

Chitimacha

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1. Introduction

Chitimacha¹ (autonym: Sitimaxa; ISO 639-3: ctm; Glottolog: chit1248) is a language *isolate*²—that is, a language with no known linguistic relatives (Campbell & Mixco 2007: 88; Crystal 2008: 256; Joseph 2001: 123; Campbell 2013: 184)—that was spoken in southern Louisiana (see Figure 1) until the death of the last native speaker in 1940, and is today being revived by the Chitimacha Tribe of Louisiana on the basis of archival materials.³ Although earlier researchers conducted somewhat extensive fieldwork with the last several speakers of Chitimacha in order to document the language (Duralde 1802; Gatschet 1881; Swanton 1908; Swadesh 1930)—and even prepared drafts of descriptive grammars (Swanton 1920; Swadesh 1939a), a dictionary (Swadesh 1939b), and a collection of stories (Swadesh 1939c)—those materials were

¹ The term Chitimacha /tʃi.ti.'ma.tʃa/ is an Anglicized version of early French transcriptions of the word Sitimaxa /si.ti.ma.'ʃa/, the Chitimacha's name for their own people (also called an *endonym* or *autonym*). French writers tended to transcribe this word as *Chetimachas*, where the <ch> represented a /ʃ/ sound. Later English writers read this <ch> as /tʃ/, giving rise to the modern English pronunciation of this word. Because the Chitimacha language places stress on the final syllable of the word, most American linguists pronounce the English name with final stress, as /tʃi.ti.ma.tʃa/. However, members of the Chitimacha tribe themselves stress the second-to-last (*penultimate*) syllable when using the English term, following the more typical stress pattern for English. Regardless of the English pronunciation, the modern Chitimacha term for the language is *Sitimaxa* /si.ti.ma.'ʃa/, with stress on the final syllable. This term derives, I believe, from the Chitimacha word *siit* 'lake, large body of water' + *-ma* pluractional + *-x* topic marker, with the original meaning 'people of the waters'. This etymology is made especially plausible by the fact that the Chitimacha are situated deep within the bayous of southern Louisiana and were well known in the region for their canoe technology and navigational expertise.

² There have been many attempts to classify Chitimacha into various language families (Swanton 1919; Swadesh 1946b; Swadesh 1960; Haas 1951; Haas 1952; Gursky 1969; Munro 1994; Brown, Wichmann & Beck 2014), but as yet none of these proposals have been widely adopted. See Campbell & Kaufman (1983), Campbell (1997: 305–308) and Campbell & Poser (2008: 274–275) for critiques of earlier proposals. My own opinion is that Chitimacha is best considered a language isolate given our present state of knowledge.

³ {{Acknowledgments}}

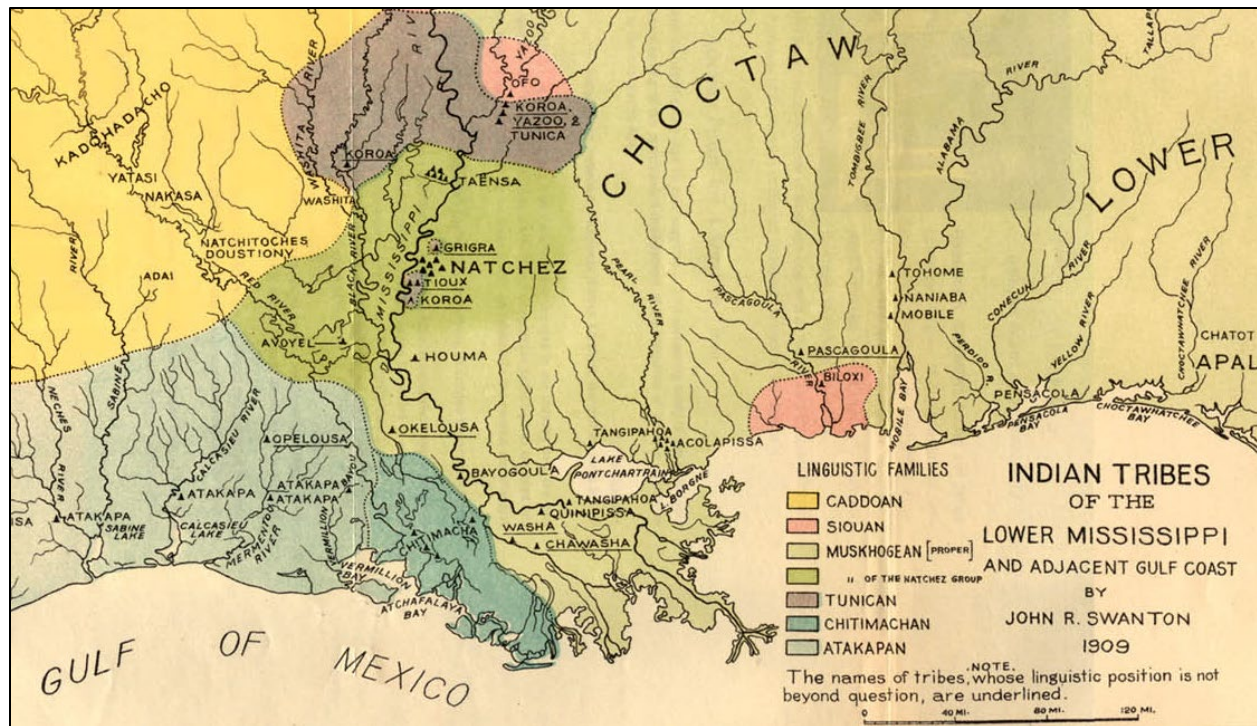


Figure 1. Map of traditional territories of the Chitimacha, Washa, and Chawasha people. The Washa and Chawasha also spoke a variety of Chitimacha. Map from Swanton (1911: plate 1, frontispiece).

archived and never published. As a result few published descriptions of aspects of Chitimacha grammar exist (Swadesh 1933; Swadesh 1934a; Swadesh 1946a; Iannucci 2009; Hieber 2018; Hieber 2019a). The Chitimacha tribe themselves were only made aware of the existence of the archival materials in the 1990s, sparking what has today become a vibrant revitalization movement, including daily language and culture classes at the tribal school, the production of Rosetta Stone language learning software for Chitimacha (Hieber 2010), and ongoing work on a dictionary and reference grammar.

The extant documentary materials leave many questions unanswered. Our understanding of many grammatical phenomena has advanced significantly since those early grammatical descriptions were written.⁴ Modern linguists now know to look for

⁴ The field of linguistics was in fact still in its infancy. What little work Swadesh did publish on Chitimacha was therefore influential in the history of linguistics: Chitimacha appears not infrequently in the earliest issues of *International Journal of American Linguistics* (Swadesh 1946b; Swadesh 1947; Swadesh 1948; Haas 1951; Haas 1952) and *Language* (Swadesh 1933; Swadesh 1934a; Swadesh 1934b). Swadesh used data from Chitimacha to formulate his well-known Phonemic Principle (Swadesh 1934b) and discussed Chitimacha in one of the first publications to raise awareness of the issue of language

certain phenomena that earlier linguists such as Swanton and Swadesh did not. Those early materials are also not written with heritage language learners in mind, and do not cover more discourse-oriented topics which are typically of most interest to learners. Thankfully, the recent availability of the Chitimacha corpus in digital, searchable form has allowed us to update and expand our understanding of Chitimacha grammar, illuminating in particular discourse-level phenomena such as topic marking (see §2.2) and switch-reference (see §2.3.2) that had been previously underdescribed.

Recent research has also brought to light the existence of contact between Chitimacha and other languages of the southeastern United States (Hieber 2019b). Chitimacha is one of a number of isolates ringing the Muskogean family of languages in the U.S. Southeast (Goddard et al. 2004; Martin 2004: 78–84). (See Chapter 57 of this volume for more information about the Muskogean languages, and Chapter 64 for a description of Tunica, another isolate in the region). The U.S. Southeast is a cultural area as well as a *linguistic area* (Sherzer 1968; Campbell 1997: 341–344; Jackson & Fogelson 2004: 1; Martin 2004: 85), a region where languages have come to share grammatical features due to contact and borrowing (Campbell & Mixco 2007: 16; Crystal 2008: 33; Campbell 2013: 330). Chitimacha is a member of this Southeast linguistic area, sharing various grammatical features with other languages in the region even though it is unrelated to any of them (Hieber 2019b: 12–17). Historically the Chitimacha people participated in regional trade networks and sometimes intermarried with other tribes in the vicinity (Speck 1907: 208; Swanton 1911: 360–364; Jackson, Fogelson & Sturtevant 2004: 38; Brown 2004), and it was through these contacts with local tribes that the Chitimacha gradually came to show influence from, and exhibit an influence on, other languages in the region. Understanding these influences has helped elucidate aspects of present-day Chitimacha grammar (*synchrony*) and the history of how it got that way (*diachrony*).

This chapter provides a brief survey of our current state of knowledge concerning Chitimacha grammar and its areal connections, in a way that aims to be accessible to Chitimacha language teachers and learners. The final section then contextualizes this research within the ongoing revitalization efforts by the Chitimacha tribe, and offers

endangerment in the field (Swadesh 1948). The first words elicited in Swadesh's field notes for Chitimacha also appear to be his first attempt at formulating and using his now (in)famous Swadesh list.

some lessons to other documentary linguists on how they might adjust their documentary practices to better abet language revitalization.

2. Grammar overview

This section presents an overview of Chitimacha grammar. It begins by describing the sounds and writing system of Chitimacha (§2.1). It then goes on to describe nouns, noun phrases, and their use in discourse (§2.2), followed by verbs and their use in discourse (§2.3).

2.1. Sounds & writing system

The *phonology* (sound system) of Chitimacha is unusual among both Southeastern languages and languages globally. Within the U.S. Southeast, it is one of the few languages to contain *glottalized* consonants (also called *ejectives*) (Sherzer 1973: 777)—sounds produced by closing the glottis in the throat while articulating the sound, creating a “popping” noise.⁵ Chitimacha also has the crosslinguistically rare (Gordon 2016: 244) characteristic that speakers produce statements with a final rising intonation, and questions with a final falling intonation (though Chickasaw has this same pattern [Gordon 2005]). Within a word, the first syllable is always stressed (Swadesh 1946a: 317).

Chitimacha has 20 consonants and 5 vowels, with long and short versions of each vowel. The Chitimacha tribe has created a practical *orthography* (a writing system for a particular language) that is designed to be easily typed and does not require diacritics. This orthography is somewhat unusual in that the letters < b, d, dz, g, j > represent the glottalized consonants /p', t', ts', k', č'/—an orthographic decision inherited from Morris Swadesh (see for example Swadesh 1946a). It also uses the letter < q > to represent the glottal stop /ʔ/. The complete orthography and its equivalents in an Americanist notation as well as the International Phonetic Alphabet (IPA) are provided in Table 1.

⁵ The other languages with glottalized consonants are Caddo (Melnar 2004: 194–195; Chafe 2005: 330) and Quapaw (Rankin 2005: 463), which were historically both situated not far north of Chitimacha. The nearby Tonkawa language to the west in Texas also had ejectives (Hoijer 2018: 8–10).

Table 1. Chitimacha orthography and phoneme inventory

Practical	Americanist	IPA
a	ɑ	ɑ
aa	ɑ:	ɑ
b	p'	p ^ʔ
c	č	tʃ
d	t'	t ^ʔ
dz	c'	ts ^ʔ
e	e	e
ee	e:	e:
g	k'	k ^ʔ
h	h	h
i	i	i
ii	i:	i:
j	č'	tʃ ^ʔ
k	k	k
m	m	m
mq	m'	m ^ʔ
n	n	n
nq	n'	n ^ʔ
o	o	o
oo	o:	o:
p	p	p
q	ʔ	ʔ
s	s	s
t	t	t
ts	c	ts
u	u	u
uu	u:	u:
w	w	w
x	š	ʃ
y	y	j

2.2. Nouns

Every language has some means of indicating how the participants in an event are acting on each other. English accomplishes this by distinguishing between *subjects* (typically the topic of the clause) and *objects* (the participant(s) acted upon by the

subject). The relationships between different participants in a clause are called *grammatical relations*, and the particular means that a language uses to indicate these relationships is called its *alignment pattern*. Languages may show a mix of alignment patterns depending on which part of the grammar one looks at. Chitimacha is remarkable in that it uses several different patterns, in different parts of the grammar.

One way that Chitimacha indicates grammatical relations is word order: generally speaking, the first part of the clause will be the subject, the second part will be the object, and the last part will be the verb. This is known as a Subject-Object-Verb (SOV) word order. This is a common pattern in the languages of the world (Dryer 2013) and is especially prevalent in the U.S. Southeast (Martin 2004: 85). Example (1) shows a simple clause with SOV word order in Chitimacha.⁶

- (1) we haksigam hix siksi his nuytiqi
 [we haksigam =hix] [siksi] [his nuyt-iqi]
 [DET young.man =ERG] [eagle] [PREV answer-NF.SG]
 SUBJECT OBJECT VERB
 ‘the young man answered the eagle’ (Swadesh 1939c: A2b.5)

Another way that Chitimacha indicates grammatical relations is with *case marking*— markers on nouns that indicate the grammatical role they play in the clause. Chitimacha marks its nouns for grammatical role using *enclitics*— suffixes that are placed at the end of a phrase rather than necessarily directly on the noun (Bauer 2004: 43; Crystal 2008: 168; Velupillai 2012: 94). Chitimacha has two enclitics, =*hix* and =*k*, that are sometimes placed at the end of noun phrases to clarify the function of that phrase in the clause. The use and behavior of these enclitics varies depending on the

⁶ In this chapter, most examples are presented with 4 lines: 1) the utterance in Chitimacha; 2) that same utterance broken down into its meaningful parts (*morphemes*); 3) a quick *gloss* or abbreviation for each of those parts; 4) the translation for the utterance. The list of abbreviations used in this chapter may be found at the end of this chapter. In the translations, any content between (parentheses) are Swadesh’s additions to the translations provided to him by the speakers he worked with. Any content between [square brackets] are my adjustments and additions to the translations for clarification. The source of each example is also given following the translation, following Swadesh’s cataloging system. The first (uppercase) letter refers to the speaker (A = Benjamin Paul, B = Delphine DuCloux); the first number refers to the number of the text; the second (lowercase) letter refers to the paragraph that the example is found in; the final number refers to the sentence within that paragraph.

type of noun phrase, a phenomenon known as mixed or *split alignment*. Participants that are highly likely to be the topic of the discourse, such as independent pronouns (*qix* ‘I’, *himq* ‘you’, etc.), human nouns (*panx* ‘person’, *haksigam* ‘young man’, etc.), and other sentient beings or talking / anthropomorphic animals (*ni tiikm* ‘god’, *kamikix* ‘wolf’, etc.) follow one pattern known as *ergative-absolutive* alignment, while other types of noun phrases follow a pattern known as *nominative-accusative* alignment.

In the ergative-absolutive pattern, clauses with one participant (*intransitive* clauses) behave differently from clauses with two or three participants (*transitive* or *ditransitive* clauses). In intransitive clauses, the single participant is marked with =*k* and is known as the *absolutive* (abbreviated ABS):

- (2) *qixk hi cuug*
qix = k hi cuw-k
 1SG = ABS PREV go.up-SS
 ‘I went up’ (Swadesh 1939c: A57a.9)

In transitive (2-participant) clauses, =*k* marks the *patient* (the participant most affected by the action):

- (3) *qixk kap getkiig*
qix = k kap get-ki-k
 1SG = ABS PREV kill(SG)-1SG.PAT-SS
 ‘when they killed me’ (Swadesh 1939c: A4c.8)

This enclitic is pronounced =*tk* after /n/, =*k* after consonants (see ex. (3) above) and =*nk* after vowels (see ex. (4) below). Since =*k* is an enclitic, it appears at the end of the phrase in (4) rather than the end of the noun.

- (4) *Wetkx we neka xamank we huuta nukunki ni tapxiqi.*
wetkx [we neka xama] = nk we huuta nuku = nki ni tapx-iqi
 then [DET devil new] = ABS DET boat back = LOC PREV stand-NF.SG
 ‘Then the new-devil stood on the back of the boat.’ (Swadesh 1939c: A33a.15)

In contrast, the actor or agent in a transitive clause is marked with =*hix*:

- (5) ni tiikmix **hix** waqax hi koomiqi
 ni tiikm = ix = **hix** waqa = x hi kow-ma-iqi
 Governor = TOP = ERG other = TOP PREV call.to-PLACT-NF.SG
 ‘the Governor called the others’ (Swadesh 1939c: A10i.1)

Example (6) shows that = *hix* too appears at the ends of phrases rather than being placed on the noun.

- (6) Wetk [we heka qatkank] **hix** kamcintkx hesigen kap natspikmiqi.
 wetk [we heka qatkank] = **hix** kamcin = tk = x hesigen
 then DET minister = ERG deer = ABS = TOP again
 kap natspik-ma-iqi
 PREV start.up-PLACT-NF.SG
 ‘Then the minister started up the deer again.’ (Swadesh 1939c: A35d.2)

Both = *hix* and = *k* may appear within the same clause:

- (7) we panxk kaaci qatin **hix** waytiig
 we panx = k kaaci qatin = **hix** wayte-k
 DET person = ABS owl large = ERG surpass-SS
 ‘the horned owl beat the man’ (Swadesh 1939c: A12b.3)

Notice that in the above examples, the participants marked by = *hix* and = *k* are highly topical—they are independent pronouns, humans, or sentient beings. By contrast, noun phrases that are less topical (inanimate things, non-anthropomorphic animals, weather phenomena, etc.) follow the nominative-accusative alignment pattern. Nominative-accusative alignment can simply be thought of as subject-object alignment. In this pattern, subjects are marked with = *k* (called the *nominative* and abbreviated as NOM) and objects do not receive any special marking. In each of the following examples, = *k* appears on inanimate or non-sentient participants when they are functioning as the subject of the clause:

- (8) Waqaxk pokt**nk** kap demi.
 waqax = k pokta = **nk** kap dema-i
 other = ABS sky = NOM PREV kill(PL)-NF.SG
 ‘The sky had killed the others.’ (Swadesh 1939c: A4b.11)

A complicating feature of both these case markers is that they are *discourse optional*, appearing only when the discourse context requires it for clarity. The nominative =*k* can be omitted whenever the subject is a continuation of the current topic: the listener already knows what’s being talked about, so it’s unnecessary to include the nominative marker to clarify. In the following example, *we kix* ‘the dog’ does not take a nominative enclitic because the dog was already mentioned in the previous sentence (referred to by *hus* in *hus panxk*) and is the only participant in the clause.

- (9) Weyjiig hus panxk qapx neejimaaxnakx we panx waa qam qucaaxnaa cun. Wetk **we kix** hus keta hiqink hi nuhci.

weyjiig	hus	panx=k	qapx	neeji-ma-qix-na=k=x					
therefore	3SG	person=NOM	PREV	talk.about-PLACT-PRES.IPFV-NF.PL=NOM=TOP					
we	panx	waqa	qam	quci-qix-naqa	cun	wetk	we	kix	
DET	person	other	what	do-PRES.IPFV-NF.PL	about	then	DET	dog	
hus	keta	hi-iqi-nk	hi	nuhc-i					
3SG	friend	be-NF.SG-LOC.NZR	PREV	run.to-NF.SG					

‘Thus his [one dog’s] people were talking about what the other people were doing. The dog ran to his friend.’ (Swadesh 1939c: A6a.2–3)

In the case of the ergative =*hix*, the enclitic only appears when there is a change of topic, so that the actor or agent is different from the one previously being discussed. As with the nominative, =*hix* isn’t necessary when the listener already knows what’s being discussed. In the following example, =*hix* is necessary in each case because the character that is speaking changes in each utterance.

- (10) Wetkx ni tiikmix **hix** ni wopmiqi, “[...]?” Wetkx heka qatkank **hix** teetiqi, “[...]” Tutk we ni tiikmix **hix**, “Gayi, [...]”

wetk = x ni tiikm = ix = **hix** ni wop-ma-iqi [...]

then = TOP Governor = TOP = **ERG** PREV ask-PLACT-NF.SG [...]

wetk = x heka qatkank = **hix** teet-iqi [...]

then = TOP minister = **ERG** say-NF.SG [...]

tutk we ni tiikm = ix = **hix** gayi [...]

then DET Governor = TOP = **ERG** no [...]

‘The Governor asked, “How are you going back?” The minister said, “I shall go back by going back around.” The Governor said, “No, you won’t go back around.”’
 (Swadesh 1939c: A3f.1–3)

The choice of when to use the case markers or omit them is therefore somewhat subjective and depends on whether the speaker thinks the hearer can successfully track which participant is being talked about.

While ergative-absolutive alignment systems like that of Chitimacha are relatively common crosslinguistically, they are rare in the Southeast; only the nearby Natchez language also has an ergative marker (Mithun 1999: 468). It is possible the ergative in either Natchez or Chitimacha developed under the influence of the other language. In Chitimacha, it is likely that the ergative = *hix* developed out of the instrumental postposition *hix* ‘with, by means of’ (a common development crosslinguistically; [Heine & Kuteva 2004: 254]), and this development might have been spurred on by bilingual Natchez-Chitimacha speakers; alternatively, the two ergative systems might have developed in parallel, under mutual influence.

While nominative-accusative alignment patterns for nominal marking are common crosslinguistically (Comrie 2013), they are rare in the Southeast. However, most Southeastern languages do use a Subject-Object-Verb word order (Martin 2004: 85).

One final feature that appears on noun phrases in Chitimacha is the enclitic = *x*. This enclitic is a *topic marker* (abbreviated as TOP) or more accurately, a switch-topic or background topic marker. When placed on noun phrases, it is used to mark a switch in the topic of the discourse, usually to one that has already been mentioned or that is particularly salient from context. In the example in (11), the topic marker = *x* appears

with *kica* ‘woman’ because the focus shifts from the couple to one member of the couple.

- (11) Tutk kunugu hi dutnaqa. We kicax kap qeypinks gaptiqi. Wetk hus qasi ni wopmiqi, “Qam guxmiidnaka?”

tutk kunugu hi dut-naqa we kica = x kap qeypinks
 then QUOT PREV go.to(PL)-NF.PL DET woman = TOP PREV hunger
 gapt-iqi wetk hus qasi ni wop-ma-iqi qam
 take-NF.SG then 3SG man PREV ask-PLACT-NF.SG what
 gux-ma-di-naka
 eat-PLACT-IRR(PL)-1PL.AGT

‘So they [the couple] went. The woman got hungry. She asked her husband,
 “What shall we eat?”’ (Swadesh 1939c: A37a.2–4)

Notice too that the topic marker does not appear on *qasi* ‘man’ in the last sentence because it is still the woman that is the continuing topic or focus of the action. The presence/absence of =x in the last sentence is the only way to determine whether the woman or the man is the person asking the question.

When used with verbs, =x indicates background information about the upcoming clause. The semantic effect of this backgrounding function is subtle, typically resulting in a slightly more significant break in the narrative than non-backgrounded clauses. This narrative discontinuity is detectable in the English translations in the form of an increased use of punctuation and/or discourse transitions such as “and then”. This can be seen in the passage in (12).

- (12) Wetkx ni gastk gasmank qam qoonak noopiigx, weytengenx dutnaqa hesigen.
Hunks guxti kap gayinkix hesigen, kap tentk ni gasminaqa.

wetk = x ni gast-ss gasma = nk qam qoonak now-pa-k = x
then = TOP PREV plant-SS corn = ABS what all grow-CAUS-SS = TOP

weytengenx = x dut-naqa hesigen hunks guxti kap
after.that = TOP go(PL)-NF.PL again 3PL food PREV

gay-i-nki = x hesigen kap ten-k
become.not-NF.SG-TEMP = TOP again PREV stop(PL)-SS

ni gas-ma-naqa
PREV plant.it-PLACT-NF.PL

‘Then they planted, made a crop of corn and so forth, and after that went on again. When their food ran out again, they stopped and planted (again).’

(Swadesh 1939c: A3b.3–4)

When the topic marker =x appears on *nopiig* ‘they planted’, it is translated with a comma and the word “and”, then followed by a discourse transition *weytengenx* ‘after that’. Contrastingly, *kap tentk* ‘they stopped’ in the next sentence lacks the topic marker and is translated without any sense of narrative discontinuity. The two verbs *kap tentk* and *gasminaqa* are being construed here as a single cohesive action, ‘stop and plant’ rather than a sequence of actions, ‘stopped and then planted’, and this difference is signaled by the presence/absence of =x.

2.3. Verbs

Chitimacha verbs are composed of several parts, each of which may only contain certain suffixes. Figure 2 shows this verb template and the suffixes which may fill each slot. Most suffixes have different forms depending on the suffixes and sounds that precede or follow them; however, only the default forms are listed here. A few mood suffixes at the end of the verb are omitted for the sake of brevity. This section gives an overview of each part of this verb template and how it is used in discourse.

PREVERB	STEM	PATIENT		TENSE-ASPECT-MOOD (TAM)			AGENT / SUBJECT	
hi		-ki	1SG.PAT	-∅-	PERFECTIVE		-iki	1SG.AGT
his		-kuy	1PL.PAT	-puy-	PAST IMPERFECTIVE		-naka	1PL.AGT
kap				-qix-	PRESENT IMPERFECTIVE		-i	NF.SG
kaabs				-cuy-	SG	IRREALIS	-na	NF.PL
ka				-di-	PL			
kas								
ni								
qap								
qapx								

Figure 2. Chitimacha verb template

The *stem* is the core part of the word that carries the word’s primary meaning and to which other *inflectional* affixes are added to indicate grammatical categories like person, number, or tense, among others (Bauer 2004: 96; Crystal 2008: 452). The stem itself may contain smaller parts, which will not be discussed here.

2.3.1. Preverbs

The preverbs in the first column are separate syntactic words from the verb stem, but they form part of the core meaning of the verb along with the stem. They convey information about the direction or *aspect* (temporal extension or boundedness [Crystal 2008: 38]) of the event. They are very similar to what are called “phrasal verbs” or “particle verbs” in English such as *eat out* or *eat up*, except that in Chitimacha the verb follows the preverb. In some cases, the meaning of the overall verb is simply the combination of the meaning preverb and the stem. In the examples in (13), the meaning of the overall verbs is predictable from the meaning of the preverbs.

- (13) a. *hi cuw-* ‘go to’
 b. *kas cuw-* ‘go back, return’
 c. *ni cuw-* ‘go down, decrease’
 d. *qap cuw-* ‘go here, come’
 e. *qapx cuw-* ‘go about, wander’

In the examples in (14), however, the resultant meanings of the verbs are idiosyncratic and not predictable from the meanings of the preverb and stem. The verb must be memorized as a unit.⁷

- (14) a. *hi xan-* ‘exceed’ < *hi* ‘to’ + *xan-* ‘go out’
 b. *his hapxje-* ‘invent’ < *his* ‘back to’ + *hapxje-* ‘construct’
 c. *kap cuw-* ‘depart’ < *kap* ‘up’ + *cuw-* ‘go’
 d. *kas hect-* ‘cure’ < *kas* ‘reverse’ + *hect-* ‘watch’
 e. *ni xahct-* ‘salt’ < *ni* ‘down’ + *xahct-* ‘put in’

A more thorough description of Chitimacha preverbs can be found in Hieber (2018).

2.3.2. Person marking

As mentioned in §2.2, Chitimacha has multiple ways of indicating grammatical relations. Case marking on noun phrases is one way, but full noun phrases are frequently not necessary in Chitimacha discourse, both because the speaker often already knows the topic being talked about (obviating the need to repeat the same noun phrase over and over), and because the participants in an event and the relationships between them are also indicated on the verb. Example (15) shows a simple clause consisting of just a verb but which conveys information about three different participants (subject, patient, and location), without the need for any noun phrases.

- (15) *xahcmiig*
xahct-ma-k
 put.in-PLACT-SS
 ‘you put them in it’
 [context: ‘you put the stones in your pocket’] (Swadesh 1939c: A71c.6)

Indicating the participants of an event on the verb is called *person marking* (Bauer 2004: 83–84; Crystal 2008: 358–359). This section provides a brief summary of person

⁷ Because the meaning of preverb + verb combinations must be memorized together, I gloss them as PREV + {meaning} in this chapter, rather than glossing the meaning of the preverb and verb separately. For example, *hi cuw-* would be glossed as ‘PREV go.up’ rather than ‘up go’.

marking in Chitimacha; a more thorough description of Chitimacha person marking is found in Hieber (2019a).

Chitimacha has two types of person markers: *same-subject* (SS) and *different-subject* (DS). The same-subject person marker is *-k* and is used when the speaker has more to say about the same topic (with the result that the subject of the following clause is usually the same). It is pronounced as *-tk* after /n/ and *-iig* after vowels. The different-subject markers are those shown in the last column of the verb template in Figure 2. Chitimacha verb template. They are used whenever there is a switch in subject from one clause to the next. This system of same vs. different subject marking is known as *switch-reference*, and it is a prevalent feature of the Lower Mississippi Valley and U.S. Southeast (Rising 1992; Martin 2004: 85; Hoijer 2018: 57). In the following example, the subject remains the same ('I') for the first four clauses, and so the same-subject marker *-k* is used. At this point, the subject switches from 'I' to 'the water', and so the different-subject marker *-i* NF.SG is used on *hiquyki*.

- (16) Weyjiig poktank kap pexk, qix sowqakt poktanki hi pootimiig qix nehe kap xagitk hiquyki. Wetkx kuukx hix qixup kap qehi.

weyjiig	pokta-nk	kap	pex-k	qix	sowqakt	pokta = nki
therefore	sky-LOC.NZR	PREV	fly.up-SS	1SG	claw	sky = LOC
hi	poote-ma-k		qix	nehe	kap	xagit-k
PREV	thrust.toward-PLACT-SS		1SG	self	PREV	hang.on-SS
hi-quy-ki		wetk = x	kuq = k = x		= hix	qix = up
be-PAST.IPFV-1SG.AGT		then = TOP	water = NOM = TOP		= ERG	1SG = to
kap	qeh-i					
PREV	arrive-NF.SG					

Therefore, I flew up to the sky, stuck my claws into the sky, and hung on there.

Then the water reached to me. (Swadesh 1939c: A10j.4–5)

Like with noun phrases, Chitimacha shows a somewhat complex split alignment pattern within the different-subject person markers, wherein certain types of participants follow one alignment pattern for indicating grammatical relations, and other types follow a separate one. Chitimacha verbs distinguish between *first person*

(events involving the speaker, that is, ‘I’ and ‘we’, abbreviated as 1) and *non-first person* (events that do not involve the speaker, that is, ‘you’, ‘he/she/it’, and ‘they’, abbreviated as NF). A first versus non-first person contrast is relatively rare in the world’s languages (Cysouw 2011: 438).

Non-first person markers in Chitimacha make the same nominative-accusative distinction as discussed in §2.2 above. Only subjects are marked on the verb (in the final slot of the template in Figure 2); there are no person markers for objects. The object of the clause is either implied or understood from the discourse context, the preverb, other suffixes on the verb, or some combination thereof. The subject markers are *-i* (singular) for ‘you’ and ‘he/she/it’, and *-na* (plural) for ‘y’all’ and ‘they’. In careful speech or at the ends of prosodic phrases, these markers are pronounced *-iqi* and *-naqa*. Examples (17)–(20) show these subject person markers in use. The first four examples show these person markers used with intransitive (one-participant) verbs.

- (17) kap nuupcuyi
 kap nuup-cuy-i
 PREV die(SG)-IRR(SG)-NF.SG
 ‘you will die’ (Swadesh 1939c: A16c.3)
- (18) xux hup hi cuyi
 xux hup hi cuy-i
 tree to PREV go.to(SG)-NF.SG
 ‘she went to the woods’ (Swadesh 1939c: A27c.2)
- (19) hank qap dutminaqa
 hank qap dut-ma-naqa
 here PREV go.here(PL)-PLACT-NF.PL
 ‘you [PL] have come here’ (Swadesh 1939c: A4d.2)
- (20) hank qap nemnaqa
 hank qap nem-naqa
 here PREV come.across.water-NF.PL
 ‘they crossed over to here’ (Swadesh 1939c: A2c.1)

Examples (21)–(24) show that the same suffixes are used with subjects of transitive verbs.

- (21) waxi huynak hi qamqixi
 waxi huynak hi qam-qix-i
 hand whole PREV look.at-PRES.IPFV-NF.SG
 ‘you see the whole hand’ (Swadesh 1939c: A13e.5)
- (22) we xaahken qapx heyxmiqi
 we xaahken qapx heyx-ma-**iqi**
 DET basket PREV gather-PLACT-NF.SG
 ‘she picked up that basket’ (Swadesh 1939c: A13a.3)
- (23) weykx witmiid**naqa**
 wey = k = x wit-ma-di-**naqa**
 DEM = ABS = TOP shoot-PLACT-IRR(PL)-NF.PL
 ‘you will shoot [that one (a deer)]’ (Swadesh 1939c: A35c.12)
- (24) hus kut katmax gapdix**na**
 hus kut katma = x gapt-qix-**na**
 3SG head brain = TOP take-PRES.IPFV-NF.PL
 ‘they take his brain’ (Swadesh 1939c: A2d.4)

These last two examples demonstrate that these suffixes are employed even when the subject is a semantic patient.

- (25) kap nuupi**iqi**
 kap nuup-**iqi**
 PREV die(SG)-NF.SG
 ‘he died’ (Swadesh 1939c: A31b.5)
- (26) kap tuwqix**naqa**
 kap tuw-qix-**naqa**
 PREV die(PL)-PRES.IPFV-NF.PL
 ‘they are dying’ (Swadesh 1939c: A3e.4)

In the first person, Chitimacha adheres to a pattern known as *agent-patient alignment*, in which the person markers distinguish between *agents* (participants that perform, effect, instigate, or control the action, abbreviated as AGT) and *patients* (participants that are affected by or otherwise lack agency and/or control over the action,

abbreviated as PAT). This pattern is an areal feature of the U.S. Southeast (Martin 2004: 85).

The agent markers are *-iki* (singular) for ‘I’ and *-naka* (plural) for ‘we’, and they appear in the same slot as the subject markers of the non-first person (the last slot in the template in Figure 2). Like the non-first person markers, there are both short and long forms of the suffixes. The long forms are *-iki* and *-naka*, and the short forms are *-ik* and *-nuk*. After the irrealis suffix *-cuw-* / *-di-*, they are pronounced *-k(i)* and *-nuk*. Examples (27)–(30) show the agent suffixes in use.

- (27) Weyjiig yehdix**iki**.
 weyjiig yeht-qix-**iki**
 therefore cry-PRES.IPFV-**1SG.AGT**
 ‘That is why I cry out.’ (Swadesh 1939c: A10j.13)
- (28) waqank hi xamdin**naka**
 waqa-nk hi xamt-di-**naka**
 other-LOC.NZR PREV go.out.to-IRR(PL)-**1PL.AGT**
 ‘we shall get out to the other (side)’ (Swadesh 1939c: A3c.2)
- (29) we nucmpax qucaax**iki**
 we nucmapa = x quci-qix-**iki**
 DET work = TOP do-PRES.IPFV-**1SG.AGT**
 ‘I do that work’ (Swadesh 1939c: A7c.2)
- (30) ni tiikmix hi koon**naka**
 ni tiikm = ix hi kow-**naka**
 Governor = TOP PREV call.to-**1PL.AGT**
 ‘we called the Governor’ (Swadesh 1939c: A3e.2)

The patient markers are *-ki* (singular) for ‘I/me’ and *-kuy* (plural) for ‘we/us’. They appear just after the verb stem and just before the tense-aspect-mood marker in the template in Figure 2. Before the irrealis marker *-cuw-* / *-di-*, the plural form is pronounced *-ku*. The following examples show the patient suffixes in use.

- (31) qixk neem**ki**
 qix = k neema-**ki**
 1SG = ABS be.afraid-**1SG.PAT**
 ‘I am afraid’ (Swadesh 1939c: A30d.5)
- (32) Quxk qun kun huygi qucmaku kaahan.
 qux = k qun kun huygi quci-ma-**kuy** kaahan
 1PL = ABS some thing good do-PLACT-**1PL.PAT** unable
 ‘They can’t do us any good.’ (Swadesh 1939c: A25a.7)
- (33) Wetkx we nitiyankx qix hi xankint**ki**.
 wetk = x we nitiya = nk = x qix hi xankint-**ki**
 then = TOP DET master = NOM = TOP 1SG PREV throw.off-**1SG.PAT**
 ‘Then the (boat) master put me off [the boat].’ (Swadesh 1939c: A10j.3)
- (34) xux qujin hix nuhcpan**kuyi**
 xux qujin = hix nuhc-pa-ma-**kuy-i**
 tree rotten = ERG run-CAUS-PLACT-**1PL.PAT-NF.SG**
 ‘rotten wood chased us’ (Swadesh 1939c: A38b.11)

Notice how these suffixes are not always translated as subjects in English. The agent-patient distinction in Chitimacha operates independently of the subject-object distinction (Hieber 2019a); Chitimacha makes both distinctions, but in different places in the grammar. A simple rule of thumb for using the patient markers is that whenever there is a first-person participant in the clause or in the recent active discourse that is especially affected by the action of the verb, the patient marker should be included on the verb, regardless of what else is marked on the verb or what other participants are involved in the action. A complete description of the use of the agent-patient markers may be found in (Hieber 2019a).

One potentially complicating factor in using the agent and patient markers is the similarity between the first person singular agent marker *-iki* and the first person singular patient marker *-ki*. While technically these two suffixes sit on either side of the tense-aspect-mood marker and so should be distinguishable by their position, in reality there is sometimes no tense-aspect-mood marker to separate them (namely, when the verb is in the perfective aspect). In this case, the only way to distinguish the agent and

patient markers is their effect on the surrounding sounds. Compare each of the following pairs of examples:

- (35) a. **heectki**
heect-**ki**
meet-1SG.PAT
'you meet me' (Swadesh 1939c: A55a.26)
- b. **heectiki**
heect-**iki**
meet-1SG.AGT
'I met you' (Swadesh 1939c: A17g.4)
- (36) a. **qucki**
quci-**ki**
do-1SG.PAT
'(he) did me (well)' (Swadesh 1939c: A18b.2)
- b. **quciki**
quci-**iki**
do-1SG.AGT
'I did it' (Swadesh 1939c: A58a.10)

The general rule is that the agent marker *-iki* always appears with its initial vowel /i/, deleting any vowel that precedes it. The patient marker *-ki*, by contrast, deletes an /i/ if it follows it, but otherwise leaves the preceding vowel unaffected.

2.3.3. Tense, aspect, & mood

The second-to-last slot of the verb template in Figure 2 contains suffixes which indicate *tense* (the time of the event in relation to the present [Bauer 2004: 100–101; Crystal 2008: 479–480]), *aspect* (the duration and boundedness of the event in time [Bauer 2004: 18–19; Crystal 2008: 38]), and *mood* (the speaker's attitude towards what they are saying [Bauer 2004: 69; Crystal 2008: 312]). The tense-aspect-mood category is often abbreviated as TAM. Chitimacha has a few other suffixes which indicate mood as well, but these appear after the person markers at the end of the verb, rather than in

the TAM slot: *-ng* DEBITIVE ‘ought, must’; *-ga* (1SG) / *-qa* (1PL) DESIDERATIVE ‘wanting’; *-te* POLITE IMPERATIVE (command); *-qa* DIRECT IMPERATIVE (command).

Chitimacha TAM suffixes are divided into *realis* markers (used when the event actually is or was the case [Crystal 2008: 402–403]) and *irrealis* markers (used when the event is not (yet) the case, is a conditional or counterfactual, or is an unactualized desire [Crystal 2008: 254]). The irrealis marker is always *-cuy-* or *-cu-* when the verb is singular and *-di-* when the verb is plural. These irrealis suffixes are used when the action is set in the future (37)–(38), is a hypothetical statement (39)–(40), is a conditional statement (41)–(42), or is an expression of unfulfilled obligation or necessity (43)–(44).

(37) Kuukx hi nukx**cuyi**.

kuq = k = x hi nukx-**cuy**-i
water = NOM = TOP PREV wash.to-IRR(SG)-NF.SG

‘The water will wash it away.’

(Swadesh 1939c: A10f.6)

(38) qaxtkanki gan tup**dinaqa** we hana

qaxtkanki gan tup-**di**-naqa we hana
sometimes not find-IRR(PL)-NF.PL DET house

‘they’ll never find the house’

(Swadesh 1939c: A28d.4)

(39) Qam gux**cuyi** ni tup**cuyi**.

qam gux-**cuy**-i ni tup-**cuy**-i
what eat-IRR(SG)-NF.SG PREV find.it-IRR(SG)-NF.SG

‘He would find something to eat.’

(Swadesh 1939c: A7a.10)

(40) hi cuupakid**ina**

hi cuw-pa-ki-**di**-na
PREV go.to-CAUS-1SG.PAT-IRR(PL)-NF.PL

‘they would have made me go away’

(Swadesh 1939c: A2d.7)

(41) naxmiig cuu gih**cuy**inki

nax-ma-k cuw gih-**cuy**-i-nki
hunt-PLACT-SS go(SG) want-IRR(SG)-NF.SG-TEMP

‘when you want to go hunting’

(Swadesh 1939c: A71c.6)

- (42) we tuxtu kap yeh**di**nanki
 we tuxtu kap yeh-**di**-na-nki
 DET toad PREV cry-IRR(**PL**)-NF.PL-TEMP
 ‘when the toad cries’ (Swadesh 1939c: A84f.1)
- (43) kap teypamic**cu**ying we kixk
 kap tey-pa-ma-**cu**y-i-ng
 PREV stop-CAUS-PLACT-IRR(**SG**)-NF.SG-DEB
 ‘he said the dog must stop’ (Swadesh 1939c: A6b.2)
- (44) Kap nuup**di**naqangx.
 kap nuup-**di**-naqa-ng = x
 PREV die(**SG**)⁸-IRR(**PL**)-NF.PL-DEB = TOP
 ‘They have to die.’ (Swadesh 1939c: A3e.8)

There is no dedicated realis marker. Instead, realis verbs are divided into two aspects—*perfective* (simple events that are viewed as a whole, abbreviated as PFV) and *imperfective* (events that are viewed as having some sort of internal structure, such as ongoing, habitual, or repeated actions, abbreviated as IPFV). There is no marker for the perfective aspect, so when a verb is in the perfective, the TAM slot is simply left empty, as seen in the following examples:

- (45) hus naancaakamankx wetk hi hokmiqi
 hus naancaakamank = x we-t = k hi hok-ma-iqi
 3SG brothers = TOP DEM-ANA = NOM PREV leave.to-PLACT-NF.SG
 ‘He left his brothers.’ (Swadesh 1939c: A1a.1)

⁸ Verb stems in Chitimacha sometimes show *suppletion* (a different form of the stem [Bauer 2004: 98; Crystal 2008: 466]) for singular vs. pluractional events. *Pluractional* events are those which have multiple participants, or have the action repeated iteratively or multiple times (Mattiola 2019: 1). The singular vs. pluractional distinction is similar to, but slightly different than, the singular vs. plural distinction. Occasionally, as in example (44), this means that the stem can be singular but take plural suffixes, or vice versa.

- (46) waxtik getnaqa
waxtik get-naqa
cow kill(SG)-NF.PL
'They call them holy cypresses.' (Swadesh 1939c: A9f.2)

Imperfective verbs are subdivided into past versus present tense actions. The past imperfective *-puy-* marks actions that are viewed as extending over some period of time or being done habitually in the past:

- (47) we piya kappax qampuykin
we piya kappa = x qam-puy-ki-n
DET cane torch = TOP see-PAST.IPFV-1SG.AGT-CONT
'I used to see the cane torches' (Swadesh 1939c: A36d.9)

The present imperfective *-qix-* marks actions that are viewed as ongoing in the present:

- (48) kap tuwqixnaqa
kap tuw-qix-naqa
PREV die(PL)-PRES.IPFV-NF.PL
'they are dying' (Swadesh 1939c: A3e.14)

After the vowels /a, e, i/, the present imperfective deletes the preceding vowel and is realized as *-aax-*:

- (49) Nidik huygi qucaaxiki.
nidi-k huygi quci-qix-iki
believe-1SG.AGT good do-PRES.IPFV-1SG.AGT
'I believe I am doing well.' (Swadesh 1939c: A5j.2)

3. Lessons for revitalization

This section provides some lessons for documentary linguists and language revitalization projects based on the experiences of the author and the Chitimacha tribe in working on the Chitimacha revitalization program. First, the needs of the revitalization program have been the primary driver of modern linguistic research on the language, and this was found to be an excellent model for prioritizing different areas of the grammar for research and grammatical description. For example, early in the author's graduate career, the Chitimacha language team expressed the desire to

better understand verbal person marking. This motivated a term paper on the topic, which later developed into a conference presentation (Hieber 2014), a peer-reviewed article (Hieber 2019a), and the description of verbal person marking offered above §2.3.2. The majority of the author’s graduate term papers were prompted in a similar way. This pairing of a new graduate student with a language revitalization project was found to be an excellent model for the gradual development of a written grammar, because the student can explore each area of the grammar as they encounter that topic during the progression of their coursework, culminating in a written grammar as the dissertation or an early-career publication. This strategy is however predicated on the preexisting availability of data for the language at the point at which the graduate student enters school, and for underdocumented languages this may not be a possibility. Linguistics departments can encourage the adoption of this model by a) recognizing the scholarly and theoretical merits of grammatical descriptions as a meaningful contributions to the field (Weber 2007: 177), and b) recognizing pedagogically-oriented grammatical descriptions in particular as being similarly merit-worthy. One particularly useful strategy for producing a dissertation that serves the needs of both the academic community and the language revitalization program is scaffolded or *progressive grammar writing*, in which each section of the grammar begins with high-level overviews of the topic (“the basics”) that are aimed explicitly at new language learners, followed by increasingly more complex or technical details. This allows the language instructor or learner to read any section of the grammar up until the point at which they are comfortable, thus serving different audiences at different levels of technical expertise. An exemplary grammar in this regard is Mithun (forthcoming) for Mohawk.

The second lesson that has become particularly evident over the course of the Chitimacha tribe’s efforts to revitalize their language from archival sources is this: what we choose to report in our grammatical descriptions and how we choose to report it often *becomes* the language in revitalization contexts. That is, the linguist’s descriptive choices can have drastic effects on what future speakers will learn (Mithun 2001). To illustrate from the history of Chitimacha: after Swadesh worked out the phonemic inventory of the language, he decided to represent the sounds /p’, t’, k’, ts’, č’/ as <b, d, g, ʒ, ʒ̣>. When the Chitimacha created a modern orthography, they retained the use of <b, d, g>, and extended that pattern so that /ts’, č’/ were written as <dz, j>. As a

result, some novice learners of the language today pronounce these sounds as /b, d, g, $\widehat{d}z$, $\widehat{d}z$ / rather than as glottalized consonants. Swadesh's orthographic decision thus still effects how the language is learned today.

A common pitfall in writing grammatical descriptions is that it is relatively easy to describe grammatical patterns that we understand, but comparatively difficult to describe the exceptions, irregularities, semi-patterned features, or simple unknowns. But we cannot predict what information future generations of linguists and community members will want to know about the language. These points illustrate the importance of ensuring the longevity and accessibility of primary data. Even in the absence of grammatical descriptions of a phenomenon, well-organized primary data makes it possible to garner an understanding of the phenomenon, and to revisit that understanding intermittently as our knowledge of language and linguistics develops (for similar points on the lasting impact of primary data, see McDonnell et al. 1998).

That said, Swadesh's (1939a) grammar is an excellent example of how to be attentive to irregularities and poorly-understood patterns in a way that benefits future researchers. Most grammatical phenomena in Chitimacha that have been the focus of recent research were not *undescribed* by Swadesh, merely *underdescribed* in the sense that Swadesh lacked an understanding of certain linguistic concepts with which to provide a descriptive synthesis that could explain all the data he had. Nonetheless, he reported the descriptive facts for phenomena that confused him to the best of his abilities. For example, the field of linguistics in 1939 had yet to develop a robust concept of ergative-absolutive alignment; yet Swadesh described the ergative marker =*hix* as "indicating subject of an active verb" (Swadesh 1946a: 328), "a device for indicating the subject unambiguously" (Swadesh 1939a: 120), and as an instrumental, along with many examples of each function. Given that ergative markers often develop historically out of instrumentals (Heine & Kuteva 2004: 180), Swadesh's comments were faithful enough to the descriptive facts of the language that they prompted the modern hypothesis that =*hix* is an ergative. Likewise, the best analysis Swadesh could offer of the agent-patient system was to describe them as "deponent" verbs after the model of Latin. Though this was ultimately inaccurate, Swadesh gave a thorough description of the semantics of these "deponent" verbs, which modern linguists quickly recognize as indicative of agent-patient alignment. Had Swadesh not described the

difficult, messy data that he didn't fully understand, the modern analysis of these features would have been significantly delayed.

4. Conclusion

This chapter has reviewed some of the most recent linguistic research on the Chitimacha language. In particular, modern research has elucidated the grammatical relations systems in the language, including two distinct split alignment systems—ergative-absolutive vs. nominative-accusative alignment for noun phrases, and agent-patient vs. nominative-accusative alignment for verbal person marking. We know now that Chitimacha also exhibits topic marking and switch-reference, and that its TAM system contrasts realis vs. irrealis mood, and perfective vs. imperfective aspect. Another recent update to our understanding of the grammar that could not be covered here due to reasons of space is a set of *nominalizers* (noun-forming suffixes) that create nouns from verbs (an agent nominalizer, patient nominalizer, gerund nominalizer, and abstract noun nominalizer). Yet while our understanding of the grammar of Chitimacha has expanded greatly in the past decade, much work remains to be done. Thanks to the existence of quality primary data, we can look forward to active research on Chitimacha for many years to come.

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