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Causativity and the origin of the causative suffix in Chitimacha

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1 Introduction[1]

The aim of this paper is to describe the formal, semantic, and syntactic properties of causativity in Chitimacha, with a particular focus on the causative marker *-pa* and its diachronic origins. The data for this study comes from a collection of 88 texts dictated by native speaker Chief Benjamin Paul to linguist Morris Swadesh from 1930–1934.

Dixon defines causative constructions as follows:

> All causative constructions have in common the addition of an A argument (the causer) to an underlying clause and this provides the basic semantic/syntactic criterion for recognizing a causative construction in a given language. (Dixon 2000:33)

By this definition, Chitimacha has one analytic causative, and one dedicated morphological causative *-pa*, described by Swadesh in a manner similar to Dixon:

> Two voice modifications may be applied to normal verbs, the causative and the indirective. The former introduces a new subject, the causing subject, which is indicated as exerting inducing or permissive influence on the subject of the action or state [...] (Swadesh 1946:325)

Section 2 describes the formal realization of causative constructions in Chitimacha. Section 3 then describes their syntactic behavior, while §4 describes their semantic properties. Section 5 ends by providing evidence for a possible diachronic pathway for causative *-pa*, linking it to an instrument nominalizer of the same form.

2 Formal realization of causatives

Chitimacha has analytical and morphological means of expressing causation, but no clear class of lexical causatives. The analytical causative is formed with the verb *quci-* 'do, make', examples of which are given in (1) and (2).[2]

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[1] Orthographic conventions in this paper follow the modern pedagogical orthography created by the Chitimacha Tribe. Graphemes correspond to their IPA values unless otherwise noted here: <b> = /p$^{?}$/, <c> = /t͡ʃ/, <d> = /t$^{?}$/, <dz> = /t͡s$^{?}$/, <g> = /k$^{?}$/, <j> = /t͡ʃ$^{?}$/, <q> = /ʔ/, <ts> = /t͡s/, <x> = /ʃ/, <y> = /j/.

[2] Abbreviations used in this paper are as follows: 1 first person; 2 second person; 3 third person; A agent; ABS absolutive; AFF affective (benefactive/malefactive); AND andative; AZR adjectivizer; CAUS causative; COND

(1) *tutk huygi we panx niikmank* ***quca****-ax-naqa.*
then be.well-AZR DET people sick **make**-PROG-NF.PL.A
'They made sick people well.' (Swadesh 1953:A03g.3)[3]

(2) *jima=nk=x teet dapgi* ***quci***
night=ABS=TOP like dark **make**\NF.SG.A
'it [the end of the world] makes it dark as night' (Swadesh 1953:A05f.4)

Note that the resultative meaning in (1) – 'make well' – can also be expressed with the morphological causative on the same verb *huy-* 'be well', shown in (3).

(3) *hi huy-****pi****-ig*
AND be.well-**CAUS**-PTCP
'he made him [be] well'
lit. 'causing him to be well' (Swadesh 1953:A75j.11)

The choice between analytic or morphological causative does not appear to be one of active versus stative verbs as in some other languages, since the morphological causative may also appear with statives, as (3) above and (4) show.

(4) *qakxux hi deyk-te-****pi****-cuu-x*
cypress AND wet-INTR-**CAUS**-FUT(SG)-COND
'if you [...] splash that cypress' (Swadesh 1953:A09b.5)

Instead, the choice of analytic over morphological causative appears to be because the speaker wishes to focus on the resultant state of the action (here, *huygi* 'well' and *dapgi* 'dark' with the adjective ending *-gi*).

Chitimacha has many verbs that are considered lexical causatives crosslinguistically, but their behavior does not differ in any notable way from other verbs. Swadesh identifies a set of 'suppletive causatives' (Swadesh 1939:37), given in Table 1, but the basis for distinguishing

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conditional; COP copula; DET determiner; DTRZR detransitivizer; ERG ergative; FUT future; GER gerund; INCEP inceptive; IPFV imperfective; INCH inchoative; INS instrumental; INTR intransitive; INTER interrogative; NF non-first person; NEUT moving neutrally, sitting; NZR nominalizer; P patient; PERF perfect; PL plural; PLACT pluractional; PTCP participle; PUNC punctual; REFL reflexive; REV reversative; SG singular; TR transitive; VEN venitive; VERT moving vertically, standing.

[3] Citations for examples refer to the speaker (A = Chief Benjamin Paul, B = Mrs. Delphine Ducloux), text number (1-122), paragraph number (a-z), and sentence number (.1 - .99) in the text collection (Swadesh 1953) where the example comes from.

these verbs as a separate category of lexical causatives appears to be just that they share a meaning similar to another verb with different valency.

Table 1. Lexical causatives in Chitimacha

Intransitive Verb		Lexical Causative	
wix-	'burn (intr.)'	*qitsi-*	'burn (tr.)'
tus-	'hide (intr.)'	*qiki-*	'hide (tr.)'
guxt-	'eat (tr.)'	*nokxte-*	'feed to (ditr.)'
kaact-	'drink (tr.)'	*hakte-*	'give a drink to (ditr.)'
nuup-, *tuw-*	'die (sg./pl. tr.)'	*get-*, *dema-*	'kill (sg./pl. tr.)'
-duwa-, *-tpguxt-*	'moving rapidly, violently, unexpectedly (intr.)	*-kint-*, *-kintma-*	'throw, drop, handle violently (tr.)'

Swadesh also notes that one stem can be either causative or non-causative: *ni kamte-* 'bend down (intr./tr.)'. He also states, "Some of the causatives here listed were also recorded with causative extension -pa-, but in no case were such forms found in text. It is possible they were unnatural forms." (Swadesh 1939:37). However, the corpus does contain at least one example of the morphological causative *-pa* occurring with a lexical causative (5), so there is no real morphosyntactic evidence to suggest that Chitimacha has a separate class of lexical causatives with its own unique behavior (although it should be noted that the causative construction in (5) has a passive meaning; see the discussion of example (22) in §3 below for more details).

(5) *hus kici mahynixin =hix kap get-**pi**-qi.*
3SG wife last =ERG STAT kill(SG)-**CAUS**-NF.SG.A
'His last wife caused him to be killed.' (Swadesh 1953:A37b.3)

With the exception of the marginal constructions just noted above, causation in Chitimacha is otherwise expressed using the morphological causative *-pa*. Example (6) shows a prototypical instance of its use. In total, there were 346 instances of the causative *-pa* and its allomorphs in the corpus.

(6) *hi cuu-**pa**-ki-di-na*
AND go(SG)-**CAUS**-1SG.P-FUT(PL)-NF.PL.A
'[they] would have made me go away' (Swadesh 1953:A02d.7)

The causative also has a morphophonologically-conditioned allomorph *-pi*, shown in (7) and (8), and typically deletes the preceding vowel, as (9) below shows.[4]

(7) *git-**pi**-cu-k*
be.dry-**CAUS**-FUT(SG)-1SG.A
'I'll dry it' (Swadesh 1953:A17b.22)

(8) *wetkx kax saa-**pi**.*
then clam rain-**CAUS**\NF.SG.A
'Then he caused it to hail.'
lit. 'Then he caused it to rain clams.' (Swadesh 1953:A08b.4)

The corpus does not contain any instances of double causation, and given how frequently *-pa* occurs, this suggests that such double causation would be ungrammatical. There is however a superficially similar suffix *-pa* (and its more frequent allomorph *-pi*) that may co-occur with the causative *-pa*, and is used for instrument nominalizations (9) and verbs in complement clauses with *kaakwa-* 'know / be able', *kaahan* 'unable', *gay-* 'be not', *giht-* 'want' and *te* INTER.COP (10).

(9) *him kut pak-t-m-**pa** qiikx-ma-a-cu-k*
2SG head scrape-TR-PLACT-**INS** grind-PLACT-AFF-FUT(SG)-1SG.A
'I shall grind your scissors for you' (Swadesh 1953:A07b.2)

(10) *dem-**pi** gih-naqa*
fight(PL)-**GER** want-NF.PL.A
'they wanted to fight' (Swadesh 1953:A06a.8)

While these two forms appear related (and are related diachronically, as will be shown in §5), the nominalizer *-pa* does not appear in the same position of the verbal template as the causative *-pa*, as (11) shows.[5]

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[4] One verb, *teet-*, is irregular in its causative form, becoming *tepa-* rather than **teetpa-*.

[5] There is some variation in the data that calls the rigidity of the Chitimacha template into question, shown in the examples below. In each case, the pluractional occurs before the causative, whereas in every other instance in the corpus, the causative precedes the pluractional. These cases likely represent lexicalizations, and do not suggest that the causative and nominalizing uses of *-pa* should be considered one and the same morpheme.

(a) *qapx kay-**mi**-**pa**-mi-cu-k*
REFL arise-**PLACT**-**CAUS**-PLACT-FUT(SG)-1SG.A
'[I will cause them to arise]' (Swadesh 1953:A11e.8)

(11) *hus yaama hus nehe qat-**pa**-m-**pi** gay-x-iqi*
3SG young 3SG self be.big-**CAUS**-PLACT-**GER** be.not-PROG-NF.SG
'it does not itself raise its young' (Swadesh 1953:A78a.5)

Dixon (2000:31) also notes that for a morphological process to have both a valency-increasing (e.g. causative) and valency-reducing (e.g. nominalization) function is extremely rare. Given their different functions and templatic positions, the nominalizing *-pa* should therefore be considered distinct from the causative.

The formal marking of nominals in causative constructions will be discussed along with argument structure in §3. Section 4 then describes the construction's semantics.

3 Syntax & argument structure in causative constructions

The morphological causative may appear on intransitive (12), transitive (13), ditransitive (14), or even impersonal verbs (15). Transitive and ditransitive verbs do not need to be detransitivized before adding the causative.

(12) *wetkx qap nen-cu-**pi**.*
then VEN cross.water-VERT-**CAUS**\NF.SG.A
'Then he got him across [the water].' (Swadesh 1953:A01c.5)

(13) *po hi qam-**pa**-m-iqi.*
medicine AND see-**CAUS**-PLACT-NF.SG.A
'he showed them medicines' (Swadesh 1953:A03e.15)

(14) *qapx kicemank gix qupa=nk we hana=nki=x*
couples just two=ABS DET house=LOC=TOP

*hi huhct-**pa**-mi-cu-ki.*
AND put.in-**CAUS**-PLACT-FUT(SG)-1SG.A
'Only two couples shall I put in the house.' (Swadesh 1953:A10f.11)

(b) *ni nuuk-**m**-**pi**-qi*
DTRZR learn-**PLACT**-**CAUS**-NF.SG.A
'[she] taught [her]'
lit. 'she caused her to learn' (Swadesh 1953:A13c.4)

(c) *we panx pinikank heec-**m**-**pi**-naqa*
DET people red move.away-**PLACT**-**CAUS**-NF.PL.A
'[they] helped the Indians' (Swadesh 1953:A44a.10)

(15) *nakt* *qap* *saa-**pi**-qi*
ice VEN rain-**CAUS**-NF.SG.A
'[he] caused it to hail' (Swadesh 1953:A45a.1)

The impersonal verb in (15) takes an object *nakt* 'ice', and so is not avalent. However, this is still an interesting case because the causative has been applied to a verb which otherwise has no subject, so there is no Causee present in the derived causative.

Commented [DWH1]: This is actually the subject.

As (14) above and also (16) below show, when added to ditransitive constructions *-pa* does not add an argument to the verb, though in the case of (16) it does change the semantics from 'give' to 'apply to' or 'give out'.

(16) *dzaytepjiinix* *qam* *kapx* *weytemank* *qaa-**p**-uy-naqa.*
lazy what name that kind give-**CAUS**-IPFV-NF.PL.A
'They gave him the name of "lazy" and (other) names of that sort.'
(Swadesh 1953:A11a.4)

Some but not all of the auxiliary verbs in Chitimacha may also take the causative suffix. The causative does not occur on the positional auxiliaries *ci-* 'be standing', *hi-* 'be sitting', *pe-* 'be lying', but does occur with the negative auxiliary *gay-* 'be not' where it usually means 'lose', as illustrated in (17).

(17) *panx* *qoogi* *hi* *gay-**pi**-naqa*
people many AND be.not-**CAUS**-NF.PL.A
'they had lost many people' (Swadesh 1953:A03i.1)

The construction in (17) is particularly interesting because it does not adhere to the prototypical semantics of causative constructions. The verb *gaypa-* literally means 'cause to be not', but the Causer in fact has no part to play in causing the event, and is a semantic Experiencer instead. And yet, even though Experiencers in Chitimacha tend to be coded with Patient marking on the verb, and even though *gay-* does occur with Patient markers elsewhere, the Causer of *gaypa-* 'lose' is always encoded with Agent rather than Patient marking, as though the Experiencer really were the cause of the event. This is exemplified in (18).

(18) *hi* *gay-**pi**-naka*
AND be.not-**CAUS**-1PL.A
'we lost it' (Swadesh 1953:A80b.4)

It appears then that in the causative construction with *gay-*, *-pa* serves more to manipulate the argument structure of *gay-*, creating a transitive, than to serve strictly as a semantic causative.

The causative may be added to either an agentive (19) or patientive (20) verb.

(19) *nuhc-**pa**-ki-di-na-n*
run-**CAUS**-1SG.P-FUT(PL)-NF.PL.A-PERF
'they would have chased me away'
lit. 'they will have caused me to run (away)' (Swadesh 1953:A02d.10)

(20) *qun kun =hix nem-**pa**-ki-cuy-i*
some thing =ERG be.scared-**CAUS**-1SG.P-FUT(SG)-NF.SG.A
'something to frighten me'
lit. 'something will frighten me' (Swadesh 1953:A33a.10)

When added to an agentive verb, the original A argument (the Causee) always appears as a Patient, as in (19). Even though the Causee is the Agent of the caused action, it is always encoded as a Patient in causative constructions. While there are languages where Causees are coded in the same way as typical Agents, or where the causative construction distinguishes between Causees that retain some control over the action and those that do not (Comrie 1989:171–174; Payne 1997:183–186), the Causee in Chitimacha must always be a Patient form – a typologically unusual pattern. The causative construction may of course take Agent person markers, as (21) shows, but in this case the Agent markers must refer to the Causer rather than the Causee.

(21) *kap kay-**pa**-mi-cu-k*
up rise-**CAUS**-PLACT-FUT(SG)-1SG.A
'I will [...] make them arise'
*'they will make me arise' (Swadesh 1953:A11c.6)

It should also be noted that the original A of the transitive verb never becomes the object of the caused event either; it must always be the Causee. Swadesh explains, "An expressed first person object of a causative is the object of causation, never the object of the underlying verb; for example, getpaki?i [*get-pa-ki-qi*: kill-CAUS-1SG.P-NF.SG-A] is 'he caused me to hit him', never 'he caused him to hit me'." (Swadesh 1939:184). It is possible, however, for the caused event to take on a passive meaning with the addition of the stative preverb *kap*, illustrated in (22).

(22) *hus kici mahynixin =hix **kap** get-**pi**-qi.*
3SG wife last =ERG **STAT** kill-**CAUS**-NF.SG.A
'His last wife caused him to be killed.' (Swadesh 1953:A37b.3)

In this example, the wife did not kill the husband herself, but rather called her sisters who then killed him. This construction allows the speaker to reframe the event as one without an explicit

Causee, since it is the wife (the Causer) rather than the sisters (the Causee) that is at the center of the discourse at this point in the story.

Turning now to nominal marking: Much remains to be discovered regarding the nominal marking of grammatical relations in Chitimacha, but a few things can be said concerning the behavior of nominal marking in causative constructions. Chitimacha nominal marking is clearly 'optional' in the sense that it is either discourse-based or a kind of differential argument marking. Exactly what conditions the presence of these markers, and indeed even what grammatical relations they encode, has yet to be determined. Keeping this caveat in mind, there are two nominal markers that appear to encode grammatical relations: *=hix*, written as a separate word, and which I tentatively call the Ergative; and *=nk*, written attached to the preceding word and which I tentatively call the Absolutive. *=nk* has two allomorphs: *=k* after consonants and *=nk* after vowels. *=hix* is exemplified in (23), and *=nk* in (24)–(25).

(23) *wetkx qoox* ***=hix*** *we kipi kap guxminaqa.*
then buzzard **=ERG** DET meat PUNC eat-PLACT-NF.PL.A
'Then the buzzards ate the meat.' (Swadesh 1953:A21e.13)

(24) *qix* ***=k*** *kuu keta=nki qap ni-ig-x-iki.*
1SG**=ABS** water side=LOC VEN to.water-PTCP-PFV-1SG.A
'I have come to the water's side.' (Swadesh 1953:A01b.3)

(25) *qix* ***=k*** *kap get-ki-ig*
1SG**=ABS** PUNC kill(SG)-1SG.P-PTCP
'when they killed me' (Swadesh 1953:A04c.8)

In causative constructions, if *=hix* is present, it marks the Causer, as (22) above and (26) below show.

(26) *wey-x* ***=hix*** *mix qap qam-pa-m-kuy-iqi.*
DET-TOP **=ERG** way VEN see-CAUS-PLACT-1PL.P-NF.SG.A
'He showed us the way.'
lit. 'He caused us to see the way.' (Swadesh 1953:A03d.5)

If *=nk* is present, it marks the Causee, as in (27).

(27) *qamin =hix gan him* ***=k*** *nac-pi-cuy-i.*
something =ERG NEG 2SG**=ABS** get.saved-CAUS-FUT(SG)-NF.SG.A
'Nothing will save you [now].'
lit. 'Nothing will cause you to get saved.' (Swadesh 1953:A26e.4)

The original object of the transitive does not appear to take marking in a causative construction even when the Causee does, as seen with the object *mix* 'way' in (26) above.

There is one instance in the corpus where *=hix* appears on the Causee rather than the Causer, shown in (28). Swadesh notes, "unless this is an error, it indicated that the subject relation to the underlying verb is maintained in this case." (Swadesh 1939:184).

(28) *qix waa kix qatin* ***=hix*** *hi wayt-pi-qi*
1SG uncle dog large **=ERG** AND surpass-CAUS-NF.SG.A
'he made my uncle's horse win (over the others)' (Swadesh 1953:A67f.10)

This shift in nominal marking may reflect the amount of control or directness of involvement of the Causer. In (28), the Causer is only indirectly allowing the horse to win, because he does so by interfering with the other horses. Nothing is done to the winning horse itself. So it may be that the syntax of Chitimacha causative constructions can distinguish between direct and indirect causation, but more data would be needed to confirm this with certainty.

4 Semantics of the causative construction

Swadesh has the following to say regarding the meaning of the causative in Chitimacha:

> The causative expresses causation of any kind, intentional or unintentional, by manipulation or moral suasion, by action or by allowing action to take place. The causative of adjectives and static verbs is inways [sic] inchoative, 'to cause to become...'" (Swadesh 1939:184)

Dixon (2000) discusses nine semantic parameters to consider when examining the behavior of causatives. This section looks at each of these parameters in turn for Chitimacha, many of which have already been discussed briefly above.

In some languages with morphological causatives, the causative morphology may only apply to active verbs. This is not the case for Chitimacha, as the stative verbs in (3) and (7) above and the example in (29) show.

(29) *kap niik-**pi**-qi.*
INCH be.sick-**CAUS**-NF.SG.A
'He caused him to get sick.' (Swadesh 1953:A67g.4)

Section §3 also showed that *-pa* may be applied to verbs of any transitivity, including impersonal verbs and the negative copula. Morphological causatives in combination with impersonal verbs and copulas are both less common crosslinguistically, making Chitimacha a typologically unusual language in this regard.

Some languages distinguish between caused events where the Causee retains some control over the action versus those where the Causee does not. In Chitimacha, the Causee is always

coded as a morphological Patient on the verb (as was seen in example (19) above), so it does not appear that Chitimacha codes for this distinction in degree of control of the Causee. The same is true for volition or affectedness on the part of the Causee. There does not appear to be any behavioral or morphological coding that distinguishes between degree of volition or affectedness of Causees.

Chitimacha causatives may however syntactically code for a difference between direct and indirect causation on the part of the Causer, as we have seen in example (28), and Swadesh notes in the quote above that the causation can also happen by "allowing the action to take place". If example (28) is to be taken as representative, this distinction in directness of causation is made by placing *=hix* on the Causer when the causation is direct, and on the Causee when the causation is indirect.

No distinction appears to be made between intentionally and unintentionally caused events, although the causative may appear with either. This is evident in example (18) where the causative is used with *gay-* 'be not' to mean 'lose'. In that example, the many people were lost through a series of accidents and starvation, and so the causation could not have been volitional. There does also not appear to be a distinction between caused events that happen naturally versus those that take effort on the part of the causer.

Dixon (2000:31–32) also notes that the causative may be syncretic with an applicative function in many languages. In Chitimacha, however, there is a separate morphological applicative which Swadesh calls the 'indirective' but which I call the affective (combining benefactive and malefactive functions), illustrated in (30).

(30) *quc ho panx xuxgay kas nuc-ma-**a**-naqa*
who these people wagon REV work-PLACT-**AFF**-NF.PL.A
'Who fixed these people's wagon?'
lit. 'Who repaired-for-them[6] these people's wagon?' (Swadesh 1953:A51b.2)

Though Swadesh says that the causative and the indirective may co-occur, I have found no example of this in the corpus, and Swadesh provides no examples in his grammar.

Dixon (2000:33) additionally states that some languages may have semantic restrictions on the Causer, while in other languages a Causer may be a person, abstract thing, or event. Chitimacha does not seem to have any such restrictions, as the event Causer in (31) shows (and also the inanimate Causer in (2) above).

[6] The 'them' part of 'repaired-for-them' is implied in the pluractional *-ma-*.

(31) *kuu* *qati* *keystigi* *qap* *cuu-x-iqi* *panx* *qoonak*
water big very VEN go-PROG-NF.SG.A people all

kap *ke-ci-**pa**-mi-ig.*
STAT near-VERT-**CAUS**-PLACT-PTCP
'A terrible flood is coming to all the people.'
lit. 'A flood is coming causing all the people to drown.' (Swadesh 1953:A10f.2)

Finally, it is an interesting question the extent to which each of these causative constructions has been lexicalized. Some verbs, like *qam-* 'see', occur frequently both with and without *-pa*, and the semantics of causative form are entirely transparent and compositional, so that *qampa-* means 'show' (lit. 'cause to see'). Given the frequency of *qampa-* however (28 instances), it may be this form has become lexicalized as well. A better example of a semantically compositional causative may be *saq-* 'rain' and its causative counterpart *saapa-* 'cause to rain', which occurs only four times in the corpus, and seems like an unlikely candidate for lexicalization. On the other hand, there are some verbs whose causative meaning is highly idiosyncratic, such as *kecipa-* 'drown' (< *keci-* 'take near') and *heecpa-* 'help' (< *heeci-* 'move aside). These cases are very likely lexicalized. Thus Chitimacha appears to show a range of both lexicalized and non-lexicalized uses of *-pa*.

5 Diachronic origin of the causative

Crosslinguistically, morphological causatives are known to arise from verbs such as 'do' (Schultze-Berndt 2008), 'cause', 'give', 'leave', 'make', 'put', 'send', and 'take' (Heine et al. 1993), and instrumentals, which sometimes even share morphology with the causative (Song 1990:194). In Chitimacha, there is strong evidence that the causative morpheme *-pa* derives historically from the instrument nominalizer / gerund *-pa*, much in line with the instrumental > causative grammaticalization pathway seen in other languages. This section lays out the evidence for this pathway and describes the likely process by which it occurred.

It was noted in §2 that the causative and the instrument nominalizer / gerund in Chitimacha, though sharing the same form in *-pa*, have very different functions and morphosyntactic behaviors. There is however some convergence between the two. Because the nominalizing use of *-pa* precludes the presence of inflectional marking, it often appears, prima facie, to fill the same slot in the verb template as the causative. An instance of this can be seen by comparing (32) and (33) below.

(32) *wetk kap natspik-mi-naqa xic-te-**pa**.*
then INCEP begin-PLACT-NF.PL.A smoke-INTR-**GER**
'They started to smoke him.' (Swadesh 1953:A40a.9)

(33) *xic-te-**pa**-ax-naqa*
smoke-INTR-**CAUS**-PROG-NF.PL.A
'(they) smoke it' (Swadesh 1953:A72b.9)

-pa is not the only morpheme to appear both immediately after the stem and at the end of the verb. The other is *-ki*, which appears both before and after the tense slot. Like *-pa*, its functions and morphosyntactic behavior are different in these two positions. The verb-medial form is the Patient marker, while the verb-final form is the Agent marker. The Agent form also triggers certain sound changes in the preceding vowel, while the Patient form does not (see Hieber in progress for a detailed description of these affixes). The agentive *-ki* is shown in (34), and the patientive *-ki* in (35). Note how similarly these suffixes pattern to *-pa* in (32) and (33) above.

(34) *qam quci-cu-**ki***
what do-FUT(SG)-**1SG.A**
'What shall I do?' (Swadesh 1953:A17b.28)

(35) *qam huygi quc-**ki**-cuy-i*
what good do-**1SG.P**-FUT(SG)-NF.SG.A
'what good would it do me?' (Swadesh 1953:A83a.6)

What explains this pattern of similarity between verb-medial and verb-final suffixes? An important piece of explanatory evidence comes from examining the intervening morphology, and in particular the tense suffixes *-qix-* PRES (and its more frequent allomorph *-ax* after vowels) and *-cuw-* / *-di-* FUT (sg./pl.; allomorphs *cuu-* and *cuy-*).

The progressive *-qix-* is cognate with several other morphemes. First is the generic quotative *qixka* 'it is said (that …); they say (that …)', decomposable into *qix-* + *-ka* PL. Second is a copula-like morpheme that occurs occasionally with the positional auxiliaries and presentatives. This is exemplified in (36).

(36) *wey qakun=tk=x kun hus hi-qi=nki **qix**-i-n.*
DET bear=ABS=TOP some 3SG be(NEUT)-NF.SG=LOC **COP**-NF.SG-PERF
'The bear was at home.'

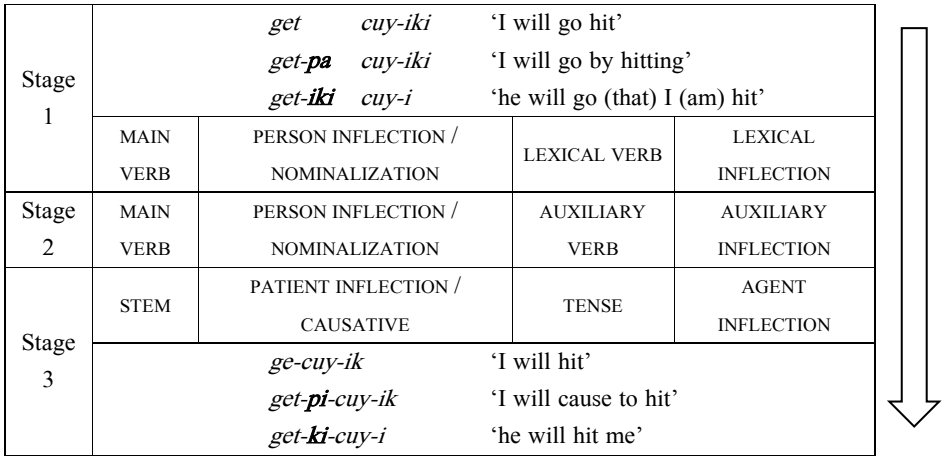
Note that this is the first sentence of its text, and *qix-* here acts as a presentational, introducing the bear as a new discourse topic. The final cognate to *-qix-* is the topic marker *-x*, visible in (36) above, with its allomorph *-ix*, shown in (37).

(37) *wayt-m-**ix*** *=hix* *waac-cuy*
surpass-A.NZR-**TOP** =ERG marry-FUT(SG)\NF.SG.A
'the winner will marry her' (Swadesh 1953:A22b.7)

These forms, taken together, suggest a common origin in a historic copula **qix-*, which underwent (poly)grammaticalization to become a progressive tense marker, a presentational verb, a topic marker, and a generic quotative, all of which are well-attested grammaticalization pathways for copulas crosslinguistically. As for the future tense marker *-cuw-* / *-di-*, these forms are quite transparently descended from *cuw-* / *dut-* 'go (sg./pl.)', a very common grammaticalization pathway for future tense forms.

The diachronic origin of the tense markers implies an earlier stage of the language where periphrastic verb constructions consisting of a main verb + inflected auxiliary 'go' or 'be' were quite common, so much so that 'go' and 'be' became semantically bleached and were reanalyzed as part of the inflectional morphology on the verb, bringing their person marking along with them. Crucially to our understanding of the distribution of *-pa* and *-ki*, any morphology that was originally verb-final (including person markers and nominalizers) would now be reanalyzed as occupying a verb-medial slot in the verb template. Moreover, since the auxiliaries 'go' and 'be' would have retained their own verb-final morphology, it now became possible for the same affix to appear at two points in the verb template: verb-medially, where they represent leftover morphology trapped between the main verb and the grammaticalized auxiliary verb, and verb-finally, where they reflect the inflection of the original auxiliary verb. Figure 1 provides a skeleton sketch of how this process might have occurred.

Figure 1. Grammaticalization of lexical verbs into tense in Chitimacha



This rudimentary sketch of the diachronic process whereby auxiliaries became tense markers neatly explains the formal connection between the causative and instrumental / gerund *-pa* in Modern Chitimacha. The original function of *-pa* was as an instrument nominalizer, which was later extended in function to nominalizing verbs in subordinate constructions, both functions it retains today in addition to its newer causative function. This layering of original and more recent functions of the same form is characteristic of many grammaticalization processes. As the auxiliary verbs 'go' and 'be' were reanalyzed as tense markers and attached themselves to the main verb, *-pa* became frozen between the verb stem and the tense marker, and in this position subsequently (or concurrently) underwent reanalysis from a subordinating nominalizer to a causative. At the same time, *-pa* continued to be appended to verbs with its original nominalizing function. It is this layering of grammaticalization processes that has allowed one and the same original morpheme, *-pa*, to appear at two different points in the verb template with very different functions.

Commented [DWH2]: Just prior to this, you should mention that *–pa* NZR only ever occurs in subordinate constructions, usually subordinate to a copula. This same function explains the origin of its causative use.

6 Conclusion

This paper set out to describe the formal, syntactic, and semantic properties of causatives in Chitimacha, as well as the diachronic origin of the morphological causative *-pa*. In terms of formal realization marking of causatives, it was shown that Chitimacha has morphological and analytic causatives, but no clear class of lexical causatives. Analytic causatives with *quci-* 'do, make' are used for resultatives of the kind 'make x into y', and otherwise the morphological causative *-pa* is used.

Syntactically, Chitimacha causatives are typologically interesting on several counts: First, that the causative *-pa* may be applied to verbs of any transitivity, including impersonal verbs like 'rain'. With impersonal verbs, the causative construction lacks a Causee, while in ditransitive verbs the causative does not add an argument to the clause. Chitimacha speakers can also use a passive-like construction to convey the caused event when the Causee is not discourse-prominent. Also typologically uncommon is that Chitimacha allows for the use of the causative with the negative auxiliary, and in this case the grammatical Causer is a semantic Experiencer. Finally, the Causee must always be coded with Patient forms, rather than allowing for a choice between Agent and Patient forms depending on the degree of control of the Causee over the caused action.

Moving to semantics, there does however appear to be a means of expressing the degree of control of the Causer over the caused action. The nominal marker *=hix* is placed on the Causer when they cause the action directly, but on the Causee when the action is caused only indirectly. Other than this, Chitimacha does not appear to make any of the semantic distinctions known to occur in causatives crosslinguistically. While many of the meanings of derived causatives have become lexicalized, there are still many instances of the causative being used in a productive, online fashion.

Finally, §5 sketched the diachronic pathway by which the instrument nominalizer *-pa* became frozen between a main verb and a grammaticalized auxiliary, and was subsequently reanalyzed as a causative, thus explaining the presence of a *-pa* morpheme with two disparate functions in different places in the verbal template. Knowledge of this process contributes to an understanding of why instrumentals and causatives often share the same form, and how the one can give rise to the other via a process of grammaticalization.

In sum, the Chitimacha causative construction proves to be a typologically interesting phenomenon that sheds a great deal of light onto the grammatical history of Chitimacha and causatives more generally.

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