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Verbal ambivalence in Chitimacha

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1. Introduction

Though valency has long been an area of strong interest to linguists, there have been relatively few surveys of valency classes from a crosslinguistic perspective (Dixon & Aikhenvald 2000a; Kulikov, Malchukov & de Swart 2006; Malchukov & Comrie 2015; Tsunoda & Kageyama 2006). A minority but persistent perspective that appears in crosslinguistic research on valency, however, is the suggestion that valency classes may not be a concept equally applicable to all languages.

This skepticism takes different forms for different researchers and languages. In some languages, it is possible to pick out distinct valency classes, but it is not clear that these classes have any meaningful status in the grammar. They are claimed to be epiphenomenal, or the indirect result of other mechanisms in the grammar. For example, Martin (2000) argues that valency classes in Creek (Muskogean) are merely a side effect of changes in event perspective, and have no real status in the language. Likewise for Mohawk (Iroquoian), a language with semantic alignment (agent-patient) rather than grammatical alignment (nominative-accusative or ergative-absolutive), Mithun (2006:214) shows that “voice alternations are not exploited for purely syntactic purposes. They can serve important semantic, lexical, and discourse functions, however.” And for Balinese (Malayo-Polynesian), Shibatani & Artawa (2015:930) demonstrate that “The valency-increasing property associated with [applicatives and causatives] is simply a consequence or a side effect of their fundamental function,” which involves the manipulation of Figure and Ground.

Other researchers question the applicability of valency classes to some languages entirely. For Sri Lanka Malay (Austronesian creole), Nordhoff (2015) states that “The distinction between intransitive, transitive and ditransitive is thus not an important one in Sri Lanka Malay” due to the fact that nominal flagging correlates directly with semantic roles. Connors, Bowden & Gil (2015) show that in Jakarta Indonesian (Austronesian), because any verb may appear in any syntactic frame, valency classes can only be described in terms of statistical *valency preferences* rather than sharply delineated categories. Yoder (2016) shows that for Abawiri (Lakes Plain, Papuan), “There are no grammatical criteria on which one can base a coherent definition of subject vs. object, core vs. oblique, or any other systematic relation between the argument and the clause,” obviously making a description of valency classes in the language untenable.

Such methodological and definitional skepticism is, I think, healthy for an area of investigation that has only recently begun to extend its empirical coverage to the vast diversity of the world’s languages. In the introduction to their extensive two-volume survey of valency across languages, Comrie et al. (2015) make clear that the project should be viewed as a starting point for future research, and state that “some broader issues brought up in the Leipzig Valency Classes Project can only be resolved through the concerted efforts of a linguistic community.” In this spirit of constructive skeptical inquiry, the present paper offers another potential difficulty in the crosslinguistic application of valency: How does one determine valency classes in a language where there is no consistent means of deciding the number of arguments that a given verb has? While many have noted the difficulty in determining whether a given participant is an argument

or adjunct in various languages, the problem presented here is more foundational, i.e., whether a given participant can be said to be present in the clause at all. I argue that Chitimacha, a language isolate of Louisiana, presents precisely this challenge for the study of valency classes. Since nearly all definitions of transitivity and valency rely crucially on knowing the number of arguments in a clause (Dixon & Aikhenvald 2000b:4; Haspelmath 2015:136; Næss 2007:6), the case of Chitimacha suggests that a more robust definition of valency than these is needed.

I will proceed to argue for this claim as follows: In §2, I introduce the Chitimacha language and describe the nature and source of the data for this study. In §3, I provide a brief overview of some relevant aspects of Chitimacha grammar and discourse. Section 4 then examines a number of the morphological devices in Chitimacha that may trigger changes in valency. I say ‘may’ trigger because in each case the effect on valency is not consistent. The reason for this, which I show in §5, is that these morphological devices are not valency-adjusting *per se*, but rather alter the lexical semantics of the verb in ways that license and abet – but do not require – changes in valency. The implication of this situation is that, while these morphemes do not directly function to index or indicate agreement with a participant, they do often semantically imply its presence. Should then these implied participants count as arguments? Ultimately I conclude that this question cannot be answered for Chitimacha due to the ambiguous nature of its transitivity-adjusting devices, and moreover that it does not need to be, because a combination of the transitivity-adjusting devices and discourse tracking are sufficient to make clear the nature of the event and participants in the clause.

2. Data & Background

The Chitimacha language (ISO 639-3: ctm; Glottolog: chit1248) was spoken natively in southern Louisiana until the death of its last fluent speaker in 1940. Though the language shares many areal features with other languages of the U.S. Southeast, it is one of the many isolates in the region. The language was documented intermittently between 1802 and 1934, and the most comprehensive set of documentation comes from fieldwork conducted by Morris Swadesh between 1930 and 1934. In addition to sixteen composition notebooks filled with lexical and morphosyntactic elicitation, Swadesh transcribed and translated 120 texts with the last two fluent speakers, Chief Benjamin Paul (1867–1934) and his niece Mrs. Delphine Ducloux (1872–1940). On the basis of these materials, Swadesh compiled a draft lexicon, text collection, and grammatical description. These manuscripts were never published, but were deposited with the American Philosophical Society Library in Philadelphia, PA instead. Swadesh did publish a handful of articles on Chitimacha (Swadesh 1933; 1934a; 1934b; 1946), but to this day very few published descriptions of aspects of Chitimacha grammar exist.

Swadesh’s draft text collection (Swadesh 1939a) constitutes the primary data for this paper, supplemented by the occasional data point or observation from his draft grammar (Swadesh 1939b). The text corpus was entered into SIL’s Fieldworks Language Explorer software (FLEX) (SIL 2016) for easy searching and concordancing. The resulting corpus contains approximately 3,500 sentences and 30,000 words. The texts consist primarily of tribal legends and personal narratives, as well as a few expository and procedural texts. There are no word- or morpheme-level glosses in the manuscript (though they exist in Swadesh’s notes elsewhere), and consequently the glosses and morphemic analyses provided here are my own, while the free translations are Chief Paul’s. The data in this paper are presented in Americanist phonetic

notation.¹ A list of glosses and their meanings is provided in the Abbreviations at the end of this paper.

3. Overview of Chitimacha Grammar

This section highlights certain aspects of Chitimacha grammar most relevant to understanding transitivity in the language. One rare feature of Chitimacha grammar is that verbal person marking distinguishes between First (1) and Non-First (NF) person, but not between second and third. This contrast can be seen in example (1) (a first person verb) as opposed to examples (2) (a second person verb) and (3) (a third person verb) below. Any potential ambiguities this introduces are resolved either by discourse context, or the use of a set of independent pronouns which distinguish first, second, and third person, singular and plural (and also function as possessives).

- First Person
- (1) ʔam-**iki**
see-**1SG.A**
'I saw' A65 4.20
- Non-First Person
- (2) ʔam-ʔiš-**iʔi**
see-IPFV-**NF.SG.A**
'you see' A5 6.3
- (3) ʔam-ʔiš-**iʔi**
see-IPFV-**NF.SG.A**
'she saw' A65 2.13

Chitimacha exhibits a form of semantic alignment (i.e. agent-patient alignment) in its verbal person marking (Hieber, in progress). In the First person only, verbs can index a semantic Patient in addition to (or sometimes instead of) an Agent, as the contrast between examples (4) and (5) shows. The participant indexed by the Patient marker does not necessarily have to be the syntactic object, as will be shown in §4.9 later.

- Intransitive with Agent
- (4) ʔapš ʔe-h-**iki**
back be-LOC-**1SG.A**
'I returned' A10 5.4
- Intransitive with Patient
- (5) hi ʔe-h-**ki**
AND be-LOC-**1SG.P**
'it happened to me' A70 1.6
- Transitive with Agent only
- (6) k'et-**iki**
hit/kill(SG)-**1SG.A**
'I killed it' A80 5.6

¹ Departures from the IPA are as follows: < ' > = / ʔ /, < c > = / ts /, < c' > = / tsʔ /, < č > = / tʃ /, < č' > = / tʃʔ /, < š > = / ʃ /, and < y > = / j /.

Transitive with Agent and Patient

- (7) k'et-ki-ʔi
hit/kill(SG)-1SG.P-NF.SG.A
'she beat me' A60 1.6

Another important fact for understanding transitivity in Chitimacha is that verbs do not obligatorily index their syntactic object. That is, verbs have dedicated markers of Subjects/Agents (depending on person), and Patients, but not Objects. Consider each of the examples in (8) through (10), where there is no indication of the object on the verb, regardless whether that object is overtly mentioned in the clause.

- (8) he:čpi-ču-k
help-IRR-1SG.A
'I'll help you' A1 2.7
- (9) siksi k'e-ču:-š
eagle kill(SG)-IRR-COND
'if one kills an eagle' A1 4.2
- (10) *hus tep c'ismam ʔuka:ši*
hus tep c'ismam ʔuka-ʔiš-i
his fire piece count-IPFV-NF.SG.A
'he counted his pieces of fire' A5 1.6

Finally, and most importantly for the present discussion, any argument in the clause may be omitted if it in some way indexed on the verb or can be understood from discourse context. In the following passage, for example, *ʔašinč'at'a* 'old (man)' is overtly stated or marked only twice even though the participant is referenced a total of five times.

- (11) Wetk kunuk'u we panš hi šam-tk-š t'ut-naʔa.
then QUOT DET people AND go.out-PTCP-SBD go(PL)-NF.PL.A
- ʔašinč'at'a* kunšin hani ʔašinč'ata=nki hi tup-t-naʔa.
old some house old=LOC DIST find-TR-NF.PL.A
- Panš hiš k'et-k ʔo:š hup hi hokšte-pa, ʔo:š
people ERG kill(SG)-PTCP buzzard to AND feed-SBD buzzard
- hepši=nk kap mesti:k' či-ʔuy-i. Tutk
excrement=ABL STAT be.white-PTCP COP(VERT)-IPFV-NF.SG then
- wey-š* kin ʔapš ne:č'i-mi-naka.
DEM=TOP with RECIP speak-PLACT-1PL.A

'The people got out and went on. They found an **old man** at an old house. He was all white with buzzard excrement, because some people had killed him and left him to the buzzards. We spoke with **him**.' A3 4.1 – 4.4

The above two facts make it difficult to determine transitivity in Chitimacha. While tracking of discourse referents (as shown in (11)), combined with a variety of transitivity-adjusting devices (described in §4 below), resolve ambiguities in practically every case, this still leaves open the question of whether such implied participants should count as arguments proper. Consider the two examples below.

- (12) Kamčín ʔap šam-k'ust-i-nki t'emi-naka. Weyt
 deer VEN go.out-sudden-NF.SG.A=TEMP kill(PL)-1PL.A thus
 ni k'uš-mi-:t'i-nakun.
 DTRZR eat-PLACT-IRR(PL)-1PL.A
 'As the deer came out, we killed them. Thus we shall eat them.' A19 4.4
- (13) Hi kima-ki k'an [...] ni k'uš-m-puy-na.
 DIST believe-1SG.P NEG DTRZR eat-PLACT-IPFV-NF.PL.A
 'I do not believe they ate [in that other land].' A4 5.2

In **Error! Reference source not found.**, the preverb *ni* 'thing' (cf. §0), as well as pluractional suffix *-ma* (realized here as /mi/; cf. §0), both reference *kamčín* 'deer' from the previous clause – hence the transitive translation 'eat them' rather than simply 'eat'. Example (12), on the other hand, even though it contains the same verb *k'us-* 'eat' and the same transitivity-adjusting devices *ni* and *-ma*, does not receive a transitive interpretation, because there is no prior discourse referent to which the two morphemes could refer which could serve as an object. Instead, in (12) the pluractional *-ma* indexes a plural subject, while the preverb *ni* indicates that some generic, unspecified thing is being eaten.

Morphology and discourse thus work in tandem to elucidate which referents are implied in the clause. But can one really say that *ni* and *-ma* index an argument, and are thus valency-adjusting, if in some cases there is no actual argument to which they could refer?

In the following section I describe a number of similarly difficult cases for each of the potential valency-adjusting devices in Chitimacha, and show that none of these mechanisms can be consistently claimed to adjust verbal valency, and that their primary function is to adjust the verbal semantics instead.

4. Transitivity-Adjusting Devices in Chitimacha

The main aim of this section is to exemplify each of the transitivity-adjusting devices in Chitimacha, and demonstrate their valency-changing uses, but show that these constructions can also be utilized with no change in valency as well. Then in §5 I discuss the implications of this situation for the determination of the number of arguments in a clause, and valency generally.

4.1. Preverbs

Chitimacha has a set of 9 preverbs that combine with verb stems to form a lexical unit with them. Material may occasionally intervene between the preverb and the verb, but the preverb + verb combination retains its lexical integrity. A given preverb + verb combination may be lexicalized and/or idiomatic, or entirely compositional. All of the preverbs include some core directional meaning, such as 'back', 'to there', 'up', etc., and most have extended these senses to more grammatical functions as well, such as a reflexive/reciprocal, an inchoative/inceptive, a stative/change of state, and others. For reasons of length, this section looks at just 3 of the 9 preverbs and their effects on valency.

4.1.1. Andative *hi*

The andative preverb *hi* has as its core directional meaning 'to' or 'there'. It changes the lexical semantics of the verb to imply a goal, even when that goal is not overt or even salient in

the discourse. For example, the verb ‘go’, when combined with *hi*, means ‘go to’, as can be seen by comparing (14) and (15).

- No Goal
 (14) miš k’ap-t-k, t’ut-naka
 road take-TR-PTCP go(PL)-1PL.A
 ‘taking to the road, we went’ A4 3.1

- Overt Goal
 (15) Wetk kunuk’u k’ast’a=nk hi t’ut-na?a.
 then QUOT north.wind=LOC AND go(PL)-NF.PL.A
 ‘Then, they say, they went toward the north.’ A3 2.1

Naturally, this change to the verb’s lexical semantics often licenses an overt noun phrase functioning as the goal, like *k’ast’ank* ‘the north’ in 0. But, as seen in example (16) (which appears two sentences after (15) in the text), the noun phrase is not mandatory.

- Implied Goal
 (16) hi t’ut-na?a hesik’en
 AND go(PL)-NF.PL.A again
 ‘they went on again’ A3 2.5

hi in this example makes clear that the actors are still continuing on towards the aforementioned goal (‘the north’), even though the goal argument is inferred from discourse rather than explicitly present in the clause. So while the verb’s lexical semantics has changed because of *hi*, its valency in this case has not. Similar alternations between overt and implied goals appear throughout the corpus and are easy to find (because *hi* is the most common preverb, with 1298 tokens). To call *hi* a valency-changing device would therefore be an overgeneralization. Rather, it is *hi*’s primary function of adding a semantic goal to the verb that allows (but does not require) a change in valency.

4.1.2. Reflexive *ʔapš*

While some preverbs like *hi* change the verbal semantics in a way that abets a valency increase, others like *ʔapš* ‘back, together’ tend to trigger a valency decrease. Example (17) shows one such case where *ʔapš* allows for a reduction in valency (since *nehpa-* ‘adorn’ would otherwise take both a subject and object).

- Reduced Valency with *ʔapš*
 (17) hus mahči kuh hiš ʔapš neh-pa-puy-na
 his tail feather INSTR REFL cover-CAUS-IPFV-NF.PL.A
 ‘they adorn themselves with his tail feathers’ A10 11.2

However, *ʔapš* can also appear with intransitive verbs (18), or verbs that already have an explicit object (19), in which case it has no effect on valency.

- No Valency Change with *ʔapš*
 (18) Wetkš we panš pinikank ʔašinč’ata=š ʔapš čuy-i.
 then DET Indian old=TOP back go(SG)-NF.SG.A
 ‘Then the old Indian came back.’ A9 4.5

- (19) Huyi waytm **ʔapš** wok-t-i.
 good more **REFL** feel-TR-NF.SG.A
 ‘He felt (himself) better.’ A86 2.21

Without *ʔapš*, arguments like *hus nehe* in are interpreted as emphatic rather than reflexive pronouns, a fact which nicely illustrates the reflexive meaning contributed by *ʔapš*:

- (20) we heki ʔatkank **hus nehe=nk** hi wit-mi-ču:-š
 DET minister **his self=NOM** AND shoot-PLACT-IRR(SG)-COND
 ‘if the minister himself shot it’ A67 3.3

Like *hi* in §4.1.1, *ʔapš* therefore does not appear to have valency reduction as its primary function. Instead, it contributes a reflexive semantics to the verb, licensing but not requiring a reduction in valency.

4.1.3. Detransitivizer *ni*

The preverb *ni*, derived from a noun originally meaning ‘thing’, implies a semantic undergoer, changing the meaning of verbs like ‘eat’ to something like ‘thing-eat’. As would be expected from this change in meaning, *ni* often has a detransitivizing effect on the verb (hence the gloss DTRZR for ‘detransitivizer’). The examples below show one such valency alternation for *ni*.

- Transitive without *ni*
 (21) ʔiš=k ʔiš nu:p k’as-ka-nki-š
 1SG=NOM 1SG potato plant-PL=TEMP=SBD
 ‘when I planted my potatoes’ A59 2.9

- Intransitive with *ni*
 (22) hus=k ney =ki **ni** k’as-t-’iš-iʔi
 3sg=NOM ground =LOC **DTRZR** plant-TR-IPFV-NF.SG.A
 ‘he was planting in the ground’ A59 1.9

But *ni* does not always trigger a change in valency. As examples **Error! Reference source not found.** and (12) above illustrate, one can ‘thing-eat deer’ (transitive) or simply ‘thing-eat’ (intransitive). The implication, contributed by *ni*, that there is some particular thing being eaten holds independently of the valency of the verb. The two clauses in example (23) show another case where *ni* has no effect on valency.

- (23) Tutk namu=š hi čuh-mi-ʔi. Hani ne **ni** čuh-mi-ʔi.
 then town=TOP DIST build-PLACT-NF.SG.A house just **DTRZR** build-PLACT-NF.SG.A
 ‘Then he built a town. He built houses.’ A49 1.11 – 1.12

In the second clause, *ni* most likely refers to the noun ‘town’ in the previous clause. That, combined with the pluractional *-ma*, suggests a translation more like ‘He developed it with houses’ (literally, ‘He repeatedly it-built houses.’). *ni* in this case has no detransitivizing effect on *čuh-* ‘build’, as evidenced by the presence of the overt object *hani*. Once again it seems that the primary function of the preverb is to subtly adjust the semantics of the verb, sometimes reducing its valency, but not consistently so.

4.2. Locational Suffixes

Chitimacha has three locational suffixes that may attach to a limited set of verbs: *-n* ‘out, on’, *-h* ‘in’, and *-k* ‘at’ (though the precise meaning of this last suffix is uncertain). These suffixes are no longer productive, but when compared to verbs without them, it is clear that these suffixes have the effect of adding a semantic ground to the verb. This effect can be seen by comparing (24) with (25).

- Without Locational Suffix
- (24) Weyt pe-ʔe-nki [...] [..]
 thus be(HORIZ)-NF.SG.A-TEMP
 ‘while he lay thus’ A17 5.17
- Locational Suffix with Overt Ground
- (25) Wetk napšč’a=nk kiš ʔatin pe-h-k kap tey-i.
 then black=NOM horse be(HORIZ)-on-PTCP STAT stay-NF.SG.A
 ‘Now a black person on a horse stopped.’ A48 3.5

Note that in 0, no postposition like *hup* ‘to’ is required to license the presence of the ground, as would typically be required for verbs without *-h* or other relevant morphology. However, the ground for verbs with locational suffixes may also be implied, as in (26). Example (27) also shows a particularly illustrative case wherein the ground is introduced via overt mention in one clause, and then is implicitly referred to in the next.

- Locational Suffix with Implied Ground
- (26) We ku:k=š k’amik’i wetk his pe-h-w-i.
 DET water=TOP long then DUR be(HORIZ)-on-moving-NF.SG.A
 ‘The water was on (the land) a long time.’ A62 2.2
- (27) Šuš=up kap pe-h-i?i. Hi pe-h-i-nki
 tree=to up be(HORIZ)-on-NF.SG.A AND be(HORIZ)-on-NF.SG.A=TEMP
 ‘He climbed a tree. When he had climbed it, [...]’ A15 2.4 – 2.5

Like the preverbs, then, the locational suffixes cannot be said to be consistently valency-adjusting, even though they do sometimes license an overt ground.

4.3. Manner Suffixes

The same set of verbs that take the locational suffixes discussed in §4.2 may also take one of a set of manner suffixes, the complete list of which is given below. These suffixes also appear occasionally on verbs outside this set.

- (28) Manner Suffixes
- *-kint* ‘dropping, pushing’
 - *-k’es* ‘pouring’
 - *-t’uwa / -ptk’uš* ‘suddenly’
 - *-čĭ* ‘handling’
 - *-c* ‘touching’
 - *-wa* ‘moving’

Some of the manner suffixes have no apparent effect on valency, as the contrast between (29) and (30) shows.

- Without Manner Suffix
- (29) Hesik’en kas ʔi:-wi-t’i-nuk.
 again back turn-moving-IRR(PL)-1PL.A
 ‘We will go back around again.’ A4 7.2

- Manner Suffix with No Valency Change
- (30) Wetkš k’ast’a=nk kas ʔi:-t’uwi-ču:-š,
 then north.wind=LOC back turn-sudden-IRR(SG)-COND
 ‘Then, if (the wind) turns to the north,’ A84 4.7

The semantics of certain other manner suffixes implies a patient, which may either appear overtly in the phrase, as in (32), or may be implied by the discourse, as in (33). Compare these with (31), with no manner suffix present.

- Without Manner Suffix
- (31) č’a: kap ša-n-i-nki
 sun up container-out-NF.SG.A=TEMP
 ‘when the sun rises’ A64 1.6

- Manner Suffix (-kint) with Overt Object
- (32) Wetkš we nitiya-nk=š ʔiš hi ša-n-kint-ki
 then DET master-NOM=TOP me AND container-out-drop-1SG.P
 ‘The (boat) master put me off.’ A10 10.3

- Manner Suffix (-kint) with Implied Object
- (33) Tutk ku: =ki hi ni-kint-i.
 then water =LOC AND water-drop-NF.SG.A
 ‘He threw (it) into the water.’ A9 3.3

The examples in (34) and (35) are also illustrative because, although they contain overt objects, the presence of the object is not due to the manner suffix *-čĭ*, but rather the semantics of the verb root. So while the interaction of *-čĭ* with the verb’s semantics licenses an object (whether overt or implied) in **Error! Reference source not found.** and **Error! Reference source not found.**, it does not in (34) and (35).

- (34) Wetk we č’ehna=š kas he:-č-ma-:š-naʔa.
 then DET moss=TOP away move.aside-handling-PLACT-IPFV-NF.PL.A
 ‘Then they raked the moss away.’
 (lit. ‘they cleared the moss away by handling’) A74 18.7

- (35) ʔiš ko kas he:-č̣i-pi-ki
 my aunt away move.aside-handling-CAUS-1SG.A
 ‘I took my aunt away.’
 (lit. ‘I made my aunt move aside by handling.’) A57 1.9

Other manner suffixes show similar inconsistencies with regard to valency, suggesting that these suffixes too should not be considered primarily valency-adjusting, but rather function to specify the manner in which the action of the verb was performed.

4.4. Intransitive Suffix *-te*

Certain verbs in Chitimacha are derived from a noun/adjective + *-te* (which itself derives historically from *te:t-* ‘be like, say’), typically resulting in an intransitive verb (hence the gloss INTR ‘intransitive’). The examples below illustrate two such verbs. Example (36) is formed from the noun *ciʔiš* ‘leaf’, while (37) is formed from the noun *nakt* ‘ice’.

- (36) šuš č̣i:š-e-pa=nki < *ciʔiš* ‘leaf’
 tree leaf-INTR-CAUS=TEMP
 ‘when the leaves bud’ A77 1.1
- (37) kap nakta:šiʔi < *nakt* ‘ice’
 kap nakt-te-ʔiš-iʔi
 STAT ice-INTR-IPFV-NF.SG.A
 ‘it (the weather) freezes’ A45 4.12

However, sometimes the result of forming a verb with *-te* is a polyvalent verb, as in the examples below.

- (38) Waʔa=š ney kin pokti kin kap t’ik-te-mi-ʔi.
 other=TOP earth with sky with STAT burst-INTR-PLACT-NF.SG.A
 ‘The earth and sky crushed the others.’ A3 9.4
- (39) hak-te-ma-:š-naʔa
 drink(?)-INTR-PLACT-IPFV-NF.PL.A
 ‘they had him drink it (the medicine)’ A3 7.2
- (40) wetk šušeyi hi mem-ti-:k’,
 then fence AND jump(?)-INTR-PTCP
 ‘then, jumping the fence,’ A48 3.13

In some cases *-te* verbs even exhibit unmarked valency alternations, as can be seen by comparing (41) below with **Error! Reference source not found.** above.

- (41) Wetk we waštik sek’is hi mem-t(e)-i.
 then DET cow among DIST jump(?)-INTR-NF.SG.A
 ‘Then he jumped amongst the cattle.’ A55 1.13

So while *-te* does correlate quite strongly with intransitive verbs, it still cannot be considered a reliable indicator of valency. Instead, its contribution to the verb’s semantics is best understood by reference to its historic meaning, ‘be like’. *-te* takes a noun or adjective X and forms a verb with the meaning ‘be like X’ or ‘having to do with X’. This typically results in an intransitive verb, but not necessarily so.

4.5. Transitive Suffix *-t*

The suffix *-t* can occur with most verb stems, except those formed with *-te*, and most prototypically increases the transitivity of the verb. Compare (42) with (43) and (44) with (45). In the latter two cases, the addition of a syntactic object is attributable to the presence of *-t*.

- Without *-t*
- (42) Wetk panš pinikank ʔo:nak kap hok-naʔa.
 then Indian all STAT leave-NF.PL.A
 ‘The Indians all left.’ A43 3.7
- With *-t*
- (43) kičant’i ʔunk’unk=š hok-t-naʔa
 old.woman one=TOP leave-TR-NF.PL.A
 ‘they had left only one old woman’ A36 2.8
- Without *-t*
- (44) wetk hus hana=nki hi hu-h-ni-na
 then his house=LOC AND enclosure-in-NEUT-NF.PL.A
 ‘they entered his house’ A86 5.6
- With *-t*
- (45) Wetk we panš ʔiš =ki hi kimi-:k’-š na
 then DET people me =LOC AND believe-PTCP-SBD COP(NF.PL)
 sa hana=nki hi hu-h-t-iki.
 DIST house=LOC DIST enclosure-in-TR-1SG.A
 ‘I have put people who believe in me in that house.’ A11 1.11

Of course, very often the syntactic object is merely implied:

- (46) Weyč’i:k’š hiʔniš hi hok-t-naʔa.
 therefore alone DIST leave-TR-NF.PL.A
 ‘Therefore they left (it) alone.’ A9 5.5

At the same time, *-t* is like certain manner suffixes in that it implies a semantic patient, even when there is no specific patient in the discourse to which it could refer. In (47), for instance, *-t* implies that something is being woven, even though there is no prior discourse referent for it to refer to. The verb is effectively intransitive.

- (47) Weyt huk’u ʔi:-č-t-’iš-naʔa.
 DEM COP turn-handling-TR-IPFV-NF.PL.A
 ‘That is the way they turn-weave.’ A73 6.3

A number of verbs have also become lexicalized with *-t*, and in these cases the verb occurs variably with or without an object, despite the presence of *-t*. Such is the case with *k’ast-* ‘plant’, which has an object in (48) but no discourse referent in (49).

- (48) him=k=š him nu:p k’as-t-k hi-ʔi.
 2SG=NOM=TOP 2SG potato plant-TR-PTCP COP(NEUT)-NF.SG
 ‘you planted your potatoes’ A59 2.2

- (49) hus=k ney =ki ni k'as-**t**-iš-i?i
 3sg=NOM ground =LOC DTRZR plant-**TR**-IPFV-NF.SG.A
 'he was planting in the ground' A59 1.9

Complicating matters considerably is the fact that *-t* is deleted by morphophonological processes as often as not, making it extremely difficult to tell whether *-t* is present in any particular case. A stem-final /t/ is deleted frequently before the pluractional suffix *-ma*, the irrealis suffix *-čuw/-t'i*, when it occurs between a consonant and one of the patient markers *-ki/-kuy*, or before any suffix beginning with /n/. In all of the following examples, it is impossible to tell whether the transitive *-t* is present (although other features of the clause may help disambiguate).

- (50) ?un kun ?uči-:k' ni k'uš-?-čuy-i
 something make-PTCP DTRZR eat-**TR?**-IRR(SG)-NF.SG.A
 'he would make something and eat [it?]' A7 1.9
- (51) ?ampi=nk kin k'uš-?-mi-:t'i-naka?
 what=ABL with eat-**TR?**-PLACT-IRR(PL)-1PL.A
 'With what shall we eat [it?]?' A15 5.1
- (52) we hu:h hi hok-?-na?a
 DET lake AND leave-**TR?**-NF.PL.A
 'they left the lake' A63 1.19

Also compare **Error! Reference source not found.** with 0, showing that *-t*

sometimes does appear in these contexts, but not reliably so. The morphological ambiguity that results allows for either transitive or intransitive interpretations of many verbs, with no overt morphological distinction between the two.

To summarize, then, *-t* is most prototypically transitivity-marking, but may appear with intransitive verbs in cases where the object is generic (as in (47)) or where *-t* has become lexicalized (as in (49)). Moreover, *-t* creates a situation of morphological ambiguity which speakers can capitalize on to create unmarked valency alternations.

4.6. Pluractional Suffix *-ma*

As is common for pluractionals crosslinguistically (Wood 2007:42–43), the Chitimacha pluractional *-ma* preferentially indicates plurality of the subject when the verb is intransitive, plurality of the object when the verb is transitive, or plural events generally (i.e., frequentative, distributive, or iterative meanings). The three examples below illustrate each of these respective functions of *-ma*.

Single Action, Plural Subject (Intransitive)

- (53) ka:kwa-ki k'an ?ašt ?uči:k'š panš ne kap nacpik-**mi**-na?a
 know-1SG.P NEG how doing person even INCEP begin-**PLACT**-NF.PL.A
 'I do not know how people started up' (i.e. how humankind originated) A1 4.4

Single Action, Plural Object (Transitive)

- (54) Wetkš hus na:nča:kamank=š hi hok-mi-i?i.
then his brothers=TOP AND leave-PLACT-NF.SG.A
'He left his brothers.'

A1 1.1

Plural Action, Singular Object (Transitive)

- (55) wetk ?apš c'it-mi-?i
then about cut-PLACT-NF.SG.A
'then he cut him up (stabbed him in several places)'

A48 1.10

Because Chitimacha verbs do not index their syntactic objects, *-ma* sometimes is the sole overt indicator of the object on the verb. As with other morphological devices discussed so far, the object referred to by *-ma* may be explicit (56) or implied (57).

Overt Object with *-ma*

- (56) Wa?a=š ney kin pokti kin ?apš neh-t-k kap t'ik-te-mi-?i.
other=TOP earth with sky with together strike-TR-PTCP STAT burst-INTR-PLACT-NF.SG.A
'The earth and the sky crushed the others by striking together.'

A3 9.4

Implied Object with *-ma*

- (57) we ?ašant'a his nuy-m-i
DET old response call-PLACT-NF.SG.A
'the old man answered' (implied by context: 'them')

A4 3.13

Should *-ma* be considered a valency-adjusting device? Obviously not in the cases where it only functions to indicate event plurality. But even considering only the cases where *-ma* is coreferential with a participant in the clause, it does not seem as though *-ma* is valency-increasing. When *-ma* indicates plurality of the subject (intransitive verbs), there is already an Agent marker on the verb indexing the argument, and this Agent marker is present with or without *-ma*. So it does not seem that *-ma* increases the valency in this case. When *-ma* indicates plurality of the object (transitive verbs), the object is frequently just an implied referent from prior discourse. It is unclear whether these cases count as arguments proper.

4.7. Causative Suffix *-pa*

The causative suffix *-pa* is the most predictably valency-adjusting device in Chitimacha, adding a causer argument as one would expect. Compare (58) and (59) below.

Without *-pa*

- (58) Wetk we še:ni hi ne-n-š-w-i?i.
then DET pond AND water-out-VERT-moving-NF.SG.A
'He crossed that pond.'

A2 1.3

With *-pa*

- (59) Wetkš ?ap nenčupi.
wetkš ?ap ni-n-č-wa-pa-i
then VEN water-out-VERT-moving-CAUS-NF.SG.A
'Then he got him across (the water).'

A1 3.5

However, sometimes *-pa* changes the meaning of the verb entirely. For example, while *nahwa-* means 'send', as in (60), the causative version *nahpa-* does not mean 'cause to send' as one might expect, but rather 'cross', as in (61).

- (60) Wetk hus hiʔi=nk na-h-wi-naʔa.
 then him place=LOC go-in-moving-NF.PL.A
 ‘Then they sent him home.’ A44 1.6
- (61) hu:h na-h-pi-naʔa
 lake go-in-CAUS-NF.SG.A
 ‘they crossed the lake’ A15 2.2

There are also a number of cases where *-pa* has become lexicalized as part of the verb stem, e.g. *he:čpa-* ‘meet; help’ and *t’a:pa-* ‘be dirty’. This latter case in particular results in an intransitive rather than transitive verb. Even in non-lexicalized cases, *-pa* sometimes allows for unmarked alternations between transitive and intransitive (or perhaps causative and anticausative) uses like those in (62) and (63) below.

- (62) we ʔakšuš ʔaškuk’u him’s ku:-k=š hi t’eyk-te-pi-ču:-š
 DET cypress certain 2SG water=INSTR=TOP AND wet-INTR-CAUS-IRR-COND
 ‘if you wet that cypress with water’ A9 2.3
- (63) wey hi t’eyk-te-p-i k’an kiš
 DEM AND wet-INTR-CAUS-NF.SG.A before
 ‘before it gets wet’ A71 6.5

Finally, one interesting token of *-pa*, given in (64), merits additional discussion:

- (64) Wetk we po: wiš-pa=nki
 then DET grass burn-CAUS=TEMP
 ‘when the grass took fire’ A19 2.4

In this example, the causative appears on the intransitive verb *wiš-* ‘burn (up)’, and yet still results in an intransitive meaning. (A different verb, *ʔic-*, is used for the transitive sense of ‘burn’.) Why then does *-pa* appear here? Most likely, this *-pa* refers back to the causer introduced two sentences prior, in which the audience is told, ‘He set fire to the grass.’ So in this case, *-pa* is acting a manner similar to various other suffixes examined above, in that it can refer anaphorically back to an already activated discourse referent.

Though these exceptional uses of *-pa* are overrepresented here in comparison to its more canonical, valency-increasing use, there are a sufficient number of exceptions to question whether *-pa* is at its core a valency-increasing device. Instead it seems that *-pa* implies a semantic causer, whether or not that causer is present in the clause.

4.8. Affective Suffix *-aʔ*

The affective suffix *-aʔ* (typically realized as *-a:* or lengthening on the preceding vowel) is a kind of applicative suffix that adds a beneficiary or maleficiary to the verb. As with each of the cases examined so far, *-aʔ* may be coreferential with an overt nominal in the clause, or may simply imply a beneficiary, usually one that is already active in the discourse. The following examples demonstrate each of these cases. Example (65) shows the verb *ʔi:kš-* ‘grind’ without the affective suffix, where it takes a patient (*kut paktmpaš* ‘scissors’) but no beneficiary. Example (66) then shows how the affective suffix licenses an overt beneficiary in the clause (*him* ‘you’). Example (67), however, demonstrates that the beneficiary can be merely implied, i.e. discourse anaphoric. And in many cases, like in (68), the beneficiary is not even included in the translation, but can be inferred.

No Affective Suffix

- (65) ʔiʃ nehe kut paktmpa=š ʔi:kš-t-i ka:kwa-ki-n.
1SG self scissors=TOP grind-TR-GER know-1SG.P-CONT
'I know how to grind scissors myself.' A7 3.1

Affective Suffix with Overt Beneficiary

- (66) him kut paktmpa ʔi:kš-ma-:čũ-k.
2SG scissors grind-PLACT-AFF-IRR-1SG.A
'I shall grind your scissors for you.' A7 2.2

Affective Suffix with Implied Beneficiary

- (67) Tutk ʔapš wa:ct-k huyk'i kas ʔut-aʔ-
then together wrap-PTCP well REV tie-AFF-NF.SG.A
'She wrapped it well and tied it for him.' A76 1.13
- (68) ʔuč ho panš šuš'ay kas nuč-ma-:naʔa.
who DEM person wagon REV work-PLACT-AFF-NF.PL.A
'Who fixed these people's wagon?' (inferred: 'for them') A51 2.2

There also at least two lexicalized cases of *-aʔ*: *neemaʔ*- 'teach' and *natmaʔ*- 'tell'. Both these verbs show unmarked valency alternations between a transitive verb with an agent and beneficiary, and a ditransitive verb with an agent, theme, and beneficiary.

The affective suffix presents a similar problem to other potential valency-adjusting suffixes, in that it consistently adds a semantic beneficiary/maleficiary to the clause, even when that referent is not overtly present in the clause, and can only be inferred from prior discourse context.

4.9. Patient Suffixes

As mentioned in §3, Chitimacha displays an agent-patient alignment system in verbal marking for first person. If there is a first person patient that is affected by the action, it is typically (but not obligatorily) indexed on the verb, depending on whether the speaker is emphasizing the affectedness of the participant. As demonstrated in Hieber (in progress), this indexing of an affected participant operates independently of the syntactic status of that participant. The patient markers can be coreferential with a syntactic subject (whether the verb is transitive or intransitive), object, applied object, or even a possessor of one of the arguments. Each of these cases is illustrated in turn below.

Subject of Intransitive

- (69) pa:kine-ki-čũ:-š
be.tired-1SG.P-IRR(SG)-COND
'If I get tired' A1 3.2

Subject of Transitive

- (70) ka:kwa-ki k'an ʔašt
know-1SG.P NEG how
'I do not know how' A1 4.4

- Object of Transitive
- (71) k'et-ki-ʔi we ko:š=iš
 beat-1SG.P-NF.SG.A DET switch=INSTR
 'she beat me with the switch' A60 1.6
- Applied Beneficiary
- (72) ʔi: ʔap mači:ki
 ʔi: ʔap mači-aʔ-ki
 tooth VEN bring-AFF-1SG.P
 'bring me a tooth' A17 1.4
- Possessor
- (73) Weyč'i:k'š huk'u ʔiš mahčiš kap ʔič'ima-ki.
 therefore COP(TOP) 1SG tail STAT be.yellow-1SG.P
 'That is why my tail turned yellow.' A10 10.7

Chitimacha agent-patient alignment therefore functions as a canonical case of semantic alignment, i.e. a system of verbal marking that tracks semantic roles rather than argument structure and valency. The patient markers in Chitimacha are therefore unhelpful for determining verbal valency. Mithun (2006:214) shows the same to be true for Mohawk (Iroquoian), another language with agent-patient alignment, for which she states, "Mohawk contains no subject, object, or oblique categories [...] But participants need not be cast in specific grammatical roles for the purpose of forming complex sentences, as in many other languages, so voice alternations are not exploited for purely syntactic purposes." Instead, these voice alternations play an important role in changing the event perspective of the clause, and what information is foregrounded or backgrounded in the discourse.

5. Discussion & Conclusion

Though the preceding sections cover a variety of potentially valency-adjusting constructions with very different functions, a few commonalities emerge. Most significantly, while each of the constructions frequently licenses a change in the argument structure of the verb, they do not do so consistently. At times a seemingly transitivizing morpheme will result in an intransitive verb, or vice versa. One and the same morpheme can at times yield a transitive verb, at other times an intransitive one. In cases where these constructions do appear to trigger a valency change, they often do so implicitly, relying on discourse and information tracking to determine the referents in the clause. In most cases, both discourse and valency-adjusting devices are needed. Can such devices really be considered valency-changing if different discourse contexts completely alter their effect on valency?

Haspelmath & Hartmann (2015), in laying out the methodology for ValPal database, and discussing issues in the crosslinguistic comparison of valency, suggest in passing that even implied, discourse-anaphoric participants might be considered arguments: "often one can make a clear distinction between an anaphoric and an existential interpretation of argument omission, and when argument absence implies an anaphoric interpretation, this could be taken as evidence of verb-specificity and argumenthood." (Haspelmath & Hartmann 2015:48 fn.). They rely crucially on the notion of verb-specificity in defining arguments, in the sense that "Elements that are verb-specific are arguments, and elements that are not verb-specific are adjuncts." (p. 48). Anything that needs to be learned in addition to the meaning of the verb, such as obligatoriness of arguments or how they are flagged, would be verb-specific in this sense. For Chitimacha,

however, this definition is unhelpful, precisely because each of the constructions discussed above functions first and foremost to affect the verb's semantics. As long as the argument structure of the clause is consistent with the verbal semantics and prior discourse context, any valency frame is acceptable. There is therefore nothing verb-specific that a Chitimacha speaker would need to learn.

Another difficulty with a definition of argumenthood that treats anaphoric discourse referents as arguments is that, at least for Chitimacha, it results in a largely meaningless typology of valency classes for the language. Since any argument in Chitimacha may be omitted in favor of an implied discourse referent, every verb would participate in the same set of unmarked valency alternations. Of course, only allowing overtly-mentioned participants to count as arguments results in the same problem. Likewise, if one relied on just verbal morphology for the determination of arguments, every verb would show a similar set of alternations, since suffixes like *-ma* or the patient markers can occur in principle with any verb. Whatever definition of argument one adopts for Chitimacha – discourse-based, overtly mentioned, or morphologically marked – the result will be a largely incoherent grouping of verbs into a few (or one) overly general valency classes.

What then should we make of argument structure in Chitimacha? It seems that valency is simply not a strong category in the language, and isn't that necessary besides. In practically every case, the combination of the semantics of the voice and transitivity-adjusting devices with tracking of referents in the discourse resolves the number and kind of participants in the clause. The number of truly ambiguous cases is extremely small, and when one does occur (as in (50) above), the precise determination of the argument status of the participant in question is not particularly relevant to the discourse anyway.

If valency is not a meaningful category in the grammar of Chitimacha, the question bears asking how such a situation could have arisen. In the particular case of Chitimacha, it seems a variety of compounding factors were at work. In the first place, the development of the agent-patient system developed out of what was originally a sequence of a main verb followed by an auxiliary verb. As the two verbs became a single syntactic unit, what were originally the person markers at the end of the main verb were reanalyzed as patient markers. The agent-patient distinction now came to cross-cut the old subject/object categories, as it does for agent-patient systems generally, and as was explicitly demonstrated by Mithun (2006) for Mohawk.

A second contributor to the dilution of the argument category was probably the rampant morphological ambiguity with respect to transitivity introduced by *-t*. Morphophonological processes made it impossible to tell with certainty whether a given verb was transitive. This is complicated further by the fact that the intransitive *-te* and the transitive *-t* are very similar in form. Indeed, in Non-First person perfective realis verbs (which occur very frequently in the corpus), the two are indistinguishable: *memt-i* 'she jumped (it)' looks like the same construction as *k'uxt-i* 'she ate (it)', even though the stem for the former is *mem-te-* while the stem for the latter is *k'uš-t-*.

Thirdly, none of the preverbs in Chitimacha had yet to become strongly grammaticalized. Their primary effect is to adjust the semantics of the verb in manifold ways. For example, *kap* often changes the lexical aspect (i.e., actionality or *Aktionsart*) of the verb, giving it a stative interpretation, but it has not yet developed into a grammatical marker of stativity. Likewise, *ʔapš* often adds a reflexive semantics to the verb, without having yet become a grammatical marker of reflexivity. Finally, numerous cases of lexicalization of these various devices into the verb stem would have muddied any valency distinctions even further. In sum, the very abundance of

valency-adjusting devices in Chitimacha may have been precisely brought about the deterioration of valency classes in the language, as each of the various constructions interacted with one another to the point of confusion, all the while being subjected to phonological change and cases of lexicalization.

The end result was a robust set of constructions for conveying an impressive degree of nuance regarding participants in an event and their role, but one which leans heavily on discourse for referent resolution. The function of the constructions described in this paper are thus strongly in line with a scalar notion of transitivity like that of Hopper & Thompson (1980), and an understanding of voice alternations as constructions which alter the event perspective of the clause rather than directly manipulating valency *per se* (Mithun 2006; Martin 2000). In this view, changes in valency are the indirect effect of changes in verbal semantics or event perspective instead. It is to be hoped that the data and definitional challenges presented here lead to a more typologically robust definition of valency, or, if it is determined that valency is not a relevant notion for all languages, a better understanding of what motivates valency classes in the languages that have them, and what the alternatives are for the languages that do not.

6. References

- Comrie, Bernard, Iren Hartmann, Martin Haspelmath, Andrej L. Malchukov & Søren Wichmann. 2015. Introduction. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages, Vol. 1: Introducing the framework, and case studies from Africa and Eurasia*, 3–26. (Comparative Handbooks of Linguistics 1.1). Berlin: Mouton.
- Connors, Thomas, John Bowden & David Gil. 2015. Valency classes in Jakarta Indonesian. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages, Vol. 2: Case studies from Austronesia and the Pacific, the Americas, and Theoretical Outlook*, 941–986. (Comparative Handbooks in Linguistics 1.2). Berlin: Mouton.
- Dixon, R. M. W. & Alexandra Y. Aikhenvald (eds.). 2000a. *Changing valency: Case studies in transitivity*. Cambridge: Cambridge University Press.
- Dixon, R. M. W. & Alexandra Y. Aikhenvald. 2000b. Introduction. In R. M. W. Dixon & Alexandra Y. Aikhenvald (eds.), *Changing valency: Case studies in transitivity*, 1–29. Cambridge: Cambridge University Press.
- Haspelmath, Martin. 2015. Transitivity prominence. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages, Vol. 1: Introducing the framework, and case studies from Africa and Eurasia*, 131–148. (Comparative Handbooks in Linguistics 1.1). Berlin: Mouton.
- Haspelmath, Martin & Iren Hartmann. 2015. Comparing verbal valency across languages. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages, Vol. 1: Introducing the framework, and case studies from Africa and Eurasia*, 41–72. (Comparative Handbooks in Linguistics 1.1). Berlin: Mouton.
- Hieber, Daniel W. in progress. Semantic alignment in Chitimacha. Manuscript.
- Hopper, Paul J. & Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56(2). 251–299.
- Kulikov, Leonid, Andrej Malchukov & Peter de Swart (eds.). 2006. *Case, valency, and transitivity*. (Studies in Language Companion Series 77). Amsterdam: John Benjamins.

- Malchukov, Andrej & Bernard Comrie (eds.). 2015. *Valency classes in the world's languages, Vol. 1: Introducing the framework, and case studies from Africa and Eurasia*. (Comparative Handbooks of Linguistics 1.1). Berlin: Mouton.
- Martin, Jack B. 2000. Creek voice: Beyond valency. In R. M. W. Dixon & Alexandra Y. Aikhenvald (eds.), *Changing valency: Case studies in transitivity*, 375–403. Cambridge: Cambridge University Press.
- Mithun, Marianne. 2006. Voice without subjects, objects, or obliques: Manipulating argument structure in Agent/Patient systems (Mohawk). In Tasaku Tsunoda & Taro Kageyama (eds.), *Voice and grammatical relations: In honor of Masayoshi Shibatani*, 195–216. (Typological Studies in Language 65). Amsterdam: John Benjamins.
- Næss, Åshild. 2007. *Prototypical transitivity*. (Typological Studies in Language 72). Amsterdam: John Benjamins.
- Nordhoff, Sebastian. 2015. Case frames in Sri Lanka Malay. In Andrej Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages, Vol. 2: Case studies from Austronesia and the Pacific, the Americas, and Theoretical Outlook*, 987–1014. (Comparative Handbooks of Linguistics 1.2). Berlin: Mouton.
- Shibatani, Masayoshi & Ketut Artawa. 2015. Balinese valency classes. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages, Vol. 2: Case studies from Austronesia and the Pacific, the Americas, and Theoretical Outlook*, 877–940. (Comparative Handbooks in Linguistics 1.2). Berlin: Mouton.
- SIL. 2016. Fieldworks Language Explorer (FLEx). <http://fieldworks.sil.org/>.
- Swadesh, Morris. 1933. Chitimacha verbs of derogatory or abusive connotation with parallels from European languages. *Language* 9(2). 192–201.
- Swadesh, Morris. 1934a. The phonetics of Chitimacha. *Language* 10(4). 503–521.
- Swadesh, Morris. 1934b. The phonemic principle. *Language* 10(2). 117–129.
- Swadesh, Morris. 1939a. Chitimacha texts. In Morris Swadesh, *Chitimacha grammar, texts and vocabulary*. (American Council of Learned Societies Committee on Native American Languages, Mss.497.3.B63c G6.5). American Philosophical Society Library: Philadelphia, PA.
- Swadesh, Morris. 1939b. Chitimacha grammar (copy 1). In Morris Swadesh, *Chitimacha grammar, texts and vocabulary*. (American Council of Learned Societies Committee on Native American Languages, Mss.497.3.B63c G6.5). American Philosophical Society Library: Philadelphia, PA.
- Swadesh, Morris. 1946. Chitimacha. In Harry Hoijer (ed.), *Linguistic structures of Native America*, 312–336. (Publications in Linguistics 6). New York: Viking Fund.
- Tsunoda, Tasaku & Taro Kageyama (eds.). 2006. *Voice and grammatical relations: In honor of Masayoshi Shibatani*. (Typological Studies in Language 65). Amsterdam: John Benjamins.
- Wood, Esther Jane. 2007. *The semantic typology of pluractionality*. PhD dissertation, Department of Linguistics, UC Berkeley.
- Yoder, Brendon. 2016. Valency classes in Abawiri. Manuscript.

7. Abbreviations

1	first person
2	second person
3	third person
A	agent
ABL	ablative
AFF	affective
AND	andative
CAUS	causative
COND	conditional
CONT	continuative
COP	copula
DEM	demonstrative
DET	determiner
DIST	distal
DTRZR	detransitivizer
DUR	durative
ERG	ergative
GER	gerund
HORIZ	horizontal position
INCEP	inceptive
INSTR	instrumental
INTR	intransitive
IPFV	imperfective
IRR	irrealis
LOC	locative
NEG	negation
NEUT	neuter position
NF	non-first person
NOM	nominative
P	patient
PL	plural
PLACT	pluractional
PTCP	participle
QUOT	quotative
RECIP	reciprocal
REFL	reflexive
REV	reversive
SBD	subordinator
SG	singular
STAT	stative / change of state
TEMP	temporal subordinator
TOP	topic
TR	transitivizer
VEN	venitive
VERT	vertical position