stative intransitive clauses (Aikhenvald, 1999). This pattern is summarized in Table 2.13. I argue that this pattern is innovative (= does not reconstruct to proto-Arawak), and that the Lokono change was independent from the rest of Northern Arawak.

	Garifuna	Añun	Wayúu	Lokono	Achagua	Baniwa	Wapishana	Palikur
	VSO	VSO	VSO	SVO	SVO	SVO	SVO	SVO
<i>active</i>	VS	VS	VS	SV	SV	SV	SV	SV
<i>stative</i>	VS	VS	VS	VS	SV	VS	VS	SV

Table 2.13: Northern Arawak word order

Following Hawkins (1994, pp. 95-106), I assume that a change which separates verbal arguments from the verb itself increases processing load, and is therefore less likely than the reverse change — because VSO word order separates the verb from its object, the claim is that a change in word order with this output (e.g., SVO  $\rightarrow$  VSO) is unlikely because it puts a higher processing load on a language user. Under this view, the most parsimonious word order reconstruction for proto-CNA is VSO, where Lokono underwent a word order change VSO  $\rightarrow$  SVO that allowed for adjacency between a predicate and its arguments, decreasing processing load for that construction.

Further, the left edge of the clause is a topic position for the CNA languages (and many other languages, cross linguistically), as shown for Garifuna in (48), where the topical constituent

sits at the left edge of the clause.<sup>5</sup> Given the close relationship between subjects and topicality cross-linguistically (Li and Thompson, 1976), it is unsurprising for subject-initiality to emerge multiple times in Arawak, while the reverse change lacks a plausible bridging context for such a reanalysis to occur.

(48) *Wagiya hiyaru mosu wegi üdüraü.* *Garifuna*

**wagiya hiyaru** [<sub>TP</sub> mosu w- egi üdüraü ]  
 1.PL girl must 1.PL- eat fish

‘As for us girls, we must eat fish.’  
 (Stark, Notebook 2, p.19)

A final argument in favor of reconstructing predicate initiality for proto-CNA comes from the branching structure for Arawak derived by a large lexical phylogenetic analysis carried out by Walker and Ribeiro (Walker and Ribeiro, 2011). The structure derived from this work identifies Northern Arawak coherently, but fails to identify Southern Arawak, suggesting that properties of the Southern Arawak languages that link them typologically (e.g., predicate-initiality (Aikhenvald, 1999)) are retentions from proto-Arawak. In the Walker and Ribeiro analysis, CNA is one of the earliest groups to branch off from Northern Arawak, allowing for a logical possibility where CNA retained predicate-initiality, like the southern Arawak supgroups that exhibit that feature, and unlike many other Northern Arawak languages.

**Zero copula nominal predication in proto-CNA** I next argue that proto-CNA exhibited a zero-copula nominal predication strategy. Recall that, to the exclusion of Añun, Wayúu, and Garifuna, Lokono exhibits a copula. Again, given the known structure of the CNA branch of Arawak, where Lokono, Añun, and Wayúu form a subgroup to the exclusion of Garifuna, the likelihood is that a morphological irregularity exhibited by Lokono, only (here, the presence of a copula), will be an innovation, rather than a retention following an analysis that appeals to parsimony, the alternative analysis being that the proto-CNA copula was independently lost twice in the history of the language group: once in Garifuna, and once in proto-Añun-Wayúu.

The synchronic presence of a copula in Lokono can be directly tied to a demonstrative pronoun in the language, and I argue that this is not a retention from proto-CNA, but rather an innovation in Lokono. Demonstrative to copula is an established grammaticalization trajectory (Pustet, 2003; Heine and Kuteva, 2004), and the source construction for the grammatical change is clear: a nominal predicate followed by a subject introduced by a demonstrative pronoun followed by a reanalysis of this demonstrative as a copula. The language still exhibits the strategy of introducing a nominal argument with a demonstrative, as shown in example (49), and I have just argued for predicate initiality in proto-CNA.

---

<sup>5</sup>Fronted topics exhibit person marking on the verb, in contrast with fronted focal constituents.

(49) *Lirabo sokofa to ada.*

Lirabo soko -fa to ada  
 he.there chop -FUT DEM tree

‘That man over there will chop that tree.’  
 (Pet, 1987)

Additionally, looking outside the CNA subgroup, we find that the other Northern Arawak languages tend to be zero copula, and that those languages with copulas do not exhibit copulas cognate to the Lokono form, suggesting that they, like Lokono, innovated copulas.

Garifuna	Lokono	Añun	Wayúu	Achagua	Baniwa	Wapishana	Palikur
no copula	<i>to</i>	no copula	no copula	no copula	áa	no copula	no copula

Table 2.14: Northern Arawak copulas

**Subject relativization in proto-CNA** I have just argued that proto-CNA was predicate initial and exhibited no copula. I will now argue that proto-CNA exhibited the subject relativization strategy discussed in §2.3 of this work. Bringing these typological properties together, I argue that a clause where a subject nominalization served as nominal predicate allowed for the reanalysis of nominalization morphology as agreement morphology.

As discussed in §2.3, the Caribbean Northern Arawak languages all exhibit traces of the subject relativization construction involving the subject nominalizer, and this construction is synchronically still active in relative clause formation in Lokono. Given the modern distribution of forms exhibiting traces of this morphology, I propose that proto-CNA exhibited this relativization strategy, and that it lost productivity to varying degrees in Garifuna, Wayúu, and Añun.

The presence of this relativization strategy in proto-CNA is important to my analysis because I rely on the information-structural properties of clauses with non-verbal predicates — including especially free relative clauses as predicates — in my analysis of the development of the suffixal subject-marking construction in the modern CNA languages.

Outside the CNA subgroup of Arawak, we find that several languages exhibit this subject relativization/nominalization construction, supporting an analysis where it was present in proto-CNA (Aikhenvald, 1999).

## 2.5.2 Information structural properties of copular clauses and nominal predication

Much work has been carried out focusing on the information structural properties of copular clauses. Here, I first argue that nominal predication in zero-copula languages falls under the analytic framework of copular clauses. Subsequently, I outline the information-structural properties that have been established for copular clauses cross-linguistically. This is important to my analysis because I argue that the change from subject nominalizer to suffixal subject agreement was facilitated in Wayúu and Añun by the loss of marked pragmatics in a construction that formerly exhibited a topical predicate, and that the modern verbal suffixal subject construction in Garifuna retains a marked pragmatic status.

Pustet (2003) defines a *copula* as “a linguistic element which co-occurs with certain lexemes in certain languages when they function as predicate nucleus. A copula does not add any semantic content to the predicate phrase it is contained in” (p. 6). The relevant part of this definition to the work at hand is the fact that copulas must be semantically empty. It has been observed that languages that exhibit no copula but that exhibit non-verbal predication fall under the scope of theories of copular clauses for this very reason (Pustet, 2003). Mikkelsen (2005) suggests that the difference between a copularizing language and a non-verbal predicate language might be related to the subcategorization possibilities of a functional verbal head in a given language: if there is structural pressure for a clause to exhibit a verbal element, then the language will be copularizing. If it may select directly for a non-verbal predicate, then it will be a zero-copula language. While the CNA languages exhibit non-verbal predication rather than copular clauses (except for Lokono), I follow Pustet (2003) and Mikkelsen (2005) in discussing non-verbal predication in the theoretical framework of copular clauses.

For the purpose of this work, it is worthwhile to distinguish between two types of copular clauses: those which are predicational and those which are specificational. Predicational copular clauses predicate some property of their subjects. Specificational copular clauses delineate a set of properties that holds of a single individual and then fill in the specific individual for which that set of properties holds. In English, predicational copular clauses exhibit a definite, referential subject, like a pronoun or a proper noun, and specificational copular clauses exhibit a non-referential subject, typically a definite description or a free relative.

Predicational copular clauses exhibit unmarked pragmatics. English specificational copular clauses are argued to exhibit topical predicates and focused subjects (Higgins, 1979; Mikkelsen, 2005), leading to an inversion construction where a topical predicate exceptionally occupies subject position, allowing for subjects that are definite, referential descriptions as mentioned above. Examples of English predicational and specificational copular clauses with their associated information-structural properties follow in examples (50) and (51).

(50)  $DP_{ref}$      $DP_{pred}$   
*John is the teacher.*  
TOP    *be* FOC

(51)  $DP_{pred}$              $DP_{ref}$   
*The teacher is John.*  
TOP            *be* FOC

Before turning to CNA nominal predication, the general information structural properties for these copula clause types are summarized in Table 2.15, below.

	Topic	Focus
<b>Predicational copular clauses</b>	$DP_{ref}$	$DP_{pred}$
<b>Specificational copular clauses</b>	$DP_{pred}$	$DP_{ref}$

Table 2.15: Information structure in copular clauses

Borrowing from this framework, my proposal is that proto-CNA non-verbal predication that exhibited subject nominalizations as predicate were historically constructions where the predicate was topical, parallel to English specificational copular clauses. Given that the headless relative clauses discussed in §2.3 serve to delineate a set of properties that holds of a single entity, they serve the function of specification. This proposal is schematized for the constructed pre-Garifuna example in (52). While the CNA languages exhibit different basic word order from English, and every language but Lokono lacks a copula, the pragmatics associated with nominal predication holds.

(52)  $DP_{ref}$      $DP_{pred}$   
*adiahati Pablo.*  
TOP    FOC  
‘*The one who fishes is Pablo.*’

Further, Plemenitaš (2015) argues that nominalization is often specifically used as a strategy to allow a verbal element to serve as topic. Because nominalization was historically the mechanism for carrying out subject relativization in the CNA languages, a relative clause has the special ability to serve as a topic in the CNA languages. Note, however, that nominalizations do not necessarily need to be topical — many Amazonian languages use nominalization as a subordination strategy in pragmatically neutral contexts. The insight is that a derivational change in lexical category makes nominalized verbs *eligible* for topicality, as topicality is a feature prototypically associated with nouns and focus is prototypically associated with verbs. The eventual change in the marked pragmatics of these constructions, along with the presence of any already verbal root then allowed for their reinterpretation as verbs carrying subject agreement morphology.

Evidence for this proposal comes from the distribution of verbs using the suffixal subject-marking strategy in Garifuna. Synchronically, suffixal subject marking in the language occurs in restricted discourse contexts, specifically, at the beginning of a new narrative, and at points within a narrative where a new context-dependent time and place is established. The term *event stage* has been used to denote implicit sentence topics that indicate the spatio-temporal parameters of a sentence (Reinhart, 1981; Erteschik-Shir, 1997, 2007). Prendergast (2012) links the discourse settings in which you find the Garifuna suffixal subject strategy to new event stage — when the contextually relevant time and place in which an event occurs changes, the suffixal subject marking strategy is used, in contrast with the subject prefixing verb stem (Prendergast’s *conjunctive verb stem*), which is used when this contextually established time and place is continuing (Prendergast, 2012) (p. 8):

When this stage is shifted or reevaluated, or when a new stage is introduced, verbs from the finite paradigm [e.g., suffixing verb stems] are used instead. This demonstrates a strong correlation between continuing, topical stage and the use of the conjunctive verb stem.

This distribution is demonstrated in the following excerpt from the beginning of a narrative about a consultant’s family:

(53) *Nuguchu ... redutu muna keisi housewife.*

nu- uguchu redu -tu muna keise housewife  
1SG- mother stay -3SG.F house like housewife

‘My mother ... she stayed in the house like a housewife.’

(54) *Aba tamaniha tou muna wagiya.*

aba t- amaniha t- ou muna wagiya  
then 3SG.F- care 3SG.F- LOC house 1PL

‘She took care of the house and us.’

We see that in the first line, the verb *redu* ‘stay’ carries the suffixal person marker *-tu*, and in the next line, the verb *amaniha* ‘care for’ carries prefixal person marking. Again, the analysis is that the suffixal verb stem is used when introducing new narrative stage, and that the prefixing verb stem is used in contexts where narrative stage is continuing.

The subject construction is additionally the default verbal form offered in an elicitation setting, which I suggest artificially acts as the beginning of a new narrative each time a new sentence is elicited.

I argue that the modern distribution of the Garifuna suffixing verb stem, and its association with new stage is a relic of the topicality associated with the specificational construction in

proto-CNA. When the suffixal relativizer was reanalyzed as verbal morphology, the association with topicality shifted to an association with new event stage, a notionally similar pragmatic category that can hold of verbs.

### 2.5.3 Diachronic pathway from relativizer to agreement

To summarize, a neutralization in participant role that deviates from core active-stative alignment for the CNA languages appears to have been facilitated by the diachronic presence of predicate-initial, zero-copula, nominal predicate clauses and the presence of a subject relativization strategy that allowed for headless relative clauses in predicate position with marked information structural status. The loss of this marked status facilitated the reanalysis of the suffixal nominalizer as verbal agreement in Wayúu and Añun. Garifuna maintains it as new stage. In this section, I specifically outline the diachronic trajectory I propose for each of the CNA languages that exhibits this strategy.

**Garifuna** In the case of Garifuna, the proposal is that a clause with a topical, nominal, specificational predicate was reanalyzed as a clause with a verbal predicate with the special pragmatics of new stage on the basis of the extreme semantic similarity of the meanings associated with these two clause types: for the former, the property of being a person who habitually carries out some particular action is asserted to hold of a particular person (e.g., *The one who fishes is Pablo.*), and for the latter, a verbal predicate is predicated of that person directly (e.g., *Pablo fishes*). The claim is that Garifuna clause structure is so similar for verbal and nominal predicates, and the semantic similarity between these two constructions is so strong, that reanalysis of the subject nominalizer as agreement morphology was highly available. The shift in pragmatics from topic to new stage is argued to be a product of the information structural associations that can hold of nouns and verbs, where topicality is prototypically associated with nouns, and not verbs, and new stage can be established with a verb. Having undergone reanalysis from nominalized verb to verb carrying agreement morphology, the marked pragmatics of the original construction resulted in the modern marginality of the subject agreement construction. The change itself, along with the spread of person distinctions across this paradigm, is argued to be analogically motivated — the presence of another suffixal person-marking paradigm that exhibits extreme phonological similarity to the suffixal subject marking (*-tina*) paradigm is examined as evidence for this claim.

Examples (55) and (56) schematize the endpoints of the diachronic reanalysis I propose here, where the reanalysis of the subject nominalizer as verbal agreement morphology involves a change in morphological category from subject nominalizer exhibiting agreement morphology for the noun it modifies to agreement morphology, only, and the topicality associated with the nominal predicate is retained as the related pragmatic category, new stage, which can hold of verbal predicates.

(55) <i>Adiahati Pablo.</i> pre-Garifuna adiaha    -ti            Pablo fisherman -NOMZ.SG.M Pablo TOP ‘The one who fishes is Pablo’	>	(56) <i>Adiahati Pablo.</i> modern Garifuna adiaha    -ti    Pablo fish            -SG.M Pablo NEW STAGE ‘Pablo fishes.’
--------------------------------------------------------------------------------------------------------------------------------------------------	---	--------------------------------------------------------------------------------------------------------------------------------------

I propose that the change from suffixal subject nominalizer to person marker was analogically driven. Garifuna exhibits a second suffixal verbal person-marking paradigm unrelated to the one discussed so far in this chapter, but very similar in phonological shape, and used when the verbs to which they are attached exhibit perfect aspect. Suffixal person markers belonging to this paradigm contain *-di* as a morphological base, and exhibit a full range of person, number, and gender distinctions, like the suffixal person-marking paradigm containing *-ti*, and unlike the suffixal person markers exhibited by Añun and Wayúu. These two Garifuna paradigms are presented in Tables (2.16) and (2.17).

	SING	PL
1	<i>-dina</i>	<i>-diwa</i>
2	<i>-dibu</i>	<i>-diǰa</i>
3M	<i>-li</i>	<i>-diǰa</i>
3F	<i>-ru</i>	<i>-diǰa</i>

Table 2.16: Garifuna *-dina* suffixal person marking paradigm

	SING	PL
1	<i>-tina</i>	<i>-tiwa</i>
2	<i>-tibu</i>	<i>-tiǰa</i>
3M	<i>-ti</i>	<i>-tiǰa</i>
3F	<i>-tu</i>	<i>-tiǰa</i>

Table 2.17: Garifuna *-tina* suffixal person marking paradigm

In Modern Garifuna, verbs that carry suffixal person markers with the base *-di* exhibit perfect aspect, as in (57).<sup>6</sup>

(57) <i>Arúmuḡadina.</i> arúmuga -dina sleep    -1.SG
-------------------------------------------------------------

‘I slept (at some well defined time in the past).’  
 (Haurholm-Larsen, 2015)

---

<sup>6</sup>It is descriptively insufficient to analyze the particle *-di*, itself, as perfect aspect because third person suffixes in this paradigm do not contain this string. Rather, as with the *-tina* paradigm examined here, speakers consider *-di* to be a part of the person suffix, itself.



Comparing Tables (2.16) and (2.17), we see that the phonological shape of the suffixal person markers in each paradigm differ only in voicing except in the third person, where the *-dina* paradigm exhibits *-li* and *-ru*, rather than the expected *-di* and *-du*.

Considering 1) the close phonetic similarity between *-di* and *-ti*, 2) the fact that both are verbal suffixes, and 3) the availability of both to be carried by verbs appearing predicate position, I propose that the person distinctions in the *-ti* paradigm developed because of analogical pressure from the person distinctions in the *-di* paradigm, which retained person distinctions from proto-CNA.<sup>7</sup> The basic analogical change I propose is exemplified in (58), where the first person marker *-na* is spread to the predicate *arúmugati* on analogy with the morphological base, *arúmugadi*. The same process applies to the second person.

(58) *arúmuga -di : arúmuga -dina :: arúmuga -ti : arúmuga -tina*

This proposal relies on the string *V+di* being the morphological base for non-third-person suffixal person markers in the perfect paradigm on some level of analysis. Given that the first and second person suffixes in this paradigm are decomposable as *-di+PERSON*, I argue that this condition is met. The fact that *-ti* and *-tu* are retained as third person singular masculine and feminine markers falls out of this analysis. The fact that the subject nominalizer already encoded gender and number, but not person, allowed for a default reading as third person. When the non-third person distinctions of the *-di* paradigm spread to the *-ti* paradigm, this reading was conventionalized.

**Wayúu and Añun** For Wayúu and Añun, the development of the suffixal subject-marking strategy was very likely a joint innovation. The two languages are very closely related, and exhibit strikingly parallel syntactic constructions synchronically. For these languages, the analysis is similar to the one for Garifuna — the presence on a nominal predicate construction where a verb carrying the subject nominalizer served as predicate facilitated the reanalysis of this morpheme as verbal agreement. For Wayúu and Añun, however, recalling that no person distinctions exist in the suffixal subject-marking paradigms for these languages, I suggest that the reanalysis was driven by a change in the pragmatic status of the non-verbal predicate, only, and not necessarily by the influence of an external suffixal paradigm. Parallel to Garifuna examples (55) and (56), Wayúu examples (59) and (60) and Añun examples (61) and (62) model this process, where, again, the small semantic distinction and the presence of a lexical verb carrying agreement morphology facilitated reanalysis of the nominalizer as verbal agreement morphology. Here, however, we see that rather than a change from topicality to new stage, Wayúu-Añun underwent a loss of marked pragmatics, such that topicality is no longer associated with the predicate, and instead focus is, as standardly assumed it should be in pragmatically neutral contexts (Rizzi, 2004).

---

<sup>7</sup>Suffixal person markers with person, number, and gender distinctions are found all across Arawak, with the same phonological shape.(Aikhenvald, 1999), making it likely these distinctions were lost in proto-Lokono-Añun-Wayúu, but retained in Garifuna.

- |                                                                                                                                                                                                       |   |                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(59) <i>Ayonnajüchi Kamiirü.</i>      proto-L-W-A</p> <p>Ayonnajü -chi      Kamiirü<br/> dance      -NOMZ.SG.M Camilo<br/> TOPIC</p> <p>‘The one who dances is Camilo.’<br/> (Álvarez, 2014)</p>   | > | <p>(60) <i>Ayonnajüshi Kamiirü.</i>      Wayúu</p> <p>Ayonnajü -shi      Kamiirü<br/> dance      -SG.M Camilo<br/> FOCUS</p> <p>‘Camilo dances.’<br/> (Álvarez, 2014)</p>  |
| <p>(61) <i>Anaapeyachi Kamiirü.</i>      proto-L-W-A</p> <p>Anaapeya -chi      Kamiirü<br/> listen      -NOMZ.SG.M Camilo<br/> TOPIC</p> <p>‘The one who listens is Camilo.’<br/> (Álvarez, 2008)</p> | > | <p>(62) <i>Anaapeyachi Kamiirü.</i>      Añun</p> <p>Anaapeya -chi      Kamiirü<br/> listen      -SG.M Camilo<br/> FOCUS</p> <p>‘Camilo listens.’<br/> (Álvarez, 2008)</p> |

Unlike the Garifuna case, the subject-suffixing agreement strategy is not restricted by discourse context, but by aspect. Specifically, the Wayúu endings *-fi* 3.SG.M and *-sü* 3.SG.F occur with stems that do not carry tense, aspect, or mood morphology, and are underspecified for these categories. The fact that TAM marking is incompatible with these suffixes serves as evidence for a nominalizer as their diachronic source. Recalling the discussion of clausal nominalization in §2.3, nominalization is cross-linguistically associated with reduced TAM morphology. Like Wayúu, Añun also exhibits suffixal person markers that are recruited for the subject-marking strategy and incompatible with TAM morphology, *-i* 3.SG.M and *-ü* 3.SG.F. It is presently unclear whether these are diachronically related to the proto-CNA nominalizer — the expected reflexes of this morpheme for Añun are *-tʃi* and *-tü*, which are currently found in the language, but Añun exhibits intervocalic consonant loss under certain conditions, potentially leading to two reflexes of the proto-CNA nominalizer in different morphosyntactic constructions.

The fact that the suffix construction does not exhibit marked pragmatics suggests that the loss of topicality associated with the predicate in this construction for Wayúu and Añun played a role in the reanalysis of the nominal predicate as verbal. Pragmatic deflation is known to be active in changes in grammatical category (Heine, 2002). In §2.5.2 of this chapter, I argued that predicates carrying the subject nominalizer in proto-CNA were topical, and that the marked pragmatics of the modern Garifuna subject constructions, along with the cross-linguistic association of headless relative clauses, sepecification, and topicality, provide evidence for this analysis. Given that modern Wayúu and Añun do not exhibit marked pragmatics in their subject suffixing constructions, and that pragmatic deflation is known to drive grammatical change, I infer this pragmatic deflation played a role in the reanalysis of the subject nominalizer in proto-Wayúu-Añun. That is, historically, a topical, derived nominal predicate was interpreted as a verbal predicate carrying agreement morphology for its subject. This analysis is schematized below, where at an early stage, the nominal predicate *ayonnahutʃi* ‘dancer’ is topical. The topicality is then lost, allowing for the reinterpretation of the derived noun as verbal.

1. *Ayonnahtëfi Kamiirü.* *Early proto-Añun-Wayúu*  
 Ayonnajü -tʃi                    Kamiirü.  
 dance            -NOMZ.SG.M Camilo  
 TOPIC        Camilo.  
 ‘**The one who dances** is Camilo.’
2. *Ayonnahtëfi Kamiirü.* *Middle proto-Añun-Wayúu*  
 Ayonnajü -tʃi                    Kamiirü.  
 dance            -NOMZ.SG.M Camilo  
 ‘Camilo is someone who dances.’
3. *Ayonnahtëfi Kamiirü.* *Late proto-Añun-Wayúu*  
 Ayonnajü -tʃi                    Kamiirü.  
 dance            -NOMZ.SG.M Camilo  
 ‘Camilo dances.’

As previously seen in example (18), repeated here as (63), Wayúu and Añun both additionally exhibit the subject construction with a second set of suffixal person markers. This set is shown in Table (2.18) for both Añun and Wayúu, and the set related to the subject nominalizer is shown in Table (2.19) for comparison.

- (63) *Ayaʼlajüinjachi pia komputatoora.* Wayúu  
 Ayaʼlajüin -ja -chi    pia komputatoora  
 buy            FUT -SG.M 2SG computer  
 ‘You’re going to buy a (\*the) computer’  
 (Álvarez, 2014)

	Wayúu	Añun
3.SG.M	-tʃi	-tʃi
3.SG.F	-rü	-rü
PL	-na	-nü

Table 2.18: Añun and Wayúu suffixal person markers unrelated to the relativize nominalizer

I remain agnostic about whether the suffixes in Table (2.18) were inherited from proto-CNA as verbal morphology. If so, it may be the case that analogy played a role in the development of Añun and Wayúu’s suffixal subject-marking paradigm, as the *-dina* paradigm likely did in Garifuna’s.

	Wayúu	Añun
3.SG.M	-fi	-tfi
3.SG.F	-sü	-tü
PL	-fii	-in

Table 2.19: Añun and Wayúu suffixal person markers related to the relativize nominalizer

Unlike for the Wayúu and Añun person markers related to the subject nominalizer, the Wayúu and Añun masculine singular suffix from the second set of suffixal person marking morphemes does not appear to exhibit morphology cognate to any masculine singular suffix in Garifuna. The consonant in the morpheme in question, Añun and Wayúu *tf* is part of a correspondence set where, before a front vowel, Añun *tf* corresponds to Wayúu *tf*, Lokono *d*, and Garifuna *r*. Before other vowels the expected Añun-Wayúu segment is *t*. These correspondences are shown in Table (2.20).

Garifuna	Lokono	Añun	Wayúu	GLOSS
—	fodi	wichiche	juchi'	'monkey'
arigei	dike	achee	ache'e	'ear'
arünaü	duna	atünü	ata	'arm'
eweragua	wedin	eeta	aweta	'vomit'

Table 2.20: Caribbean Northern Arawak set 2 coronal correspondences

We do not find third person masculine suffixal person markers *-di* in Lokono, or *-ri* in Garifuna, suggesting that the Wayúu and Añun forms are unrelated to third person masculine suffixes outside their subgroup.

We do, however, find the third person feminine marker *-ru* in Garifuna, which may be cognate to the third person feminine singular *-rü* exhibited by Añun and Wayúu, as these languages also exhibit an  $r \sim r \sim r \sim r$  correspondence, as shown in Table (2.21)

Garifuna	Lokono	Añun	Wayúu	GLOSS
ügürügü	shikoro	iruku	e'iruku	'flesh'
jierü	ereitho	eri	eerüin	'wife'

Table 2.21: Caribbean Northern Arawak set 3 coronal correspondences

**Lokono** As we have already seen, Lokono actively retains the relativization strategy exhibited by the other CNA languages, and has not developed suffixal person markers based on its reflex of the proto-CNA subject nominalizer. I have argued here that the properties relevant to the availability of this diachronic development are predicate initiality and zero-copula nominal predication, both of which Lokono lacks.

## 2.6 Conclusions

I have shown here that modern suffixal subject agreement in the CNA languages is related to a historical nominalization construction involving a suffixal subject nominalizer that carried gender and number agreement, and that the development of this construction has served to neutralize distinctions in the alignment systems of the CNA languages, which generally exhibit a active-stative alignment. If nominalizations, like the one I propose to reconstruct for the proto-CNA subject relativization strategy, constitute subordinate clauses, we have here a detailed trajectory of one way in which insubordination might be facilitated. The typological properties that allowed for such a development are clustered in the languages of South America, namely: the use of nominalization in relativization, head marking, and zero-copula nominal predication. Given this shared set of properties, I suspect that just this type of change is quite common in the languages of South America, and likely underdiagnosed.

## Chapter 3

# Auxiliation and ergativity in Caribbean Northern Arawak

This chapter investigates a shift in lexical category from adposition to auxiliary in two Northern Caribbean Arawak languages, Wayúu and Garifuna. While the emergent auxiliaries bear striking similarities in terms of distribution and argument marking — both occur post-verbally and carry prefixal and suffixal verbal agreement morphology — I argue that the innovation is not joint, but independent. I draw on comparative evidence from the Northern Arawak languages subgrouped with Garifuna and Wayúu in extant classifications of the Arawak language family. While Garifuna and Wayúu share a similar typological profile, lexical phylogenetic analyses (cf Chapter 1) and comparative morphological evidence suggests they do not form a subgroup independent of the other Caribbean Northern Arawak languages, providing support for an analysis where each language independently innovated its auxiliary system. As in the case of the development of suffixal person morphology, properties of proto-CNA appear to have made such a development available. The change from adposition to auxiliary is typologically rare, and is not expected in a grammaticalization-theoretic framework. I argue here that insubordination and analogy are the formal mechanisms that allowed for this change in the CNA languages.

### 3.1 Introduction

An innovative set of auxiliaries has emerged in two members of the Caribbean Northern Arawak (CNA) subgroup of Northern Arawak, Wayúu and Garifuna. While the emergent auxiliaries in Wayúu and Garifuna exhibit an ergative pattern of argument marking, and while both sets of auxiliaries appear to have adpositional diachronic sources, the languages do not appear to have made use of the same adpositions in the constructions relevant to this change in grammatical category, suggesting that this change occurred independently for both

languages. For both Wayúu and Garifuna, the emergent auxiliaries appear to be cognate to adpositions in the other CNA languages that inflect prefixally for their objects. In their auxiliary uses, these lexical items only carry prefixal person markers that cross-reference the subject of a transitive verb, contra the pattern of argument marking discussed in Chapter 1 for main verbs, where the subject of an active, intransitive predicate could also be cross-referenced prefixally. The CNA languages grouped with Wayúu to the exclusion of Garifuna, Añun and Lokono, do not exhibit auxiliaries, but do exhibit adpositions that are cognate to Garifuna and Wayúu auxiliaries, suggesting the Garifuna and Wayúu auxiliaries are diachronically related to these adpositions. Further supporting this claim is the fact that Wayúu synchronically exhibits both adpositional and auxiliary uses for this set of lexical items.

As discussed in Chapter 1 of this work, every CNA language exhibits active-stative alignment. Given this fact, it is inferred that proto-CNA exhibited active-stative alignment, and that deviation from this alignment system in the daughter languages is innovative. Specifically, for the analysis presented here, ergative marking in Garifuna and Wayúu is presumed to be innovative. Support for this inference is found by observing that active-stative alignment is also found in the Northern Arawak languages outside the Caribbean subgroup. Looking to Tariana, for example, we find that the person-marking system also exhibits active-stative alignment, suggesting that active-stative alignment, but not ergative marking on auxiliaries, is inherited in CNA from an earlier ancestral state.

This analysis draws upon comparative morphological data from the CNA languages, Garifuna, Wayúu, Lokono, and Añun, as well as data from Tariana, an outgroup Northern Arawak language. As discussed in Chapter 1, Lokono and Añun are demonstrably more closely related to Wayúu than Garifuna. Neither language exhibits a similar set of auxiliaries, even though both languages exhibit the set of adpositions from which these auxiliaries apparently developed. Further, neither language exhibits evidence that these adpositions function as auxiliaries, providing more evidence that the change from adposition to auxiliary must have occurred more than once in the history of the CNA languages. The modern Garifuna and Wayúu auxiliaries additionally appear to be related diachronically to separate adpositions, supporting an analysis where the change in grammatical category described here occurred more than once in the CNA languages.

The data examined here are of broad typological interest because the change in lexical category from adposition to auxiliary is very rare. In fact, at the time of writing, I know of no other attested cases of this trajectory. However, the phonological evidence that this change occurred in CNA is very strong, as cognates to the auxiliaries described here are attested as adpositions in Lokono and Añun. A change in lexical category from adposition to auxiliary is not an expected trajectory in the grammaticalization literature (Hopper and Traugott, 2003). Therefore, some mechanism other than grammaticalization must be appealed to here. Garrett (2012) argues that the two mechanisms for change in syntactic category are *grammaticalization* and *analogy*, parallel to *phonological reduction* and *sound change* in the phonological literature. I argue here that analogy is the formal mechanism that made the two auxiliatation processes possible — many Northern Arawak languages exhibit a “dummy verb” *a* that hosts person markers in subordinate clause structures. This verb is distributionally

similar to adpositions in the CNA languages, in that it follows the predicate and carries prefixal agreement morphology. Further, this verb has been shown to have developed main clauses uses in several Northern Arawak languages, suggesting that *insubordination* — the conventional main-clause use of grammatical structures normally used in subordinate clauses (Evans, 2007) — has played a role in the development of these constructions. I claim here that the main-clause use of this auxiliary created an analogical template for the reanalysis of Garifuna adpositions as auxiliaries. For both Wayúu and Garifuna, I argue that transitive verbs served as the analogical template for the spread of suffixal agreement to auxiliaries in these languages.

These data are of further interest because the historical emergence of ergative marking is commonly thought to involve passive constructions in which an oblique marker that historically reintroduced the external argument is reanalyzed as an ergative case marker (Garrett, 1990). Ergative marking in CNA shows no signs of being historically related to a passive construction. In fact, it is not even possible to reintroduce an external argument in a passive construction in modern Garifuna, so this avenue of analysis is not available for the language. The Cariban languages neighboring the CNA languages exhibit ergative marking that has been shown to have arisen from a process of insubordination in which a nominalized clause is reanalyzed as a main clause (Gildea, 1998). I find here that insubordination appears to have played a role in the development of auxiliaries for Garifuna, as well, though Wayúu auxiliaries appear to have emerged as the result of some degree of incorporation into the verbs with which they co-occur.

For both Garifuna and Wayúu, the lexical items I analyze as auxiliaries are post-verbal and carry prefixal and suffixal person markers cross-referencing core verbal arguments. Garifuna auxiliaries generally encode tense and aspect. Here I argue that just one Garifuna auxiliary, *umu*, developed from an adposition. This auxiliary is shown in example (64), where it hosts prefixal and suffixal person markers. I argue in §3.3 that other aspect denoting auxiliaries analogized to the argument-marking strategy exhibited in example (64) under negation after this auxiliary was incorporated into the tense/aspect system of the language.

(64) *Hou lumutu Pablo üdüraü.* *Garifuna*

hou l-            umu -tu     Pablo üdüraü  
eat 3SG.M- AOR -3SG.F Pablo fish

‘Pablo ate the fish.’

For Wayúu, three auxiliaries appear to have developed from adpositions: the dative marker *ain*, the comitative *au*, and locative *o’u*. These contribute non-compositional meanings to the verbs with which they co-occur, and have a restricted use in the language. The sense in which they exhibit an auxiliary-like distribution, distinct from other CNA adpositions, is in their ability to take suffixal person markers, like verbs, and like Garifuna *umu*. An example of auxiliary *ain* carrying suffixal person marking is shown in (65).



(65) *Moto' áinchi nukúoma híntiikai.*

moto' áin -chi            n-            ukúoma híntii -kai  
 forget DAT -M.SG.PST 3.SG.M- hat        boy    DEF

‘The boy forgot his hat.’ ~ ‘Forgotten (to him) is the boy’s hat.’  
 (Zubiri and Jusayu (1978), p.280)

Table 3.1, below, summarizes the auxiliaries discussed in this chapter, along with their CNA cognates. Items shaded in grey exhibit auxiliary uses — they carry both prefixal and suffixal person markers like verbs. We find that Garifuna and Wayúu both exhibit auxiliaries that are cognate to adpositions in the other CNA languages, and that these adpositions are not cognate to each other.

Garifuna	Lokono	Añun	Wayúu	Tariana	GLOSS
a	a	—	—	a	DUMMY
au	—	ou	au	—	SUPERESSIVE
—	—	ein	ain	—	DATIVE
—	—	ou	o'u	—	LOCATIVE
umu	myn	mo	ümü	—	BENEFACTIVE

Table 3.1: CNA adpositions with auxiliary uses and their cognate forms

The analysis is broadly structured as follows: for Garifuna, insubordination led to the main-clause use of the auxiliary *a* as a host for verbal agreement morphology under negation. Because of the phonological similarity between the perfect verb stems (ending in *ha*) and the auxiliary *a*, the latter is reanalyzed as the locus of perfect marking under negation. This pattern holds synchronically. On analogy with transitive lexical verbs, which also inflect prefixally for core arguments, auxiliary *a* developed the ability to carry suffixal verbal agreement morphology. The benefactive adposition *umu* underwent reanalysis as verbal on analogy with auxiliary *a*, forming with *a* a class of morphemes that appears post-verbally, carrying agreement morphology, and developed the semantics of aorist (unmarked) tense.

For Wayúu, I argue that adposition *ain* was reanalyzed as verbal on analogy with lexical verbs, which also carry agreement marking for core arguments. Suffixal agreement morphology spread on analogy with transitive verbs, and this change in grammatical category spread to at least two other adpositions. The identification of transitive verbs as the template responsible for the spread of suffixal agreement marking is supported by the fact that most CNA verbs exhibit both intransitive and transitive uses — once a grammatical element is perceived to be verbal there is no a priori reason it should not adhere to morphosyntactic patterns that hold generally of verbs. These changes are schematized in the two analogical diagrams in Figures 3.1 and 3.1.

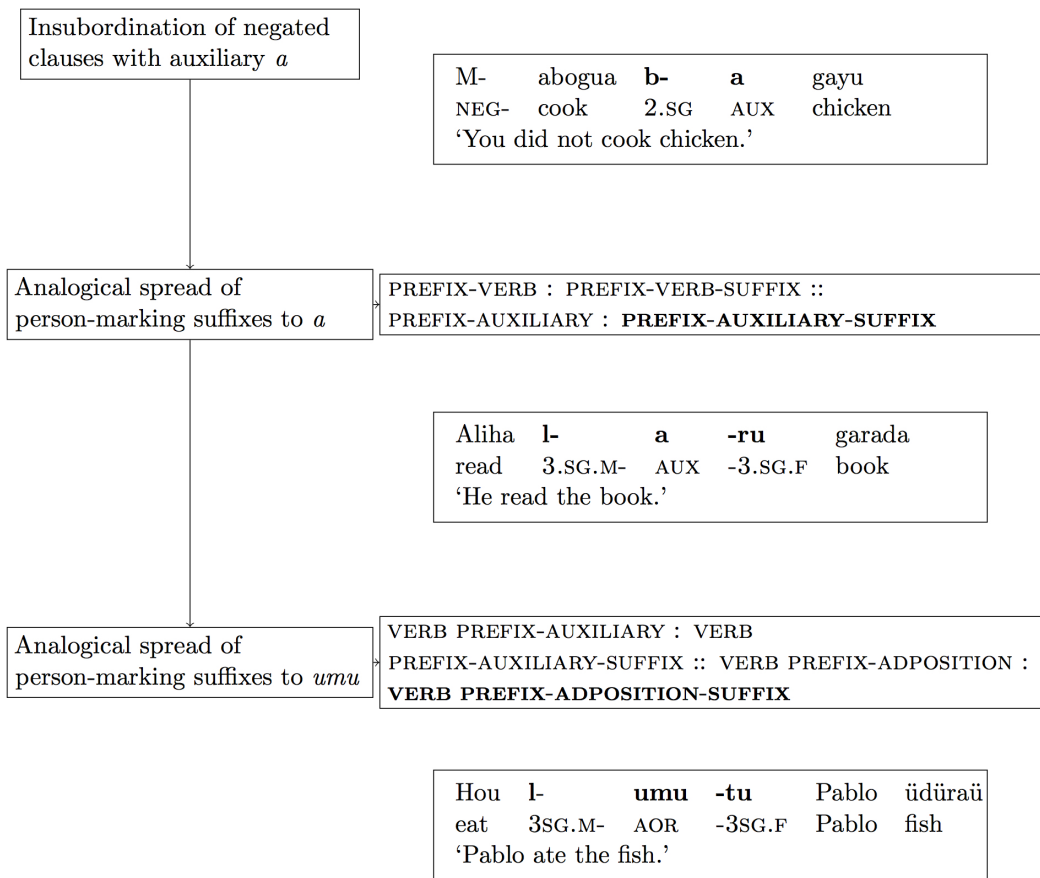


Figure 3.1: Garifuna analogical reanalysis

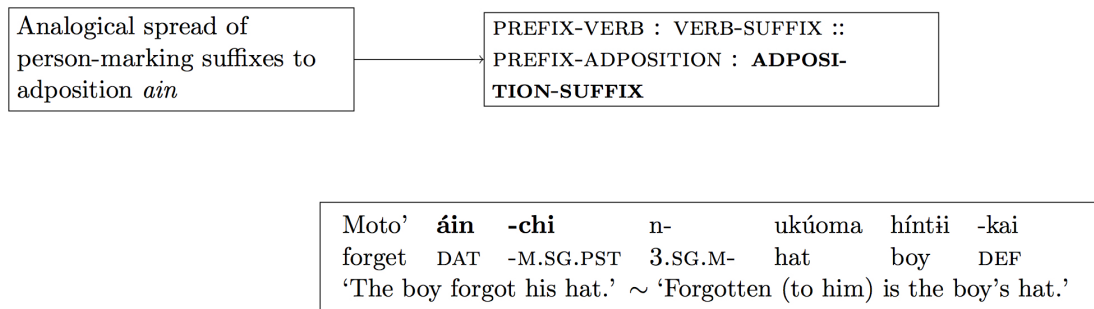


Figure 3.2: Wayúu analogical reanalysis

## 3.2 Marking of core arguments on loci other than lexical verbs in CNA

This section examines the empirical basis of this chapter: namely, exceptional loci of argument marking in the CNA languages, given that argument marking is generally expected to appear on the verb in the Arawak languages. Here, I argue that constructions where argument-marking morphology is carried on some lexical item other than the main verb has led to the reanalysis of these items as verbal for Garifuna and Wayúu. Caribbean Northern Arawak exhibits non-verbal argument marking on both auxiliaries and adpositions. Here, I demonstrate this claim empirically. In the following section, I defend the proposal that the presence of argument marking on adpositions in proto-CNA made the development of auxiliaries from adpositions possible for Wayúu and Garifuna.

The CNA languages are head marking, and argument marking on the verb is the norm for these languages, but every CNA language exhibits person marking for a core argument on some head other than a main lexical verb (either adposition or auxiliary) in at least one construction. Every language exhibits oblique subject marking with a handful of stative predicates where the prefixal person marker encoding syntactic subject is carried by a post-verbal adposition. Añun additionally exhibits person marking for a causer on a adposition in clauses where the main predicate is a stative, quality-denoting predicate. Otherwise, Añun adpositions primarily serve to license noncore arguments. Wayúu exhibits argument marking on a adpositional head in subordinate clauses as well as argument marking of auxiliaries in perfect and present tenses in main clauses. Garifuna exhibits person marking on auxiliary verbs in certain subordinate clauses and in morphologically transitive main clauses under negation, on morphologically transitive verbs when the clause establishes new event stage (c.f., §2.5.2), and when a morphologically transitive verb is underspecified for aspect. Lokono exhibits person marking on a semantically empty auxiliary in reported speech constructions and in some negated clauses. Outgroup data from Tariana is also included for comparison. It is noted that Tariana marks an external argument on a semantically null auxiliary under passivization. The generalization is that non-verbal argument marking in at least certain constructions is a property of the CNA languages that was likely inherited, making the reanalysis of such constructions available.

This section describes person marking on auxiliaries and adpositions in the Northern Caribbean Arawak languages. For each language, I first show conventional uses of adpositions as licensers of noncore arguments, followed by a discussion of areas of the grammar where either adpositions or auxiliaries appear to carry core verbal agreement morphology. The generalization that emerges for these languages is that core argument marking on loci other than lexical verbs generally occurs in subordinate clauses, under valence decreasing constructions, like passivization, or with predicates denoting emotion. Exceptions to this generalization are found only in Wayúu and Garifuna, the only two languages in the Northern Caribbean subgroup that have innovated a class of auxiliary verbs. I argue that this is expected under the analysis presented here. If insubordination is a mechanism driving

auxiliation for Garifuna, and if, for both Wayúu, and Garifuna, analogy to verbal argument marking found for transitive verbs played a role, the modern distribution of their auxiliaries should not depend on clause type or valence-decreasing morphology.

Prior to the discussion of non-verbal argument marking that follows, it is useful to be explicit about the CNA-specific diagnostics for auxiliaries I appeal to here. Heine (1993) offers a discussion of prototypical uses of and diagnostics for auxiliaries. Among semantic categories prototypically expressed by auxiliaries are tense, aspect, mood, and voice. Syntactically, auxiliaries co-occur with verbs and exhibit verbal properties. Because languages differ in how they divide semantic meanings lexically, and in the grammatical categories they exhibit, properties of particular word classes may vary cross-linguistically. Along a syntactic axis, given that CNA adpositions, like CNA nouns, carry prefixal agreement for the dependents they introduce, I take the ability to carry suffixal agreement to be a crucial property distinguishing CNA auxiliaries from adpositions — aside from auxiliaries, only verbs can carry suffixal agreement morphology. Only Garifuna and Wayúu auxiliaries carry both prefixal and suffixal verbal agreement morphology, and in both cases, this morphology co-indexes core verbal arguments. Along a semantic axis, only Garifuna auxiliaries exhibit meanings typically discussed under the umbrella of tense and aspect. Wayúu auxiliaries either contribute desiderative or non-compositional semantics to the constructions in which they appear. Lokono and Añun adpositions never encode tense or aspect, though Añun does exhibit a desiderative construction involving an adposition. While the presence of this construction in Añun may be representative of a stage earlier exhibited by Wayúu in its development of auxiliaries, I do not treat the Añun desiderative construction as involving an auxiliary on syntactic grounds since it never carries a suffix.

**Lokono** Lokono exhibits several adpositions that inflect prefixally for a pronominal object, or otherwise follow the lexical noun they introduce with no agreement marker. This agreement pattern is parallel to Lokono verbal person marking, as agreement morphology is in complementary distribution with lexical arguments, as described in Chapter 1 of this work. Verbal arguments are not marked on Lokono adpositions, as they are for the other CNA languages — that is, there is no case where Lokono exhibits oblique subject marking.

Example (66) shows the Lokono locative adposition *diako* following its object *hala* ‘bench’ carrying no inflection, as expected in the case that a lexical object to the adposition is present, as just described. The verb *see* licenses a direct object, only (here, *no* 3.SG). The locative adposition *diako* licenses the noun *hala* ‘bench’, which is not a core argument of the verb.

(66) *Dadykha no hala diako.*

da- dykha no hala diako  
1.SG- see 3.SG bench LOC

‘I saw it on a bench.’  
(Pet (1987), p. 47)

Example (67) shows a construction where two pronominal objects to the benefactive adposition *myn* are marked prefixally on each instantiation of the morpheme. The prefixal agreement markers *da-* 1.SG, and *tho-* 3.SG.F, each serve to co-index a pronominal referent licensed by *myn*, and the benefactive occurs twice in the clause. As expected, these arguments are encoded via person-number-gender agreement as prefixes to the adposition, and they do not co-refer with any free lexical or pronominal argument in the clause. Like example (66), the benefactive adposition is not carrying agreement morphology for a core argument of the verb, but instead for its own object in each of its instantiations.

(67) *Dikika no thomyn damyn.*

bi- sika no tho- myn da- myn  
 2SG- give 3.SG 3.SG.F- BEN 1.SG -BEN

‘Give it to her for me.’  
 (Pet (1987), p.47)

As we will see holds for the CNA languages, certain Lokono adpositions appear to be related to body part terminology, though Pet (1987) shows this is not the case for Lokono adpositions, generally. For Wayúu and Añun, the term for heart has developed into the locus of person marking for experiencer subjects, and has further developed auxiliary uses in Wayúu. Here, the body part term in question clearly played a role in the historical development of experiencer semantics. The fact that adpositions related to body part terms appear in every CNA language suggests this was a general property of proto-CNA. I include a partial list of Lokono adpositions related to body part terms here in Table 3.2.

Possessed body part term	Inflected adposition
<i>ly-sibo</i> ‘his face’	<i>ly-sibon</i> ‘in front of him’
<i>da-khona</i> ‘my body’	<i>da-khonan</i> ‘about me’
<i>da-dike</i> ‘my tracks’	<i>da-dike</i> ‘after me’

Table 3.2: Lokono adpositions related to body part terms

Apart from adpositions that introduce noncore arguments, Lokono exhibits one semantically empty auxiliary verb *a* which hosts prefixal person marking for core arguments in both main and subordinate clauses. This auxiliary co-occurs with the prefixal privative marker *ma-* if person marking is expressed, as in main clause example (68), where *a* carries prefixal agreement marking for the subject of the subordinate verb (= carries marking for a core verbal argument).

(68) *Mandyn labo akharoho.*

m- andy -n l- a -bo akharoho  
NEG- arrive -SUB 3.SG.M- AUX -CONT now

‘He isn’t arriving now.’

(Pet (1987))

The auxiliary verb appears in sentences where the verb bears the privative prefix *ma-* and the subject is not expressed by a free lexical argument. The auxiliary *a* may only take prefixal person markers (and never suffixal person markers). The auxiliary always bears prefixal person marking when present, and person markers and arguments do not co-occur, as discussed in Chapter 1.

Privative *ma-* is widespread throughout the Arawak languages as a clausal negator — languages that exhibit *ma-* in this use in addition to, or instead of a privative marker have been shown to be innovative (Michael, 2014). Given the function of Lokono *ma-* as nominal derivational morphology, along with the areal tendency for subordinate clause structures to involve nominalization, there is a possible analysis for Arawak languages that exhibit clausal negation with *ma-* where the nominalization (historical or synchronic) of a subordinate predicate makes it eligible for the privative marker to serve as a clausal negator in these constructions. As discussed later in this chapter, like Lokono, Garifuna has developed the main-clause use of *ma-* as a general clausal negator. I cite this as evidence for insubordination-driven alignment change in the language. Here, and throughout Arawak, prefixal privative marking in subordinate clauses interacts with prefixal agreement marking on subordinated verbs — generally speaking, Arawak verbs may carry only one prefix, usually for a subject. When negated with the privative *ma-*, this prefixal slot is unavailable, and subject agreement morphology is carried by the auxiliary.

Though *ma-* functions as a clausal negator in Lokono, the language retains synchronic privative uses of the morpheme where it derives stative predicates from nouns meaning ‘not having NOUN’, as we see in (69), where the noun *balha* ‘hair’ carries privative *ma-* prefixally and perfect *-ka* suffixally, and exhibits the privative meaning ‘to lack hair’ (Pet, 1987).

(69) *Ma- balha -ka no*

ma- balha -ka no  
PRIV- hair -PERF 3SG.F

‘She is hairless/bald’

(Pet (1987), p. 74)

Lokono also exhibits auxiliary *a* in quotative constructions, as seen in example (70). This grammatical function of the auxiliary is not core to the analysis developed in this chapter, but its presence in Lokono is interesting because, while the general analysis of auxiliary *a* is

that the auxiliary is semantically vacuous (Pet, 1987; Patte, 2014), the sole auxiliary verb in Tariana is also *a*, and means ‘say’ when it appears as a lexical verb, which fits congruously with the quotative meaning expressed in (70). Further differentiating the function of the auxiliary from its use in clauses negated with private *ma-*, the auxiliary here appears to serve as a matrix verb that takes a clausal complement, itself exhibiting agreement marking for the quoted speaker, as in example (70). In other subordinate structures the auxiliary appears to carry agreement morphology for a subordinate verb as a clausemate. These facts indicate that, although the auxiliary in both constructions is the same phonologically, its two uses are syntactically different. Still, the similar use of the auxiliary in Lokono and Tariana suggest this lexical item is cognate in the languages that exhibit it, and therefore a lexical item that must have been present in proto-CNA.

(70) “*Beithoa!*” *la*.

b- eithoa l- a  
 2.SG- know.self 3.SG.M- AUX

“‘Be careful!’ he said/thought/shouted.’  
 (Pet (1987, p. 76))

While the quotative use of the Lokono auxiliary warrants further investigation, for the current analysis, I set it aside, since it does not serve as the host for agreement marking of arguments licensed by a separate verb in this construction. In the following section, I turn to a discussion of exceptional loci of argument marking in Añun. I find in this section that there is potential evidence in support of an analysis where Añun has developed a single auxiliary. However, marking on this auxiliary is exclusively prefixal, unlike Wayúu and Garifuna auxiliaries. If analyzable as an auxiliary at all, its presence makes Añun alignment in these constructions nominative — all subjects are prefixes in the relevant construction, which we will see is not true for Garifuna and Wayúu auxiliaries.

**Añun** Like Lokono, Añun exhibits person marking on a variety of adpositions. In most of these cases, the adpositions license noncore arguments, and they encode spatial relations prototypically expected of adpositions cross-linguistically (Dixon, 2010). Añun exhibits an adposition related to the term for ‘heart’, *ein* (discussed below), which has developed the distribution of a dative marker in both Añun and Wayúu. While Añun adpositions inflect prefixally for their arguments, they never carry suffixal person-marking morphology, which I take to be a crucial difference between Añun and the CNA languages that exhibit auxiliaries sourced from adpositions — in the case that an adposition carries agreement morphology for a single argument, even for a verbal argument, its status as an adposition is defensible.

In this section, I provide examples of prototypical and non-prototypical constructions involving Añun adpositions to demonstrate their canonical and non-canonical uses. Constructions where Añun adpositions carry person-marking morphology for core arguments of the lexical

verb are argued to be inherited from proto-CNA. In §3.3, I rely on the presence of this construction in Añun to make a broader historical point about proto-CNA, generally.

Example (71) shows a prototypical example of an Añun adposition. The instrumental adposition *ka* precedes its object *utiñagar* ‘needle’, and carries prefixal agreement morphology for it. The verb *i* ‘sew’ carries suffixal morphology that co-indexes the subject of the sentence *te* 1.SG. Here, the adposition licenses its object. It does not carry agreement morphology for any core argument of the verb.

(71) *Einoi te tayawin nka utiñagar.*

a- i -naa -i te ta- yawin hi- ka uniña -kari  
 AT.1 sew -MULT -SG.F. 1.SG 1.SG- dress 3.SG.F INSTR needle -DET.F

‘I sew my dress with the needle’  
 (Patte (1989, p. 62))

Similarly, examples (72) and (73) exhibit prefixal person marking on the adpositions *ou* (superessive) and *ru* (locative), both of which encode spatial relations between the predicate and a noncore argument. Example (72) shows the adposition *ou* introduce the noun *mo* ‘earth’, the location on which the the digging action occurs. Like adpositions in the other CNA languages, *ou* carries prefixal person, number, and gender marking that agrees with its object, the noncore argument it introduces.

(72) *Naponei hou mogor.*

na- po -naa -i hi- ou mo -kari  
 3.PL- dig -MUL -SUB 3.SG.F- SUPR earth -DET.F

‘They dig the earth continuously planting.’  
 (Patte (1989, p. 87))

Similarly, example (73) shows the locative adposition *ru* introduces the noncore argument *wiin* ‘water’, and agrees in person, number, and gender with this noun.

(73) *Hapitti hiru wiinkari.*

hapitta -i hi- ru wiin -kari  
 fall -SG.F 3.SG.F- LOC water -DET.F

‘She fell in the water.’  
 (Patte (1989, p. 88))

Añun adpositions also exhibit meanings not strictly limited to spatial relations. In example (74), the adposition *ta* licenses the causer of the predicate *wiinari* ‘run’ and takes prefixal



person and number marking cross-referencing that causer, the person, number, and gender of that noun, 3.SG.F. While the translation in (74) suggests that the example is a passive construction, the example does not exhibit any passive morphology. The predicate *hoto* ‘rot’ appears to be an intransitive, stative predicate. To add in a participant that causes the action of the verb, *ta* is used. While semantically dissimilar to spatial adpositions, distributionally, and grammatically, *ta* behaves like other Añun adpositions. It follows a verb and licenses a noncore argument. Such examples show that, in certain cases, the semantics of CNA adpositions align the arguments they introduce with prototypical subject roles: minimally, causers and experiencers (Dowty, 1991), which I argue in §3.3 played a role in the availability of reanalysis for such constructions.

(74) *Hotoroi wapana nta wiinar.*

hoto -roo -i wa- pana hi- ta wiinari  
 rot -AUM -SG.F 1.PL- liver 3.SG.F- CAUS rum

‘Our livers are rotted by rum.’  
 (Patte (1989, p. 83))

Aside from their function as noncore argument licensors, Añun adpositions can host morphology that indexes core verbal arguments. Añun exhibits oblique subject marking with some stative predicates. We see in (75) that the predicate *payawa* ‘be happy’ does not carry a person marker cross-referencing its subject. We find instead that the dative adposition *ein* carries the prefixal person marker *ta*, which cross-references the  $S_o$  argument of the predicate. The Añun dative adposition *ein* is polysemous, meaning ‘heart’ in non-adpositional contexts, the dative marker presumably having developed from a possessive construction meaning ‘My heart is happy.’ In its adpositional use, the dative adposition carries agreement marking for an experiencer subject, as in example (75).

(75) *Payawii tein.*

payawii ta- ein  
 be.happy 1.SG- DAT

‘I am happy.’  
 (Patte (1989, p. 76))

The dative marker is also used in the desiderative construction, shown in examples (76) and (77). Here, *ein* cross-references the subject of the clause with a prefixal person marker. I suggest that the dative marker developed its use in desiderative constructions as a result of its association with experiencer subjects. Because verbal subject agreement, adpositional agreement, and agreement in possessive constructions is formally identical, just this type of reanalysis is made possible, providing a clear example of how non-verbal argument marking has developed in the CNA languages.

Again, this construction is notable precisely because agreement for the grammatical subject of the verb is carried by an element other than the verb, itself, not necessarily because of its semantics, interesting though they may be. If prefixal marking for core arguments is generally a property of verbs, core prefixal person marking on adpositions makes these eligible for reanalysis.

(76) *Akee tein.*

a- k -ee ta- ein  
 AT.1- eat -ASP.1 1.SG- DAT

‘I want to eat.’  
 (Patte (1989, p. 95))

(77) *Akeep tein.*

a- k -ee -pe ta- ein  
 AT.1- eat -ASP.1 -NEG 1.SG- DAT

‘I don’t want to eat.’  
 (Patte (1989, p. 95))

This particular adposition is also notable because it has an obvious cognate in Wayúu, *ain*, though, in Wayúu, this adposition has developed a clear auxiliary use, hosting suffixal object agreement morphology, as well as prefixal subject morphology. The Añun dative marker discussed here may be analyzable as an auxiliary in its desiderative use. However, morphosyntactically, these two analyses are indistinguishable for Añun, given that *ein* does not carry suffixal person markers, like adpositions, generally, in the language. Given also that Añun exhibits no other auxiliaries, generalizations about how auxiliaries pattern morphosyntactically in the language are difficult to formulate.

The examples cited in this section show only a handful of the many adpositions Añun exhibits. However, unlike Wayúu and Garifuna, none of these adpositions exhibits the verbal properties characteristic of the auxiliaries to which they seem to be historically related in Wayúu and Garifuna. In most cases, the function of these adpositions is to license a noncore argument. Dative-marked experiencer subjects, as well as the desiderative construction, provide evidence that core argument marking was likely available on a non-verbal host in proto-CNA — Añun does not appear to have undergone full reanalysis of this word class like Garifuna and Wayúu, as I will show in the following two sections.

**Wayúu** Like the canonical adpositions widespread throughout CNA, Wayúu adpositions license noncore arguments and carry prefixal person-marking morphology that coindexes the arguments adpositions introduce. Additionally, Wayúu exhibits constructions that appear to be instances of partial adpositional incorporation into the lexical verb. These partial

incorporation constructions disrupt canonical argument marking for both lexical verb and adposition, a situation I argue has given rise to ambiguity in the lexical category of adpositions. Agreement morphology for core verbal arguments is carried on adpositions, allowing for an interpretation of adpositions as verbal. Example (78) illustrates such a construction. The lexical verb *moto* ‘forget’ carries no person-marking morphology.<sup>1</sup> The verb is followed by the dative adposition *ain*, which carries no prefixal person-marking morphology, and instead carries suffixal person-marking morphology cross-referencing the syntactic subject of the lexical verb *nukúoma híntiikai* ‘the boy’s hat’.

(78) *Moto’ áinchi nukúoma híntiikai.*

moto’ áin -chi            n-            ukúoma hínti -kai  
 forget DAT -M.SG.PST 3.SG.M- hat        boy    DEF

‘The boy forgot his hat.’ ~ ‘Forgotten (to him) is the boy’s hat.’  
 (Zubiri and Jusayu (1978, p. 280))

Zubiri and Jusayu (1978) describe three adpositions that exhibit this behavior, though it is not clear this list is exhaustive from the exposition in this grammar. Each of these three items maintains canonical adpositional uses where each introduces a noncore argument and carries prefixal agreement morphology that cross-references that argument. Adpositional meanings for each of these elements are summarized in Table 3.2.

Adposition	Meaning
<i>au</i>	COMITATIVE
<i>ain</i>	SUPERESSIVE
<i>o’u</i>	LOCATIVE

Table 3.3: Wayúu adpositions with auxiliary uses

Wayúu exhibits several more elements which clearly function as adpositions, only, introducing and carrying agreement for noncore arguments. Like for the other CNA languages, many of these appear to be sourced from body-part terms, historically. For example, the adposition *o’u*, shown in Table 3.2, also independently means ‘eye’ in Wayúu. An example of a canonical adposition licensing a noncore argument and carrying prefixal marking is found in (79), where the benefactive adposition *üümü* introduces the argument *Marakaríita*, and carries prefixal third person feminine agreement for this argument.

<sup>1</sup>This verb may grammatically carry suffixal agreement morphology, independently, as shown in example (82).

(79) *Ee'irajshi taya wanee jayeechi sümüin Marakariita.*

ee'iraj -shi taya wanee jayeechi s- ümü -in Marakariita  
 sing -SG.M 1.SG one song 3.SG.F BEN -PROC Margarita

'I sing a song for Margarita.'  
 (Álvarez (2014, p. 48))

Each of the three lexical items listed in Table 3.2 exhibits the same range of agreement possibilities. Core arguments are cross-referenced on these items for Wayúu verbs in the present and the perfective only. In their adpositional uses, each may take prefixal person marking that encodes the argument introduced by the adposition, as in (80). This example shows the person-marking suffix *-shi*, attaching to the verb *anta* 'surprise', and cross-referencing the subject of the clause *taya* '1.SG', as well as prefixal third person masculine agreement *n-* on the adposition *áu*, cross-referencing the object of the adposition.

(80) *Antishi taya náu wané wayúu aluwahishi.*<sup>23</sup>

anti -shi taya n- áu wané wayúu aluwahishi  
 surprise -SG.M 1.SG 3.SG.M- MAL one man robber

'I surprised a robber.' ~ 'I surprised one man who robs.'  
 (Zubiri and Jusayu (1978, p. 279))

Since both nouns in example (80) are masculine and singular, the agreement morphology carried by the main verb in this example is technically ambiguous in terms of the noun it agrees with. Example (81) shows the same adposition (written *aa'u* by Álvarez) in the same syntactic function. Here, however, because the object of the adposition is plural, the adposition takes third person plural prefixal agreement, ruling out a possible analysis where the suffixal person marker carried by the verb is agreement morphology for the object of the adposition.

---

<sup>2</sup>This clause appears to exhibit two instances of the subject suffixing construction discussed in Chapter 2, *antishi*, and *aluwahishi*. A possible literal translation here is 'I am the surprier of the man who robs.' If this is accurate, 1) it is possible that the suffix *-fi* is synchronically still active in subject relativization of the type I reconstruct for proto-CNA in Chapter 2, providing further evidence for the analysis I pursue in that chapter, and 2) the reanalysis of the subject relative-nominalizer as suffixal person morphology played a role in the development of auxiliaries in CNA. Because the subject relative-nominalization is valence decreasing, a direct object of the relativized verb would have to be reintroduced by an adposition.

<sup>3</sup>The adposition *au* is described as meaning *above*, or *over* in extent descriptions for the language (Zubiri and Jusayu, 1978; Álvarez, 2014). Given the difficulty of reconciling the translation in example (80) with such semantics, I gloss *au* as a malefactive here on parallel with the Wayúu benefactive. If the point made the above footnote is correct, a genitive interpretation of this adposition may be most correct. Both these analyses may ultimately be wrong, but this glossing convention should not affect my analysis since what I am interested in is the fact that the object of a transitive verb is marked on a lexical item other than the verb itself.

(81) *Onjulaapu'ushii naya iipünaa jaa'u wunu'ulia.*

onjulaapu'u -shii naya iipünaa j- aa'u wunu'ulia  
hide -SG.M 3.SG.M high 3.PL- SUPR tree

'He hides himself high in the trees.'

(Álvarez (2014, p. 96))

The fact that *au* can carry prefixal verbal person marking that is coreferential with its object demonstrates that the word retains its adpositional function. Under the assumption that adpositions carry prefixal agreement for arguments they introduce, and under the assumption that the verb in (80) is at least morphologically intransitive, *au* is the licenser of the of the argument *wané wayüu alywahishi* 'a robber'. The adposition therefore carries agreement marking for that argument. The same point can be made for example (81), where *au* appears to license the argument *wunu'ulia* 'trees'.

Like Añun, Wayúu exhibits dative experiencer subject marking involving the morpheme *ain*. As for Añun, in this use, it is ambiguous whether to analyze *ain* as an auxiliary or as an adposition. If analyzed as an auxiliary, this argument-marking strategy is not oblique, given the assumptions I lay out about the difference in argument structure for auxiliaries and adpositions in the introduction to this section. If a core syntactic function of auxiliaries is to host agreement morphology for verbal arguments, prefixal marking on *ain* that encodes a syntactic subject fulfills this function. Conversely, if the central role of adpositions is the licensing of arguments, and the subject is licensed by the verb, itself, *ain* is a non-canonical adposition in its role as the locus of argument marking in these constructions.

An example of a Wayúu construction with a dative-marked experiencer subject mirroring those found in Añun is shown in (82). Here, we find the lexical verb *motu'* 'forget' carries suffixal agreement morphology. Because suffixal subject agreement is underspecified for person, this marking is compatible with either the first or second person argument in the clause. We find first-person prefixal marking, on the morpheme *áin*, making the argument the verbal suffix agrees with likely to be the second person pronoun in the sentence.

(82) *Motu'shi táin pia.*

motu' -shi t- áin pia  
forget -SG.M 1.SG- DAT 2.SG

'I forgot you.'

(Zubiri and Jusayu (1978, p. 280))

We can see that disambiguation of this agreement morphology is possible in examples like (83). Here, the addressee was masculine but the suffixal morphology on the verb is SG.F, agreeing with *wüin* 'water'. This example demonstrates that the notional subject of the desiderative construction is truly not marked on the lexical verb, making reanalysis of this

construction available — because subject agreement is prototypically carried on verbs, an available interpretation of other lexical items carrying subject agreement morphology is that these are also verbal.

(83) *Aseesü paa'in wüin?*

asee -sü p- aa'in wüin  
 drink -SG.F 2.SG DAT water

‘Would you like to drink water?’  
 (Álvarez (2014, p. 75))

In summary, when it carries prefixal agreement morphology, the lexical category of desiderative *ain* is ambiguous between adposition and an auxiliary in Wayúu. It is cognate to Añun *ein*, and historically related to the word for heart, as discussed above for Añun. It is possible that this morpheme is cognate to the Garifuna, Lokono, and Tariana auxiliary *a*, though this is unlikely (and moreover, difficult to prove), given the degree of phonological reduction that the morpheme would have had to undergo in these languages for this to be the case. However, the auxiliary *ain*, itself, is reduced from its full nominal form *aa'in* ‘heart’ (cf. Garifuna *anigi* ‘heart’, Lokono *ansin* ‘like, love, want’), and phonological reduction does prototypically accompany grammaticalization (Bybee et al., 1994), so the possibility of this etymology remains.

In its use as the dative marker for experiencer verbs, as well as in the desiderative construction, the distribution of Wayúu *ain* differs from that of Añun *ein* in allowing for suffixal agreement morphology, as seen in example (84). This is the function I claim motivates a clear verbal analysis for these lexical items in Wayúu to the exclusion of their Añun cognates. Example (84) contains no person marking at all on the lexical verb *moto'*, and instead exhibits suffixal marking co-referential with the stimulus subject of the verb, *ukóma* ‘hat’ on the auxiliary, only. Note that the experiencer subject *híntii* ‘boy’ is absent except in the complex phrase where it serves as a possessor. It is not marked with agreement morphology on the verb or on the auxiliary *ain*.

(84) *Moto' áinchi nukúoma híntiikai.*

moto' áin -chi n- ukúoma híntii -kai  
 forget DAT -M.SG.PST 3.SG.M- hat boy DEF

‘The boy forgot his hat.’ ~ ‘Forgotten (to him) is the boy’s hat.’  
 (Zubiri and Jusayu (1978, p. 280))

Wayúu also exhibits this syntactic pattern with the other lexical items with both auxiliary and adpositional uses, as can be seen in example (85), in which *wayúu* ‘man’ (the object of *motu* ‘surprise’) is cross-referenced with the suffixal person marker *-chi* carried by the morpheme

*au*. Here, the first person subject of the verb *anta* ‘surprise’ is explicitly marked with the first person singular morpheme *ta* on the verb. Note that example (84) minimally contrasts with example (80), introduced at the beginning of this section in its argument-marking strategy. Whatever the internal structure of the complex involving the lexical verb and the morpheme *au* in example (85), this use of *au* suffixal agreement marking for a core argument is non-canonical for adpositions, but perfectly acceptable for verbs, suggesting an auxiliary analysis for the set of morphemes that exhibits these properties.

(85) *Tánta áuchi wayúkai hinain aluwa'há kaula.*<sup>4</sup>

t-   ánta    áu  -chi  wayú -kai  hinain  aluwa'há  kaula.  
1.SG- surprise MAL -M.SG man  -DEF  ??   rob       goats

‘I surprised the man (who was) robbing goats.’  
(Zubiri and Jusayu (1978, p. 280))

We see in this section that Wayúu exhibits both prefixal and suffixal argument marking for core arguments of lexical verbs on items that are related to adpositions. In the following section, I lay out the non-verbal core argument marking facts for Garifuna.

**Garifuna** Here, I introduce Garifuna constructions that exhibit person marking for core verbal arguments on items other than the verbs that introduce them. I also discuss aspects of Garifuna grammar that appear to be unique among the CNA languages, namely, the items that appear to exhibit auxiliary functions semantically encode tense, aspect, and mood (TAM), semantic features prototypically encoded by auxiliaries cross-linguistically (Heine, 1993), but features encoded affixally in the other CNA languages. In §3.3, I will argue that these auxiliaries motivate an analysis where Garifuna’s auxiliary system developed differently from Wayúu’s. Namely, the dual pressures of insubordination and analogically-driven reanalysis of adpositions as verbal both contributed to the development of an auxiliary system for Garifuna, but only the latter appears to be relevant for Wayúu. Here, I introduce this set of morphemes descriptively as they relate to argument marking. In §3.3, I argue that analogical pressure from Garifuna’s adpositionally-sourced auxiliary led to the auxiliary use of formerly bound morphemes.

Like the other CNA languages, Garifuna exhibits a large class of adpositions that license noncore arguments, and these inflect prefixally for the person, number, and gender features of their direct objects, as shown in example (86), where the comitative adposition *uma* carries prefixal marking for its object, *Pablo*. Table 3.4 shows a number of these adpositions with masculine third person singular prefixes.

---

<sup>4</sup>For this work, I did not carry out original elicitation with Wayúu speakers. The source from which this example is drawn does not provide interlinear glosses for every example. The question marks here indicate that I was unable to determine a good gloss for the item in question.

(86) *Abinahatu luma Pablo.*

abinaha -tu      l-            uma Pablo  
 dance    -3.SG.F 3.SG.M- COM Pablo

‘She danced with Pablo.’

Table 3.4: Garifuna adpositions

ADPOSITION	GLOSS
lun	‘to/for/ him/it’
lau	‘of/with him/it’ (instrumental)
luma	‘with him/it’ (comitative)
lida	‘in/on him/it’
luwagu	‘on him/it’
lubadu	‘next to him/it’
luwe	‘from him/it’
luba	‘toward him/it’
luwege	‘above him/it’
labu	‘under him/it’
tigibu	‘in front of him/it’
lanaga	‘behind him/it’
lauru	‘beside’

Additionally, we find that the facts about oblique subject marking in the other CNA languages also hold for Garifuna, shown in example (87). The locus of oblique experiencer marking for this example is the adposition *un*, which can more generally express either locative or benefactive semantics.<sup>5</sup>

(87) *Hírugati nun.*

hirugati n-      un  
 be.sad    1.SG- LOC

‘I am sad.’

(Munro (2007, p. 122))

Munro (2007) also observes that Garifuna oblique subject marking occurs with the adpositions *au* INSTR, and *uwágu* BEN.

<sup>5</sup>While *un* is not the expected form for a Garifuna cognate to Añun *ein* and Wayúu *ain* (Añun *ei*, and Wayúu *ai* generally correspond to Garifuna *a.*), the fact that marking of a subject on a head other than the lexical verb occurs in at least Wayúu, Añun, and Garifuna, strongly suggest that such subject marking was a property of CNA, inherited by these languages, and was therefore an available analogical template for the extension of non-verbal marking of core arguments elsewhere in the grammars of these languages.



(88) *Chúti táu.*

chuti t- áu  
be.smart 3.SG.F- INSTR

‘She is smart.’

(Munro (2007, p. 122))

Like for Añun and Wayúu, it is possible to make the case that the oblique subject marking, as found in (87) construction is a case where the lexical category of the morpheme in question is ambiguous between adposition and auxiliary. In these constructions, the adposition carries agreement morphology for a core verbal argument, which is expected behavior for an auxiliary and non-canonical for an adposition. In this particular construction, Garifuna does not exhibit suffixal marking of the type found in Wayúu, leaving oblique subjects outside the scope of the diachronic changes I trace in this chapter.

Aside from items that exhibit clear adpositional functions involved in oblique subject marking, Garifuna exhibits core argument marking on a set of aspectual auxiliaries. The argument-marking patterns associated with Garifuna aspectual auxiliaries are of three types, summarized in Table 3.5, adapted from Kaufman (2010).

	POSITIVE	NEGATIVE
Aorist <i>umu</i>	VERB A- <i>umu</i> -O	VERB A- <i>umu</i> -O
Perfect <i>ha/a</i>	VERB A- <i>ha/a</i> -O, -S	VERB A- <i>ha/a</i> -O, S
Continuative <i>gi</i>	VERB A- <i>gi</i> -O, -S	VERB A- <i>gi</i> -O, S
Future <i>ba</i>	A-, S- VERB <i>ba</i> -O	VERB A- <i>ba</i> -O, -S

Table 3.5: Summary of auxiliary person marking, adapted from Kaufman (2010)

For Garifuna, main clauses with TAM categories aorist, perfect, continuative, and future, verbal arguments are not consistently marked on the lexical verb, but instead appear on auxiliaries that express those TAM categories under particular conditions involving transitivity and polarity. The following generalizations hold about the distribution of person-marking in such clauses: Under aorist tense, the lexical verb will carry a suffixal person marker if it is morphologically intransitive, and no auxiliary or TAM morphology will appear. If the verb is morphologically transitive, prefixal and suffixal person marking is carried on the Aorist auxiliary *umu*, as shown in example (89).

(89) *Ariha numuti mesu le.*

ariha n- umu -ti mesu le  
see 1.SG- AOR -3.SG.M cat DEM.M

‘I see the cat.’

(Kaufman (2010, p. 8))

Kaufman (2010) analyzes *umu* as ‘aorist’. I preserve this glossing convention in examples citing his work, and I take this label to indicate that the auxiliary does not specify tense or aspect features, as I have found no evidence for any semantic content for the auxiliary *umu*, though it is cognate to Lokono, Añun, and Wayúu’s benefactive adposition. The main function of Garifuna *umu* is to host person markers when a suffixing verb stem of the type analyzed in Chapter 2 takes a definite object and where TAM semantics are underspecified. Example (89) shows this auxiliary carrying subject and object agreement.

Under perfect and continuative aspects, the auxiliaries exhibiting these meanings carry suffixal marking cross-referencing a syntactic subject in the case that the lexical verb with which these co-occur is intransitive. In this case, these morphemes are pronounced as a phonological word with the lexical verb. In the case that the lexical verb is morphologically transitive, both prefixal marking for the subject of the lexical verb and suffixal marking for its object are carried by these auxiliaries. The transitive pattern for perfect aspect marking is shown in example (90).

(90) *Aliha laru garada.*

aliha l-            a        -ru        garada  
read 3.SG.M- PERF -3.SG.F book

‘He had already read the book.’  
(Kaufman (2010))

Finally, for future marked clauses, prefixal morphology for any syntactic subject is carried by the lexical verb, except under negation, in which case, the future morpheme will carry suffixal person marking for an intransitive lexical verb’s subject, and prefixal and suffixal person marking for a transitive lexical verb’s core arguments. In the case that the future marker carries prefixal person marking, it is pronounced as a free phonological word, as shown in example (91).

(91) *Madáru nubou gáfu.*

m-     adáru nu-     ba    -u        gáfu  
NEG- open 1.SG- FUT -3.SG.F box

‘I will not open the box.’  
(Munro (2007, p. 21))

These aspectual auxiliaries are unique to Garifuna among the CNA languages. In the following section, I argue that these were originally suffixal verbal morphology, and entered into the auxiliary system on analogy with auxiliaries *a* and *umu* once these entered into the TAM system as perfect and aorist tense, respectively.

Finally, like for Lokono main clauses, under negation, transitive complement clauses exhibit a semantically vacuous auxiliary *a* that hosts prefixal person markers cross-referencing the subjects of the lexical verbs with which they co-occur.

(92) *Bulietina kelo mabogua ba gayu.*

bulie -tina kelo m- abogua b- a gayu  
 forget -1.SG COMP NEG- cook 2.SG AUX chicken

‘I forgot that you did not cook the chicken.’  
 (Chen, 2012)

As holds for the other CNA languages as well, the similarity of prefixal agreement marking on verbs and adpositions is precisely what provides the type of ambiguity that allows for the reanalysis of lexical category, as demonstrated by the difficulty of analytically sorting such cases as adposition or auxiliary descriptively. In the following section, I will discuss oblique argument marking of core arguments for Tariana before turning to a discussion of the diachronic analysis of auxiliiation in CNA.

**Tariana** Here, I introduce two Tariana constructions where argument marking for core verbal arguments is not encoded on the verb, itself. Tariana exhibits oblique subject marking with certain stative predicates, as observed for Wayúu, Añun, and Garifuna, and Tariana exhibits marking of a demoted agent on an auxiliary in passive constructions. Tariana exhibits person-marking prefixes, but no suffixes. These cross-reference a syntactic subject when carried by a verb. Like for the CNA languages, adpositions and possessed nouns may also carry these prefixes, in which case these prefixes cross-reference the object of the adposition, and the nominal possessor, respectively.<sup>6</sup>

Example (93) shows a Tariana experiencer predicate *amiri* ‘be drunk’ where subject marking is not carried on the verb. Instead, the person marker associated with the subject is carried prefixally on the morpheme *na*.

(93) *Amirikamha duna.*

amiri -ka -mha du- na  
 be.drunk -DECL -PRES.NON.VIS 3.SG.M- OBJ

‘She is drunk.’  
 (Aikhenvald (2001))

---

<sup>6</sup>Tariana is a serial verb language, so many of the canonical functions of auxiliary verbs (e.g., argument marking cross-referencing core arguments) are carried out via serialization in the language. Because no other language in this study exhibits verb serialization, person marking and serial verbs fall outside the scope of the current study. Aikhenvald (1999) points out that verb serialization in Arawak is limited to the sub-branch of the Northern Arawak languages spoken in the Vaupés region of Brazil and Colombia, and claims serialization is an areal, rather than genetic feature of Tariana.

Tariana also exhibits a passive construction in which the subject of the passivized verb may be carried by the auxiliary *a*. The auxiliary *a* can be used as an independent predicate meaning ‘go’, ‘say’, ‘give’, or ‘cause’. Crucially, in this function, it becomes the locus of person marking for the predicate. The Tariana passive is marked with the prefix *ka-* and the suffix *-kana*. The auxiliary *a* is optional. If it does not appear, there is no verbal person marker in the passive clause. This pattern is demonstrated in (94) and (95). Example (94) contains the active form of the verb *ñha* ‘eat’. It takes the prefixal person marker *di-*, which is coreferential with the subject of the clause. Example (95) shows the passive form of the same verb. The promoted subject of the verb is encoded by the verbal person marker *di-*, which now appears on the auxiliary *a*. The verb *ñha* hosts no person markers.

(94) *Hanenuku yawi diñhamhade.*

ha-            ne    -nuku            yawi    di-            ñha -mhade  
 DEM:INAN- DIST -TOP.NON.A/S jaguar 3.SG.NF- eat -FUT

‘A jaguar will eat that one up.’  
 (Aikhenvald (2003))

(95) *Hane kañhakanamhade dia.*

ha-            ne    ka-    ñha -kana -mhade di-            a  
 DEM:INAN- DIST REL- eat -PASS -FUT    3.SG.NF AUX

‘This one will be in the process of being eaten up by the jaguar.’  
 (Aikhenvald (2003))

While an auxiliary of the phonological shape *a* is fairly light, it is striking that it appears with the same shape and function in Lokono and Tariana. Given that this auxiliary is present outside of CNA, the likelihood is that it was inherited from a common ancestor by both Lokono and Tariana, making constructions involving this auxiliary, in addition to constructions where adpositions carry oblique subject markers, an available template for the reanalysis of adpositions as verbal — if true auxiliaries follow verbs and carry person marking for them, and adpositions also exhibit this function, the syntactic similarity of the two lexical categories makes their analysis as members of a single word class available for users of these languages. In the following section, I will propose that both oblique subject marking and the presence of auxiliary *a* played a role in the analogical reanalysis of adpositions as auxiliaries for Wayúu and Garifuna.

### 3.2.1 Summary

To summarize, Garifuna and Wayúu exhibit lexical items with auxiliary uses (hosts for core verbal argument marking) that appear to reconstruct as adpositions for proto-CNA. These

lexical items are summarized with cognate forms from Añun and Lokono in Table 3.2.1. Items with auxiliary uses are shaded grey, while those that only serve as adpositions are not.

Garifuna	Lokono	Añun	Wayúu	Tariana	GLOSS
a	a	—	—	a	DUMMY
au	—	ou	au	—	SUPERESSIVE
—	—	ein	ain	—	DATIVE
—	—	ou	ouu	—	LOCATIVE
umu	myn	mo	ümü	—	BENEFACTIVE

Table 3.6: CNA adpositions with auxiliary uses and their cognate forms

We saw in this section that Garifuna and Wayúu adpositions exhibit verbal properties that cognate adpositions in Lokono and Wayúu do not — beyond just oblique subject marking, Wayúu and Garifuna both exhibit constructions where both verbal arguments are encoded on auxiliaries, a subject prefixally, and an object suffixally. This use is clearly not analyzable as adpositional — adpositions do not serve to introduce two arguments, cross-linguistically. In the following section, I propose a diachronic analysis of the emergence of these properties.

### 3.3 Historical development of Garifuna and Wayúu auxiliaries

The preceding section examined core argument-marking patterns that involve loci of person marking other than main verbs, namely, CNA adpositions and auxiliaries. The goal of this section is to provide an analysis of how auxiliaries developed from adpositions in the histories of these languages. In the Garifuna auxiliary system we find elements that express some aspectual meaning alongside elements which are semantically empty, serving only as agreement hosts. In the Wayúu system, we find synchronic categorical ambiguity between adpositions and auxiliaries.

In this section, I argue that the diachronic source for Garifuna continuative and future auxiliaries are suffixal TAM markers, and that Garifuna’s aorist auxiliary *umu* developed from the benefactive adposition *umu*. I suggest that subordinate clauses exhibited the auxiliary *a* as the locus of person marking in pre-Garifuna, as we find synchronically for both Lokono and Garifuna, and that subordinate clauses exhibiting this person-marking strategy underwent insubordination, allowing for the main-clause use of this auxiliary, which, in turn, provided a template for reanalysis of adpositions as verbal. I also show how negation constructions provide supporting evidence for this insubordination analysis. Following this change, I argue main clause *a* was reinterpreted as the locus of perfect marking in morphologically transitive perfect constructions, and benefactive *umu* analogized to this pattern, as a post-verbal lexical item carrying prefixal agreement morphology. The other aspectual suffixes then analogized to the perfect argument-marking pattern.

Unlike for Garifuna, Wayúu’s development of auxiliaries does not require an appeal to insubordination, though there is evidence for insubordination in both languages. For Wayúu auxiliaries, I argue that the morphosyntactic properties of desiderative *ain* allowed for a verbal interpretation of the morpheme. Ambiguity in lexical category between the auxiliary and adpositional uses of this morpheme allowed for the reanalysis of the other adpositions that appeared historically in post-verbal position. For *ain*, itself, the development of its use in desiderative constructions is very likely related to the fact that body part terms are the source of adpositions in the CNA languages, and *ain* means ‘heart’ in Wayúu, as discussed in §3.2.

Further distinguishing the two languages is the fact that the Wayúu auxiliaries exhibit no aspectual meanings. These auxiliaries are all synchronically related to adpositions, and there is no apparent semantically vacuous auxiliary whose argument-marking pattern extended to adpositions. Instead, it appears that constructions utilizing adpositions as the locus for argument marking underwent reanalysis, and the verbal paradigm of prefixal and suffixal argument marking was extended to adpositions.

Recalling the formal mechanisms of syntactic change, *grammaticalization*, and *analogy*, the emergence of auxiliaries from a grammatical source like an adposition or aspectual suffix might suggest a degrammaticalization trajectory. In the case of Garifuna TAM morphology, bound morphemes appear to have developed word-like properties. However, the change from adposition to auxiliary, in particular, is sufficiently rare that a grammaticalization analysis is called into question. Grammaticalization clines known to involve auxiliaries normally involve a shift from lexical verb to auxiliary and from auxiliary to aspect (Heine and Kuteva, 2004). Degrammaticalization, then, should involve a category shift from aspect to auxiliary and from auxiliary to lexical verb. In the cases of Garifuna *-gi* and *-ba* we find the beginning stage of such a shift. However, for those auxiliaries that developed from adpositional sources, we do not. Similarly, lexical nouns are commonly accepted as the source of adpositions in the grammaticalization literature (Heine and Kuteva, 2004). A degrammaticalization account involving adpositions should involve a category shift from case marker to adposition and from adposition to lexical noun.<sup>7</sup>

### 3.3.1 Insubordination

In this section, I will discuss the role of insubordination — the conventional main-clause use of structures exhibiting subordinate morphology — in the emergence of Garifuna main clause auxiliaries. I argue in this section that there is strong evidence that insubordination occurred in the history of the CNA languages, and that this insubordination played a crucial

---

<sup>7</sup>English verbs derived from adpositional sources, such as *down* (as in *he downed his beer*) or *up* (as in *he upped his ante*) have been suggested to be possible evidence for the existence of a degrammaticalization cline from adposition to lexical verb, a potential avenue of analysis for the present study. However, Hopper and Traugott (2003) contend that such verbs are morphologically derived in English, and are not indicative of a true degrammaticalization pathway.

role in the development of Garifuna auxiliaries from adpositions — namely, the main-clause use of an auxiliary historically limited to subordinate clauses where verbs were nominalized introduced an analogical template for the reanalysis of Garifuna adpositions as auxiliaries.

**Garifuna** Patterns of argument marking on Garifuna main-clause auxiliaries appear to have developed as a result of insubordination-driven reanalysis and analogical extension. Synchronic data support this analysis. Evans (2007) defines insubordination as, “the conventionalized main-clause use of what, on *prima facie* grounds, appear to be formally subordinate clauses.”

Strong morphological evidence for a Garifuna insubordination analysis comes from the main clause negator *ma-*. Example (96) exemplifies the modern distribution of this morpheme: *ma-* is prefixed to a main verb, and arguments are marked on the auxiliary *umu*. Recall from the discussion of Lokono’s semantically empty auxiliary *a* that *ma-* exists in Lokono as a privative marker, prefixing to nouns to derive a stative verb, and functioning as clausal negator in subordinate clauses and main clauses that appear to be diachronically related to subordinate structures. The morpheme *ma-* in fact reconstructs to proto-Arawak as a privative marker, and the use of the morpheme as a main clause negator has been argued to be the result of insubordination (Michael, 2014). Subordinate structures in CNA generally involve nominalization, making subordinated verbs historically eligible hosts for privative *ma-*. The CNA use of the morpheme to encode main clause negation is the result of insubordination-driven reanalysis of the morpheme’s function.

- (96) *Máfaru n- umu -ti.*  
 ma- afaru n- umu -ti  
 NEG- hit 1.SG- AOR -3.SG.M  
 ‘I didn’t hit him.’  
 (Munro (2014, p. 17))

We have seen in the previous section that the auxiliary *a* serves as the locus of person marking in Lokono negated subordinate (nominalized) clauses. We find that this same pattern obtains in Garifuna. Example (97) contains a subordinate clause negated by *ma-*, with the external argument marked prefixally on the auxiliary *a*.

- (97) *Emenigiratu lun mabinaha ta.*  
 emenigira -tu lun ma- abinaha t- a  
 hope -3.SG.F COMP NEG- dance 3.SG.F AUX  
 ‘She hopes not to dance.’  
 (Chen (2012, p. 7))

Given the necessary co-occurrence of privative *ma-* and auxiliary *a* in subordinate clauses in Lokono and Garifuna, I propose that main clause auxiliary *a* emerged in Garifuna as a result

of the same insubordination that led to the use of privative *ma-* as a general clausal negator. Example (98) shows that exactly this structure surfaces in a context where insubordination is cross-linguistically expected — namely, in imperative clauses.

- (98) *Móumuga ban!*  
 m- oumuga b- a  
 NEG- sleep 2.SG- AUX  
 ‘Don’t sleep!’  
 (Munro (2014))

### Garifuna insubordination trajectory:

1. Private *ma-* attaches to nouns and derives stative predicates. Subordinate clauses count as nouns for *ma-* negation. Core arguments are marked on subordinate auxiliary *a* in negated subordinate structures.
2. Subordinate clauses negated with *ma-* undergo insubordination.
3. Main clause negation with *ma-* and main clause core person marking on *a*.

An insubordination analysis for Garifuna explains main clause negation with prefixal *ma-* and main-clause auxiliary *a*, which can host prefixal person markers. This analysis does not independently explain the emergence of Garifuna aspectual auxiliaries, which will be addressed after examining the case for Wayúu insubordination.

**Wayúu** As is the case for Garifuna, Wayúu exhibits the main clause negator *ma-*, as we see in (99). Although this is not the primary form of negation in Wayúu, the fact that *ma-* negation occurs at all in main clauses suggests insubordination also occurred in Wayúu. Privative *ma-* is only associated with nominal stems in many other Arawak languages, and a privative meaning for *ma-* is the generally accepted reconstruction for Arawak (Michael, 2014). The fact that it occurs on a verbal stem in a main clause construction suggests that the verb was historically nominal, supporting an insubordination analysis for Wayúu, in precisely the same way these facts support an insubordination analysis for Garifuna. Wayúu negated main-clause verbs also carry suffixal morphology that is formally nominalizing, providing more evidence that insubordination has occurred in main clauses exhibiting negation in the language.

- (99) *Ma’yataainsai Kamiirü tepialu’u.*  
 ma- yataa -in -sa -i Kamiirú t- epia -lu’u  
 NEG- work -SUB -?? -SG.M Camilo 1.SG- house -LOC  
 ‘Camilo doesn’t work in my house.’  
 (Álvarez (2014, p. 159))



While it is clear that insubordination has occurred in the history of Wayúu’s grammar, it is not necessary to appeal to insubordination as a formal mechanism in the development of auxiliaries from adpositions for Wayúu. I argue in the section that follows that the analogical reanalysis of *ain* as verbal led to the extension of verbal properties to other Wayúu adpositions. However, the fact that Wayúu exhibits evidence for insubordination is relevant to the larger argument that typological properties of the CNA languages make them eligible for syntactic change driven by insubordination. The fact that Wayúu auxiliation does not appear to be related to insubordination provides evidence that Garifuna and Wayúu auxiliation was not joint.

Given that the use of *ma-* as a clausal negator occurs in Lokono, Garifuna, and Wayúu, but not Añun, a question of parsimony arises for the analysis presented here. Namely, it is simply more likely that proto-CNA exhibited *ma-* as a clausal negator in at least some contexts, and that *ma-* was independently lost in Añun, than it is to say that Lokono, Garifuna, and Wayúu each underwent insubordination separately. This question is left open. However, it is worth noting that the contexts in which *ma-* serves as a main clause negator vary across the three languages — for Garifuna, *ma-* serves as the main strategy for negation across clause types, while for Lokono, it is available in main clauses, but not the only option for negation. For Wayúu, main clause negation with *ma-* is only available with a habitual reading. This distribution suggests that proto-CNA minimally exhibited the subordinate clause structures necessary for main clause negation with *ma-* to develop in the CNA languages. In the following section, I argue that analogy played a major role in auxiliation for both Wayúu and Garifuna.

### 3.3.2 Analogy

Returning to a view of syntactic change where grammaticalization and analogy are formal mechanisms driving reanalysis (Garrett, 2012), and having ruled out grammaticalization as playing a role in the emergence of Garifuna auxiliaries, we are left with analogy as the driving force behind reanalysis of CNA auxiliaries as adpositions.

**Garifuna** I propose that the remaining Garifuna auxiliaries entered the grammar in three cycles, which I lay out in detail here: first, the auxiliary *a* was reanalyzed as a perfect marker due to the fact that the suffixing verb stem type which co-occurs with negation and the auxiliary *a* has a default perfect reading; second, the suffixal TAM markers *-gi* and *-ba* were reanalyzed as auxiliaries on analogy with the perfect auxiliary *a* as fellow members of Garifuna’s TAM system; finally, the auxiliary-marking pattern was extended to the adposition *uma* in non-perfect contexts where the suffixing verb stem type is used.

In morphologically intransitive clauses, verbs that mark an A or  $S_a$  argument suffixally and carry no overt TAM marker exhibit a perfect reading, but no synchronically segmentable morpheme encoding perfect aspect for many verbs. Though many of these verbs end in

*-ha*, the pattern is irregular. This fact is observed in (100), where the A argument of *aliha* ‘read’ is cross-referenced on the verb with a suffixal person marker. This A and  $S_a$  suffixing verb stem is the same verb stem used under negation and so necessarily the same stem type which must have undergone insubordination with the negative marker *ma-* and the auxiliary *a*. My proposal is that this co-occurrence between unmarked perfect aspect and the semantically empty auxiliary *a*, along with the phonological similarity of *-ha* and *a*, allowed for the reanalysis of *a* as the locus of perfect marking in this construction — a stem ending in *ha* and carrying a perfective meaning appears in a subordinate clause with a free morpheme *a*, and this morpheme is then interpreted as the locus of perfective meaning.

(100) *Alihali Pablo bandi garada.*

aliha -li        Pablo bandi garada  
 read -3.SG.M Pablo many book

‘Pablo has read many books.’  
 (Sheil (2012, p. 12))

Once *a* developed its function as a main clause verbal element capable of carrying prefixal person marking, it also developed the ability to carry a suffixal person marker cross-referencing an O argument like the prefixing verb stem found for lexical verbs, yielding the person-marking pattern exhibited in (101).

(101) *Hala tali bolu.*

hala t-        a        -li        bolu  
 break 3.SG.F- PERF -3.SG.M bowl

‘She has broken the bowl.’  
 (Sheil (2012, p. 12))

I argue this change is analogical — most verbs in Garifuna exhibit both morphologically transitive and morphologically intransitive stems, where a morphologically intransitive verb exclusively takes prefixal person marking cross-referencing its subject, and its transitive version exhibits prefixal marking for its subject as well as suffixal person marking cross-referencing its direct object. Once auxiliary *a* exhibited a main-clause use as the locus of core argument marking, it analogized to this pattern. This analogy is schematized in (102).

(102) AGR.PRE-VERB : AGR.PRE-VERB-AGR.SUFF :: AGR.PRE-*a* : AGR.PRE-*a*-AGR.SUFF

Under this analysis, one might expect to see prefixal marking of an  $S_a$  argument on the perfect auxiliary *a* in main clauses, like we find in subordinate clauses, exactly as we saw in example (98). However, the perfect use of the auxiliary only exhibits prefixal marking in

the case that it is transitive. The question remains open at the present. It seems likely this pattern was exhibited at some stage of the language, given the insubordination analysis I have proposed here. It is possible that the established presence of stem-alternating perfect marking as in (100) prevented such a pattern from spreading.

Turning now to the other TAM auxiliaries, I propose that the *a*-marking pattern was analogically extended to *gi* and *ba*, as morphemes that form a semantic class with perfect *ha/a*. Lokono exhibits perfect *-ka*, which is the expected cognate for Garifuna *-ha*, as well as future *-fa*, cognate to Garifuna *-ba*. For Lokono, neither of these forms carries prefixal subject marking — these only appear as suffixal verbal morphology, which I take to be the historical state of affairs for proto-CNA TAM markers. I argue here that the insubordination-driven reanalysis of auxiliary *a* as the free version of perfect *-ha* put analogical pressure on the remaining suffixal TAM morphemes, such that these, too, developed independent uses. The analogical template is schematized in (103).

- (103) VERB-*ha*-AGR.SUFF : VERB AGR.PRE-*a*-AGR.SUFF ::  
 VERB-*ba*-AGR.SUFF : VERB AGR.PRE-*ba*-AGR.SUFF

Such a spread would have occurred for either a future transitive or continuative transitive clause under negation, since the negation marker *ma-* occupies the prefixal slot where an A argument is encoded in non-negated clauses, as discussed in §3.3.1. Table 3.5, repeated here as Table 3.7, shows the synchronic person-marking patterns available for each of these morphemes.

	POSITIVE	NEGATIVE
Aorist <i>umu</i>	VERB A- <i>umu</i> -O	VERB A- <i>umu</i> -O
Perfect <i>ha</i>	VERB A- <i>ha</i> -O, -S	VERB A- <i>ha</i> -O, S
continuative <i>gi</i>	VERB A- <i>gi</i> -O, -S	VERB A- <i>gi</i> -O, S
Future <i>ba</i>	A-, S- VERB <i>ba</i> -O	VERB A- <i>ba</i> -O, -S

Table 3.7: Summary of auxiliary person marking adapted from Kaufman (2010)

It is observed that the auxiliaries *ha* and *gi* exhibit the same person marking pattern. Future marker *ba*, however, only exhibits prefixal person marking when the main verb is negated. I attribute this to the fact that *ha* and *gi* are only compatible with the Garifuna verb stem type incompatible with prefixal person morphology. Future *ba*, on the other hand, appears with the prefixing verb stem type in non-negated contexts, which allows for prefixal person marking on the lexical verb, itself, except under negation. The minimal difference in A-marking strategies is shown in examples (104) and (105), where the subject of the transitive, future-marked verb *eihi* ‘see’ is cross-referenced via the prefixal person marker *n-* on the lexical verb, itself, and the person marking cross-referencing the subject of the transitive, perfect-marked verb *aliha* ‘read’ is carried by perfect *ha*.

(104) *Neihi bei.*

n- eih ba -i  
1.SG see FUT SG.M

‘I will see him.’  
(Ekulona (2000, p. 26))

(105) *Aliha laru garada.*

aliha l- ha -ru garada  
read 3.SG.M- PERF -3.SG.F book

‘He had already read the book.’  
(Kaufman (2010))

The final step in the development of auxiliaries in Garifuna is the emergence of *umu* in transitive contexts underspecified for TAM. The relevant construction is exemplified in (106); subject and object markers are hosted by a semantically empty auxiliary *umu* and the lexically contentful verb *hou* ‘eat’ carries no person markers. The auxiliary *umu* only appears in transitive constructions; the A argument is always prefixed on *umu* and the O argument is always suffixed.

(106) *Hou lumutu Pablo üdüraü.*

Garifuna

hou l- umu -tu Pablo üdüraü  
eat 3.SG.M- AOR -3.SG.F Pablo fish

‘Pablo ate the fish.’  
(Stark, notebook 1, p.75)

I suggest that the diachronic source of this auxiliary was the benefactive adposition, *umu*. I propose that the *a* argument-marking pattern was analogically extended to *umu* in non-perfect contexts where the suffixing verb stem type is necessary: either under negation or under new stage, as discussed in Chapter 2. Given that adpositions canonically license noncore arguments, and that adpositions in Garifuna carry prefixal person marking for their objects, and that elsewhere in the language prefixal person marking always encodes an A or  $S_a$  argument, a context where reanalysis of a prefixal adpositional object as an agent could occur is easy to imagine. It would simply require a context where a third person subject and a third person noncore argument were both pronominal, and a lexical verb semantically encoded more than one participant. Example (108) shows such a context.

(107) *Houti lumu.* pre-Garifuna

hou -ti        l-        umu  
eat -3.SG.M 3.SG.M- BEN

‘He ate for him/it.’

(108) *Abinahatu tumu.* pre-Garifuna

abinaha -tu        t-        umu  
dance -3.SG.F 3.SG.F- BEN

‘She danced for her/it.’

Here, the analogical template is, again, constructions involving auxiliary *a*, a post-verbal element which takes prefixal person marking cross-referencing a syntactic subject. This analogy is schematized in (109). Person-marking strategies involving main clause constructions involving auxiliary *a* are analogically extended to *umu*, as both these items were historically post-verbal elements carrying prefixal person morphology.

(109) VERB AGR.PRE-*a*        : VERB AGR.PRE-*a*-AGR.SUFF        ::  
VERB AGR.PRE-*umu* : VERB AGR.PRE-*umu*-AGR.SUFF

Broadly, the regularity with which subjects are cross-referenced via prefixal agreement markers, systematic morphological ambitransitivity for verbs, and prefixal person marking on non-verbal heads all play a role in the availability of reanalysis here. For Garifuna, it appears that insubordination of a construction involving auxiliary *a* played a crucial role in the analogical extension of verbal person-marking strategies to non-verbal elements, and ultimately to the reanalysis of these elements as verbal.

**Wayúu** For Wayúu, I argue that reanalysis of adpositions as auxiliaries was facilitated by the development of the desiderative use of *ain* alongside its adpositional use. Like for Garifuna *a*, The analogical template that allowed for adposition *ain* to carry suffixal agreement morphology for core verbal arguments is provided by patterns of argument marking exhibited by ambitransitive verbs, where these may optionally cross-reference one argument (prefixally), or two (prefixally and suffixally). The presence of both an auxiliary and adpositional *ain* caused the other adpositions in the language to develop such uses by analogy.

Wayúu trajectory:

1. Experiencer subjects are cross-referenced prefixally on adposition *ain*.
2. *ain* develops suffixal cross-referencing pattern on analogy to ambitransitive verbs while retaining adpositional use in non-experiencer constructions, schematized in (110).

3. Adpositions *au* and *ou* develop auxiliary uses on analogy to the *ain* pattern, schematized in (111).

(110) AGR.PRE-VERB : AGR.PRE-VERB-AGR.SUFF :: AGR.PRE-*ain* : AGR.PRE-*ain*-AGR.SUFF

(111) AGR.PRE-*ain* : AGR.PRE-*ain*-AGR.SUFF :: AGR.PRE-AD : AGR.PRE-AD-AGR.SUFF

As in the case of Garifuna, the fact that adpositions carry prefixal agreement markers that are identical to those carried by verbs for their subjects created structural ambiguity allowing for the type of analogical change we find has occurred in the Wayúu adpositional system, yielding the argument-marking patterns discussed in §3.2.

### 3.4 Conclusions

In this chapter, I have discussed an alignment pattern found in Wayúu and Garifuna that deviates from the CNA active-stative alignment discussed in Chapter 1. I have proposed that the development of ergative marking in the auxiliary systems of these two languages is innovative, and related to the reanalysis of adpositions as auxiliaries. Given that Garifuna and Wayúu do not form a subgroup, these auxiliaries appear to have been independently innovated in each language. Garifuna only appears to exhibit one modern auxiliary with an adpositional source while Wayúu auxiliaries all appear to have synchronic adpositional uses. While the auxiliary argument-marking patterns in these two languages is superficially similar, the diachronic sources for the auxiliaries themselves appear to be different, providing further evidence that this diachronic change was not joint. Finally, I proposed a possible diachronic path from adposition to auxiliary for each language that involves insubordination and analogy for Garifuna, and analogy, only, for Wayúu.

Garifuna and Wayúu constructions where the lexical items investigated here carry agreement morphology for two verbal participants appear to be instances of a complete change in lexical category from adposition to auxiliary. While such constructions are not found in Lokono or Añun, both languages exhibit the right ingredients for this reanalysis to occur, as both exhibit prefixal oblique subject marking on items other than lexical verbs and the same prefixal subject marking on verbs, themselves. Crucially separating the functions of Añun and Lokono adpositions from their Garifuna and Wayúu counterparts is the fact that Añun and Lokono adpositions never host suffixal person markers that co-index a main verb's syntactic object, the criterion I use here to distinguish the two categories.

A question raised by the analysis presented here is why these changes should occur independently in two closely related languages but not other members of the subgroup, given that all four CNA languages exhibit very similar, inherited morphosyntactic resources. While Lokono and Añun exhibit evidence that insubordination has occurred in their grammars, they did

not develop auxiliaries from adpositions like Garifuna and Wayúu. It is possible that the grammatical changes examined here are partially due to contact with the Cariban languages, which also exhibit effects of insubordination, and which are spoken in close proximity to both Garifuna and Wayúu. South America is a linguistic region well known for long term stable multilingualism among indigenous groups. The CNA languages provide a rich area for future research into pre-colonial contact effects among unrelated American languages.

Finally, an important finding of this chapter is that ergative alignment can arise without intermediate passivization, as also discussed in Gildea (1998). What is particularly interesting about the Northern Arawak case is that ergative marking was facilitated by a typologically uncommon change from adposition to auxiliary, where the Cariban change from adposition to case marker is fairly common. It is possible that this change is attributable to the different loci of marking for grammatical relations in head-marking versus dependent-marking languages.

# Chapter 4

## Conclusions and future research

This thesis has examined morphosyntactic change in the person-marking and alignment systems of the modern Caribbean Northern Arawak languages, Garifuna, Lokono, Wayúu, and Añun. Carrying out comparative analyses of morphosyntactic change in the grammars of these languages allows us to understand the diachronic sources of typologically interesting static patterns presented by the CNA languages. I investigated grammatical change in two areas in detail. Chapter 2 examined the development of a suffixal argument-marking strategy that encodes syntactic subject across verb type for Garifuna, Wayúu, and Añun in some instances, obscuring an otherwise robust pattern of active-stative alignment in CNA that encodes subjects of transitive verbs and subjects of active intransitive verbs prefixally, and subjects of stative intransitive verbs and objects suffixally. Chapter 3 examined the auxiliary systems of Garifuna and Wayúu, which exhibit typologically rare VAuxSO word order, and linked this fact to the diachronic relationship between adpositions and auxiliaries in these languages.

To establish an internal branching for the CNA languages, I carried out a lexical phylogenetic study presented in Chapter 1 that supported the analyses about joint and independent changes for these languages I developed in the rest of the dissertation. The lexical phylogenetic analysis resulted in a topology that deviates from the received view of internal branching for the clade in grouping Taino and Garifuna to the exclusion of TA-Arawak, Taino having traditionally been grouped as a member of TA-Arawak to the exclusion of Garifuna. I also reexamined morphological evidence for including Taino in TA-Arawak and found it to be compatible with the proposed structure. Future research will expand the phylogenetic analysis to include data for Island Carib. The lexical database created for the phylogenetic analysis will provide the empirical data for a phonological reconstruction of the CNA languages.

The comparative morphosyntactic work carried out for the analyses presented here allow for several avenues of future research. First, I proposed in Chapter 2 that the change from subject nominalizer to agreement morphology was available for the CNA languages because of the typological properties of being head marking, and of carrying out subordination,



and in particular, relativization, via syntactic nominalization. This claim is predictive and empirically testable — many languages of the Americas carry out subordination generally via nominalization, and many are head marking. My proposal suggests we should expect to find other cases where nominalizers have been reanalyzed as agreement morphology in other languages that exhibit these features.

Related to this, in Chapter 3, I proposed that exhibiting prefixal argument marking that is identical to a possessive marker and to prefixal agreement on adpositions allowed for reanalysis of adpositions as verbal. This proposal is also predictive and empirically testable. It is possible that both these changes appear to be typologically rare precisely because not enough diachronic work has been carried out for the many South American languages that exhibit these typological properties. With the high quality descriptive work that has been generated for the South American languages in recent decades, such studies are now possible.

# Bibliography

- Aikhenvald, A. Y. (1999). The Arawak language family. In C. U. Press (Ed.), *The Amazonian languages*, Chapter 3, pp. 65–106. R. M. W. Dixon and Alexandra Y. Aikhenvald.
- Aikhenvald, A. Y. (2001). Verb types, non-canonically marked arguments and grammatical relations: A Tariana perspective. In A. Y. Aikhenvald and R. M. W. Dixon (Eds.), *Non-canonical marking of subjects and objects*, pp. 177–200. John Benjamins Publishing Company.
- Aikhenvald, A. Y. (2003). *A grammar of Tariana*. Cambridge University Press.
- Álvarez, J. (2007). Vocalic mora augmentation in the morphology of Guajiro/Wayuunaiki. *Lingua Americana* 11(20).
- Álvarez, J. (2008). Esbozo gramatical de la lengua Añú.
- Álvarez, J. (2014, September). Manual de la lengua Wayuu.
- Álvarez, J. and M. Bravo (2008). *Diccionario basico de la lengua Añú*. Maracaibo, Sinamaica, and El Moján.
- Baker, M. and N. Vinokurova (2009). On agent nominalizations and why they are not like event nominalizations. *Language* 85, 517–556.
- Barðdal, J. (2013). Construction-based historical-comparative reconstruction. In T. Hoffmann and G. Trousdale (Eds.), *Oxford Handbook of Construction Grammar*, Chapter 24, pp. 438–457. New York: Oxford University Press.
- Bowern, C. (2010, December). Historical linguistics in Australia: trees, networks and their implications. In James Steele, Peter Jordan, and Ethan Cochrane (Eds.), *Cultural and linguistic diversity: evolutionary approaches*, Volume 365, pp. 3845–3854. Philosophical transactions of the Royal Society B.
- Bowern, C., H. Haynie, C. Sheard, B. Alpher, P. Epps, J. Hill, and P. McConvell (2014). Loan and inheritance patterns in hunter-gatherer ethnobiological nomenclature. *Journal of Ethnobiology* 34(2), 195–227.
- Breton, R. (1900). *Dictionnaire français-caraïbe*. Leipzig, B.G. Teubner.

- Bybee, J., R. Perkins, and W. Pagliuca (1994). *The evolution of grammar: tense, aspect, and modality in the languages of the world*. University of Chicago Press.
- Campbell, L. (2012). Classification of the indigenous languages of South America. In L. Campbell and V. Grondona (Eds.), *The Indigenous Languages of South America: A comprehensive guide*, pp. 59–166. Berlin: Gruyter Mouton.
- Campbell, L. and V. Grondona (Eds.) (2012). *The Indigenous Languages of South America: A comprehensive guide*. Berlin: Gruyter Mouton.
- Campbell, L. and A. C. Harris (2002, November). Syntactic reconstruction and demythologizing ‘Myths and the prehistory of grammars’. *Journal of Linguistics* 38(3), 559–618.
- Captain, D. M. and L. B. Captain (2005). *Diccionario básico ilustrado Wayuunaiki-Español, Español-Wayuunaiki*. Bogotá: Editorial Buena Semilla.
- Cayetano, E. R. (1993, February). *The People’s Garifuna Dictionary*. Dangriga, Belize: National Garifuna Council.
- Chang, W., C. Cathcart, D. Hall, and A. Garrett (2015). Ancestry-constrained phylogenetic analysis supports the Indo-European steppe hypothesis. *Language* 91(1), 194–244.
- Chen, I.-H. (2012, May). Two types of Garifuna complement clauses.
- Comrie, B. and S. A. Thompson (1985). Lexical nominalization. In T. Shopen (Ed.), *Language Typology and Syntactic Description*. Cambridge University Press.
- de Carvalho, F. O. (2016). The diachrony of person-number marking in the Lokono-Wayuunaiki subgroup of the Arawak family: reconstruction, sound change and analogy. *Language Sciences* 55, 1–15.
- de Goeje, C. H. (1939). Nouvel examen des langues des Antilles. *Journal de la Société des Américanistes* 31(1), 1–120.
- Dixon, R. M. W. (2010). *Basic Linguistic Theory*, Volume 1. Oxford: Oxford University Press.
- Dowty, D. (1991, September). Thematic proto-roles and argument selection. *Language* 67(3), 547–619.
- Drummond, A. J. and A. Rambaut (2007). BEAST: Bayesian evolutionary analysis by sampling trees. *BMC Evolutionary Biology* 7(214).
- Ehrman, S. (1972). *Wayuunaiki: a grammar of Guajiro*. Ph. D. thesis, Columbia University.
- Ekulona, T. J. (2000). The ba morpheme in Garifuna. Master’s thesis, UCLA.
- Epps, P. (2012). Between headed and headless relative clauses. In B. Comrie and Z. Estrada-Fernández (Eds.), *Relative Clauses in Languages of the Americas: A typological overview*, Volume 102, pp. 191–212. John Benjamins.

- Erteschik-Shir, N. (1997). *The dynamics of focus structure*. Oxford: Cambridge University Press.
- Erteschik-Shir, N. (2007). *Information structure: The syntax-discourse interface*. Oxford: Oxford University Press.
- Evans, N. (2007). Insubordination and its uses. In I. Nikolaeva (Ed.), *Finiteness : Theoretical and Empirical Foundations*, Chapter 11, pp. 366–431. Oxford University Press.
- Garrett, A. (1990, June). The Origin of NP Split Ergativity. *Language* 66(2), 261–296.
- Garrett, A. (2012). The historical syntax problem: Reanalysis and directionality. In D. Jonas, J. Whitman, and A. Garrett (Eds.), *Grammatical change: Origins, nature, outcomes*, pp. 55–72. Oxford University Press.
- Gijn, R. V. (2014). Subordination strategies in South America: nominalization. In L. O’Connor and P. Muysken (Eds.), *The Native Languages of South America. Origins, Development, Typology*, Chapter 274-296. Cambridge: Cambridge University Press.
- Gildea, S. (1998). *On reconstructing grammar: comparative Cariban morphosyntax*. Oxford University Press.
- Gray, R. D. and Q. D. Atkinson (2003). Language-tree divergence times support the Anatolian theory of Indo-European origin. *Nature* 426, 435–39.
- Harris, A. C. (2008). Reconstruction in syntax: Reconstruction of patterns. In G. Ferraresi and M. Goldbach (Eds.), *Principles of Syntactic Reconstruction*, pp. 73–95. Amsterdam: John Benjamins.
- Haurholm-Larsen (2016). *A Grammar of Garifuna*. Ph. D. thesis, University of Bern.
- Haurholm-Larsen, S. (2015). Why state the obvious? Tense-aspect marking as a clue to information structure in Garifuna. Portland, Oregon. SSILA.
- Hawkins, J. A. (1994). *A Performance theory of order and constituency*. New York: Cambridge University Press.
- Heine, B. (1993). *Auxiliaries: Cognitive Forces and Grammaticalization*. Oxford: Oxford University Press.
- Heine, B. (2002). On the role of context in grammaticalization. In I. Wischer and G. Diewald (Eds.), *New reflections on grammaticalization*, pp. 83–100. Amsterdam and Philadelphia: John Benjamins.
- Heine, B. and T. Kuteva (2004). *World Lexicon of Grammaticalization*. Cambridge, New York: Cambridge University Press.
- Higgins, F. R. (1979). *The Pseudocleft construction in English*. New York: Garland.

- Hopper, P. J. and E. C. Traugott (2003). *Grammaticalization*. Cambridge Textbooks in Linguistics. Cambridge University Press.
- Jusayu, M. A. and J. O. Zubiri (1981). *Diccionario de la lengua Guajira, Castellano Guajiro*. Universidad Católica Andrés Bello, Centro de Lenguas Indígenas.
- Kaufman, D. (2010). Greenberg's 16th slayed in the Bronx? Language universals and fieldwork in NYC. Talk at Harvard University.
- Kaufman, T. (1994). The native languages of South America. In C. Moseley and R. E. Asher (Eds.), *Atlas of the world's languages*, pp. 46–76. London: Routledge.
- Lewis, M. P., G. F. Simons, and C. D. Fennig (Eds.) (2016). *Ethnologue: Languages of the World, Online version: <http://www.ethnologue.com>*. (17th ed.). SIL International.
- Li, C. N. and S. A. Thompson (1976). Subject and topic: a new typology of language. In C. N. Li (Ed.), *Subject and topic*, pp. 457–489. New York: Academic Press.
- Lightfoot, D. (1979). *Principles of Diachronic Syntax*. Cambridge University Press.
- Matteson, E. (1972). Proto Arawakan. In E. Matteson, A. Wheeler, F. Jackson, N. Waltz, and D. Christian (Eds.), *Comparative Studies in Amerindian Languages*, Number 127 in *Janua linguarum, Serie practica*, pp. 160–242. The Hague: Mouton.
- Michael, L. (2011, October). Verbal person markers as pronouns in Matsigenka. Talk at Group in American Indian Languages (GAIL) meeting.
- Michael, L. (2014). A typological and comparative perspective on negation in Arawak languages. In L. Michael and T. Granadillo (Eds.), *Negation in Arawak Languages*, Chapter 11, pp. 235–292. Brill. In press.
- Michael, L., N. Chousou-Polydouri, K. Bartolomei, E. Donnelly, V. Wauters, S. Meira, and Z. O'Hagan (2015). A Bayesian Phylogenetic Classification of Tupí-Guaraní. *LIAMES 15*(2), 193–221.
- Mikkelsen, L. (2005). *Copular clauses: specification, predication and equation*. Amsterdam: John Benjamins.
- Munro, P. (2007). Oblique subjects in Garifuna. In P. Austin and A. Simpson (Eds.), *Endangered languages*, pp. 113–142. LB Sonderheft.
- Munro, P. (2014). Garifuna negatives. In L. Michael and T. Granadillo (Eds.), *Negation in Arawak Languages*, Chapter 2, pp. 11–50. Brill. In press.
- Noble, G. K. (1965). *Proto-Arawakan and its Descendants*. Bloomington, Indiana: Indiana University.
- Oswalt, R. L. (1971, December). Towards the construction of a standard lexicostatistic list. *Anthropological Linguistics 13*(9), 421–434.

- Patte, M.-F. (1989). *Estudio descriptivo de la lengua Añun (o “Paraujano”)*. Universidad Católica del Tachira.
- Patte, M.-F. (2011). *La langue arawak de Guyane: Presentation historique et dictionnaires arawak-français et français-arawak*. Marseille: Institut de recherche pour le développement.
- Patte, M.-F. (2014). Negation in Guyanese Lokono/Arawak. In L. Michael and T. Granadillo (Eds.), *Negation in Arawak Languages*, Chapter 3, pp. 51–70. Brill. In press.
- Payne, D. L. (1991a). Clasificadores nominales: La interacción de la fonología, la gramática y el léxico en la investigación comparativa del maipurán. In I. P. Pastor (Ed.), *Revista latinoamericana de estudios etnolingüísticos*, Volume VI, pp. 241–258. Ignacio Prado Pastor.
- Payne, D. L. (1991b). A classification of Maipuran (Arawakan) languages based on shared lexical retentions. In D. C. Derbyshire and G. K. Pullum (Eds.), *Handbook of Amazonian languages*, Volume 3, pp. 356–499. Mouton de Gruyter.
- Pet, W. J. A. (1987). *A Grammar sketch and lexicon of Arawak (Lokono Dian)*. Ph. D. thesis, Cornell University.
- Plemenitaš, K. (2015). Aspects of nominalization from a cognitive perspective. In S. Starc, C. Jones, and A. Maiorani (Eds.), *Meaning Making in Text: Multimodal and Multilingual Functional Perspectives*, Chapter 4, pp. 72–91. New York: Palgrave Macmillan.
- Prendergast, E. (2012, July). The power of one: *Aba* and predicate subordination in Garifuna. Talk at UCLA American Indian Seminar.
- Pustet, R. (2003). *Copulas: universals in the categorization of the lexicon*. Oxford: Oxford University Press.
- Ramirez, H. (2001). *Línguas Arawak da Amazônia Setentrional. Comparação e descrição*. Manaus: Editora da Universidade do Amazonas.
- Reinhart, T. (1981). Pragmatics and linguistics: An analysis of sentence topics. *Philosophica* 27, 53–94.
- Reyes, R. (2012). *Garüdia: Garifuna Trilingual Dictionary (Garifuna-English-Spanish)*. Garifuna institute.
- Rizzi, L. (2004). On the cartography of Syntactic Structures. In L. Rizzi (Ed.), *The Structure of CP and IP*, pp. 3–15. Oxford: Oxford University Press.
- Rouse, I. (1993). *The Tainos: Rise and decline of the people who greeted Columbus*. New Haven: Yale University Press.
- Rybka, K. (2016). *The grammar of landscape*. Ph. D. thesis, University of Amsterdam.
- Segerer, G. and S. Flavier (Eds.) (2011-2016). *SAmLex, comparative database running RefLex framework*. Paris, Lyon: Reference Lexicon, Version 1.1.

- Seki, L. (2000). *Gramática Kamaiurá: Língua Tupi-Guarani do Alto Xingu*. Campinas.
- Sheil, C. (2012). Case in head marking languages.
- Stark, T. (2017). Caribbean northern arawak subgrouping: lexical phylogenetics and comparative morphology. Paper presented at the Society for the Study of the Indigenous Languages of the Americas, Austin, TX, January 6.
- Swadesh, M. (1955). Towards greater accuracy in lexicostatistic dating. *International Journal of American Linguistics* 21(2), 121–137.
- Taylor, C. (2012). *The Black Carib Wars: Freedom, survival, and the Making of the Garifuna*. Jackson: University Press of Mississippi.
- Taylor, D. (1935, April-June). The Island Caribs of Dominica, B.W.I. *American Anthropologist* 37(2), 265–272.
- Taylor, D. (1951). *The Black Carib of British Honduras*. New York: Wenner-Gren Foundation for Anthropological Research.
- Taylor, D. (1977). *Languages of the West Indies*. Johns Hopkins studies in Atlantic history and culture. Baltimore: Johns Hopkins University Press.
- Taylor, D. and I. Rouse (1955). Linguistic and archeological time depth in the West Indies. *International Journal of American Linguistics* 21(2), 105–115.
- Trask, R. L. (2000). *The Dictionary of Historical and Comparative Linguistics*. Psychology Press.
- Uriana, J. G. and R. P. Ipuana (2000). *Guajiro (Wayuu)*, pp. 342–397. Fundación Bigott.
- Valenti, D. M. (1986). *A reconstruction of the Proto-Arawakan consonantal system*. Ph. D. thesis, New York University.
- von Martius, C. F. P. (1867). *Wörterammlung Brasilianischer Sprachen*. Leipzig: Martin Sändig.
- Walker, R. S. and L. A. Ribeiro (2011, January). Bayesian phylogeography of the Arawak expansion in lowland South America. *Proceedings of the Royal Society B*.
- Warnow, T. and J. Nichols (2008). Tutorial on computational linguistic phylogeny. *Language and Linguistics Compass* 2(5), 760–820.
- Zubiri, J. O. and M. A. Jusayu (1978). *Gramática de la lengua Guajira*. Lenguas indígenas de Venezuela. Universidad Católica Andrés Bello, Centro de Lenguas Indígenas.

# Appendix: CNA cognates

Gloss	23. Añun [pbg]	24. Lokono [arw]	25. Wapis- hana [wap]	27. Wayuu [guc]	30. Gari- funa [cab]	31. Palikur [plu]	33. Ach- agua [aca]	34. Baniwa [bwi]	32. Taino [tnq]
afternoon 01				aliika					
afternoon 02	jatupa								
afternoon 03		bakulama							
afternoon 04			wachuupunin						
afternoon 05					ranbaweyu				
afternoon 06						maviyvi ahawkanavrik			
afternoon 07							táikala		
afternoon 08								déepiina	
agouti 01									aguti
agouti 02						aguri			
agouti 03							uwan		
agouti 04									mohuy
agouti 05							hiífi		
agouti 06		hokorhéro	sokoru						
aji 01		athi		jashi'	ati	atit		áatti	
aji 02			didada						
aji 03				üta'müin mürülü					
animal 01									
animal 02		khota							
ankle 01					aaluwain				
ankle 02		karopaira							
ankle 04			baruri'i						
ankle 05					umurugutei				
ankle 06						gimakuyana			
ankle 07									gua
ankle 08							kúdufi		
ankle 09								tawírhe	
ant 01	jañu(n)			jeyuu	haü				
ant 02		kashishi							
anteater 01		tamanoa	tamanawaa			kasis	kéefi	keétto	
anteater 02		wariti		walii		tamanwa			
anteater 03		baremu	paashim			wariy		páapali	
aquatic snail 01				warrutta	wadabu		walauta		
aquatic snail 02	karakoola								
aquatic snail 03		alaka							
aquatic snail 04			uway						
aquatic snail 05						xuguway			
aquatic snail 07								tsikówa	
arm 01	atüna	duna		atiüna	ariünaü				
arm 02									
arm 03			anoba			giwan			
arm 04							naafi		
arm 05								-naapa	
armadillo 01							alítai	aalídali	
armadillo 02				keri					
armadillo 03		barhakata							
armadillo 04			kapashi						
armadillo 05					gasigamu				
armadillo 06						tat			
armadillo 07							tjée		
armadillo fish 01	poyo			pole'					
armadillo fish 02	araa								atatu
arrive 01	einta	andun		antaa	ábiiriüga				
arrive 02									
arrive 03						danuh			
arrive 04			kaawan						



arrive 05				o'otoo						-óoka	
arrow 01	jatü			jatü							
arrow 02			bairi								
arrow 03		shimarha		ima'lá	gimara						
arrow 04								tjáawideri			
arrow 05										kapítsiri	
ashes 01	parii	balishi	paritibi	pali'í	baligi		ahewra	báali			
ashes 02											
ashes 03											-wádzole
ashes, dust 01	moushirein										
ashes, dust 02		korheli									
ashes, dust 03			kixana'u								
ashes, dust 04					kaliki						
ashes, dust 05							wayk atabd-abni				
ashes, dust 06								pukúpukui			
ashes, dust 07										-wittale	
ask (request) 01	ouyapaa	khoyabun									
ask (request) 02			pishaan								
ask (request) 03				ajulijaa							
ask 01	asakira			asakiraa							
ask 02		thokodokoton									
ask 03					alügüda						
ask 04			pishaan								
ask 05							aya				
ask 06											-ttátha
at, to 01	ami	muniro		amüin	un						
at, to 03			di'iti								
at, to 05								aduhya			
at, to 07											-liko
axe 01				ashottaa				tjúfúfi			dzóoka
axe 02	poru	barho	baro	polu'							
axe 03					harawa						
axe 04											
back 01	ayuku										
back 02		âbo									
back 03			barau								
back 04				asapü							
back 05					anagani						
back 06								aduhya			
back 07									wóhunafi		
back 08											-ttáma
bad 01		wakhai		mojuu			má	máafi		máatshi	mayana
bad 02			idikauda'o								
bad 03					würiba-						
bamboo 01		hiwa	iiwa						iwówi		íiwa
bamboo 02				pálua							
bamboo 03								tuwem			
bamboo 04											
bark 01		adada	mada	ata				amar			pheelóma
bark 02	kununtüü										
bark 03					uraüídibu						
bark 04									íimanafi		
bark 05											-ya
basket 01			dazoaniz								
basket 02											kaxadádali
basket 03				chonoí							
basket 04					básigidi						
basket 05								kat			
basket 06											hava
basket 07									kéemali	káame	
bat 01	püriüütü	buhuri		püsichi	buriri				híjiri	piíttiri	
bat 02			tamaruo								
bat 03								msibyu			
bat 04											wayaámani
bathe 01	aawa	kan			ágawa		akah				
bathe 02			kaokopan								
bathe 03				o'oojoo							
bathe 04								híderi			
bathe 05											-pitéeta
be angry 01		eimatonoan									
be angry 02			to'oran								
be angry 03				aashichijawaa							
be angry 04					gain-						
be angry 05							dagawne				
be angry 06											zynato
be angry 07											
be bitter 01	ishi	shife	kibii	ishii	gifi-	tiviye		ihífi		íiroa	hiipítiti
be black 01				mütsiia	würi-						
be black 02			podu'o								
be black 03	mareko										
be black 04		khareme									
be black 05							pohe				
be black 06								katfáhulailau			
be black 07										íitta	
be born 01		kayara									
be born 02			shakatan								

be born 03			jemeiwaa					
be born 04					wayvuka			
be born 05							híiko	
be dark/night 01			aiwaka'an			katáwakai	daawáka	
be dark/night 02		orharho						
be dark/night 03			sa'wai					
be dark/night 04				búrigi-				
be dark/night 05					msanap			
be full 01	amira							
be full 02		paidan						
be full 03				buin				
be full 04					kivunsa			
be full 05						káawai		
be full 06								-keettadáta
be full 07			pirataa					
be hanging 01	kacheta		kachetaa					
be hanging 02		nukudan						
be hanging 03			sawikinan					
be hanging 04				adibira				
be hanging 05					kuwigiwih			
be hanging 06						kúahideriu		
be hanging 07							írokawa	
be hanging 08								koiro
be happy 01		halekhebe						
be happy 02	payawa							
be happy 03			konaukia'o					
be happy 04			talataa					
be happy 05				gúnda-				
be happy 06					bateke			
be happy 07						sáitai		
be happy 08								kattíima
be hot 01				ja'iwaa				
be hot 02				sü-				
be hot 03	kamaira							
be hot 04						amuái		
be hot 05							hámo	
be hot 06		there						
be hot 07			wichan					
be hot 08						awahne		
be hungry 01					mativwa			mawittákai
be hungry 02	jaamúka			jamü				
be hungry 03		funasha						
be hungry 04			zamazin					
be hungry 05						ašlámašcha		
be hungry 06								mepinaa
be inclined 01		faroreken		amo'rrolouá ašrounšra				
be intoxicated 01	apera			eperaa				
be intoxicated 02			po'idipan					
be intoxicated 03					bacharua-			
be intoxicated 04						uwkya		
be intoxicated 05							kámaimau	
be intoxicated 06								idewanakaíta
be lost 01	moto							
be lost 02		kashina						
be lost 03			pozawatan					
be lost 04				amü'loulii				
be lost 05				álüda				
be lost 06						biyukavye		
be lost 07								máanali
be lying 01	oüraa							
be lying 02		burhê						
be lying 03			washatinan					
be lying 04				eisalawaa				
be lying 05					roun			
be lying 06							rúweriu	
be lying 07								-koawa
be odorous 01	emewa	kame		jemetaa	héme-			
be odorous 02			damainan	eejuu				
be odorous 03						imihe		
be odorous 04							íisanifí	
be odorous 05								pomeni
be pointy 01	kamena	kamana						
be pregnant 01	poüra			ipuoluu				
be pregnant 02			kaudanin					
be pregnant 03		kadibeyo						
be pregnant 04					dageina-			
be pregnant 05						kamukanyo		
be pregnant 06								kewédani
be ripe 01		hebe		je'wee				éewa

be ripe 02							hírrii	íitta	
be ripe 03	jaküta								
be ripe 04		korhe							
be ripe 05			ozokan						
be ripe 06				ja'yumuu					
be ripe 07					funá-				
be ripe 08						muwebdi			
be sad 01									
be sad 02	japüya								
be sad 03									
be sad 04					híru-				
be sad 05						bawki		káiwii	
be sad 06									iinónaa
be sharp 01		kamana	dimana'o		hamana-		kéemai		kemána
be sharp 02				kasaa					
be sharp 03	aruusa					guyawmu			
be shiny 01									kéraa
be shiny 02		helodon							
be shiny 03			wizi'i'o						
be shiny 04				jotaa					
be shiny 05					miri-				
be shiny 06						kabutnih			
be sick 01		haboa		aapuwaa					
be sick 02		kari	karinaan						
be sick 03	aya			ayuulii					
be sick 04					sándi-				
be sick 05						kakahrip			
be sick 06							bálineriu		tsóo
be small 01	chon			jo'uuchon					nianti
be small 02			sodi						
be small 03		ibi			nübüri-				
be small 04						nopsesa			
be small 05							püütuituu		tíki
be small 06									
be small 07	sirata			sinataa					
be smooth 01									
be smooth 02		tele							
be smooth 03			midoda'o						
be smooth 04						akikin			
be smooth 05							huníhuni		kéetti
be smooth 06		boraha							
be sour 01			diri'o						
be sour 02				jashü'üwaa	garühü-				
be sour 03						suwiyno			
be sour 04							ihíji		káama
be sour 05									
be sour 06				sha'wataa	araramaha				
be standing 01									
be standing 02		dinabun							
be standing 03	atoüntaa								
be standing 04			kadishitan						
be standing 05						kannikaw			
be standing 06							bárueriu		hiníko
be standing 07	jaiüwa								
be stinky 01									
be stinky 02		kashi							
be stinky 03			kapowun						
be stinky 04				kejuwaa'eejuu					
be stinky 05					hingi-				
be stinky 06						sunap			
be stinky 07									-áa ttoa
be strong 01	kachin			katchinwaa					khedzáako
be strong 02			ma'ozaka'o						
be strong 03						datyo			
be strong 04		tata							
be strong 05					gabafu-				
be strong 06						awaygye			
be strong 07									carib
be strong 08							kadánaniiniu		
be sweet 01	jarera								
be sweet 02		seme							
be sweet 03					bime-				
be sweet 04						kitere			
be sweet 05							húhtjai		
be sweet 06									poottídza
be sweet 07			bishoa'o	püsiaa					
be tasty 01	jameta			jemetaa					
be tasty 02		seme			semé-				
be tasty 03			kaduunu'o						
be tasty 04						maguye			
be tasty 05									hóíwi
be thirsty 01	miyaawa			miyaasüü					
be thirsty 02			maraadakon						
be thirsty 03						arabyu			
be thirsty 04					mágürabu-				mákaale
be thirsty 05		halokosha							
be tired 01				mapüsaa		mab			
be tired 02	jawara								háamaa
be tired 03		methe							

be tired 04			mizainan			bucharua-			
be tired 05									
be used to 01			dishadonoan						
be used to 02			naudinan						
be used to 03						eki'rrajiishi			
be used to 04						hechu-			
be used to 05							ihuhak		
be used to 06									-dzéeka
be visible 01			aidinan						kathinaa
be warm 01	kamaira						awahne	amuái	hámo
be warm 02			wiicha'o						
be warm 03						hárouga-			
be weak 01	kachimpe								
be weak 02							mabimne		
be weak 03									móki
be weak 04		khole							
be weak 05			kakuta'o						
be weak 06						matsüinwaa			
be weak 07						débili-			
be wet 01	jonta								
be wet 02		yoyo							
be wet 03			zabi'o						
be wet 04						chü'laa			
be wet 05							düdü-		
be wet 06							sabaptibet		
be wet 07								íisabii	
be wet 08									póotsia
be white 01	kasuu					kasuwaa			
be white 02		harhira				harú-			
be white 03			baraka'o						
be white 04							seyboye		
be white 05									yalánawi
be wide 01	raüta								
be wide 02		biloko							
be wide 03			kazoa'o						
be wide 04						jerulaa			
be wide 05						tulé-			
be wide 06							kirikad		
be wide 07								manúfidai	
be wide 08									maka-
be yellow 01	amariiya								
be yellow 02		hehe							
be yellow 03			oparita'o						
be yellow 04							kuwikwiye		
be yellow 05								meréekii	
be yellow 06									éewa
be yellow 07									
beard 01	eima	kasorhō	kashoroo	mariiyaa	gachuru				
beard 02		tima		kaa'ürüi					
beard 03			dino	e'iima					
beard 04					ídiumaü				
beard 05						gisuyum			
bee 01	wapa	maba	maaba	mapa	maba		máaba		tsínoma
		oyo							máapa
bee 02							ahayak		
beetle 01		adurhukurhu							
beetle 02			daadaro						
beetle 03							waraym		
beetle 04									táapaliko
belch 01		rharhaidoan	aidan						
believe 1				anoujaa					
believe 2					afienra				
believe 3						iha			
believe 4								é?wideri	
believe 6		kishidin	mishidan						
belly 01	ayure								
belly 02		dibeyo							
belly 03			toba						
belly 04				ale'e					
belly 05					uragei				
belly 06						atunmarap			
belly 07							jawaiji		
belly 08									-xáda
belly button 01	amoyo			omocho					
belly button 02				zarau					
belly button 03					ari				
belly button 04						gidugas			
belly button 05							muduiji		
belly button 06									-héepole
bent 01							tfúeikui		dzíki
big 01	you			miyo'u					
big 02		firo							
big 03			udaru'o						
big 04					wéiri-				

big 05					nopsad		máanuii		
big 06							mífidu	maka-	
big 07	wüchii			wuchii					
bird 01		kodibio							
bird 02			kotu'uzá		dunuru				
bird 03						kuhivra			
bird 04									
bird 05									
bird 06								képira	bogiaet
bird 07									
bite 01	ajoruta	rudun	arookan	ojottaa	gürü	kagah			
bite 02									
bite 03			ziiziba					-mhoa	
biting gnat 01				ja'yumulerü					
biting gnat 02						yu			
biting gnat 03									gúnga
biting gnat 04							hulédiru		
biting gnat 05								dóota	
biting gnat 06								-iiranaa	
blood 01		aawa	thuna	iza	isha	hitaü	íirai		
blood 02									
blood 03						gimig			
blood 04									moinaly
blow 01	ouruta	fudun	awaru	waawataa	ahuracha				
			kaawan						
blow 02						kamayghaw			
blow 03									
blow, (shoot			pootan		fu	puh		-phia	
blowgun) 01		bokoan							
boil 01			warakan						
boil 02				opooloojoo					
boil 03					áhuraha				
boil 04						kudis			
boil 05									calalu
boil 06									
boil 07								-thia	
bone 01	eipiya	buna	niwa'uzi	jiipü	lšabuš	avit		-áapi	
bone 02							jáhifi		
bow 01	aapüra	shimarhábo	somara	(w)uraichi	gimara				
bow 02							t fáawidaufi	-dzawithiapo	
boy 01	mayiichi						t fütfi		
boy 02									aatsiáda
boy 03		wadilikhan							
boy 04			tominnaru						
boy 05				jintü					
boy 06					wügüri				
boy 07						bakimni			
boy 08						awayg			
brain 01	akii	shitoko	aukuo	ekiisholoin					
brain 02					lisasa				
					ichüügü				
brain 03						givirik			
brain 04							késuefi		
brain 05	atüna			atüna				-hiwideéta	
branch 1			waoda						
branch 2			daakori			uburébu			
branch 3							ah		
branch 4							atawni		
branch 5									
branch 6							dubáifi		
branch 7							t fíkiri		
branch 8								-ke	
break (VT) 1			ramitan		oso'lujaau				
break (VT) 2					halagua				
break (VT) 3						kukwa			
break (VT) 4							túukueri		
break (VT) 5									-tokométa
break (VT) 6		thoyadun							
break 1			ramitan						
break 2									
break 3				ojuichajaa					
break 4				apiüttaa					
break 5					dagügua				
break 7						dunih			
break 8									dálheme
break 9									towháme
breast 01	achiüra			achira			kútafi		
breast 02			dunu						too
breast 03					aniguagu				
breast 04									
breast 05		dio						-íimi	
breathe 1		akubun							
breathe 2			nizoan						
breathe 3				asanalaa					
				aa'in					
breathe 4					awaragua				
breathe 5						kahekanaw			
breathe 6								-hiraa	
breathe 7								-kaalewa	

bring 01	einka			aniiga					
bring 02		andun...abo		antiraa					
bring 03				anaha					
bring 04				barü					
bring 05			kaawa-kidan						
bring 06					ewk				
bring 07						índeri			
bring 08				asaa <sup>j</sup> aa					
bring 09				alü'üjaa					
brother 01			azu						
brother 02				awala					
brother 03					ibiri				
brother 04						yey			
brother 06							éénahirifi		
brother 07								mhéereeri	
brother 08									guatiao
brother of father 01		ithi		ashi					
brother of father 2			paapai						
brother of father 4						nuguchihaña			
brother of father 5								-haniri	
brother of father 7									
brother-in-law 01	arei	reneithi		aleshi					
brother-in-law 3			yakon						
brother-in-law 5						ibamu			
brother-in-law 6						-uguñou			
brother-in-law 7							ganig		
brother-in-law 8									-limáttairi
burn (VT) 3				asijaa					
burn (VT) 4									
burn (VT) 5									
burn 01	jata			jotaa					
burn 02	amuraa		kawaodan			bukah		éemairi	mháita
burst 1		wakudonoan							
burst 10									
burst 2			shaazotan						
burst 3			su'ukan						
burst 4				oso'nojo					
burst 5				oso'toua					
burst 6						bougua			
burst 7						aducha			
burst 8							batis		
burst 9							patuk		
bury 1	ojorita			ojoitaa					
bury 2		karatun							
bury 3			didan						
bury 4						buná			
bury 5							mutuw		
bury 6							avuh		
bury 7								kéeniri	
bury 8									-dawa
butterfly 1		kambana							
butterfly 2		laliwa							
butterfly 3			tam tam						
butterfly 4				julirü					
butterfly 5						warigabaga			
butterfly 6							kuru		
butterfly 7								áatutuma	
butterfly 8									makálo
buttocks 1	auyi								
buttocks 2		ínasa							
buttocks 3		itorha							
buttocks 4			dikapo						
buttocks 5			dozon						
buttocks 6				einal'u					
buttocks 7							gihpumna		
buttocks 8								dúiwifi	
buttocks 9									-iiwáaphi
caiman 01	keiwi	kayakothi		kayúshi					cayman
caiman 3		arharhá							
caiman 4		durhudurhu							
caiman 5			atoru						
caiman 6			kanawada						
caiman 7						agare			
caiman 8							punamna		
caiman 9								kanápanalu	
call 01	aapira								
call 02									-wana
call 03		shimakun							
call 04			dakotan						
call 05			dapadan						
call 06				eenakaa					

call 07					áwara				
call 08						humak			
call 09						kanum			
call 10									
canoe 01	anuwa	yorhadooako	kanawa	anu'a	ugunei	ginawya	máideri		canoa
capybara 01			kasho				húnaŋi		
carry 01	einka	onakun	na'akan		anagua		kéesu	kéetto	
carry 10						hiyuh			
carry 11							waákueri		
carry 12							júwaderi		
carry 13							téeri		
carry 14								-dee	
carry 3			dowautan						
carry 5				ali'ijaa					
carry 6				o'otoo		abayaraha			
carry 8							tawah		
carry 9									
caterpillar 1		khalise							
caterpillar 2		komakati							
caterpillar 3			taruwiin						
caterpillar 4		marakaro					itey		
caterpillar 5								áakoro	
centipede 03			sishiba'i	kasipa					
centipede 1		bayabo							
centipede 2		kasekéro							
centipede 4						íluba			
centipede 5							awátŋa		
centipede 6							áakuru		
cheek 1	awakare								
cheek 2		walaina							
cheek 3			kaozoo						
cheek 4				awalapa'a					
cheek 5					ubuyubu				
cheek 6						gihepka			
cheek 7									
chest 08									
chest 1	eetti						kútaŋi		
chest 2		uloashibo							
chest 3		loabana							
chest 4			dokoriba						
chest 5				aluuwain					
chest 6					aniguogu				
chest 7						aduk			
chew 01		khurhutan	kuzotan						-kholítta
chew 3					chagú				
chew 4						guhbeta			
chew 6									-mhoa
chew 7									-ñhakóta
chicken egg 01	ariinaükü		kuruku dani	kalfnashuku					
chief 1		shí							
chief 10	huráure(h)								
chief 11		afodo							mato
chief 12			toshao			ábuti			
chief 3									
chief 4									
chief 5				alaülashi ekiipüü					
chief 7						wewkisne			
chief 8							wákalifi		
chief 9									-aapidzáwali
chigger 01					ñugucharu				nigua
chigger 02							ishidu	iittító	
child 1		ilontho							
child 10		korhelia							
child 11			koraidaonaa						
child 2		ibili							guaili
child 3		usa							
child 4			dani						
child 5					irahü				
child 6					ígiramaü				
child 7						bakimni			
child 8									ienipétti
child 9	jaapüchi			tepichi					
chin 1		tála boloko							
chin 2			awa'u						
chin 3				e'lyeinse					
chin 4					áribügü				
chin 5						gikuveyini			
chin 6							wétaifi		
chin 7									-wéeda
chin 8	ta-yúye								
clear 7									-pharáka
clear land 1			paradapan						
clear land 2			poduzuupan						
clear land 3				ousaa					
clear land 4					áchuaha				
clear land 5						kew			
clear land 6									-aakaapiíta
close (VT) 2					yarafa				
close (VT) 3						sabuk			

close (VT) 4									fímiri		
close 01	asiirüta	tatadun	taratan	asiirülaa	adoura						
cloth 1	ayawin										
cloth 2		bokorhoho									
cloth 3				kuluulu							
cloth 4					anaguni						
cloth 5					gamisa						
cloth 6						giybet					
cloth 7											cochio
cloth 8											yaguas
cloth 9									yamakátti		
cloud 1		orharho									
cloud 2			isha								
cloud 3					dúrari						
cloud 4					kuloudu						
cloud 5						ukuhne					
cloud 6									sáanai		
cloud 7	jürüma			siruma							
cloud 7	kaachera										
cockroach 1											
cockroach 2		hababaro									
cockroach 3		kakalaka									
cockroach 4		hokóko									
cockroach 5		ishibéro									
cockroach 6			basharao								
cockroach 7					fudi			piriíto		poléta	
cockroach 8						masumsu				aráwe	
cockroach 9											coquillas
coconut 01		kokoronoto	kokonoto	kóko	guguedi						
cold 01	jamira			jemiai							
cold 02		mimili									
cold 03			wadidi'o								
cold 04					diilí						
cold 05						kisepehe					ymizui
cold 06								kasáinii			
cold 07										hápe	
cold 08		abuya									
collared	pec-										
cary 1											
collared	pec-	matúla									
cary 2											
collared	pec-		bakuru								
cary 3											
collared	pec-				gegéu						
cary 4											
collared	pec-							kavine			
cary 5											
collared	pec-										zaino
cary 6											scuna
collared	pec-									dzamolíto	
cary 7											
comb 1		barhudoan									
comb 2			maodan								
comb 4				epéinajauá	fañei						
comb 5					amuriga						
comb 6						akuyva					
comb 7								fíába			
comb 8										-pia	
come 1	einta	andun	wa'atin	antaa	anate	ayta					
come 2					nüübi						
come 3								íinueri			
come 4										-no	
converse 01	yoota			yootoo							
converse 02		diábon									
converse 03					ayanuha						
converse 04					árügüda						
converse 05					yanu						
converse 06						kinetihwa					
converse 07								táanieri			
converse 08										kaakopéda	
cook 01		bokon				abougua					
cook 02			warakīpan								
cook 03				a'lakajawaa							
cook 04						marahpa					
cook 05						sakah					
cook 06								tjánieri			
cook 07										-dzána	
cook 08											calalu
copula 01			tomian								
copula 02				amaa						-éema	
copula 03				anain							
copula 04								-no			
copula 05											zi
copula 06											el
copula 07											eit
copula 08								jairi			
copula 09									áa		
copulate 01		satun									
copulate 02			izimidan								
copulate 03											
copulate 04					adiüga						
copulate 05						kiyakan					
								baheriu			



copulate 06									-ti	
copulate 07									-dakíta	
copulate 08									-kawiléta	
corn 01	mayikü	marishi	maziki	maikkü	awasi	gimayka				mayz
corn 02								káana	káana	
cotton 01		yaho								
cotton 02			kinaridi							
cotton 03				maawüi	mouru	mawru				mapu
cotton 04										zeiba
cotton 05										
cotton 06									ttáawaali	
cough 1	enkata									
cough 2		thondon								
cough 3				oshowan						
cough 6								dákieri		
cough 7									-tékhia	
count 1										
count 10										
count 2										
count 3				aitapan						
count 4										
count 5										
count 6					ayaawajaa					
count 7					akiijaa					
count 8						abahüda				
count 9							ekkene			
count 9							pukuha			
cousin 1								hútaderi		niwéeta
cousin 2					wáirrá					
cousin 3					ashi'úa					
cousin 4	apaya									
cousin 5										
crab 01	wiiwicha				apü'rrimasé					-iiténaa
crab 02										
crab 03							gaguchi			kaátsi
crab 04										kalámaa
crab 05										ttiido
crab 06		koa					gusa	kuwa		
crab 07					barara					
crab 08					wauru					
crab 09						jórrolo	magüre			
crab 10							harouru			
crawl 1							heringe			taracola
crawl 2		rhoadun								
crawl 3		lebesen								
crawl 4					kozootian					
crawl 5						lemütaa				
crawl 6							awariha			
crawl 7								huwiksa		
cricket 1										járderiu
cricket 2		foti				ju'i				
cricket 3		kodokodo								
cricket 4		shikishiki								
cricket 5					pi'isoro					
cricket 6							diru			
cricket 7								wayayka		
								tanán		
								nopses-		
								niye		
cricket 8										piito
cricket 9										dzíiro
crush 1		sapadun								
crush 10										
crush 11										-patóita'pátshia
crush 2					chadikan					tsírhia
crush 3						apo'tolujaua				
crush 6								kumuk		
crush 7								sibuh		
								kiyhaw		
crush 8										kabádanaa
crush 9										bíkhia
cry (animal) 1	ayaraa					a'yalajaa				
cry (animal) 2		shimakan								
cry (animal) 3					imodan					
cry (animal) 4							wagua			
cry (animal) 5								kabiman		
cry (animal) 6										máidaderi
cry (animal) 7										áapoa
cry 1		üira				óin				
cry 2										
cry 3					zaadinan					
cry 4						a'yalajaa	ayahua			
cry 5								tih		
cry 6										íitferi
cut (amputate) 1					chootan					-íidza
cut (amputate) 2								ivuk		
cut (amputate) 3										matáka
cut (amputate) 4										aakaapíta
cut (carcass) 1					shazodan					

cut (carcass) 2				adiuragua					
cut (carcass) 3					masere				
cut (carcass) 4					hiwhbeta				
cut (carcass) 5									-matáka
cut (carcass) 6									-aakaapita
cut (fell) 1	achawata				áchuaha				
cut (fell) 2				baropan					
cut (fell) 3		ladun							
cut (fell) 5						ivuk			
cut (fell) 6							káraleriu		
cut (fell) 7									-óoka
cut (pieces) 1				dazaapan					
cut (pieces) 2				sa'ukan					
cut (pieces) 3					bigua				
cut (pieces) 4						bukihbeta			
cut (pieces) 5							kaaleri		
cut (pieces) 6									-matáka
cut (pieces) 7									-aakaapita
cut (pieces) 8									-keéta
cut 1		sokon							
cut 10									
cut 11									
cut 12					o'yotowaa				
cut 2				kurutan					
cut 3									
cut 4						adiürüira			
cut 5							bukih		
cut 6							hiwh		
cut 7							ivuk		
cut 8							tigah		
cut 9								witfueri	
daughter 01	achon	oto		achon					
daughter 02			dani						
			zuna						
daughter 03					hianru				rahen
daughter 04					irahü				
daughter 05							gikamkayh		
daughter 06							tino		
daughter-in-law 01	aürü			a'üi				kírakua	-íto
daughter-in-law 02		tio	dinizo		ídiun				
daughter-in-law 03		taboatho							
daughter-in-law 04							gihinyo		
daughter-in-law 05								nirufi	
daughter-in-law 06									-iríno
dawn 1	urikeu								
dawn 2				wakanakanaanin					
dawn 3				jayua					
dawn 4					lidawamari				
dawn 5							hewkepka		
dawn 6							hiyavaweke		
dawn 7									-haaléta
dawn 8									pidzóome
deceive 01		morhididn	mariidan						
deceive 02				emeejaa	eyeda				-mañéeta
deep 1		tola							
deep 2			kaana'o						
deep 3				kéinolú					
deer 01		kakashiro	koshara		usari				
deer 02							néri	néri	
demon 01	yaaruwa	yawahu		yolujaa	mafia		wawafi		mabuya
demon 2									
die 2	outa	ahodon		ouktaa			giwavitira		
die 3							miyop		
dig 1	aponaa			aponoo					
dig 2		thikin			achiga	atik			-hika
dirty 1				yerüttaa					
dirty 2					wie-				
disappear 1				amoutaua					
discard 01	apüta			ojutaa	átura				
do 1	aiña	anin		aainjaa					
dog 01					ounli		auli		aon
dog 02	yerü			erü					
dog 03				arimarak <sup>h</sup> a					
dog 04							isivrit		
dog 05		karishishi							
dog 06									tsíino
domesticated animal 1		likin			ilügüni				
domesticated animal 2							íhira		-pira
door 01				paninom					panittinóma

downriver 01			apoa'a						pókoalhe
drink 1				asaa	ata				
drink 2							íireri	-íira	
drip 01			sorhokodoan	shottaa					
dull 01			mamana	mamuna'o			kéemai		
dust 01						atabdabni		dáaphe	
ear 01	achee	dike		ache'e	arigei				
earring 01					arigeila\$+\$				guarique
earring 02				che'esaa					
earring 03	acheepüran								
earring 04			iši-tain						
earring 05		dikehe							
earring 06								heenitáda	
earth 01	mmo			mma	múa				
eat 1	aka			ekaa	eiga	ax			
egg 1							éewifi	-éewhe	
egg 2	aükü			ashuku					
elbow 01	eetoru		patori				natúerafi	-nawáthere	
emit noise 01								khéma	
enemy 01	aünü			a'ünüü	_ágani	kiman			akani
enemy 02			-t <sup>h</sup> ari'ba						
enemy 03						gitimni			
enemy 04								hipónda	
enter 01	ekerota	kodonoan		ekerolaa					
existential verb 1	ee			eevaa	ñeini				ei
exit 01	oota							-mótto	
expand 01				achüütá	dará				
eye 1	ou	koshi	awunii	o'u	agu		túifi	-thi	izi
face 01	apanaa		awun	o'upiinaa					
		shibo	baara						
face 02					igibu				
fall 01	eekota		waotan	ojuttaa	éiguada				
far 01	watta	taha		wattaa					
fast 01		kahulu		akua					
fat 1	aüti								
fat 2			kiwinii						
fat 3					dibune	dibe			
father 1	ei	ithi		ashi					ahia
father 2					uguchi				nucu-chili
father-in-law 01	ashimiya			ashimia					
fear 1				momoluu					
fear 2		hamaro							
feces 01	achaa			acha'a					
feces 02						gasis	íijafi		
feed 01				ekiraa	eigagüda				
feel 1						awahni			
ferment 01				áshüüja	achouha				
fight 01					ragieru	ker			
fight 02			mizaapan						
fight 03									
find 01		öthikin					uti		huctu
finger 01	aapa	ibira		ejepira	liráü				
					úhobu				
finger nail 01			bazi	apato'u					
finish.VI 01	üüta		aotan						
finish.VI 02						madika			-wadzáka
finish.VT 01		íbidin	ipaian						
fire 02	shikü	ikihi	tikazi	siki		tiket	tjitfái		títzee
firewood 01	shikü	ikhikhodo		siki		tiketka	gitimkítjába		ttidzéena
fish 01	üyü	hime		jima		gima			
fish 02			okotan			ikuna			
fish hook 1		bodehe				uburei			
fish hook 2	kuir(e)			kulira			kulupa		
fish poison 01			oko				kúuna		kóona
flame 01	jata			jotaa					háaka
flesh 01	iruku	shiroko		e'iruku					
flow 01		mala		pala'náua	ügürügü	arih			
flower 1	asii			asii					
fly 01				awataa	ahamaha	amara			-áara
fly 02	mooka	morodon							
food 01	aküürü	khotaha		eküülü					
foot 01	aawi	koti		oo'ui	eigini				
foot 02			kidiba		ugudi				
forehead 01	eiporu	shibaroko		e'ipo'u			íibafi		-hiüpa
forest 01	kununuriya	konoko	konoko						
		èbera							
friend 01		madianthi				umadaü			
frog 01	okoro	akhorá							
frog 02						húa			tua
fruit 1	achon	ada iwi	aka	achon					
fruit 2						furuda			
garden 1						ichari			chali
genipa 01							adamna		dáana
germinate 01		borhodonoapa'	ashizodinan						
giant	ar-						tat		
madillo 01							tjée		adzána
							batfáida		
girl 01	jümaayi			jimo'olu					
give 1	aapa			aapaa					
give birth 01	amüra	hemeyo		jemeyuluu	emeiliha				

go 01	auna	osun		o'unaa				-aa(wa)	
go down 01		thokodon	tokan		rari			-ooroko	
go up	ootaa	mudun		o'otowaa	amudeira				
godfather 01	oupa				ebenenei				
good 01	anaa			anaa					
gourd 01		kodo	moto						
gourd 02	arit			ita	rida				hibuera
gourd 03				hapii					
grandchild 01	arin			aliiin					
grandfather 01	atiiyu	dokothi	dokozu	atuushi	aruguti				aroko
grandmother 01	auwi	kuthu	uuzo	oushu	agütü				
grandson 01		lukunthi		aliiin					
grandson 02			takaan					-dakeeri	
grass 01	arama	karhó							
green 01	wiita			wiittaa	wurigi-				
grub 01	jokoma	otokoma		jokoma					
hair 01	awareeya	barha		walashi					
hammock 01	jamaa	hamaka	zamaka	jama'a		amaka			amaca
hammock 02	aura	koraha		o'ula	üüürai				
hand 01	aapü	khabo	ka'u	ajapii	ühobu			-kaapi	
hang 01	akachera		kazadan	akacheraa					
hard 01		tata	dadara		dere-			taara	
he 01	nü-			nia					
he 02		lu			li-	lijá	lhía	li	
head 1	akii	shí		ekii	ichüü	wítafi			
hear 01	aapa		abatan	aapajaa					
hear 02						émeri		-himeeta	
heart 01	jiichü	ein		aa'in	anigi				nanichi
heart 02		washina				wówafi			
heat 01					isü				zechon
heavy 01	jawata			jawataa					
heavy 02		kudu			hürü-				
help 01	apüitaa	aburatum							
here 01		yara	dii'a	jaa-já	ya	ay		áa yaahá	
hide 01	anuuraa			anujulawaa					
hide 02	anuuraa			anujulaa					
high 01		diako				aakai			
hill 01		ayumun		namüna	wübü				huibo
hit 01	achaata	sabadun	zo'itan	ashe'etaa	afara				
hoe 01				hu					koa
hoe 02			samp <sup>h</sup> a			mpuri			
hoe 03								poróle	
hoe 04		kasarona							
hold 01	ataüra		dokobatan	ata'ülaa	árügüda				
honey 02						anunu		-doni	
honey 1	wapa	maba	maaba	mapa	maba				
horn 01		koa	ozoo	o'uwa		atuw		-tsówa	
horsefly 01					mabarawa		mápara		
hot pepper 01		shi	didada	jashi'	ati	atit		áatti	aji
house 01		bahu	kabaun	epia	uba			-pana	boa
how? 01	ama			jamaa			híka?a	kóame	
howler mon-key 01				alá?ala	arawada				
hummin?bird 01			piimuda					piimi	
hummin?bird 02				chünü'ü	yürüdü				
hurt 01		kari	kaziwan		agarida			-kadzaanáata	
husband 01	eichi	reithi		eechin	eyeritei				eyeri
husband 02						íniri		-íniri	
husband 03	eimüchi			a'wayuuse					
I 01	ta-	da-		taya					tacha
I 02						nah	nujá	nhóá	
I 03			õgaru		nuguya				
I 04			õ-		nu-	nu-	nu-	nu-	ni-
I 05					au				
if 01			ana		anhein				
imitate 01					abadühada			wadzéeta	
in 01	ou	rako	di'ii	o'u	idan		ríku	-liko	hiqui
infant 01	jouchei	korheli-		jo'uu	irahürai				
Inga 1					wariafa				
Inga 2								hawádza	
Inga 3								iitsi-páateni	
Inga 4								kawiápali	
Inga 5								konópa	
Inga 6								ooni-pateni	
Inga 7								paate	
Inga 8								potto-xapi	
Inga 9								wiritéekhe	
intestines 01	ashaa				isasaü				
intestines 02			okori				íjakuafi		
island 01					ubouhu		wówaifi		
jaguar 01							tjáawi	dzáawi	
jaguar 02	kareira	rhoathe		kalai'rra					
jaw 01			awa'u	awalainse					
jewel 01					inarihabu				yari
jewel 02									

jump 01	awata		zaka'utan	awataa		padakwa		-kádaa	
kick 01			dakazatan	ashe'etaa	dügiiti				
kidney 01	achüü			achü'ü			tjálefi		
kill 01							ínueri	-íinoa	
kill 02	outa ein		zowian	o'utaa					
				aa'in					
kin?fisher 01			sara'oo		sada		tjáíri	dzáalíro	
knee 01		korho	kodoro					-hóorhi	
knife 01	meeya		marii	rüi				maliye	manaya
know 01	ataa	eithin	aitapan	atüjaa					
know 02							jalénaa	-áanhee	
lake 01			karishii					kalítta	
lake 02	jawaru								haguai
land 01					gitúa	gikasguwa			
laugh 01				asirajaa	éheraha				
laugh 02	joika							-íkaa	
lay down 01		shikin				iki			
lazy 01	shokura			shukulaa					
lazy 02							íinui	íino	
leaf 01	apana	bana		apana	ubanaü	avan	bánabai	panaphe	
left 01	apee			epe'e					
leg 01							káwafi	-kawa	
let's go 01				joo'uya		uyay			
hana 01		hikorhi		jiiku					
lick 01				eerra'jauá	ehelucha				
lick 02		bélin						-péro	
live 01							káwikafi	káawhi	
live 02	katouwa			kataa					
				o'u					
liver 1	apana	bana	kubaa	apana	ubanaü	giban		-xópana	
long 01		wadi					matjéenii		
look for 01		wádun	dorotan		ariha				
louse 01	eekü	uye			iein				
love 01		anshin			ísiein		niínafi		
lung 01	ososo	thorha		ososo	íhuarü				
macaw 01			kazaru	waama'ya	gararawa	karru	éeta	áadaro	
macaw 02	wakamaaya								
mahogany 01	u								cahoba
make 01	aiña	anin		aainjaa	goubana				
make 02		marhitin					méderi		
make 03								-dzeekáta	
make wet 01				chü'laa	adüga				
man 01	eichi	wadili			düdü				
manioc 01	üi			ai			aaliri		
manioc beer 01					ugui		kuliáa		
manioc beer 02									chicha
manioc bread 01							béeri	peéthe	
manioc bread 02					ereba	awebru			
manioc bread 03			badhi						
manioc bread 04									maru
manioc juice 01					ienli				hyen
manioc, bitter 01			kanuzu		gain	gikengi	keeniru	káini	
manioc, sweet 01					yuga				yuka
many 01			pau	ma'i					
maternal uncle 01					iáwüritei		kúiriífi	-khiri	
meat 01	iruku	shiroko		e'iruku					
medicine 01				epi		avey	díbe	tápee	
millipede 01		hiwara					awátja		
monkey 01	wichiche	fodi		juchi'					
moon 01	keichi	kathi	kauzu	kashi	hati	kayg	kéeri	kéeri	kati
mosquito 01	müi		miso	mei	marín				
mother 01	een			ei					
mother 02					uguchuru				nucu-churon
mother-in-law 01	aürü			a'ülü	ágürü		néerufi	-ñhero	
mother-in-law 02			imauzo	emeshi					
mountain 01		abo			w'ub'u				huibo
mountain 02	uuchi			uuchi					
mountain 03						waxi			
						imuhye			
mountain 04			mi' dik <sup>h</sup> iu'						
			nawazi						
mountain 05							duuii		
mouth 1	auna			aanükü					
much 01	mei			ma'i					
name 01	eini	íri		anülia	iri				
neck 01		noro		anulu					
nephew 01							íwífi	-nóoro	
nephew 02		aithi		asiipü				-íwi	
								-eeri	

new 01		emelia					wáalii	wali- déepe	
night 01					ariebu				
non-indigenous					baranagüre				
person 01									
nose 01	eichi	shiri		e'ichi	ígiri				
ocean 01	paraa	barha	p <sup>h</sup> aran	palaa	barana	paraw			balana
ocean 02							manúa		
ocean 03								kaida	
one 01	mana	aba	bauda'apa		aban	pahá	áabai	a(a)pa-	
open 01		thorhodon	dadata						
open 02			dadata		adarara				
order 01	aruwataa			aluwatawaa					
other 01	mane	aba	ba'oran	wane'eya	le aban		áabi	a(a)pa-	
outside 01	anoomi			anooipa'a					
paca 01			oran			uwan			
paddle 01					fágayu				pagaya
paddle 02							ténieriu	-dénaa	
paint 01	ashara			ashajawaa					
palm 01								ponáma	
papaya 01		papáya	ma'apai		ubabai	pavay	mapája		papaya
parasitic worm					héweraü				
01									
parasitic worm			iinii				éenifji		
02									
parasitic worm							úumai		
03									
parrot 01			waro					wáaro	
pass 01	arata			alataa					
paternal aunt	eira			ei					
01									
paternal aunt							kúu	-koiro	
02									
path 01	wopu	waboroko		wopu					
path 02			ponaa	apiüna					
peck 01		tokon		ocho'tó					
peel 01		sodon		oshojoo					
penis 01	aure	wera		érrá	éun				
penis 02		firo			fítaru				
penis 03		wishi	chiy				tjípiti		
pineapple 01		nana	naan				náanana		yayagua
pineapple 02	piiña				yéyewa				
pineapple 03								maawiro	
pineapple 04		nana						ómai	
piranha 01		oma						máini	
pitch 01			min						
placenta 01	amuyoo	uba	wubo		abaü				
placenta 02	aura			o'ula					
placenta 03							jebáfi	-yáapa	
plant 01	apünaa			apiünajaa			jáabaneri		
plantain 01		pratna		püla'ana	baruru	bara	palátuna	palána	banana
play 01	amiyawa			emi'ijaa					
play 02		biran			áhurera	arehwa			
play 03					adibirihá				
Pleiades 01	iima			iiwa					
point 01			sawadan			tawan			
port 01						uyakri		óñai	
pot 01		kadikedoada	dowada						
pot 02						kasru	karáhi		
powder 01			po'oka'o				pukúpukui		
push 01					ádaha	takah			
put 01		bokorhotono	amrokodan						
raft 01					burari				balza
raft 02						umuh wanag- bohaki			
rain 01	eita			a'itaa	áhuya				
	uuya			juya	huya				
rat 01							íiri	hiiri	
rat 02		korhihi							
rattle 01		marhaka				kuruku			
rattle 02	kiira				maraga				
raw 01		iya		isira	sísira			iñaa	
red 01				iyaa	ien-		kírai	iirai	ris
reply 01	asokuta								
rest 01				asouktaa		emeraqua			
return 01	aütaa			eimerawaa					
return 02	aüchera			eitawaa					
rib 01	apare(n)			eite'eraa					
right 01	rota						báraitfi	-díeta	
river otter 01		ashiro	saaro	lotaa				-peréma	
roast 01	eiya								
root 01	aurula			asijaa					
run 01	aututa			ourala					
sand 01	jasai			awatawaa					
sand 02			kaatu	jasai				káina	káida
sandfly 01					mabiri	kayh mbiri			
say 01	ma			maa					
say 02		akan	kian						
scorpion 01				ja'yulu	águru	akuw			
see 01	era			e'raa	ariha				

see 02							káberi	-kápa	
seed 01	aü	th\$+ \$-	u-	a'ü	iläi				
she 01				s\$+ \$-	tu-	gu-	du-	zu-	
she 02	na-								
shore 01	oru			olu					
shout 01	awaata			a'waataa	áwaha				
sibling 01					íbiri				-pheeri
sing 01	eiraa			ee'irajaa	eremuha				
sister-in-law 01	eerü			e'erü					
sister-in-law 02	arinyu			alüinyuu					
sister-in-law 03							nítuafi	-nídoa	
skin 01	atünü	uda	mada	ata	uraü		éeri		
sky 01				siruma	seiri				
sky 02					dúei				turei
sleep 01		donkon		atunkaa					
sleep 02	atüma				arumuga				
smell 01	emewa			jemetaa					-eemia
smell 02	eejura			aataa					
				eejuu					
smoke 01	achita			akaijaa					
smoke 02							íisa	íitta	
smoke 03		dibaledun	diparu						
snake 01	wüi	óri		wüi	hewe				
sneeze 01		eithidin					éefineri		
sneeze 02			achawan	ashoujaa	átionha				
son 01	achon			achon					
son 02	arin	aithi							-íri
son-in-law 01	ashimiya			ashimia					
spider 01				walekerü		waraku			
spider 02							éeni	éeni	
spirit 01	ein			aa'in					
spirit 03					ufioun				hupia
spit 01	awaawa			awaa					
split apart 01					bougua	bukihbeta			
squeeze 01		foroton	raudan						
star 01					waruguma	warukma			
star 02							sáalii		starei
steal 01	arüwaa			a'luwajaa					
stir 01			kopoan		agubudagua				
stone 01	jüpa	shiba	kuba	ipa	dübü	tip	íiba	hiipada	ziba
stop 01			shaabatan	asha'walawaa					
storm 01		akhorakhali	u	u	u	hawkri			urogan
strain 01		sodan	zoroan						
strain 02					áseiha	akehne			
suck 01	achura			atu'laa	chu				
suck 02		soroton	soozoan						-tsóotso
sugar cane 01		shikharho			asigaru	sus			
sun 01			kamoo			siku			
sun 02	kai			ka'i		kamuw	káiwia	kámoi	kachi
sun 03		adali							
sun 04					weyu				
swallow 01	amira			emiralaa					
swallow 02					agarunchagua				
sweep 01	awareeta			awareejaa	abeidaha				
sweep 02			paraupan						
sweet potato 1		halithi		haíf					kalíri
swell 01	ourura				áluda				
swim 01	katüna			katünaa					
tail 01		ihi		asi	ili		íifífi	-iittípi	
take 01	einka	nukun	na'akan	e'ikkaa	anüga		éema	héema	
tapir 01		kama		amá			tfúukui	dzóowe	
tayra 01									
tear 01			kuzuan						
tear 02						bak	ipákieri		
tear 03					heiri				
tell 01						pukuhpawasa			
termite 01							kamára	kamára	
testicles 01			kuu	ashüna					
that 01	shirü			chira					
there 01	aa					ayte	a?a	yaataha	
there 02				cha'aya			tjéera		
they 01	nana		inao	naya			najá	nháa	
they 02	na-	na-		na-			na-	na-	
they 03			ĩ-			gi-			
thigh 01	apüye	buku		apü'ü					
thigh 02							húifi	-kótshi	
think 01					haritagua				
this 01	shi			chi(i)					
this 02		li			le				
this 03							náani		
this 04		to			to				
this 05			uruu						
this 06						inin			
this 07									rhiehe
thorn 01	eipiya			eipüse			túuwiri	dóowiri	
thorn 02									
three 01	apani	kabun		apünüin		mpana			abem
three 02							matálikua	madali-	

throw 01				ajutaa	achüra				
thunder 01	eichü			atüttá					
tick 01					gubari	kuvar		kóopali	
tie 01					gürá				
tie 02				sukuruupan					
tie 03							báhier		
to, ben 01	apürü	boran		apiüla		avit			
to, ben 02			di'iti	yüi	iüri				
tobacco 01		yorhi			liraü				
toe 01		koti			ugudi				
toe 02		ibira		ejepira					
		koti							
toe nail 01		ibira							
tomato 01	tomaate	bada	bazi	apato'u	ubarau				tomates
tomorrow 01	wattaa			watta'a	dumadi				
tomorrow 02									
tongue 01	aweña	uyê		ayee	haruga	takuwa	ínaneeji	-eenene	
tooth 01	ai	ari		ai	ieiei	ginen	éefi	-eetsha	
tree 01	kunu(n)			wunu'u	ari	aybut			
tree 02							áikuba	haiko	
trunk 01	eipiya			eje'püse					
turtle, sea 01					higidi		ít'fali		icotea
twist 01					guribi				
twist 02			sorian						
two 01	pími	bian		piama	biama				bem
two 02			dya'utam						
two 04						mmukna	támata	dzama-	
two 05						pebkak			
unripe 01				wüittüsü	würiqi				
unripe 02		tomore							
untie 01					fará				
urinate 01	eita			ashiitaa	asisiha				
urinate 02		dakan			áragua		tákeri	-dáka	
urinate 04						ahinap			
urinate 05			zuni						
urinate 06	auriyacha								
vein 01	asiira			asüla			tjakálefi	dzakálee	
village 01						paytwempu			
village 02									
village 03	kaniye								
village 04		shikoahu							
village 05			wiizai						
village 06				wayuu					
village 07				pueulo					
village 08					aüdü				
village 09					ageirau				
vomit 01	aweta	wedin		eetaa	eweragua				
vomit 02									
vomit 03						gihikakni	kétairi	-kátha	
vomit 04									
vulture 1		anoana	taitaan		wadubi		wáatfuli	wáadzoli	aura
vulture 2	mátarin		anoan	wato	íbiri		wálibefi	-wali	
wait/hips 01					agurabaha				
wait 01	ayaapaa	obadun...	boraaudapan	a'atapajaa		wahap			
wait 02									
wake 01									
wake 02									
want 01	achaka			achekaa	achiba				
wash 01	achijaa			ashijawaa					
wash 02		sokoson				sukuheku		-kótsho	
water 01	wiin	oni	wunu	wiin	duna			óoni	
water 02									ama
we 01	we	we	faa	waya		wiy	wajá	whía	
we 02	wa-	wa-	wa-	wa-	wa-	u-		wa-	
what? 01	keeta								
when? 01		halikha							
when? 02									
when? 03	jeere								
when? 04									
when? 05			dono						
when? 07			na'apainim			aysaw			
when? 08							háikta		
when? 09								koame	
when? 6					jouja			kawálhi	
where 04									
where? 01	jara ya	alon		jalaa	halía	kiney			
where? 02			na'iam						
where? 03									
where? 05									
where? 07							tjíte'tá	kálhe	
white 02	kasuu			kasúu-si					
white 03		harhira			haruti			hále	
white 04			baraka'o						
white 05						seyboye			
white 06									luca
white 07									
white 09							kabálai	yalanawi	
white-lipped.peccary 01				püülükü	buiruhu				



white-lipped, peccary	aryatiyara								
02									
white-lipped, peccary	kychiina								
03									
white-lipped, peccary		keerun							
04									
white-lipped, peccary									
05									
white-lipped, peccary			bichi			pakir		aapídza	
06									
white-lipped, peccary									
07									
who? 01					ká	ka-			
who? 02	jara			jarai					
who? 03		halikan							
who? 04			kanom						
who? 05						pariye			
who? 06								hiqui	
who? 07							tána		
who? 08								kóaka	
wife 01	eri	ereitho	daiaro	eerüin	jierü				
wife 02					inounaü		íinu	-íino	inuya
wife 04					úmari				
wife 05						gihayo			
wife 06					_iani				liani
wind 01							káli	kawaale	
wind 02									
wind 03		awadoli	awaru			mayg			
wind 04									banzex
wind 05	joutei			jouktai					
wind 06					garabali				
wing 01	atüna	duna		atüna	arünaü				
wing 02						ahanpi	náabaifi	-naphe	
wing 03			wion						
wipe 01					ragá				
wipe 02	aurera								
wipe 03		rödun							
wipe 04			inoan						
wipe 05				ojuichajaa					
wipe 06						barew			
wipe 07								-haatha	
wipe 08								-pidzo	
with 01	amo	oma	tuma	amaa	úma				
with 02	aka					akak	játfa		
with 03			idi						
with 04						abohri			
with 05								-aapídza	
with 06								-íinai	
with 07								-íinai	
with 08								-yo	
woman 01	ñeerü	hiyaro		jierü	jierü		íina	íinaro	inaru
woman 02			zuna		würi				churon
woman 03						gitinora			
woman 04									bibi
woman 07			kaudian						
work 01		mekhebon							
work 02	atarawaa			a'yatawaa					
work 03						gannivwi			
work 04									boria
work 05									
work 06								-déenhi	
work 07						awadigimarida			
worm 01	jokoma								cusi
worm 02		usehi							
worm 03						gikawa			
worm 04			pazaro						
worm 05					heweraü	kawri			
worm 07								oomápi	
wound 01	ariya			alio'u					
wound 02		ikorihi							
wound 03			bauzaian						
wound 04					yaga				
wound 05					chaüinti				
wound 06						gibuskana			
wound 07								-dzáanaa	
wrap 01		kodikitin							
wrap 02			bazobatan						
wrap 03				oko'ooloo					
wrap 04					(h)ouburagua				
wrap 05					kanuk		wówaneri		
wrap 06								-deñápa	
wrap 07								-kaarophéta	
wrap 08									
wrist 01	apuna				ufuñei				
wrist 02		khabokoto							-pokóda
wrist 03			ka'u dikoi- ipan						
wrist 04				ajapkii					
wrist 05						gikan			
wrist 06								-kaapi	

you.pl 02	jaña	hi		jia		yis	iha	hia
you.pl 03			unao					
you.pl 04					hugaya			
you.sg 02	piya	bi		pia		pis	ijá	phia
you.sg 03			pugaru		bugaya			
you.sg 04					amürü			
you.sg 05								te
young woman 02						gitinora		
young woman 03		satho						
young woman 04			mawuusa					
young woman 05							mijákau	
young woman 06								iinaróda
younger brother 01						gisamwi		
younger brother 02			dawiichan					
younger brother 03	ta-muiñi			emülia	amuleñei			
younger brother 4		dikhidi						
younger brother 5								-mhereeri