SEMANTIC ALIGNMENT IN CHITIMACHA

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This paper describes the alignment system for verbal person-marking in Chitimacha, a language isolate of Louisiana. Using data from recently digitized versions of texts collected by Morris Swadesh in the 1930s, I show that Chitimacha exhibits a split alignment system with agent-patient alignment in the first person and nominative-accusative alignment in non-first persons. The agent-patient alternation is shown to cross-cut subjects of intransitives, objects and even subjects of transitives, and direct/indirect objects of ditransitives. The agent-patient system in Chitimacha is therefore sensitive not to transitivity but rather to the semantic categories of agent and patient, making it an exemplary case of semantic alignment. I also discuss evidence of the diachronic origins of the agent-patient pattern and show that it arose via a reanalysis of transitive verbs with impersonal subjects ("transimpersonals") as intransitive verbs with patientive subjects.

[KEYWORDS: Chitimacha; semantic alignment; agent-patient alignment; US Southeast; typology]

1. Introduction. This paper describes the alignment pattern for verbal person markers in Chitimacha (ISO 693-3: ctm; Glottolog: chit1248), a language isolate of Louisiana.[1] In accord with Mithun (1991a:537, 1999:388, 2008:328–29), Chitimacha is generally thought to follow an agent-patient alignment pattern in the first person on the basis of a handful of examples published in a brief grammatical sketch by Swadesh (1946a). These examples are shown in (1) and (2), with glosses and analysis from Mithun (2008:328–29).[2]

(1) k'eti ‘(he) beat (him)’
k'eti–**k** ‘I beat (him)’
k'et–**ki** ‘(he) beat me’

[1] An earlier version of this paper was presented at the 2014 Winter Meeting of the Society for the Study of the Indigenous Languages of the Americas (SSILA) in Minneapolis. I am indebted to Marianne Mithun, Jack Martin, Bernard Comrie, and Eric Campbell for their thoughtful discussions and comments on earlier drafts, to the audience in Minneapolis for their insightful questions, and for the careful work of the editors and reviewers in helping prepare this manuscript for publication. All errors and shortcomings are of course wholly my own.

[2] Data in this paper are presented in an Americanist orthography. Departures from the IPA are as follows: < c > = / t͡s /, < c' > = / t͡s' /, < č > = / t͡ʃ /, < č' > = / t͡ʃʼ /, < š > = / ʃ /, and < y > = / j /. A <:> always indicates a long vowel.

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(2) niːkpa–**ki** ‘(he) made me sick’
natma–**ki** ‘(he) told me’
t’at’iwa–**ki** ‘I feel cold’
nuːp–**ki**–čuːš ‘if I die’

Mithun (2008:328–29) analyzes the *-k* suffix as a first-person agent marker and the *-ki* suffix as a first-person patient marker. Unfortunately, very few grammatical descriptions of Chitimacha have been published (Swadesh 1946a being the most extensive), and although the handful of examples shown here are indeed suggestive of an agent-patient alignment pattern, there is not yet the preponderance of evidence we would need to understand the details of the verbal alignment system fully. With the availability of digital scans of archival materials, however, we are now in a position to more fully capture the richness of the alignment system in Chitimacha. In this paper I revise and expand upon analyses by Mithun and earlier researchers to show that Chitimacha verbal person-marking exhibits a split alignment system, with agent-patient alignment in the first person and nominative-accusative alignment in non-first persons.[3] Moreover, the difference between the agent and patient affixes is not their form per se but rather their position in the verbal template and their respective morphophonological behaviors.

I also show that Chitimacha’s agent-patient system is a genuine case of *semantic alignment*, a cover term encompassing various alignment patterns that are based on semantic distinctions rather than syntactic categories such as subject and object (Wichmann 2008:4), the most well-known of which are agent-patient and active-stative systems. The term is meant to contrast with *syntactic alignment*—that is, alignment patterns that rely on notions of transitivity and valency (the number of arguments in a verb) for their definitions. By *alignment*, I refer broadly to the way that arguments are organized and pattern relative to each other (Siewierska 2010:339; Song 2018:285). By *verbal alignment*, I refer to the alignment of person markers on the verb, as opposed to the alignment of pronouns, syntactic alignment of noun phrases, etc.

Semantic alignment patterns are a common feature of the US Southeast, and one taken as evidence for the Southeast’s status as a linguistic area (Campbell 1997:341–44; Mithun 1999:320). Although semantic alignment in verbal person-marking appears in only 14% of the 380 languages sampled by Siewierska (2013) worldwide, and is somewhat more frequent in North

[3] The use of the term *system* here is not meant to imply a whole-language typology but rather refers to specific components of the grammar that operate according to certain patterns. Thus when I use the phrase “agent-patient system” or similar, I refer specifically to the alternation between agent and patient forms that is limited to first-person verbal marking. Its use is not meant to have implications for other aspects of the grammar. Likewise, I use the phrase “verbal alignment system” to refer to the set of patterns displayed in verbal person-marking (whether first or non-first), again without implications for other areas of the grammar.

America (12 of 62, or 19%, of the North American languages in the WALS sample), it is especially prevalent in the US Southeast. Similarly, the survey in Nichols (1992:187) shows that 31% of North American languages display a form of semantic alignment, although this survey takes into account both verbal and nominal (head and dependent) marking. Semantic alignment appears in Muskogean, the major language family in the region, as well as 13 of 14 (93%) of the non-Muskogean languages included in the Southeast linguistic area by Campbell (1997:341–44).[4] Yet in-depth studies of semantic alignment have not been carried out for the isolates in the region. Broadwell (2016) discusses semantic alignment for Timucua, and Heaton (2016) for Tunica, but most of the isolates of the region remain underdescribed in this regard.

Moreover, because the particular semantic distinction underlying semantic alignment systems varies from language to language, and may include lexical aspect (*Aktionsart*, or actionality), agency, control, or affectedness (Mithun 1991a), much more thorough treatments are needed before one can say with certainty which languages follow which subtype of semantic alignment system. Individual languages also vary as to the distribution of agentive vs. patientive verbs (Pustet 2002), and there is much variation within each of these systems as well. For example, the choice of agent vs. patient markers in languages with semantic alignment may be primarily lexically determined, as in Choctaw (Broadwell 2006:146), or more context-dependent ("fluid"), as in Creek (Martin 2011:171–78), with most languages showing a mix, and with other subtypes existing as well. Even the distinction between syntactic and semantic alignment is not clear-cut: individual verbs within a language may vary as to the alignment patterns they follow (Nichols 2008), making alignment a matter more of statistical tendency than of categorical classification.

Compounding the above problems are terminological inconsistencies regarding semantic alignment that make it difficult to approach the concept from an areal or typological perspective. For example, Klimov (1974) posits an active vs. stative classification of languages in which various bundles of structural features correlate to each type (Klimov 1974:11). Although Klimov does consider semantic alignment as one of those features, his focus is on a

[4] The non-Muskogean languages showing semantic alignment are Atakapa (Mithun 2008:327), Biloxi (Mithun 1991a:524), Catawba (Mithun 1999:508), Cherokee (Mithun 1991a:529), Chitimacha (this paper), Natchez (Mithun 1999:468), Ofo (Mithun 1991a:524), Quapaw (Mithun 1999:508), Timucua (Broadwell 2016), Tunica (Heaton 2016), Tuscarora (Mithun 1991a:529), Tutelo (Mithun 1991a:524), and Yuchi (Linn 2000:128–30). The only Southeastern language where to my knowledge no evidence of semantic alignment has been found is Shawnee. It should also be noted, however, that the Siouan, Iroquoian, and Caddoan language families exhibit semantic alignment even outside the Southeast linguistic area, and that the one case of a language in the Southeast lacking evidence of semantic alignment (Shawnee) also happens to be an Algonquian language, which has a direct-inverse system. The presence of semantic alignment in the remaining isolates is nonetheless suggestive of its status as an areal feature.

whole-language typology rather than semantic alignment specifically. Another terminological issue is that for a long time the term "active-stative alignment" was used indiscriminately to refer to all types of semantic alignment, even when the semantic distinction was actually an agent-patient one (see, e.g., Siewierska's 2004 typological overview of person-marking). This paper therefore aims to contribute to the typological literature in demonstrating a clear case of agent-patient alignment at work.

A final difficulty is that what constitutes a grammatical patient in one language may not count as a grammatical patient in another. For example, in Chitimacha (as will be seen), recipients are coded as grammatical patients; in Muskogean languages, however, recipients/beneficiaries take a separate series of person markers. This makes crosslinguistic comparison of semantic alignment systems difficult. Terminology also becomes confusing: for example, should we continue to use the term "grammatical patient" for affixes in languages whose semantic alignment system is based on an active-stative distinction rather than an agent-patient one, or should new terminology be devised? For lack of better terms, this paper uses "grammatical agent" and "grammatical patient" or "agent marker" and "patient marker" to refer to the morphological distinction between contrasting forms in a semantic alignment system, regardless of the particular semantic basis of that opposition. It is beyond the scope of this paper to provide solutions to these broad typological and terminological problems. The focus here is instead to describe the (semantic) basis of the particular morphological opposition between grammatical agents and grammatical patients as it exists in Chitimacha.

Chitimacha's verbal alignment system turns out to be especially interesting in that the agent-patient alternation in the first person cross-cuts both subjects and objects of transitives, and objects of ditransitives as well—not just intransitives. This makes Chitimacha the ideal test case for Mithun's (1991a:542; Mithun and Chafe 1999) claim that semantic alignment systems "constitute coherent, semantically motivated grammatical systems in themselves. They are not simply inefficient vehicles for expressing the subject and object categories of languages like English." Mithun (1991b) makes this case by showing that semantic alignment systems may lack any clear subject category. Building upon this research, in this article I demonstrate the independence of the Chitimacha semantic alignment system in the first person not just from the subject category, but from the syntactic categories of subjects and objects generally. Chitimacha *does* have subject and object categories, which are relevant for word order, case marking, and non-first-person verbal marking—just not first-person verbal marking. If semantic alignment systems are in fact distinct and self-contained systems of coding verbal participants that operate on semantic principles rather than syntactic ones, we should not expect them to be sensitive to such syntactic categories. As will be shown

here, this is exactly what we see in first-person verbs in Chitimacha. Verbal person-marking in the first person operates entirely independently of valency or syntactic categories such as subject, direct object, and indirect object. This fact means that Chitimacha exhibits a canonical case of semantic alignment at work and provides robust empirical support for the claim that agent-patient systems and similar patterns constitute a distinct type of alignment system that has as its basis semantic rather than syntactic categories.

This paper proceeds as follows: I begin with a brief introduction to the sociohistorical context of the Chitimacha corpus, and the source of the data for this study (**2**). I then provide a cursory overview of Chitimacha grammar (**3**). The next section presents analyses from previous researchers (**4**), followed by my own expansions and revisions on these analyses (**5**). In the analysis, I first discuss the alignment of non-first persons, demonstrating that non-first person follows nominative-accusative alignment (**5.1**). I then proceed to show the differential marking of grammatical agents and patients for first-person intransitives (**5.2**). The following sections show that this same agent-patient alternation appears in both subjects and objects of transitives (**5.3**), as well as direct and indirect objects of ditransitives (**5.4**). I next discuss the behavior of the person markers in the copula/auxiliary, which takes agent forms but is insensitive to the agent-patient distinction (**5.5**), and then the ability for patient suffixes to co-index a possessor of an overt noun phrase in the clause (i.e., "external possession") (**5.6**). The next section is devoted to demonstrating that the agent-patient alternation is not based on the distinction between dynamic ("active") vs. stative verbs, showing that Chitimacha should not be considered an active-stative language (**5.7**). In **6**, I lay out a diachronic pathway whereby transimpersonal constructions were reanalyzed as intransitive patientive ones, giving rise to agent-patient alignment in the first person in Chitimacha. Finally, I conclude in **7** that the data on verbs of differing transitivity show the agent-patient alternation to be sensitive only to the semantic factors of agency, control, and affectedness, and not syntactic categories such as subject and object. Chitimacha first-person marking, in other words, is most appropriately thought of as a true case of semantic alignment.

2. Background and data. The Chitimacha language was spoken in Louisiana until the death of its last native speaker in 1940. Historically, it was spoken in an area extending from the Mississippi River and modern-day New Orleans in the east to Vermillion Bay in the west. Later it would come to be spoken mainly in the town of Charenton, the location of the modern tribal reservation. Although there have been numerous attempts to demonstrate a genetic affiliation for Chitimacha (Swanton 1919; Swadesh 1946b, 1960; Haas 1951, 1952; Gursky 1969; Munro 1994; Brown et al.

2014), none of these proposals have been widely adopted (cf. Campbell and Kaufman 1983, Campbell 1997:305–8, and Campbell and Poser 2008:274–75 for critiques of earlier proposals).

The available documentation of Chitimacha exists in the form of archival materials resulting from fieldwork conducted by various researchers from 1802 to 1934. All extant materials are housed at either the American Philosophical Society Library in Philadelphia or the Smithsonian's National Anthropological Archives in Suitland, Maryland. The first known documentation of the Chitimacha language, apart from occasional vocabulary items in colonial reports and journals, is a 287-item Jefferson list and accompanying ethnographic sketch, written in French and recorded at Attakapas Post in 1802 (Duralde 1802). That vocabulary was later published in Vater (1820), and data from the vocabulary were included in Gallatin's (1836) and Powell's (1891) classifications of the languages of the Americas. Albert S. Gatschet, member of the Bureau of American Ethnology, visited the town of Charenton in December 1881 through January 1882 and worked with an elderly black speaker who was not himself Chitimacha, but who had learned the language fluently. Gatschet recorded enough material for 1,273 file slips and a long expository text about traditional Chitimacha culture (Gatschet 1881a, 1881b). Gatschet published a short anthropological sketch of the Chitimacha but says nothing of the language except that it "seems to be extremely polysynthetic" (Gatschet 1883:156). Gatschet's documentary materials were never published, but both Swanton and Swadesh obtained copies of his materials and incorporated his data into their own databases.

John R. Swanton, one of Franz Boas's earliest students and a prominent ethnographer of Southeastern cultures, visited Charenton in 1907, 1908, 1917, and 1918 and worked primarily with Chief Benjamin Paul (1867–1934) to record several dozen texts in the language (Swanton 1908a). Swanton produced a file-slip dictionary (1908b) and 90-page grammatical sketch (1920), but neither was published. Beginning in 1930, Edward Sapir's then-graduate student Morris Swadesh worked with Chief Paul and his niece, Mrs. Delphine Ducloux (1872–1940), who were by that time the last two speakers, until the time of Chief Paul's death in 1934. Based on this fieldwork, Swadesh prepared drafts of a dictionary comprising 3,500 words (1939a), a collection of 110 texts (1939b), and a 238-page descriptive grammar (1939c). These were never published, although Swadesh did publish a few short works about the language (Swadesh 1933, 1934, 1946a). The recent availability of the Chitimacha archival materials in digital form has, however, facilitated renewed academic interest in the language (Iannucci 2009; Brown et al. 2014; Hieber 2018a). Moreover, the Cultural Department of the Chitimacha Tribe is now actively revitalizing the language, with daily language classes in the tribal school, and partial immersion programs in the tribal preschool.

For this study, I elected to use the collection of 110 texts compiled by Swadesh working in conjunction with the last two speakers. The texts consist primarily of tribal legends and personal narratives, as well as a few expository and procedural ones. There are no word- or morpheme-level glosses in the manuscript (though they exist occasionally in Swadesh's notes elsewhere), and consequently the glosses and morphemic analysis provided here are my own, except when reporting the analyses of previous researchers. For the present study, I entered the texts into the linguistic analysis software FieldWorks Language Explorer (FLEx) (Summer Institute of Linguistics 2019) for searching and analysis.

The data presented in the interlinear glosses follow an Americanist orthography (except as noted in fn. 2), though the Chitimacha Tribe has developed their own practical orthography that does not rely on diacritics. A list of glossing abbreviations and their meanings is provided in footnote 5. Unless otherwise noted, all examples are from Swadesh's unpublished text collection (Swadesh 1939b). The free translations are from Chief Paul and Mrs. Ducloux, with parenthetical notes from Swadesh. At times, the translations in examples diverge somewhat significantly from the glosses; nonetheless, I have chosen to retain the speakers' original translations. Where it is helpful for clarification, I have also occasionally added my own annotations on the translations in [square] brackets.

The exact textual source for each example is given after its translation, following Swadesh's system of organizing the texts he collected. Each identifier refers to a specific speaker (A = Chief Benjamin Paul, B = Mrs. Delphine Ducloux), text number (01–88), paragraph (a–z), and sentence number (1–99) in the corpus.

3. Overview of Chitimacha grammar. The following description of Chitimacha grammar is necessarily quite brief, and in some places tentative. For a more extensive treatment, I refer the reader to Swadesh (1946a). The present paper is also the first place I am aware of in which the analyses of Swanton and Swadesh have been published or otherwise discussed.

Chitimacha is a strongly synthetic, strongly head-marking language that is consistently suffixing rather than prefixing (Swadesh 1946a:314). Word order follows patterns typical of head-final languages: simple clauses adhere to an SOV schema; subordinate clauses generally precede main clauses; the language has postpositions rather than prepositions; and possessors precede possessed nouns (although modifiers follow their head noun) (Swadesh 1946a:328, 331–35). Verbal person-marking distinguishes between first (1) and non-first (NF) person, but not between second and third (Swadesh 1946a:317). Non-first-person objects are not coded on the verb (see **5.3**). These facts are exemplified for the suppletive verb *k'et-* 'kill$_{SG}$' in the perfective aspect in

(3a) (where perfective is zero-marked, and the suppletion is conditioned by grammatical number), although the first vs. non-first distinction holds for all aspects and moods.[5]

(3a) k'et–**ik**
kill$_{SG}$–**1SG**
'I killed (him)' (Swadesh 1939b: A34c.4)

(3b) k'et–**iʔi**
kill$_{SG}$–**NF:SG**
'you killed (him)' (Swadesh 1939b: A32c.6)

(3c) k'et–**iʔi**
kill$_{SG}$–**NF:SG**
'he killed (her)' (Swadesh 1939b: A4h.3)

Any potential ambiguities that the syncretism between second and third person introduces are resolved by the use of a set of independent pronouns which distinguish first, second, and third person, singular and plural. The independent pronouns occur very frequently in the corpus.

Chitimacha has a set of nine preverbs, which form a semantic unit with the verb they precede and convey meanings such as definiteness, direction, reflexivity/reciprocity, inchoativity/inception, stativity, and punctuality (Swadesh 1939c:146–55, 1946a:329–30). The preverbs are optional but ubiquitous. Each preverb has multiple diachronically related yet synchronically distinct senses (Hieber 2018a). A given combination of preverb + verb may be either semantically compositional or idiosyncratic. In the cases in (4), for example, the meanings of the overall verbal constructions are transparently derived from the combined meaning of the particular preverb plus the verb *čuw-* 'go$_{SG}$'.

(4)

hi *čuw-*	'go to'	(*hi* 'to')
kas *čuw-*	'go back, return'	(*kas* 'back')
ni *čuw-*	'go down'	(*ni* 'down')
ʔap *čuw-*	'go here, come'	(*ʔap* 'here')
ʔapš *čuw-*	'go about, wander'	(*ʔapš* 'about')

(Swadesh 1939a)

[5] Glossing abbreviations used in this paper are as follows: 1: first person; 2: second person; 3: third person; ABS: absolutive; AGT: grammatical agent AND: andative; AUX: auxiliary verb; BEN: benefactive; CAUS: causative; COND: conditional; CONT: continuative; COP: copula; DEB: debitive; DEF: definite; DEM: demonstrative; DIST: distal; DS: different-subject; ERG: ergative; GER: gerund; INCH: inchoative; INSTR: instrument; IPFV: imperfective; IRR: irrealis; LOC: locative; NEG: negation; NEUT: neutral position; NF: non-first person; NOM: nominative; NZR: nominalizer; OBJ: object; PAT: grammatical patient; PL: plural; PAST: past tense; PLACT: pluractional; PLEO: expletive/pleonastic; PRES: present tense; PTCP: participle; PUNC: punctual; RECIP: reciprocal; REFL: reflexive; SG: singular; SIMIL: similative; SS: same-subject; STAT: stative; SUBJ: subject; TEMP: temporal subordinator; TOP: topic; VEN: venitive; VERT: vertical position.

In (5), however, the resultant meanings of the verbal constructions are not predictable from the meanings of the individual components.

(5) ***kas*** *ʔi꞉kšt-* 'sharpen' (*kas* 'back' + *ʔi꞉kšt–* 'turn')
ni *wopma-* 'ask' (*ni* DEF + *wop–* 'hear' + *–ma* PLACT)

(Swadesh 1939a)

The meanings of these constructions are noncompositional and idiosyncratic. A thorough description of Chitimacha preverbs and their diachrony can be found in Hieber (2018a).

Chitimacha has a copula that distinguishes orientation of the subject in the singular—*hi-* 'neutral/sitting', *či-* 'vertical/standing', *pe-* 'horizontal/lying' (Swadesh 1933). These forms also function as an auxiliary, as shown in (6).

(6) ʔapš hok'u–mi–꞉k' **či**–ʔuy–i
about shake–PLACT–PTCP **AUX**vert–PAST꞉IPFV–NF꞉SG

'he was shaking' (Swadesh 1939b: A84c.2)

As seen above, auxiliary verbs follow their main verb, which is marked with a participial suffix of the form *-k*, *-꞉k'*, *-tk*, or *-nt'k*, depending on phonological environment.

One verbal suffix of relevance to this paper is the pluractional *-ma* (with allomorphs *-mi*, *-ma*, and *-m*), which patterns in the canonical way that pluractionals do crosslinguistically—that is, it expresses plurality of the object when the clause is transitive, plurality of the subject when the clause is intransitive, or plurality of events in either case, depending on the semantic profile of the verb (Storch and Coly 2017:1). This suffix is therefore sometimes useful in determining the transitivity of verbs in Chitimacha. Examples of the pluractional with intransitive and transitive uses of the same verb root, *k'ušt-* 'eat', are provided in (7) and (8).

(7) tutk ni k'uš–**mi**–naʔa
then DEF eat–**PLACT**–NF꞉PL

'then they ate' (Swadesh 1939b: A15e.6)

(8) kap k'uš–**m**–iʔi
up eat–**PLACT**–NF꞉SG

'he ate them up' (Swadesh 1939b: A87c.9)

In the intransitive case in (7), the pluractional suffix indicates plurality of the subject, while in the transitive case in (8), it indicates plurality of the object. Example (9) shows the pluractional functioning to indicate multiplicity of the event (going to the woods multiple times in search of something):

(9) šuš sek'is ʔapš ču꞉–**m**–iki
wood among about go$_{SG}$–**PLACT**–1SG.AGT

'I have gone about in the woods' (Swadesh 1939b: A28a.5)

In addition, the singular stem and singular person suffix in (9) demonstrate that it is the action that is plural rather than the number of actors.

As the examples with *k'ust-* 'eat' in (7) and (8) illustrate, Chitimacha verbs are highly labile ("ambitransitive").[6] Additionally, as mentioned above, non-first-person objects are not coded on the verb, and almost any nominal argument can be omitted when it is either coded on the verb or understood from the discourse context. As a result, the number of arguments in a Chitimacha clause must be determined by considering the noun phrases, determining whether an already activated topic in the discourse may function as the object of the verb (Hieber 2017), and considering the semantic contribution of the preverbs or the pluractional *-ma* to the verb. While this combination of discourse tracking and other devices reliably resolves the valency of Chitimacha verbs in nearly every case, the lack of morphological marking of valency is important for the development and operation of the agent-patient system, as will be seen in **6**. This lability furthermore supports the claim that the agent-patient system functions independently of valency: if valency distinctions are not in operation in the grammar of Chitimacha generally, then it is unlikely that the agent-patient pattern would be sensitive to valency either.

Chitimacha nouns are uninflected for number or person, except for a handful (~30) of human animate nouns which mark their plurals in various idiosyncratic ways, as seen in (10) (Swadesh 1939c:62, 1946a:327).

	Singular		Plural	
(10)	*ʔasi*	'man'	*ʔayš*	'men'
	kiča	'woman'	*kič*	'women'
	ʔaːyʔ	'mother'	*ʔaːyʔampa*	'mothers'

(Swadesh 1939c:62)

Noun phrases may, however, be marked for case using the enclitics *=hiš* ERG and *=(n)k* ABS/NOM. Though further research is needed, a preliminary analysis of noun phrases shows a split alignment system wherein independent pronouns, human animate nouns, and other sentient beings adhere to an ergative-absolutive pattern (with *=hiš* used as the ergative and *=(n)k* as the absolutive), while other noun phrases adhere to a nominative-accusative pattern (with *=(n)k* used for the nominative, and the accusative unmarked). Examples of absolutive marking for independent pronouns in intransitive clauses are shown in (11) and (12).

(11) ʔiš**=k** čuː–ču–ki–š
1SG**=ABS** go_{SG}–IRR:SG–1SG.AGT–COND
'if I go' (Swadesh 1939b: A26d.4)

[6] I use the term *labile* to refer to either the causative-inchoative alternation (S/P lability) or the unspecified object-deleting alternation (S/A lability), following Malchukov (2015:108).

(12) him**=k** samis ša:–čuy–i–nk'
2SG**=ABS** front sleep–IRR:SG–NF:SG–DEB
'you must sleep in front' (Swadesh 1939b: A30e.7)

In both of the above examples, the single argument of the intransitive clause is marked with the absolutive *=k*. The following two examples show that this same absolutive enclitic marks the undergoer in a transitive clause:

(13) ʔiš**=k** kap k'et–ki–:k'
1SG**=ABS** PUNC $kill_{SG}$–1SG.PAT–SS
'when they killed me' (Swadesh 1939b: A4c.8)

(14) him**=k** his he:čt–iki
2SG**=ABS** response meet–1SG.AGT
'I met you' (Swadesh 1939b: A17g.4)

The following examples show that the agent argument of a transitive clause is marked with the enclitic *=hiš*.

(15) ʔiš**=hiš** hi ko:–mi–ču–ki–š
1SG**=ERG** AND call–PLACT–IRR:SG–1SG.AGT–COND
'if I call them' (Swadesh 1939b: A11c.10)

(16) him**=hiš** ʔapš kim–pa–ki
2SG**=ERG** REFL believe–CAUS–1SG.PAT
'you remind me' (Swadesh 1939b: A83a.1)

Finally, (17) shows both the ergative and the absolutive markers appearing in the same transitive clause.

(17) ʔiš**=hiš** we kič**=k** hi ko:–mi–iki
1SG**=ERG** DEM women**=ABS** AND call–PLACT–1SG.AGT
'I called to the women' (Swadesh 1939b: A57a.7)

Examples of *=(n)k* used as a nominative marker with nonhuman (nonsentient) noun phrases are given below.[7]

(18) činš**=k** hani čuht–i=š
wren**=NOM** house build–NF:SG=TOP
'if a house wren builds a house' (Swadesh 1939b: A84h.1)

(19) we kiš**=k** hesik'en ʔunk'u kap nuhč–pi–naʔa
DEM dog**=NOM** again one up run–CAUS–NF:PL
'the dogs [again] chased up another one'
(Swadesh 1939b: A55b.6)

[7] Note that not all nouns ending in /(n)k/ are instances of the case marking enclitic. Chitimacha also has a suffix *-(n)k* which derives nouns from verbs. An example of derivational suffix can be seen in the word *k'inkk'ank* 'young woman' in (31).

(20) kamčin**=tk** ya: hi waytm hi čuy–iʔi
deer**=NOM** fast AND exceeding AND go$_{SG}$–NF:SG
'the deer went faster' (Swadesh 1939b: A22d.8)

(21) him šiš**=k** ʔuyp'ik'–a:š–iʔi
2SG nose**=NOM** bleed–PRES:IPFV–NF:SG
'your nose bleeds' (Swadesh 1939b: A77a.4)

The enclitic =(*n*)*k* is also used when the subject of a transitive verb is lower on the referential hierarchy than the object (most typically, when an animal or inanimate is acting on a human), with the result that =(*n*)*k* and =*hiš* may occasionally co-occur:

(22) we siksi**=nk=hiš** ni wop–m–iʔi
DEM eagle**=NOM=ERG** DEF hear–PLACT–NF:SG
'that eagle asked (him) (Swadesh 1939b: A1b.5)

(23) ʔiš mahči=š ku:**=k=hiš** kap ni:–ki
1SG tail=TOP water**=NOM=ERG** STAT sit.in.water–1SG.PAT
'the water soaked my tail' (Swadesh 1939b: A10j.6)

Since the overlapping nature of =(*n*)*k* and =*hiš* is quite unusual, I consider the present analysis tentative; more research on the exact details of the nominal alignment system is needed.

In addition to the case enclitics, Chitimacha has a topic-marking enclitic =*š* (sometimes realized as =*s* owing to sibilant harmony), which indicates a switch in topic when used with noun phrases, and backgrounded information when used with verbs. Example (24) shows =*š* marking the switch in topic from 'we' to 'one of the girls'.

(24) wetk ʔapš ne:č'i–ma–:š–naku–n we
then RECIP speak–PLACT–PRES:IPFV–1PL.AGT–CONT DEM

k'inkk'ank ʔunk'u**=š** hi te:t–iʔi [. . .]
young.woman one**=TOP** AND say–NF:SG

'We were conversing. One of the girls said [. . .]'
(Swadesh 1939b: A65a.4–5)

Example (25) shows the backgrounding function of =*š*, where planting crops is the narrative background against which the next action (going on again) is situated.

(25) wetk=š ni k'ast–k k'asmank ʔam ʔo:nak
then=TOP DEF plant–SS corn thing all

no:pi–:k'**=š** weytenk'enk=š t'ut–naʔa hesik'en
make.crop–SS**=TOP** only.then=TOP go$_{PL}$–NF:PL again

'Then they planted, made a crop of corn and so forth, and after that went on again.'
(Swadesh 1939b: A3b.3)

The topic marker appears to have fossilized and been reanalyzed as part of the stem in the case of certain highly topical, frequent words. For example, most of the personal pronouns end in /š/ or /s/ (e.g., *ʔiš* '1SG', *hus* '3SG'), as does the highly frequent word *panš* 'person'.

In terms of clause types, Chitimacha has a weakly grammaticalized system of switch-reference, wherein same-subject verbs are marked with *-k* (also *-ːk'*, *-tk*, or *-ntk* depending on phonological environment), and different-subject verbs are marked with a full set of person markers (the ones of interest for this study) (Hieber 2018b). Example (26) demonstrates the switch-reference system in use.

(26) wenk hi čuː–ːk'=š kuː k'apt–k we
now DIST go$_{SG}$–SS=TOP water take–SS DEM

ʔakšuš hi t'eyktepi–čuː–Ø–š kayi paːhmpa
cypress AND splash–IRR–NF:SG:DS–COND thunder

him ni k'apt–ʔiš–i
2SG DEF get–PRES:IPFV–NF:SG:DS

'Now if you go there, take water, and (if) you splash that cypress, thunder gets you.'

(Swadesh 1939b: A9b.5)

Although this example includes the DS 'different-subject' gloss, I do not include this gloss elsewhere in the paper. Any person affix that is not glossed as SS 'same-subject' may be assumed to be DS.

4. Previous analyses of verbal person-marking. The first researcher to discuss verbal person-marking in Chitimacha is John R. Swanton, though his manuscript (Swanton 1920) is prefaced with the note, "Superseded by Swadesh when his work is printed," suggesting that Swanton viewed his work as tentative. Swanton (1920:71) analyzes the language as having the complex verbal template shown on the left in table 1. By comparison, Swadesh posits the much simpler but still morphologically complex schema on the right. In **5.2** I show that neither template is quite correct and present a revised analysis of Chitimacha verbal structure.

Swanton treats Chitimacha as having a nominative-accusative system, with objects unmarked on the verb (Swanton 1920:9). Although Swanton does not provide an example of a fully conjugated verbal paradigm, he does provide the paradigm for subject suffixes given in table 2. Swanton also includes several gender-specific suffixes reported to him by his consultant (Swanton 1920:11), but these had already fallen out of use by that time and were not used by speakers in everyday speech. I have omitted them here for the sake of exposition.

Swadesh likewise analyzes Chitimacha verbal person-marking as nominative-accusative, with the important difference that first person objects

TABLE 1
PROPOSED CHITIMACHA VERBAL TEMPLATES

Swanton	Swadesh
Indirect pronominal	Stem
Prefix indicative state	Causative
General object	Plural/plurimal
Principal stem	Indirective
Second stem	First person object
Plural	Tense/aspect
Auxiliary first class	Subject
Usitative	
Perfect	
Auxiliary second class	
Volitional	
Future	
Negative	
Auxiliary third class	
Continuative	
Pronominal subject	
Tense	
Infinitive	
Interrogative participle	

TABLE 2
CHITIMACHA VERBAL PERSON-MARKING ACCORDING TO SWANTON (1920:11)

	Singular	Plural
First person	*-k* *-ki*	*-naka*
Second person	*-i*	*-nana*
Third person	*-i*	*-i* *-na*

are marked on the verb whereas non-first-person objects are not (Swadesh 1939c:35–36, 1946a:317–18). Data and analysis from Swadesh allow us to make a few corrections to Swanton's analysis of verbal person marking in table 1. Swadesh (1939c:47) states that *-na:na* is the interrogative form of the non-first plural; otherwise the non-first plural is *-na*. As Swanton does not consistently mark vowel length, the form *-nana* in the second-person plural is undoubtedly the interrogative form mentioned by Swadesh.

The appearance of *-i* in both the singular and plural is puzzling. The justification for its appearance in the plural slot is difficult to substantiate since Swanton provides only one example of *-i* used as a plural, shown in (27).

(27) hiniki´nt**i** (Swanton's transcription)
hi nikint**i** (Americanist transcription)
'they went and launched (their canoe)' (Swanton 1920:13)

However, the speech of Benjamin Paul (Swanton's consultant) was also documented extensively by Swadesh ten years later, with no such plural use of *-i*. In fact, Swadesh coincidentally documents the same word form that Swanton gave as an example of plural *-i*, but with a singular meaning rather than plural:

(28) tutk ku:=ki hi nikint–**i**
then water=LOC AND throw.in.water–**NF:SG**
'he threw it in the water' (Swadesh 1939b: A9c.3)

It therefore seems likely that the presence of *-i* for the non-first plural form in (27) was an elicitation or translation error on Gatschet or Swanton's part.

Swanton's verb paradigm in table 2 also displays variance between *-k* and *-ki* for the first-person singular. Swanton seems to view *-k* as something like a rapid speech variant of *-ki* (Swanton 1920:15). Swanton also discusses a *-ka* variant, which he analyzes as resulting from a combination of the first singular *-k* and a continuative suffix *-ka*. Regarding the continuative *-ka*, Swanton notes that it only appears in the first-person singular (Swanton 1920:15), suggesting that this is merely a morphophonological variant of *-ki*. This is in fact precisely how Swadesh analyzes it. Swadesh states that when a vowel is followed by the continuative *-ʔiš*, the preceding vowel is dropped and the continuative becomes *-a:š* (Swadesh 1939c:44). Thus, when the first singular *-ki* is followed by continuative *-ʔiš*, it results in a sequence /ka:š/. This process can be seen in (29).

(29) k'et**ki** 'he hit me'
k'et**ka**:ši 'he is hitting me'
(Swadesh 1939c:52)

Swanton appears to have mistakenly analyzed this /ka:š/ sequence as a first-person singular continuative *-ka* followed by an "infinitive" *-š* instead (Swanton 1920:39–40).

In certain cases, Swanton mistakenly analyzes forms that are clearly the first-person singular as something else. For example, he describes a perfect suffix *-ki* that "denotes a state which has been completed for a long time, or a state continuously perfect" (Swanton 1920:30). However, about half the examples Swanton provides in evidence for this analysis are instances of the adjectivizing suffix *-k'i* according to Swadesh (1939c:57), an error brought about by Swanton's frequent failure to distinguish between plain and ejective stops. A few additional examples of the "perfect" suffix are instances of the temporal subordinating suffix *-nki*. The remainder of the examples are first-person forms that Swanton mistakenly analyzed as perfect suffixes. For

TABLE 3
SUBJECT MARKERS WITH A PERFECTIVE ASPECT VERB

	Singular		Plural	
First person	k'et–**iki**	'I hit (him)'	k'et–**naka**	'we hit (him)'
Non-First person	k'et–**i**	'he hit (him)'	k'et–**na**	'they hit (him)'

TABLE 4
SUBJECT MARKERS WITH AN IRREALIS VERB

	Singular		Plural	
First person	k'et–ču–**ki**	'I will hit (him)'	k'e–t'i–**naka**	'we will hit (him)'
Non-First person	k'et–čuy–**i**	'he will hit (him)'	k'e–t'i–**na**	'they will hit (him)'

example, Swanton lists *wiški* 'I burnt [my tongue]' as an illustrative example of the perfect *-ki* suffix, but Swadesh would analyze the final *-ki* of this form as a first-person singular object marker (Swadesh 1939c:187).

Regarding the position of the person markers in the verbal template, Swanton generally treats the subject markers as preceding the tense marker (see table 1) but states that "The order is probably not absolutely fixed in all cases" and provides several examples with the first-person marker following rather than preceding the tense marker (Swanton 1920:70). What Swanton viewed as variability in the ordering of the affix *-ki*, Swadesh views as two different slots in the verb—one for first-person object markers (immediately prior to the aspect marker) and one for subject markers (immediately following the aspect marker), as shown in Swadesh's verb template in table 1. Swadesh also points out that the first-person object marker has both singular (*-ki*) and plural (*-kuy*) forms, a fact which Swanton overlooked. The following paragraphs walk through the evidence in support of Swadesh's analysis.

Table 3 illustrates the paradigm for Swadesh's subject markers with a perfective aspect verb (perfective aspect is zero-marked) (Swadesh 1939c:41, 49, 1946a:317). Note that the verb in this table is transitive with a non-first person object, and the object is unmarked.

Table 4, which shows the same verb but in the irrealis (marked by the suffix *-čuy* 'IRR:SG' or *-t'i* 'IRR:PL'), demonstrates that these subject markers immediately follow the aspect marker in the verb template (Swadesh 1939c:41, 49, 1946a:317). Note that the non-first-person object is once again unmarked.

When the object is first person rather than non-first person, an object marker appears before the aspect marker. Table 5 illustrates the use of this first-person object marker in the singular and plural (Swadesh 1939c:52). (Note that the verb *k'et-* is suppletive, taking the form *t'ema-* when the verb is pluractional.) A first-person subject marker in combination with a first-person object marker

TABLE 5
OBJECT MARKERS WITH AN IRREALIS VERB

	Singular Object		Plural Object	
Singular subject	k'et–**ki**–čuy–i	'he will hit me'	t'em–**ku**–čuy–i	'he will hit us'
Plural subject	k'et–**ki**–t'i–na	'they will hit me'	t'em–**ku**–t'i–na	'they will hit us'

is unattested in the corpus; when first person acts on first person, the reflexive *ʔiš nehe* 'myself' or *ʔuš nehe* 'ourselves' is used instead.

A comparison of tables 4 and 5 makes clear that Swadesh's subject affixes follow the aspect marker, whereas object affixes precede it. Another clear minimal set can be seen in (30) and (31).

(30) ʔuč**ki**čuyi
ʔuči–**ki**–čuy–i
do–**1SG.OBJ**–IRR:SG–NF:SG.SUBJ
'you will do me (well)' (Swadesh 1939b: A49d.16)

(31) ʔučiču**ki**
ʔuči–čuy–**ki**
do–IRR:SG–**1SG.SUBJ**
'I will do it' (Swadesh 1939b: A17e.23)

What Swadesh analyzes as the first-person object marker (and what I treat as a patient marker) precedes the irrealis marker in (30), whereas the first-person subject (agent) marker follows the irrealis marker in (31).

Additional evidence for the two slots is the fact that the object markers but not subject markers may also appear in same-subject clauses, where they continue to fill the slot immediately following the stem:

(32) k'et–**ki**–ːk' hi ču–pa–ki–t'i–na
hit_{SG}–**1SG.OBJ**–SS AND go_{SG}–CAUS–1SG.OBJ–IRR:PL–NF:PL.SUBJ
'they would have struck me and made me go away'
(Swadesh 1939b: A2d.7)

(33) hokt–**ki**–ːk' hanisc'in=hup hi šanšwi–ːk'
leave–**1SG.OBJ**–SS porch=to AND go.out–SS
'leaving me, he goes out on the gallery (porch)'
(Swadesh 1939b: A24b.10)

Swadesh takes data such as that in tables 4 and 5 and examples (30) and (31) as evidence that the Chitimacha verbal template contains object, aspect, and subject slots, in that order. Although the first-person-singular subject and

object forms are superficially similar (*-ki*), these data show that they actually appear in different slots in the verb.

A potentially ambiguous scenario occurs, however, when the verb involves a first-person-singular argument, but no aspect marker is present (i.e., in the perfective aspect). In this case, the lack of an aspect marker makes it difficult to determine whether a *-ki* suffix sits in the slot before or after the aspect marker. The *-ki* in a form such as *k'et–ki* is seemingly ambiguous between the first-person-singular subject and the first-person-singular object. This ambiguity is superficial, however, because the subject and object markers differ not just in position, but also in their morphophonological behaviors. Swadesh lays out a set of morphophonological rules for Chitimacha inflectional morphology that unambiguously distinguish subject and object forms in every case (Swadesh 1939b:44–54). There are three relevant conditioning contexts for first-person forms: (*a*) after stem-final /i/, (*b*) after stem-final /a, e/, and (*c*) and after stem-final consonants. (34) and (35) illustrate the behavior of the first-person forms after a stem-final consonant.

Environment 3: stem-final /C/

(34) he꞉čt**ki** (object marker)
he꞉čt–**ki**
meet–**1SG.OBJ**
'you meet me' (Swadesh 1939b: A55a.26)

(35) he꞉čt**iki** (subject marker)
he꞉čt–**iki**
meet–**1SG.SUBJ**
'I met you' (Swadesh 1939b: A17g.4)

In this environment, the object marker is realized as *-ki* and the subject marker as *-iki*, with no other phonological changes to the stem, suggesting that these are the underlying forms of each of the markers.

(36) and (37) illustrate the behavior of the first person forms after stem-final /i/.

Environment 1: stem-final /i/

(36) ʔuč**ki** (object marker)
ʔuči–**ki**
do–**1SG.OBJ**
'(he) did me (well)' (Swadesh 1939b: A18b.2)

(37) ʔuč**iki** (subject marker)
ʔuči–**iki**
do–**1SG.SUBJ**
'I did it' (Swadesh 1939b: A58a.10)

In this environment, both the object marker and the subject marker delete the stem-final vowel.

Examples (38) and (39) illustrate the behavior of the first person forms after stem-final /a/ or /e/.

Environment 2: stem-final /a, e/

(38) wopma**ki** (object marker)
wopma–**ki**
ask–**1SG.OBJ**
'(he) asked me' (Swadesh 1939b: A51b.2)

(39) wopm**iki** (subject marker)
wopma–**iki**
ask–**1SG.SUBJ**
'I asked her' (Swadesh 1939b: A45d.5)

In this environment, the object marker does not delete the preceding vowel, whereas the subject marker does. In sum, in each of the three environments a subtle but notable phonological difference between the subject and object markers allows for their disambiguation in any context.

When the subject marker appears after the irrealis marker *-čuy/-t'i* or the past imperfective marker *-(p)uy*, it is realized as *-ki* rather than *-iki*:

(40) kišu–ču–**ki**
swim–IRR:SG–**1SG.SUBJ**
'I will swim it' (Swadesh 1939b: A1b.4)

(41) č'imt ʔo:nak wop–puy–**ki**
night all hear–PAST:IPFV–**1SG.SUBJ**
'I heard her every night' (Swadesh 1939b: A64b.2)

This does not create an ambiguity with the homophonous object marker *-ki*, however, since the aspect marker is present to disambiguate the position of the *-ki* suffix in these cases (cf. 30 and 31).

Swadesh also notes a set of exceptions for his nominative-accusative analysis—namely, when the object markers are used for subjects. Following the model of Latin, Swadesh calls these "deponent verbs" and discusses them in both his draft grammar (Swadesh 1939c:94) and his published grammatical sketch (Swadesh 1946a:326):

> Certain verbs, which we may call deponent, have the inflectional peculiarity that a first person subject is expressed as a first person object with non-first subject. . . . Some, perhaps all, deponent verbs may also be inflected in the ordinary way. . . . Most deponent verbs refer to bodily states or bodily changes. A few refer to mental conditions or processes. They may be active or static (Swadesh 1939c:94).

Swadesh provides a number of examples in his grammatical sketch, each of which is an intransitive verb whose single argument is a semantic patient, such as *t'at'iwaki* 'I feel cold' (Swadesh 1946a:326). Swadesh briefly considers an analysis of these verbs that is more akin to agent-patient alignment, but he rejects it on the grounds of parsimony:

> It is possible that the verbs treated in this section are to be taken as literally construing as object what we have called the subject. Thus instead of translating 'to want . . .', perhaps it should be 'to be desired by . . .', instead of 'to feel cold', perhaps 'to be coldness felt by . . .'. The evidence is, however, not compelling. Without other evidence, the present interpretation has to recommend it that it provides a simple formulation of the variation between deponent and non-deponent treatment (Swadesh 1939c:94).

This passage appears to be a reference to a suggestion made decades prior by Swadesh's teacher, Edward Sapir, who established a typology of alignment systems which not only recognized "active" languages as a distinct type (giving rise to the later "active-stative" alignment terminology) but posited that "'active' languages could be interpreted as having unexpressed impersonal subjects, e.g., that 'I sleep' could be interpreted as 'it sleeps me'" (Sapir 1917:85, discussed in Wichmann 2008:5). It is unclear why Swadesh rejects this analysis, and he provides no further evidence or argumentation for his deponency analysis. The above passages are his only discussion of the topic.

It is these "deponent" verbs, of course, that constitute the crucial data for Mithun's analysis of Chitimacha as showing agent-patient alignment. On the basis of the data in Swadesh (1946a), Mithun (1991a:537, 1999:388) describes Chitimacha as having an agent-patient system that operates only within the first person (no analysis is suggested for non-first persons). This analysis is based on the fact that the "deponent" verbs that Swadesh (1946a) describes fall into the semantic classes typically expected of patient-marked verbs in an agent-patient system (Mithun 1999:388). Mithun (2008:328–29) adds the detail that that the first-person-singular agent is *-k* and the patient is *-ki*. However, we have already seen from Swadesh's grammar (which existed only as an archival manuscript and would have been unavailable to Mithun at the time) that the two forms in question are actually *-ki* and *-iki*, respectively, and that they fill different slots in the verbal template and have different morphophonological behaviors.

Mithun (2008:329) also provides a handful of examples from Swadesh (1946a:326) (examples (1) and (2) above) and a short paragraph from a text glossed by Geoffrey Kimball (personal communication, 2008). Unfortunately, the accompanying text has a few small errors which obscure the behavior of the alignment system somewhat (e.g., the same-subject marker *-k*, described in **3**, is glossed as a patient marker).

Even so, given the differential marking of intransitive verbs, Mithun's agent-patient analysis seems to be an accurate reinterpretation of Swadesh's deponency analysis. However, more robust evidence in support of this claim is desirable, and the cursory nature of Mithun's description leaves many questions unanswered. The following section takes up this task and analyzes the verbal alignment system in Chitimacha in detail.

5. Verbal alignment in Chitimacha. This section provides a thorough description of the alignment of verbal person markers in Chitimacha, using data from Swadesh's (1939b) text collection, and shows that Chitimacha verbs have an agent-patient pattern in the first person and a nominative-accusative pattern in the non-first person. The agent-patient alternation is shown to cross-cut all types of arguments—intransitive subjects, transitive subjects and objects, and others. I begin with an analysis of alignment in the non-first person (**5.1**) and then describe the agent-patient system for first person in clauses of various types and transitivity (**5.2–5.5**). **5.6** describes the behavior of the agent and patient markers with possessed noun phrases, and **5.7** shows that the two sets of first-person forms in Chitimacha are not sensitive to the dynamic-stative distinction, and that Chitimacha should therefore not be analyzed as exhibiting active-stative alignment.

5.1. Non-first persons. Examples (42) through (45) demonstrate that non-first-person subjects are marked by *-i* in the singular.

Intransitive, non-first-person singular

(42) ʔapš ʔehy–**i**
back arrive–**NF:SG**

'you come back' (Swadesh 1939b: A17d.3)

(43) siksi=s ʔap čuy–**i**
eagle=TOP VEN go_{SG}–**NF:SG**

'an eagle came' (Swadesh 1939b: A2b.1)

(44) k'asti pokuš ʔap howa:š**i**
k'asti poku=š ʔap howa–ʔiš–**i**
cold wind=TOP VEN blow–PRES:IPFV–**NF:SG**

'the north wind blows' (Swadesh 1939b: A84c.11)

(45) hus ne ču:–čuy–**i**
3SG also go_{SG}–IRR:SG–**NF:SG**

'she too would have gone' (Swadesh 1939b: A32a.12)

Plural subjects are marked by *-na*:

Intransitive, non-first-person plural

(46) t'ut–**na**
go$_{PL}$–**NF:PL**
'they went' (Swadesh 1939b: A86c.1)

(47) ʔap šamk'uš–**na**
VEN rush.out–**NF:PL**
'they rushed down' (Swadesh 1939b: A34d.9)

(48) wa:č'ika:aš**na**
wa:č'ika–ʔiš–**na**
play–PRES:IPFV–**NF:PL**
'they play' (Swadesh 1939b: A72c.2)

(49) panš.pinikank ʔašantka=:š wa:č'iki–puy–**na**
Indian old.men =TOP play–PAST:IPFV–**NF:PL**
'the old Indian men used to play' (Swadesh 1939b: A69b.2)

As seen in the following transitive examples, non-first-person objects are not marked on the verb. Note that when an aspect marker is present, the subject marker follows rather than precedes it.

Transitive, NF:SG > NF:SG

(50) him ʔi: kap toht–**i**
2SG tusk PUNC break–**NF:SG**
'you broke your tusk' (Swadesh 1939b: A17b.28)

(51) ku:=ki hi nikint–**i**
water=LOC AND throw.in.water–**NF:SG**
'he threw it into the water' (Swadesh 1939b: A9c.3)

(52) hi kayi ʔuči–čuy–**i**
DIST life do–IRR:SG–**NF:SG**
'you will live' (lit. 'you will do a life') (Swadesh 1939b: A24a.10)

(53) kaya=nk ni k'ap–čuy–**i**
rain=NOM DEF get–IRR:SG–**NF:SG**
'the rain will get you' (Swadesh 1939b: A9b.3)

Transitive, NF:PL > NF:SG

(54) miš hi ʔam–**na**
road AND look.at–**NF:PL**
'they looked at the course' (Swadesh 1939b: A22b.9)

(55) ni tiškin–**na**
down push.down–**NF:PL**
'they knocked him down' (Swadesh 1939b:26c.1)

(56) hus kut katma=š k'apt–ʔiš–**na**
3SG head brains=TOP take–PRES:IPFV–**NF:PL**
'they take his brain' (Swadesh 1939b: A2d.4)

(57) wey ne hunks=ki hi kaš–m–puy–**na**
DEM just 3PL=LOC AND paint–PLACT–PAST:IPFV–**NF:PL**
'they just smeared that on them(selves)'
(Swadesh 1939b: A2d.12)

Subjects and objects continue to be marked by *-i*/*-na* in the non-first person regardless of whether the indexed argument is a semantic patient. The following examples show *-i* and *-na* used with intransitive verbs whose argument is a semantic patient.

Intransitives with semantic patients, non-first persons

(58) hi šaʔ–**i**
AND sleep–**NF:SG**
'he fell asleep' (Swadesh 1939b: A41b.2)

(59) kiči ʔunk'u=š kap niːk–**i**
woman one=TOP INCH be.sick–**NF:SG**
'a certain woman fell sick' (Swadesh 1939b: A4a.1)

(60) nuːp–čuy–**i**
die_{SG}–IRR:SG–**NF:SG**
'you will die' (Swadesh 1939b: A16c.3)

(61) niːki–čuy–**i**
be.sick–IRR:SG–**NF:SG**
'you will become sick' (Swadesh 1939b: A26c.6)

(62) ʔuš panš ʔoːnak kap tuw–ʔiš–**na**
1PL person all INCH die_{PL}–PRES:IPFV–**NF:PL**
'all our people are dying' (Swadesh 1939b: A3e.6)

(63) niːk–mi–ːtʼi–**na**ː–š
be.sick–PLACT–IRR:PL–**NF:PL**–COND
'when they get sick' (Swadesh 1939b: A4f.2)

Examples (64) through (67) show *-i* and *-na* used with transitive verbs whose subject is a semantic patient.

Transitives with semantic patients, non-first persons

(64) huyu=š ʔamin wokt–**i** k'an
turtle=TOP anything taste–**NF:SG** NEG
'the turtle did not taste anything' (Swadesh 1939b: A21e.17)

(65) ʔašt huyi wokt–ʔiš–**i**
how good feel–PRES:IPFV–**NF:SG**
'how good it feels!' (Swadesh 1939b: A69c.8)

(66) t'em–pa k'ih–**na**
fight–NZR want–**NF:PL**
'they wanted to fight' (Swadesh 1939b: A6a.8)

(67) k'ih–t'i–**na**:–š
want–IRR:PL–**NF:PL**–COND
'if you [PL] wish (it)' (Swadesh 1939b: A35b.1)

The fact that the non-first-person markers for semantic patients do not have different forms than they do for semantic agents rules out the possibility of agent-patient alignment in the non-first person. Taken together, the preceding sets of examples show that non-first person follows a nominative-accusative system, wherein subjects are marked by *-i* in the singular and *-na* in the plural and follow the aspect marker, while objects are unmarked, much in line with Swadesh's analysis (see **4**).

Extended versions of these subject markers, containing a glottal stop and a rearticulated vowel, also exist: *-iʔi* SG and *-naʔa* PL (Swadesh 1939c:41). These are shown below.

(68) we neki šama=š ʔap ʔehy–**iʔi** (cf. 42)
DEM devil new=TOP VEN arrive–**NF:SG**
'the new devil came up' (lit. 'arrived here')
(Swadesh 1939b: A33a.12)

(69) waši ki:saktiš hi toht–**iʔi** (cf. 50)
arm left DIST break–**NF:SG**
'he broke the left arm' (Swadesh 1939b: A15b.10)

(70) k'ast'a–nk hi t'ut–**naʔa** (cf. 46)
north–LOC AND go_{PL}–**NF:PL**
'they went toward the north' (Swadesh 1939b: A3b.1)

(71) hi ʔam–**naʔa** (cf. 54)
DIST see–**NF:PL**
'they saw him' (Swadesh 1939b: A5e.5)

These forms are careful speech versions of their shorter counterparts and tend to occur most frequently at the end of intonational phrases. They are functionally equivalent to the short forms *-i* and *-na*, and speakers freely alternate between short and long forms in natural speech (Swadesh 1939c:42).

Finally, the non-first-person-singular subject marker deletes when the verb is in the conditional, as shown in (72).

(72) piyi toh–ču:–**Ø**–š
cane break–IRR:SG–**NF:SG**–COND
'if she breaks [sugar]cane' (Swadesh 1939b: A13e.1)

In this case, however, the resulting wordform is unambiguously non-first singular, making this a paradigmatic zero.

5.2. Intransitives. Intransitive first-person verbs whose single argument performs, effects, instigates, or controls the action are marked with *-iki* (singular) or *-naka* (plural), which I call agent suffixes. The examples below show the singular in use:

(73) ʔapš ʔeh–**iki**
back arrive–**1SG.AGT**
'I returned' (Swadesh 1939b: A10e.4)

(74) kas čuy–**iki**
back go_{SG}–**1SG.AGT**
'I went back' (Swadesh 1939b: A39c.5)

(75) hus=ki memt–**iki**
3SG=LOC jump–**1SG.AGT**
'I jumped on him' (Swadesh 1939b: A34b.11)

(76) hi kut–**iki**
AND face–**1SG.AGT**
'I looked up' (Swadesh 1939b: A55a.7)

The following examples illustrate the plural agent marker *-naka*.

(77) ʔapš kanimi–**naka**
REFL be.ready–**1PL.AGT**
'we got ready' (Swadesh 1939b: A4b.1)

(78) hi šam–**naka**
AND go.out–**1PL.AGT**
'we got out' (Swadesh 1939b: A4b.10)

(79) hi t'ut–**naka**
AND go_{PL}–**1PL.AGT**
'we went' (Swadesh 1939b: A4b.2)

hesik'en haš–mi–**naka**
again stalk–PLACT–**1PL.AGT**
'we hunted again' (Swadesh 1939b: A87a.5)

These agent suffixes follow the aspect marker when it is present. They correspond to the first-person subject markers of Swadesh's analysis (see **4**). As mentioned in **4**, the form of the first singular is *-ki* after the irrealis and past imperfective markers, and *-iki* after the present imperfective marker.

Verbs that take agent forms are typically those whose single argument performs, effects, instigates, or controls the action. Some representative intransitive verbs that take agent suffixes in the first person are given in (81).

Intransitive verbs which take agent suffixes

(81) *he:čwa-* 'move back'
ketišt- 'go away'
kišut- 'swim'
kow- 'call out'
k'ust- 'eat'
nakte- 'hang'
namč'i- 'camp out'
namka- 'live, dwell'
nehčwa- 'descend'
nenšwa- 'cross water'
niy- 'come to water'
nu:k- 'learn'
nučma- 'work'
šahne- 'go to sleep' (cf. *ša?-* 'fall asleep')
šan- 'go out'
tey- 'stop'
weyč'i- 'do thusly'
ya:pa- 'hasten'

The vast majority of intransitives in the corpus are only attested with agent suffixes.

As with the non-first-person subject markers, the agent markers also have short and long forms: *-ik* vs. *-iki* in the singular and *-nuk* vs. *-naka* in the plural (Swadesh 1939c:41). And like the alternate forms of the subject markers, the alternate forms of the agent markers are functionally equivalent (Swadesh 1939c:42).

Intransitive first-person verbs whose single argument indexes an affected patient or one that otherwise lacks agency and/or control of the action are marked with *-ki* (singular) or *-ku(y)* (plural), which I call patient suffixes. Examples of the singular in use are below; no textual examples are attested for the plural with intransitives (elicited verb paradigms only; plural examples exist for transitives and ditransitives, however).

(82) ʔiš=k ne:m–**ki**
1SG=ABS be.afraid–**1SG.PAT**

'I am afraid' (Swadesh 1939b: A30d.5)

(83) wey ne hi ʔeh–**ki**
DEM just AND happen–**1SG.PAT**

'that just went and happened to me' (Swadesh 1939b: A70a.6)

(84) kap ʔeypinks nu:p–**ki**
INCH hunger die$_{SG}$–**1SG.PAT**

'I am dying of hunger' (Swadesh 1939b: A37a.5)

(85) ša:**ki**
šaʔ–**ki**
sleep–**1SG.PAT**

'I slept' [i.e. fell asleep] (Swadesh 1939b: A75h.35)

These intransitive patient forms correspond to the object markers of Swadesh's analysis when they occur in "deponent" verbs (i.e., verbs that use "object" markers for subjects; see **4**). As (86)–(91) show, these same verbs take subject markers in the non-first person, demonstrating that it is indeed the syntactic subject being coded as a patient in the first person:

(86) we ʔakun=tk=š kap ne:m–**iʔi**
DEM bear=NOM=TOP STAT be.afraid–**NF:SG**

'the bear took fright' (Swadesh 1939b: A26h.3)

(87) we panš hup ʔapš ʔeh–**iʔi**
DEM person to back arrive–**NF:SG**

'he came back to that person' (Swadesh 1939b: A10e.1)

(88) we kici nahc'ip'u=š kap nu:p–**iʔi**
DEM woman young=TOP PUNC die$_{SG}$–**NF:SG**

'the young woman died' (Swadesh 1939b: A4h.4)

(89) hi šaʔ–**i**
DIST sleep–**NF:SG**

'he fell asleep' (Swadesh 1939b: A41b.2)

When the patient affixes co-occur with an aspect marker, they precede rather than follow it:

(90) pa:kine–**ki**–ču:–š
be.tired–**1SG.PAT**–IRR:SG–COND
'if I get tired' (Swadesh 1939b: A1c.2)

(91) nu:p–**ki**–ču:–š
die$_{SG}$–**1SG.PAT**–IRR:SG–COND
'when I die' (Swadesh 1939b: A5j.4)

The patient markers, unlike agent markers, may also appear in same-subject verbs:

(92) t'at'iwa–**ki**–:k' wey ne hi ʔeh–ki.
feel.cold–**1SG.PAT**–SS DEM just AND experience–1SG.PAT
'because I felt cold, that just went and happened to me'
(Swadesh 1939a:A70a.6)

Stems that take patient suffixes include verbs of feeling, emotion, cognition, and experience. The complete list of intransitive verbs attested as occurring with patient affixes is given in (93).

(93) Intransitive verbs that take patient suffixes

c'i:se-	'shiver (once)'
č'i:šema-	'feel itchy'
č'eyma-	'gargle, clear (one's throat)'
hetk'a-	'rest'
k'a:ste-	'shiver, be shivering (from cold)'
k'o:ste-	'get sprained'
mokte-	'be incapable of sex'
ne:mi-	'be afraid'
nu:p-	'die'
pa:kine-	'be tired'
p'is-	'be swollen'
ša?-	'fall asleep' (cf. *šahne-* 'go to sleep')
sep-	'have an erection'
še:k'ima-	'have pus'
šeška-	'be pleased'
šiki-	'forget'
teki-	'suffer'
to:k'sma-	'be hoarse'
t'at'iwa-	'feel cold'
ʔak'ihte-	'be greedy'
ʔašiše-	'be weary'
ʔeh-	'happen to'
ʔič'ima-	'be yellow'

TABLE 6
PARADIGM FOR THE INTRANSITIVE AGENTIVE VERB *peš-* 'fly'

	Singular		Plural	
First	peš–iki	'I flew'	peš–naka	'we flew'
Non-First	peš–i	's/he flew'	peš–naʔa	'they flew'

TABLE 7
PARADIGM FOR THE INTRANSITIVE PATIENTIVE VERB *nu:p-* (SG) / *tuw-* (PL) 'die'

	Singular		Plural	
First	nu:p–ki	'I died'	tu:–ku	'we died'
Non-First	nu:p–i	's/he died'	tu:–naʔa	'they died'

Tables 6 and 7 compare the complete paradigms for an intransitive verbs with agent markers and patient markers in the perfective aspect. The word forms in each cell are all attested at least once in the corpus.

A small set of verbs may take either agent or patient suffixes. When an agent suffix is used, volition or control on the part of the subject is implied; when a patient suffix is used, the subject is construed as lacking control or otherwise being significantly affected by the action. In (94) the use of the agent form with *šaʔ-* means 'go to sleep' (intentionally), whereas the use of the patient form with the same verb in (95) means 'fall asleep' (unintentionally).

(94) ʔiš=k šuš=hup nuhč–k šaʔ–uy–**ki**–n
1SG=ABS wood=to run–SS sleep–PAST:IPFV–**1SG.AGT**–CONT
'I used to run off to the woods and sleep (there)'
(Swadesh 1939b: A52a.4)

(95) wetk ša:–**ki**
then sleep–**1SG.PAT**
'then I slept' (Swadesh 1939b: A75h.35)

This nuance of meaning can be inferred from the narrative contexts of the two examples: in the first, the narrator sets out for the woods with the specific intention of sleeping there for the night; in the second, the narrator is sick, gets treated for the sickness, and falls asleep as a result of the medicine he takes.

Dixon (1979) uses the term "fluid S-marking" to describe languages in which the marking for the single argument of an intransitive verb varies depending on the degree of control that the participant has over the action. Although "S-marking" is an inappropriate description of the first-person alignment pattern of Chitimacha (see **7**), "fluid" is nonetheless a useful term for describing cases where the choice of agent vs. patient affix can vary depending on the discourse context.

The motivation behind the choice of agent vs. patient markers is sometimes simply a matter of construal, depending on whether the speaker wishes to highlight the affectedness of the participant. Compare the use of the verb *šeška-* 'be pleased' in the following two examples, where the first takes the agent suffix and the second, the patient suffix:

(96) he:čpa–ki–ču:–**Ø**–š, šeški–ču–**k**
help–1SG.PAT–IRR:SG–NF:SG–COND be.pleased–IRR:SG–**1SG.AGT**
'I'll be pleased, if you help me' (Swadesh 1939b: A2b.7)

(97) šeška–**ki**–čuy he:čpa–ki–ču:–**Ø**–š
be.pleased–**1SG.PAT**–IRR:SG help–1SG.PAT–IRR:SG–NF:SG–COND
'I'll be pleased if you help me' (Swadesh 1939b: A17b.7)

In at least one case, the verb uses patient forms by default, but speakers may choose to use an agent form when they wish to convey some sense of agency over the event. For example, the majority of first-person uses of the verb *nu:p-* 'die' appear with patient suffixes as one might expect (as in 98), but in a few cases the verb appears with an agent suffix (as in 99).

(98) him pan=ki nu:p–**ki**–ču:–š
2SG before=LOC die_{SG}–**1SG.PAT**–IRR:SG–COND
'if I die before you' (Swadesh 1939b: A65a.6)

(99) him pan=ki nu:p-ču–**ki**–š
2SG before=LOC die_{SG}–IRR:SG–**1SG.AGT**–COND
'if I die before you' (Swadesh 1939b: A65a.5)

The motivation behind the use of the agent suffix in (99) is that the speakers are making agreements regarding what the other person should do when they die. The use of the agent form in this case is a reflection of agency on the part of the speaker over the events surrounding her death (if not necessarily the act of dying itself).

In some cases, the choice of agent vs. patient suffixes appears to be lexically specified, such that one verb takes agent suffixes while a different but semantically similar verb takes patient suffixes. Compare the use of *šahne-* 'go to sleep' in (100), which always takes agent forms, with that of *ša?-* 'fall asleep' in (101), which defaults to patient forms but can take agent forms as shown in (95).

(100) šuš sek'is šahni–**naka**
wood in sleep–**1SG.AGT**
'we slept in the woods' (Swadesh 1939b: A47c.3)

(101) wetk ša:–**ki**
then sleep–**1SG.PAT**
'then I slept' (Swadesh 1939b: A75h.35)

The complete list of intransitive verbs that are attested with both agent and patient forms is provided in (102).

(102) Intransitive verbs attested with both agent and patient suffixes

t'at'iwa-	'feel cold'
hetk'a-	'rest'
ne:mi-	'be afraid'
nu:p-	'die'
šaʔ-	'fall asleep'
šeška-	'be pleased'
ʔeh-	'arrive/happen to'

The lack of any semantic commonality between these verbs as compared with other verbs attested with patient forms implies that their patientive uses are motivated by discourse context rather than the meaning of the verb itself.

The fact that Chitimacha has two sets of affixes for intransitive verbs—one for agents, controllers, instigators, performers, etc., and one for patients, affected persons, or those not in control—affirms and provides more robust support for Mithun's analysis of Chitimacha as exhibiting an agent-patient alignment system in the first person. In the non-first person, as we have seen, a nominative-accusative system is at work instead. This pattern wherein a language shows semantic alignment for verbs only in the first, or first and second, person is attested for other languages as well (Siewierska 2004:65).

5.3. Transitives. Transitive verbs adhere to the same alignment pattern as intransitives. First-person patient affixes appear before the aspect marker, whereas first-person agent affixes and non-first-person subject affixes appear after the aspect marker. The following examples illustrate verbs with a first-person agent acting on a non-first-person object (1 > NF). As mentioned above, non-first-person objects are not marked on the verb.

First person > Non-First person

(103) we ka:ci ʔatin kap k'et–**iki**
DET owl large PUNC kill$_{SG}$–**1SG.AGT**
'I killed the horned owl' (Swadesh 1939b: A80e.6)

(104) sa hana=nki hi huht–**iki**
DEM house=LOC AND put.in–**1SG.AGT**
'I have put them in that house' (Swadesh 1939b: A11a.11)

(105) he:čpi–ču–**k**
help–IRR:SG–**1SG.AGT**
'I'll help (you)' (Swadesh 1939b: A1b.7)

(106) nikin–ču–**ki**–nk'
drop.in.water–IRR:SG–**1SG.AGT**–DEB
'I must drop you into the water' (Swadesh 1939b: A1c.2)

(107) ni ti:km=iš hi ko:–**naka**
governor=TOP AND call–**1PL.AGT**
'we called the governor' (Swadesh 1939b: A3e.2)

(108) t'emi–**naka**
kill$_{PL}$–**1PL.AGT**
'we killed them' (Swadesh 1939b: A18d.4)

(109) him načpi–:t'–**naka**
2:SG cure–IRR:SG–**1PL.AGT**
'we will help [i.e. cure] you' (Swadesh 1939b: A3a.10)

(110) ka:čt–ʔiš–**naka**
drink–PRES:IPFV–**1PL.AGT**
'we drank prickly ash' (Swadesh 1939b: A75i.1)

Examples (111) through (115) illustrate transitive verbs with a non-first-person subject and a first-person patient (NF > 1).

Non-first person > First person

(111) k'et–**ki**–**ʔi** we ko:š=iš
beat–**1SG.PAT**–**NF:SG** DEM switch=INSTR
'she beat me with the switch' (Swadesh 1939b: A60a.6)

(112) te–**ki**–**ʔi**
say–**1SG.PAT**–**NF:SG**
'he spoke with me' (Swadesh 1939b: A13b.4)

(113) nikint–**ki**–ču:–**Ø**–š
drop.in.water–**1SG.PAT**–IRR:SG–**NF:SG**–COND
'if you drop me into the water' (Swadesh 1939b: A1c.3)

(114) ʔašt huyk'i ʔuc–ma–**kuy**–**iʔi**
how good do–PLACT–**1PL.PAT**–**NF:SG**
'how he has benefitted us!' (lit. 'how he has done us good')
(Swadesh 1939b: A18d.2)

(115) t'em–**ku**–cuy–**i**
kill$_{PL}$–**1PL.PAT**–IRR:PL–**NF:SG**
'he would kill us' (Swadesh 1939b: A42b.6)

In each of the above examples, both the first-person patient marker and the non-first-person subject marker appear on the verb, sometimes separated by an aspect marker, sometimes not.

When the verb lacks an aspect marker, the non-first-singular subject marker may be omitted entirely. Compare in particular (116) with (112).

(116) te–**ki**
say–**1SG.PAT**
'he told me' (Swadesh 1939b: A17f.9)

(117) we nitiya=nk=š ʔiš hi šankint–**ki**
DEM master=NOM=TOP 1SG AND put.out–**1SG.PAT**
'the (boat) master put me off [the boat]'
(Swadesh 1939b: A10j.3)

(118) nowa k'ih–**ki**
hominy want–**1SG.PAT**
'I want hominy' (Swadesh 1939b: A31a.4)

One might analyze these forms as deriving from the coalescence of the final /i/ of the patient marker and the *-i* agent suffix. I discuss in **6** that although this was probably the case historically, the form has since been reanalyzed as a single patient marker with no internal morphology.

First-person patient markers may also corefer to or coindex subjects of transitive verbs, as in the examples below.[8] As with patientive intransitives, this happens with verbs of feeling, emotion, cognition, and experience.

(119) wey hi waytm ka:kwa–**ki** k'an
DEM DIST more know–**1SG.PAT** NEG
'I do not know more than that' (Swadesh 1939b: A2d.5)

(120) kamčin kipi hi wok–**ki** te
deer meat AND taste–**1SG.PAT** COP_{SIMIL}
'when I taste deer meat' (Swadesh 1939b: A87a.18)

(121) ni šik–**ki** ʔašt
DEF forget–**1SG.PAT** how
'I have forgotten how' (Swadesh 1939b: A5i.9)

(122) ʔiš kani ʔapš hukt–ma–ki–čuy ni
1SG eye together close–PLACT–1SG.PAT–IRR:SG DEF
k'ih–**ki**–ʔi
want–**1SG.PAT**–NF:SG
'I want you to close my eyes' (Swadesh 1939b: A65d.8)

(123) wey ne ni kima–**ki** k'an.
DEM even DEF believe–**1SG.PAT** NEG
'I do not even believe that' (Swadesh 1939b: A80e.8)

[8] See Croft (2013) and Haspelmath (2013) on the notions of coreference and coindexation, respectively.

(124) ni šey–**ki** nu:km–pi k'ay–ki
DEF regret–**1SG.PAT** learn–NZR AUX_{NEG}–1SG.PAT
'I am sorry I did not learn' (Swadesh 1939b: A67h.7)

Several of these verbs are fluid and may be used with first-person agent markers as well. Examples of some of the same verbs used with agent suffixes are given below.

(125) ʔam ha:–na: ne ka:kw–**iki** k'an (cf. 119)
what happen–NF:PL even know–**1SG.AGT** NEG
'I do not know what happened [to them]'
(Swadesh 1939b: A3f.12)

(126) c'ahc'i hi wokt–ʔiš–**iki**
seasoning AND taste–PRES:IPFV–**1SG.AGT**
'I taste seasoning' (Swadesh 1939b: A74q.4)

(127) piya–nk=š ču: k'iht–**iki**
cane–LOC=TOP go_{SG} want–**1SG.AGT**
'I want to go to the cane patch' (Swadesh 1939b: A88g.3)

The choice of agent vs. patient markers for these verbs is directly motivated by the degree of agency and/or control of the participant, and whether the speaker wishes to convey this. For example, *ka:kwa-* 'know' takes a patient suffix in (119) because the speaker was not allowed to ask questions of his elders about eagles, so the patient form reflects the fact that his state of ignorance is out of his control. In (125), by contrast, the speaker uses the agent form because he is referring to details that are inconsequential to the story: he does not know them because he does not care to know them, and thus his ignorance arises through a degree of agency.

The verbs *šik-* 'forget', *šey-* 'regret', and *kima-* 'believe' only appear with first-person patient forms, never first-person agent markers, suggesting that these verbs are lexically specified for—or at least default to—patient forms for their experiencer argument. Just as we saw the lexically specified pair *ša?-* 'fall asleep' (patientive) vs. *šahne-* 'go to sleep' (agentive) with intransitives, we find another apparently lexically specified pair for transitives: *kima-* 'believe' (patientive) vs. *nit'i-* 'believe' (agentive). Compare the verb *nit'i-* in (128) (which only takes agent affixes) with the verb *kima-* (which only takes patient affixes) in (123).

(128) nit'i–**k** huyk'i ʔuč–a:š–iki
believe–**1SG.AGT** good do–PRES:IPFV–1SG.AGT
'I believe I am doing well' (Swadesh 1939b: A5j.2)

The fact that verb *nit'i-* 'believe' only ever appears with agent affixes, and its semantically comparable counterpart *kima-* 'believe' only appears with

patient suffixes, suggests that the choice of agent vs. patient affixes is lexically specified for these verbs.

In a handful of instances a verb that typically takes agent markers is used instead with a patient marker, even though the meaning of the verb does not fit the expected semantic profile for patientive verbs:

(129) ʔamin ne k'as–**ki** k'an
anything even plant–**1SG.PAT** NEG
'I didn't plant anything' (Swadesh 1939b: A88q.2)

(130) ho wašta=š Misye ko:–**ki**
DEM day=TOP Monsieur call–**1SG.PAT**
'(from) these days (on) I call you "Mister"'
(Swadesh 1939b: A48c.19)

(131) ʔiš his ko:–ma–**ki**
1SG back call–PLACT–**1SG.PAT**
'I answered (them)' (Swadesh 1939b: A85f.5)

(132) ʔamin ni wop–ma–**ki** k'an
anything DEF hear–PLACT–**1SG.PAT** NEG
'I don't ask (for) anything' (Swadesh 1939b: A7b.4)

(133) ʔam ʔo:nak wey čun te–pi ka:kwa–**ki**–n
thing all DEM with say–NZR be.able–**1SG.PAT**–CONT
'[if Pauline helps me,] I can tell you all about it'
(Swadesh 1939b: A73g.1)

For comparison's sake, (134) through (137) show the same verbs in their more typical use, with agent suffixes.

(134) ʔo:sk'e:cu pan ʔapš kunihtem=ki k'ast–ʔiš–**iki**
onion moon waning=LOC plant–PRES.IFPV–**1SG.AGT**
'I plant onions in the waning moon'
(Swadesh 1939b: A83b.8)

(135) ʔiš ʔa:y ʔatin hi kow–**iki**
1SG mother big AND call–**1SG.AGT**
'I called my grandmother' (Swadesh 1939b: A75h.12)

(136) panš ʔašinč'atka ni wop–m–**iki**
person old$_{PL}$ DEF hear–PLACT–**1SG.AGT**
'I asked the old people' (Swadesh 1939b: A68a.4)

(137) hi šant'iw–i ka:kwi:–t'i–**naka=**š
AND go.out–GER be.able–IRR:PL–**1PL.AGT=**TOP
'we are able to get out' (Swadesh 1939b: A4b.9)

Although the choice of patient markers for these verbs seems odd at first, a closer look at the discourse context of each example shows that the patient forms are in fact semantically well motivated. In (129), the speaker didn't plant because he didn't have money to buy seed, so his use of the patient marker reflects a lack of agency regarding his failure to plant crops. In (130), the speaker, who is a black slave, has just been beaten for failing to refer to his addressee as 'Mister' ('Monsieur'). His subsequent use of the patient form reflects the fact that he was coerced into using that term of address and thus lacked agency over the act of naming. In (131), the speaker was being teased by others and goaded into a response, so the patient form is an indication of the forced nature of the response. In (132), the speaker is stating that she cannot, morally or in good conscience, ask for anything in return from someone who offered to repay her for her hospitality. The use of the patient form reflects her lack of choice over asking for repayment in accord with her moral principles. Finally, in (133), the speaker uses a patient form with the otherwise agent-marked verb 'be able' because the ability is qualified: he is only able to tell the story if another person, Pauline, helps him. Thus, his ability to narrate the story is not entirely in his control, a fact reflected in the use of the patient form.

In sum, transitives are sensitive to the same semantic parameters as intransitives when it comes to the agent-patient distinction. First-person arguments that exhibit agency and/or control—whether they corefer to syntactic subjects or objects—are indexed with agent markers, and those that do not are indexed with patient markers. However, first-person patientive arguments are fairly rare in the corpus; the examples in this section constitute an exhaustive list of transitive verbs known to take them (although additional tokens of most of these verbs being used patientively do exist). The much more typical case is that transitive verbs have agent suffixes.

5.4. Ditransitives. Chitimacha has very few nonderived ditransitives, and the majority of ditransitive clauses are derived from transitives or intransitives via affixes such as the benefactive *-aʔ* or causative *-pa*. The nonderived ditransitives in Chitimacha are *ʔaʔi-* 'give' and various verbs of putting, such as *šah-* 'put into a container', *ničí-* 'put in water', *huh-* 'put indoors'. First-person recipients of ditransitives are marked in the same way as first-person patients of transitives (i.e., with the patient suffix *-ki* preceding the aspect marker), as the following examples show.

(138) panš ʔašinč'at'ank=š ka:cpi ʔap ʔa:–**ki**
person old.man=TOP stick VEN give–**1SG.PAT**
'an old man gave me a stick' (Swadesh 1939b: A15d.10)

(139) ʔap ʔa:–**ki**–čuy–i
VEN give–**1SG.PAT**–IRR:SG–NF:SG
'will you give it to me?' (Swadesh 1939b: A17b.30)

(140) poku čuw–a ʔap ʔa:–**ku**–:š–naʔa
air go_{SG}–NZR VEN give–**1PL.PAT**–PRES:IPFV–NF:PL
'[both of those winds] give us storms' (lit. 'give us going air')
(Swadesh 1939b: A84d.4)

In each of the above cases, the first-person recipient is marked with a patient form. Clear examples of first-person themes in ditransitives are unattested. This suggests that Chitimacha ditransitives adhere to a secundative alignment pattern in the first person, where recipients are marked in the same way as patients (Haspelmath 2005), sometimes also called "primary object" alignment after Dryer (1986).

The benefactive suffix *-aʔ* (which is realized most frequently as /a:/ or simply a lengthened vowel due to morphophonological processes) derives ditransitives from transitives by adding a beneficiary argument to the verb. Examples of the beneficiary suffix with non-first- and first-person recipients are provided below.

(141) kas ʔut–**aʔ**–i
back tie–**BEN**–NF:SG
'she tied it for him' (Swadesh 1939b: A76a.13)

(142) we pu:p=hiš na:kšp'u heč–m–**aʔ**–i
DEM rabbit=ERG children care.for–PLACT–**BEN**–NF:SG
'the rabbit took care of the children for them'
(Swadesh 1939b: A26b.2)

(143) ʔi: ʔap mač–**a**:–ki
tooth VEN bring–**BEN**–1SG.PAT
'bring me a tooth' (Swadesh 1939a:A17a.4)

(144) ʔap mač–**a**:–ču–k
VEN bring–**BEN**–IRR:SG–1SG.AGT
'I'll bring it for you' (Swadesh 1939a:A17a.5)

(145) ʔiš kiča=nk=š natm–**a**:–ki ka:kwi:k'š
1SG woman=NOM=TOP tell–**BEN**–1SG.PAT knowing
či–: k'an
AUX_{VERT}–NF:SG NEG
'My wife told me, "One doesn't know."'
(Swadesh 1939a:A7c.3)

(146) ʔiš kiča=š natm–**aʔ**–ik ʔiš nehe
1SG woman=TOP tell–**BEN**–1SG.AGT 1SG self
[. . .] ka:kwa–ki–n
[complement] know–1SG.PAT–CONT
'I told my wife, "I myself know [that . . .]"'
(Swadesh 1939a:A7c.1)

The clauses above follow the same secundative/neutral alignment patterns as nonderived ditransitives, where first-person recipients/beneficiaries are marked like patients, and non-first-person objects of all kinds are not coded on the verb.

Chitimacha also has a productive causative suffix *-pa*, which treats the causee (the agent of the caused event, or the second in the chain of causation) as a grammatical patient, marking the causee using the patient markers:

(147) čuː–pa–**ki**–t'i–na
go$_{SG}$–CAUS–**1SG.PAT**–IRR:PL–NF:PL
'they would have made me go away'
(Swadesh 1939b: A2d.7)

(148) k'et–pa–**ki**–ʔi
hit$_{SG}$–CAUS–**1SG.PAT**–NF:SG
'he caused me to hit him' (Swadesh 1939c:184)

The causative may be added to either intransitives or transitives. The causee, even though it is the semantic agent of the caused action, is treated as a morphological patient in Chitimacha causative constructions (Swadesh 1939c:184) so that the causee is construed as lacking complete control or volition over the action—something else caused them to do so instead.[9]

5.5. Copular and auxiliary clauses. The Chitimacha copula—which also functions as an auxiliary in the language—distinguishes orientation of the subject (*hi-* 'neutral/sitting', *či-* 'vertical/standing', or *pe-* 'horizontal/lying') in the singular (Swadesh 1933), as shown in the following examples.

(149) hi tey–k'=š **hi**–ʔuy–ki–n
DIST sit$_{SG}$–PTCP=TOP **AUX**neut–PAST:IPFV–1SG–PROG
'I was sitting down' (Swadesh 1939b: A65f.3)

(150) we ʔakšuš kuː=ki **či**–ʔi
DET cypress water=LOC **AUX**vert–NF:SG
'that cypress stands in the water' (Swadesh 1939b: A9b.4)

(151) ʔapš šaht'iːk'=š **pe**–ʔe
about crawl–PTCP=TOP **AUX**horiz–NF:SG
'he crawls about' (Swadesh 1939b: A67d.4)

The plural forms are the same regardless of orientation of the subject, as the following examples show.

[9] In other languages, causees are coded as grammatical agents rather than patients, or there are different causative constructions depending on whether the causee retains some control over the action (Comrie 1989:171–74; Payne 1997:183–86).

TABLE 8
CONJUGATION OF THE COPULA/AUXILIARY

	Singular	
Neutral	First	*hiki*
	Non-First	*hiʔi*
Vertical	First	*čiki*
	Non-First	*čiʔi*
Horizontal	First	*peke*
	Non-First	*peʔe*
	Plural	
	First	*naka*
	Non-First	*na(ʔa)*

(152) hi teni–ːk' **na**–ku–n
DIST sit$_{PL}$–PTCP **AUX**pl–1PL–PROG
'they were sitting' (Swadesh 1939b: A65a.3)

(153) tapš–mi–ːk' **na**–ʔuy–na
stand–PLACT–PTCP **AUX**pl–PAST:IPFV–NF:PL
'they were standing' (Swadesh 1939b: A38a.19)

(154) kamčin namč'e–mi–ːk'=š **naʔa**
deer be.camped–PLACT–PTCP=TOP **AUX**pl
'deer are lying' (Swadesh 1939b: A66b.1)

When the position is neutral or irrelevant to the discourse, the 'neutral/sitting' form *hi-* is used:

(155) kaye **hi**–ʔuy–i
alive **AUX**neut–PAST:IPFV–NF:SG
'he was alive'

In the above example, there is nothing within the clause or surrounding discourse context to indicate the orientation of the subject. The vast majority of copulas/auxiliaries in the corpus appear in this neutral form.

The full paradigm for the copula/auxiliary in the perfective is provided in table 8. The copula takes person suffixes that match the agent suffixes in form but do not necessarily imply the presence of a semantic agent—that is, they are neutral or unspecified with regard to the agent-patient distinction (see below). In the irrealis, the forms of the copula/auxiliary are *hih-*, *čih-*, and *peh-*, respectively, to which the irrealis suffix and person suffixes are added.

Languages with semantic alignment vary as to whether their auxiliary verbs bear grammatical agent markers or patient markers. For example, some languages in the Southeast are like Chitimacha in that they use agent forms

with auxiliaries (e.g., Creek: Martin 2011:176); others use patient forms (e.g., Choctaw: Broadwell 2006:34). Two pieces of evidence suggest that the person forms of the copula/auxiliary in Chitimacha are the morphological equivalents of the agent suffixes on main verbs. First, the first plural is *naka* rather than **naku* as would be expected if the copula used patient forms.[10] Second, whenever a copula/auxiliary takes an aspect marker, the person marker appears in the agent position, following the aspect marker:

(156) pušinkank hunks sek'is hih–ču–**ki**–nk'
quiet 3PL among COP_{NEUT}:IRR–IRR:SG–**1SG**–DEB
'I had to be quiet amongst them' (Swadesh 1939b: A2d.4)

(157) nenču: nahc'i hi–ʔuy–**ki**
too young COP_{NEUT}–PRES:IPFV–**1SG**
'I was too young' (Swadesh 1939b: A2d.6)

The morpheme orders *ki-ču* and *ki-ʔuy* are unattested for the copula/auxiliary.

Although the person markers on the copula/auxiliary match the agent markers morphologically, they do not function as agent markers semantically. Auxiliaries may co-occur with typically patientive verbs, without affecting the agency imparted by the verb. For instance, the first-person argument in the following example is a semantic patient, and the verb *šik-* 'forget' always takes patient markers in other contexts.

(158) ʔiš=k ni šik–kite hi–ki
1SG=ABS DEF forget–1SG.PTCP AUX_{NEUT}–1SG
'I have forgotten' (Swadesh 1939b: A5i.6)

The presence of the agent suffixes on the auxiliary verb in this example does not affect the interpretation of the clause. Thus, although Chitimacha auxiliary and copula verbs take suffixes that look like agent markers, they do not impart an agentive interpretation to the clause.

5.6. Possession. Chitimacha differs from other languages of the Southeast in that it does not share its patient forms with either the alienable or inalienable possessive markers. In fact, Chitimacha has no nominal possessive affixes. The free pronominals function as both independent pronouns and possessives so that *ʔiš* translates to both 'I/me' and 'my'. Chitimacha does, however, allow a verbal patient marker to be coreferential with a possessor in an overt noun phrase—a type of construction often referred to in the literature as *external possession* (Payne and Barshi 1999). This can happen whenever the overt possessor is first person, and the referent of that first person is in some way affected by the action. Examples are given below.

[10] The form *naku* does occur before the progressive suffix *–n*, but this is a regularly conditioned morphophonological alternation for *–n*. Without *–n*, the form of the plural auxiliary is *naka*.

(159) **ʔiš** mahči=š kap ʔič'i–ma–**ki**
1SG tail=TOP INCH be.yellow–PLACT–**1SG.PAT**
'my tail turned yellow' (Swadesh 1939b: A10j.7)

(160) **ʔiš** mahči=š ku:=k=hiš kap ni:–**ki**
1SG tail=TOP water=NOM=ERG STAT sit.in.water–**1SG.PAT**
'the water soaked my tail' (Swadesh 1939b: A10j.6)

(161) hims=is **ʔiš** kani ʔapš
2:SG=ERG **1SG** eye together
hukt–ma–**ki**–čuy–i–nk'–s
close–PLACT–**1SG.PAT**–IRR:SG–NF:SG–DEB=TOP
'you will have to close my eyes' (Swadesh 1939b: A65a.9)

(162) **ʔiš** kamikiš kap k'et–a:–**ki**
1SG dog PUNC $kill_{SG}$–BEN–**1SG.PAT**
'you have killed my wolf' (Swadesh 1939b: A34c.8)

In (159), for instance, the verb bears a first-person patient marker, even though the overt noun phrase ('my tail') is non-first person. Nonetheless, because the noun phrase contains a first-person possessor who is affected by the action, that person is coded on the verb using a patient affix.

The patient marker, however, is not obligatory, as can be seen by comparing (163) with (161).

(163) hims=is **ʔiš** kani ʔapš hukt–mi–čuy–i
2:SG=ERG **1SG** eye together close–PLACT–IRR:SG–NF:SG
'you will close my eyes' (Swadesh 1939b: A65a.7)

In this example, no first-person patient marker appears on the verb, even though there is a first-person possessor in the overt noun phrase.

Patient markers coreferring to an overt possessor also occur in Muskogean (see Martin 1999, 2011:188–92 for Creek; Broadwell 2006:305–6 for Choctaw; and Munro 1984 for Chickasaw) and Siouan (see Einaudi 1976:113 for Biloxi) and is common in languages with semantic alignment systems generally (Payne and Barshi 1999:10).

5.7. Dynamic and stative verbs. Some languages exhibiting semantic alignment base their two inflectional series on dynamicity so that dynamic verbs take one type of inflection, and stative verbs take another. This section shows that the dynamic-stative distinction is not relevant for the first-person alignment system in Chitimacha. Following Comrie (1976), I use the term *dynamic* rather than *active* so as to distinguish from other potentially confusing uses of the term *active* (e.g., active vs. passive or active vs. inactive).

(164) and (165) show the dynamic verb *mači-* 'bring' with grammatical patient and agent markers, respectively.

(164) nešč'iwi ʔi ʔap mač–a:–**ki**–čuy–i–nk'
alligator tooth VEN bring–BEN–**1SG.PAT**–IRR:SG–NF:SG–DEB
'you must bring me an alligator's (leniary) tooth'
(Swadesh 1939b: A17d.5)

(165) ʔap mača:č**uk**
ʔap mači–aʔ–čuy–**k**
VEN bring–BEN–IRR:SG–**1SG.AGT**
'I'll bring it for you' (Swadesh 1939b: A17a.5)

If Chitimacha's first-person alignment were based on dynamicity, we would expect both of the above examples to take the same suffix. In the same vein, (166) and (167) show agent-marked and patient-marked uses of the stative verb *ka:kwa-* 'know'.

(166) waʔa=š ʔam ha:–na: ne ka:kw–**iki** k'an
other=TOP what experience–NF:PL even know–**1SG.AGT** NEG
'I do not know what happened to the others'
(Swadesh 1939b: A3f.12)

(167) ʔiš kiča=š natm–aʔ–ik, ʔiš nehe
1SG woman=TOP tell–BEN–1SG.AGT 1SG self
[. . .] ka:kwa–**ki**–n
know–**1SG.PAT**–CONT
'I told my wife, "I myself know [that . . .]"'
(Swadesh 1939b: A7c.1)

These examples can only have a stative interpretation (rather than the dynamic 'come to know') because they lack the inchoative preverb *kap*. Again, if the Chitimacha system were based on dynamicity, we would expect both of these verbs to be inflected in the same way.

Additional examples of the agent-patient alternation at work with the stative verb *t'at'iwa-* 'feel cold' are shown in (168) and (169).

(168) t'at'iwa–**ki**–:k' wey ne hi ʔeh–ki
be.cold–**1SG.PAT**–SS DEM just AND happen–1SG.PAT
'that happened to me because I felt cold'
(Swadesh 1939b: A70a.6)

(169) weyč'i:k'š ʔiš t'at'iwa–:š–**iki**
therefore 1SG be.cold–PRES:IPFV–**1SG.AGT**
'therefore I felt cold' (Swadesh 1939b: A84c.10)

The patient form is used in (168) because the speaker had been tricked into thinking the weather was getting colder.

The examples in this section show that the *-ki*/*-iki* alternation cross-cuts the dynamic-stative distinction. Both dynamic and stative verbs are attested with either affix. Thus, the dynamic-stative distinction does not appear to be a relevant conditioning factor for semantic alignment in the first person in Chitimacha.

6. Origins of the Chitimacha agent-patient system. Now that I have argued for an agent-patient analysis of first-person verbal marking in Chitimacha, the question arises how this system arose. This section discusses the morphological evidence for a diachronic pathway whereby *transimpersonals*—that is, transitive verbs with an impersonal subject (Sapir 1917:85; Haas 1941)—were reanalyzed as intransitive patientive verbs in Chitimacha.

A morphological quirk of Chitimacha verbs is that when an aspect marker is present, the agent/subject slot must be filled by an affix unless it is followed by the conditional suffix *-š*. In most cases this happens naturally because there is a first-person agent or non-first-person subject in the clause that is indexed on the verb. The exceptions to this are patientive intransitive verbs and patientive transitive verbs whose syntactic subject is a first-person patient. When either of these appear with an aspect marker, the suffix that fills the agent/subject slot is *pleonastic*—that is, expletive and nonreferential, functionally similar to the expletive *it* in meteorological verbs in English (e.g., "it rained"). The following four examples (170 through 173) constitute all the attested instances of pleonastic *-i*.

(170) wekka:š**i**
wek–ki–ʔiš–**i**
laugh–1SG.PAT–PRES:IPFV–**PLEO**
'I laugh [when I think about it]' (Swadesh 1939b: A49c.9)

(171) ʔeypinks kap nu:pka:š**i**
ʔeypinks kap nu:p–ki–ʔiš–**i**
hunger INCH die_{SG}–1SG.PAT–PRES:IPFV–**PLEO**
'I am dying of hunger' (Swadesh 1939b: A86b.7)

(172) ʔaštkanki k'an ni šik–ki–čuy–**i**
sometimes NEG DEF forget–1SG.PAT–IRR:SG–**PLEO**
'I shall never forget' (Swadesh 1939b: A60b.2)

(173) nu:p–ki–čuy–**i**–nk'
die_{SG}–1SG.PAT–IRR:SG–**PLEO**–DEB
'I must die' (Swadesh 1939b: A3a.5)

When the irrealis is followed by the conditional suffix *-š*, no pleonastic suffix is required:

(174) pa:kine–ki–ču:–š
be.tired–1SG.PAT–IRR:SG–COND
'if I get tired' (Swadesh 1939b: A2b.8)

This pleonastic suffix is therefore quite marginal. The only scenario in which it applies is with patientive verbs in nonperfective aspects since in all other contexts either the agent/subject slot is already filled or no aspect marker is present. Moreover, only the non-first-singular *-i* is attested as filling this slot in these contexts, not the plural *-na*.

Swadesh, in his discussion of "deponent" verbs, does not discuss these cases or give examples which include the pleonastic suffix. It is unclear how he would have interpreted its appearance. My reasons for considering this affix pleonastic are that, first, it is nonreferential. In none of the attested examples is there a referent in the discourse that might be indexed by this suffix. Second, its appearance is limited to a specific set of aspects, which are morphologically conditioned. If its appearance were functionally motivated as a way of indexing an argument, we should expect it to appear in other aspects. (175) shows that this is not the case; no pleonastic suffix is needed in the perfective aspect (cf. 171).

(175) kap ʔeypinks nu:p–ki
STAT hunger die$_{SG}$–1SG.PAT
'I am hungry' (lit. 'I am dying of hunger'; euphemistic)
(Swadesh 1939b: A35a.5)

If the pleonastic suffix were present in this example, the form of the verb might be *nu:p-ki-ʔi* rather than *nu:p-ki*, as can be seen in (111) and (112). Thus, given its rarity, its phonologically reduced form, and its lack of referentiality, it seems this pleonastic suffix is merely a fossilized vestige of an earlier stage of Chitimacha during which this subject/agent slot was filled more consistently, even in the case of what today are intransitive patientive verbs.

Recent work on the diachrony of semantic alignment systems suggests that these pleonastic suffixes may be the result of a diachronic pathway whereby transimpersonals are reanalyzed as intransitive patientive verbs (Holton 2008; Malchukov 2008; Mithun 2008). Mithun (2008:329) suggests that this process took place in Chitimacha; the following discussion provides evidence in support of that claim. There are certain morphosyntactic ambiguities which, when present in a language, make it fairly easy to reanalyze a nominative-accusative system as an agent-patient one, or vice versa (Mithun 2008:308–9). All of these ambiguities are found in Chitimacha: verbs are highly labile, implied arguments and continuing topics may be omitted, case-marking for nouns is discourse-optional, and word order is generally predicate-final. Additionally, we have already seen one context in which non-first-person subjects have no

realization on the verb owing to phonological processes: in the conditional, the non-first-person singular is deleted entirely (see example 72 in **5.1**). The variation in the short vs. long forms of the person suffixes (see **5.1**) would have created additional ambiguity: does the final /ki/ sequence of a verb such as *ša:–ki* (< *ša?-* 'sleep') represent the amalgamation of a first singular *-ki* + a non-first-singular *-i*, or is it simply an unsegmentable first singular patient?

It is precisely the confluence of these ambiguities which would have allowed speakers to reanalyze transitive impersonal verbs as intransitive patientive ones. Transitive impersonal verbs that would have originally meant something like 'it sleeps me', and taken both subject and object affixes, were reinterpreted as intransitive patientive verbs meaning simply 'I sleep', with the result that Chitimacha today has no transimpersonal verbs, just the very occasional vestige of the subject marker remaining as a fossilized, pleonastic suffix. Similar pleonastic morphological holdovers from a historical transimpersonal > intransitive patientive shift have been documented for semantic alignment systems in certain North Halmaheran languages (West Papuan, Indonesia) (Holton 2008).

7. Conclusion. In this paper I have described the alignment system for verbal person-marking in Chitimacha based on recently digitized data collected by Morris Swadesh in the 1930s with the last two fluent speakers of the language (Swadesh 1939a, 1939b, 1939c). Although previous analysts (Swanton 1920:9, Swadesh 1939c:35–36, 1946a:317–18) saw the alignment system as nominative-accusative (**4**), this paper shows that Chitimacha in fact has a split alignment system wherein first person adheres to an agent-patient pattern, and non-first person to a nominative-accusative one. Expanding upon earlier analysis by Swadesh (see **4**), it was found that the agent and patient forms of the first person singular have similar forms, but actually occur in two distinct slots in the verb, and are further disambiguated via their distinct morphophonological behaviors.

Intransitive first-person verbs whose single argument performs, effects, instigates, or controls the action are marked with agent forms, and those that do not are marked with patient forms (**5.2**). Stems that take patient suffixes typically include verbs of feeling, emotion, cognition, and experience. This same differential marking of agents and patients occurs for objects of transitives, subjects of transitives, direct objects of ditransitives, and indirect objects of ditransitives, suggesting that the agent-patient distinction is not sensitive to valency or transitivity (**5.3** and **5.4**). The distinction between dynamic and stative verbs was not found to be relevant for determining inflection (**5.7**). Copulas and auxiliaries in Chitimacha always take agent forms but may be used with either agentive or patientive verbs with no semantic implication for the agency or affectedness of the arguments (**5.5**). Patient markers may

sometimes be coreferential with the possessor of an argument in the clause (**5.6**), a construction often termed *external possession* (Payne and Barshi 1999). Certain verbs are only attested with agent forms, others only with patient forms. Other verbs appear to default to one form or the other but allow the use of the alternate inflection when the agency or affectedness of the argument is particularly salient. Finally, a few verbs seem to be quite fluid, alternating between the agent and patient forms as context dictates.

A morphological quirk of Chitimacha verbal person-marking also suggests a diachronic pathway whereby the agent-patient system emerged: the existence of a pleonastic suffix in certain limited morphological contexts hints at an earlier stage of the language in which transimpersonals (transitive verbs with an impersonal subject) were common but that, owing to morphophonological changes and various other factors that obscured the transitivity of the verb, these transimpersonals were later reinterpreted as intransitive patientive verbs (**6**).

Given the fluidity in the choice of agent vs. patient markers for verbs of various transitivity (**5**), it might be tempting to claim that the agent-patient distinction in Chitimacha is in fact entirely productive, and that with the proper context nearly any verb could exhibit agent or patient affixes as context dictates. However, such rampant productivity would be rather nonfunctional in that it would require speakers to decide on a case-by-case basis which set of affixes to use, eschewing the cognitive benefits of routinization and lexicalization (Mithun 1991a:541). It is much more likely that the choice of agent vs. patient forms is routinized in the majority of cases. Support for this position also comes from the collection of crosslinguistic studies on semantic alignment in Donohue and Wichmann (2008), wherein each author mentions that a portion of the verbs in their data have become lexicalized with either agent or patient forms, exhibiting the kind of routinization we expect in language generally. It would therefore be an overgeneralization to state that the Chitimacha agent-patient alternation is entirely fluid or entirely fossilized. Instead, speakers seem to have a great deal of item-specific knowledge regarding the behavior of each verb with regard to the agent-patient distinction, much in line with other research on alignment showing that alignment patterns need to be assessed on a verb-by-verb basis (Pustet 2002; Nichols 2008).

In accord with work by Dixon (1979), semantic alignment systems are frequently treated as a mixture of ergative and accusative systems, wherein the single argument of an intransitive verb is sometimes coded as an A argument and sometimes as a P argument. As such, semantic alignment is often discussed in the typological literature as a type of "split intransitivity" or as a "split-S system." However, the data in this paper show that there is in fact nothing privileged about the single argument of an intransitive verb in systems of semantic alignment. Although subjects of intransitives do exhibit

the canonical variability in coding expected of agent-patient systems (**5.2**), we have also seen in **5.3** that this same alternation between agent and patient forms cross-cuts objects and even subjects of transitives. Likewise, **5.4** contains examples of the agent-patient alternation applied to both direct and indirect objects of ditransitives. The agent-patient distinction therefore cuts across all types of syntactic arguments, regardless of whether the argument coindexes a subject or object, and whether the verb is intransitive, transitive, or ditransitive.

Alignment systems are traditionally defined in terms of a set of semantico-syntactic primitives: S, A, P, T, and R. These concepts represent a mix of semantic and syntactic factors, one of which is valency (or transitivity, which traditionally also relies on notions of valency). To give just one example, Song (2018:287) defines S as "the sole argument of a one-argument predicate (i.e., intransitive sentence)." However, this paper has shown that the agent-patient pattern in Chitimacha can be described using just the semantic concepts of agent and patient alone, without reference to the number of arguments a verb takes. The syntactically based categories of S, A, P, T, and R are not the basic categories at work within Chitimacha verbal marking in the first person. Analyzing the distribution of the agent and patient affixes in terms of purely semantic roles provides a cleaner account of the Chitimacha data and explains the rather unexpected and infrequent yet nonetheless semantically motivated use of agent forms with typically patientive verbs, and patient forms with typically agentive ones. The Chitimacha data in this paper therefore provide strong empirical evidence in favor of the point made by Dahlstrom (1983), Mithun (1991a:542), and Wichmann (2008:4) that agent-patient systems are not merely subtypes or mixtures of other alignment patterns. They are much better described by the term "semantic alignment" (Wichmann 2008:4) because the basis for such systems is truly semantic, and not sensitive to valency.

With this paper I hope to have contributed to the typological literature on semantic alignment systems by demonstrating that the alignment for first person in Chitimacha verbs is a canonical example of agent-patient alignment at work, in that the distinction is based entirely on the semantic parameters of agent and patient and is insensitive to syntactic categories such as subject and object. This last fact has an interesting implication for the definition of semantic alignment provided by Donohue (2008:74), who defines semantic alignment broadly as "a split in the morphosyntactic encoding of arguments according to some feature of the lexical semantics of the verb," focusing specifically on cases where this split affects word order, case marking, or agreement. However, Chitimacha does none of these things. Word order is based on the syntactic relations of subject and object (in an SOV schema); case marking is ergative-absolutive and nominative-accusative (or at least,

not sensitive to the agent-patient distinction—more research is needed in this area); and the patient markers do not necessarily agree with an argument in the clause, as the cases of external possession in **5.6** show. Nonetheless, Chitimacha appears to exhibit a true case of semantic alignment precisely because the agent-patient distinction operates independently of each of these morphosyntactic features. Chitimacha is therefore the canonical case of semantic alignment at work and supports a typology of alignment types that divides into two subtypes—syntactic and semantic, where each of these has various subtypes as well (nominative-accusative and ergative-absolutive being subtypes of syntactic alignment, and agent-patient and active-stative being subtypes of semantic alignment). In this paper I have provided a model for how alignment systems in other languages of the region or crosslinguistically might be similarly analyzed not in terms of valency or as mixtures of other systems, but as genuine systems of semantic alignment in their own right.

REFERENCES

Broadwell, George Aaron. 2006. A Choctaw Reference Grammar (Studies in the Anthropology of North American Indians). Lincoln: University of Nebraska Press.

——— . 2016. Transitivity, inflection, and active agreement in Timucua. Paper presented at the Society for the Study of the Indigenous Languages of the Americas (SSILA), January 7–10, Washington, DC.

Brown, Cecil H., Søren Wichmann, and David Beck. 2014. Chitimacha: A Mesoamerican language in the Lower Mississippi Valley. IJAL 80(4):425–474.

Campbell, Lyle. 1997. American Indian Languages: The Historical Linguistics of Native America (Oxford Studies in Anthropological Linguistics 4). Oxford: Oxford University Press.

Campbell, Lyle, and Terrence Kaufman. 1983. Mesoamerican historical linguistics and distant genetic relationship: Getting it straight. American Anthropologist 85(2):362–72.

Campbell, Lyle, and William J. Poser. 2008. Language Classification: History and Method. Cambridge: Cambridge University Press.

Comrie, Bernard. 1976. Aspect: An Introduction to the Study of Verbal Aspect and Related Problems (Cambridge Textbooks in Linguistics). Cambridge: Cambridge University Press.

——— . 1989. Language Universals and Linguistic Typology: Syntax and Morphology, second edition. Chicago: University of Chicago Press.

Croft, William. 2013. Agreement as anaphora, anaphora as coreference. Languages across Boundaries: Studies in Memory of Anna Siewierska, ed. Dik Bakker and Martin Haspelmath, 95–118. Berlin: Mouton de Gruyter.

Dahlstrom, Amy. 1983. Agent-patient languages and split case marking systems. Proceedings of the Berkeley Linguistics Society 9:37–46.

Dixon, R. M. W. 1979. Ergativity. Language 55(1):59–138.

Donohue, Mark. 2008. Semantic alignment systems: What's what, and what's not. The Typology of Semantic Alignment, ed. Mark Donohue and Søren Wichmann, 24–75. Oxford: Oxford University Press.

Donohue, Mark, and Søren Wichmann (eds.). 2008. The Typology of Semantic Alignment. Oxford: Oxford University Press.

Dryer, Matthew S. 1986. Primary objects, secondary objects, and antidative. Language 62(4):808–45.

DURALDE, MARTIN. 1802. Vocabulaire de la langue des Chetimachas et Croyance des Chetimachas (American Philosophical Society Historical and Literary Committee, American Indian Vocabulary Collection Mss.497.V85). Philadelphia: American Philosophical Society Library.
EINAUDI, PAULA FERRIS. 1976. A Grammar of Biloxi (Garland Studies in American Indian Linguistics). New York: Garland.
GALLATIN, ALBERT. 1836. A synopsis of the Indian tribes of North America. Transactions of the American Antiquarian Society 2:1–422.
GATSCHET, ALBERT S. 1881a. Shetimasha words and sentences collected December 1881 and January 1882 (to accompany texts of the same language) (MS 349-a–b). Suitland, MD: National Anthropological Archives.
———. 1881b. Texts of the Shetimasha language, spoken in Charenton, St. Mary's Parish, La. (MS 288) Suitland, MD: National Anthropological Archives.
———. 1883. The Shetimasha Indians of St. Mary's Parish, southern Louisiana. Transactions of the Anthropological Society of Washington 2:148–59.
GURSKY, KARL-HEINZ. 1969. A lexical comparison of the Atakapa, Chitimacha, and Tunica languages. IJAL 35(2):83–107.
HAAS, MARY R. 1941. Tunica. Handbook of American Indian Languages, Part 4 (Bureau of American Ethnology Bulletin 40), ed. Franz Boas, 159–204. New York: Augustin.
———. 1951. The Proto-Gulf word for "water" (with notes on Siouan-Yuchi). IJAL 17(2):71–79.
———. 1952. The Proto-Gulf word for "land" (with a note on Proto-Siouan). IJAL 18(4):238–40.
HASPELMATH, MARTIN. 2005. Argument marking in ditransitive alignment types. Linguistic Discovery 3(1):1–21.
———. 2013. Argument indexing: A conceptual framework for the syntactic status of bound forms. Languages across Boundaries: Studies in Memory of Anna Siewierska, ed. Dik Bakker and Martin Haspelmath, 197–226. Berlin: Mouton de Gruyter.
HEATON, RAINA. 2016. Active-stative agreement in Tunica. Anthropological Linguistics 58(3):299–326.
HIEBER, DANIEL W. 2017. Indeterminate valency and verbal ambivalence in Chitimacha. Paper presented at the Society for the Study of the Indigenous Languages of the Americas (SSILA), January 5–8, Austin.
———. 2018a. Category genesis in Chitimacha: A constructional approach. Category Change from a Constructional Perspective (Constructional Approaches to Language), ed. Muriel Norde, Kristel van Goethem, Evie Coussé and Gudrun Vanderbauwhede, 15–46. Amsterdam: John Benjamins.
———. 2018b. Lessons from an isolate: Chitimacha diachrony in areal perspective. Paper presented at the Society for the Study of the Indigenous Languages of the Americas (SSILA), January 5, Salt Lake City.
HOLTON, GARY. 2008. The rise and fall of semantic alignment in North Halmahera, Indonesia. The Typology of Semantic Alignment, ed. Mark Donohue and Søren Wichmann, 252–76. Oxford: Oxford University Press.
IANNUCCI, DAVID J. 2009. Aspects of Chitimacha phonology. MA thesis, Department of Linguistics, University of Utah.
KLIMOV, G. A. 1974. On the character of languages of active typology. Linguistics: An International Review 131:11–26.
LINN, MARY S. 2000. A grammar of Euchee (Yuchi). PhD dissertation, Department of Linguistics, University of Kansas.
MALCHUKOV, ANDREJ. 2008. Split intransitives, experiencer objects, and "transimpersonal" constructions: (Re-)establishing the connection. The Typology of Semantic Alignment, ed. Mark Donohue and Søren Wichmann, 76–100. Oxford: Oxford University Press.
Malchukov, Andrej L. 2015. Valency classes and alternations: Parameters of variation. Valency classes in the world's languages, Vol. I: Introducing the framework, and case studies from

Africa and Eurasia (Comparative Handbooks of Linguistics 1), ed. Andrej L. Malchukov and Bernard Comrie, 73–130. Berlin: Mouton de Gruyter.

Martin, Jack B. 1999. External possession in Creek. External Possession (Typological Studies in Language 39), ed. Doris L. Payne and Immanuel Barshi, 229–50. Amsterdam: John Benjamins.

———. 2011. A Grammar of Creek (Muskogee) (Studies in the Anthropology of North American Indians). Lincoln: University of Nebraska Press.

Mithun, Marianne. 1991a. Active/agentive case marking and its motivations. Language 67(3):510–46.

———. 1991b. The role of motivation in the emergence of grammatical categories: The grammaticization of subjects. Approaches to Grammaticalization, Vol. II (Typological Studies in Language 19), ed. Elizabeth Closs Traugott and Bernd Heine, 159–84. Amsterdam: John Benjamins.

———. 1999. The Languages of Native North America. Cambridge: Cambridge University Press.

———. 2008. The emergence of agentive systems in core argument marking. The Typology of Semantic Alignment, ed. Mark Donohue and Søren Wichmann, 297–333. Oxford: Oxford University Press.

Mithun, Marianne, and Wallace L. Chafe. 1999. What are S, A, and O? Studies in Language 23(3):569–96.

Munro, Pamela. 1984. The syntactic status of object possessor raising in Western Muskogean. Proceedings of the Berkeley Linguistics Society 10:634–49.

———. 1994. Gulf and Yuki-Gulf. Anthropological Linguistics 36(2):125–222.

Nichols, Joanna. 1992. Linguistic Diversity in Space and Time. Chicago: University of Chicago Press.

———. 2008. Why are active-stative languages rare in Eurasia? A typological perspective on split-subject marking. The Typology of Semantic Alignment, ed. Mark Donohue and Søren Wichmann, 121–39. Oxford: Oxford University Press.

Payne, Doris L., and Immanuel Barshi. 1999. External possession: What, where, how, and why. External Possession (Typological Studies in Language 39), ed. Doris L. Payne and Immanuel Barshi, 3–29. Amsterdam: John Benjamins.

Payne, Thomas E. 1997. Describing Morphosyntax: A Guide for Field Linguists. Cambridge: Cambridge University Press.

Powell, John Wesley. 1891. Indian linguistic families of America north of Mexico. Bureau of American Ethnology Annual Report 7:1–148.

Pustet, Regina. 2002. Split intransitivity revisited: Comparing Lakota and Osage. IJAL 68(4):381–427.

Sapir, Edward. 1917. Review: Het Passieve Karakter van het Verbum Transitivum of van het Verbum Actionis in Talen van Noord-Amerika [The passive character of the transitive verb or of the active verb in languages of North America], by C. C. Uhlenbeck. IJAL 1(1):82–86.

Siewierska, Anna. 2004. Person (Cambridge Textbooks in Linguistics). Cambridge: Cambridge University Press.

———. 2010. Person marking. The Oxford Handbook of Linguistic Typology, ed. Jae Jung Song, 322–46. Oxford: Oxford University Press.

———. 2013. Alignment of verbal person marking. World Atlas of Language Structures Online, ed. Matthew S. Dryer and Martin Haspelmath. Leipzig: Max Planck Institute for Evolutionary Anthropology. http://wals.info/chapter/100.

Song, Jae Jung. 2018. Linguistic Typology (Oxford Textbooks in Linguistics). Oxford: Oxford University Press.

Storch, Anne, and Jules Jacques Coly. 2017. Introduction. Sprachtypologie und Universalienforschung (STUF)–Language Typology and Universals 70(1):1–6.

SUMMER INSTITUTE OF LINGUISTICS (SIL). 2019. Fieldworks Language Explorer (FLEx). https://software.sil.org/fieldworks/.

SWADESH, MORRIS. 1933. Chitimacha verbs of derogatory or abusive connotation with parallels from European languages. Language 9(2):192–201.

———. 1934. The phonetics of Chitimacha. Language 10(4):345–62.

———. 1939a. Chitimacha-English dictionary. Chitimacha Grammar, Texts and Vocabulary (American Council of Learned Societies Committee on Native American Languages Mss.497.3 B63c G6.5). Philadelphia: American Philosophical Society Library.

———. 1939b. Chitimacha texts. Chitimacha Grammar, Texts and Vocabulary (American Council of Learned Societies Committee on Native American Languages Mss.497.3.B63c G6.5). Philadelphia: American Philosophical Society Library.

———. 1939c. Chitimacha grammar. Chitimacha Grammar, Texts and Vocabulary (American Council of Learned Societies Committee on Native American Languages Mss.497.3.B63c G6.5). Philadelphia: American Philosophical Society Library.

———. 1946a. Chitimacha. Linguistic Structures of Native America (Publications in Anthropology 6), ed. Cornelius Osgood, 312–36. New York: Viking Fund.

———. 1946b. Phonologic formulas for Atakapa-Chitimacha. IJAL 12(3):113–32.

———. 1960. The Oto-Manguean hypothesis and Macro Mixtecan. IJAL 26(2):79–111.

SWANTON, JOHN R. 1908a. Chitimacha stories 1908–1931 (Numbered ms., 1850s–1980s, some earlier, MS 4199). Suitland, MD: National Anthropological Archives.

———. 1908b. Chitimacha-English dictionary 1908–1931 (Numbered ms., 1850s–1980s, some earlier, MS 2439). Suitland, MD: National Anthropological Archives.

———. 1919. A structural and lexical comparison of the Tunica, Chitimacha, and Atakapa languages (Bureau of American Ethnology Bulletin 68). Washington, DC: Smithsonian Institution.

———. 1920. A sketch of the Chitimacha language (Numbered ms., 1850s–1980s, some earlier, MS 4122). Suitland, MD: National Anthropological Archives.

VATER, JOHANN SEVERIN. 1820. Analekten der Sprachenkunde [Analects of linguistics]. Leipzig: Dykschen Buchhandlung.

WICHMANN, SØREN. 2008. The study of semantic alignment: Retrospect and state of the art. The Typology of Semantic Alignment, ed. Mark Donohue and Søren Wichmann, 3–23. Oxford: Oxford University Press.