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5 Applicatives in Upper Necaxa Totonac

Abstract: Like other members of the Totonac family, Upper Necaxa Totonac (UNT) lacks prepositions and morphological case. Monomorphemic verbs are either mono- or bivalent except for a handful of trivalent stems, and a complex derivational system of causatives and applicatives is used to augment verbal valency. Applicatives in this respect play a functional role in UNT grammar analogous to that of prepositions and oblique “semantic” cases in other languages. As derivational elements used in word formation, applicatives affect the meaning of their bases in a variety of ways: many applicative forms are entirely compositional, while others are non-compositional but transparent (i.e., psychologically plausible), and still others are fossilized and idiomatic—although even fossilized forms continue to be associated with fairly consistent semantic domains.

1 Introduction

Upper Necaxa Totonac (UNT; iso-639 tku) is a member of the Totonacan (a.k.a. Totonac-Tepehua) language family, spoken by approximately 3,000 people in the north-eastern part of Puebla State, Mexico. Like other members of the family, UNT lacks prepositions and morphological case. Monomorphemic verbs are either mono- or bivalent except for a handful of trivalent stems. A complex derivational system of causatives and applicatives is used to augment verbal valency, creating verbs with three, four, or even five arguments. Consider the example in (1):¹

¹ Examples used in this paper are drawn from the Upper Necaxa Totonac database and the author's field notes, ultimately having their sources in texts, conversations, and interviews with speakers. The initials of consultants who provided particular examples are given following the free translation. Examples use a practical orthography in which most symbols have the values they have in the IPA/APA, with the following exceptions: <x> = /ʃ/, <tz> = /ts/, <ch> = /tʃ/, <lh> = /ɬ/, <h> = /ʔ/, <j> = /x/, <uj> = /w/, and <y> = /j/. A colon following a vowel indicates phonemic length, and a straight apostrophe, laryngealization; a raised comma following a fricative indicates weak ejection. The acute accent marks lexical stress. Semantic roles in lexicographic definitions of verbs are indicated by variables; roles added by applicatives are given using an abbreviation for their most typical semantic domain.

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- (1) *tsa'má i'xhawá'cha' nakila'hmakapini'ya' puská:t ti: ta'jatatlát*
tsa'má i'x-hawá'cha' na-kin-Ø-la'h-makapin-ni'-ya'
 that 3PO-boy FUT-1OBJ-SG.OBJ-ALL.APPL-send:2SBJ-BEN.APPL-IPFV:2SG.SBJ
puská:t ti: Ø-ta'jatatlá-t
 woman HREL 3SG.SBJ-sick-PFV
 'On behalf of her_i son, you will send me to the woman_i who is sick.' (LB)

The verb *la'hmaka*: 'ni' 'X sends Y to G on behalf of B' in (1) is based on a bivalent stem, *maká*: 'n 'X sends Y', which is combined with the allative applicative *la'h-* and the benefactive *-ni'* to add two new objects expressing a Goal and a Beneficiary, respectively. In total, the language has five applicatives—the benefactive *-ni'*, the instrumental *li:-*, the comitative *ta:-*, the allative *la'h-*, and the containing instrumental *pu:-*. These will be described in detail in Section 3, following a brief tour of UNT morphosyntax.

2 Morphosyntax

Like all Totonacan languages, UNT is polysynthetic with nominative-accusative alignment and flexible (unmarked VO/VS) constituent order. Verbs are inflected for tense, aspect, mood, and person/number agreement with subject and objects. Person and number of subjects is expressed cumulatively, while person and number of objects have separate exponents:

- (2) *pus chuwá: ka:tama'hni:yá:n ka:talhkuyuyá:n*
pus chuwá: ka:-ta-ma'hni:-ya:-n ka:-ta-lhku-yu-ya:-n
 INTJ now PL.OBJ-3PL.SBJ-kill-IPFV-2OBJ PL.OBJ-3PL.SBJ-burn-TRZ-IPFV-2OBJ
 'Well, now they are going to kill you guys, they are going to burn you guys.' (MR)

Both verbs in (2) use the prefix *ta-* to show agreement with an understood 3PL subject. The person of the 2SG object is expressed by the suffix *-n* while its number is expressed by the plural object prefix *ka:-*. The same prefix *ka:-* also expresses the plurality of first- and third-person objects (see (13) below). Third-singular subjects and objects trigger no overt agreement, although I will include Øs in glosses to help keep track of verbal valency:

- (3) *cha:'lho'ho'ho'tzá' ya:wá:lh kí'wi' cha:'ká:m*
cha:-lho'hó'ho'=tzá' Ø-Ø-Ø-ya:wá:-lh kí'wi' cha:'ká:m
 shin-perforated=now 3OBJ-SG.OBJ-3SG.SBJ-strike-PFV tree woodpecker
 'The woodpecker strikes the tree, making holes in its trunk.' (PS)

While plural non-human and lower-animate subjects do not always trigger agreement, third person animates and first- and second-persons always do, with some restrictions on certain combinations of person and number (Beck 2004, 2016).

All arguments in the clause are bare noun phrases. UNT lacks morphological cases and the closest thing it has to a preposition is the locative clitic *nak=*, which forms optional (adjunct) locative adverbial phrases:

- (4) *he:po'hó:' wi:lh ha'wáj naklha'mám*
he:po'hó:' Ø-wi:lh ha'wáj nak=lha'mám
 piled 3SG.SBJ-sit nixtamal LOC=pot
 'The nixtamal is piled up in the pot.' (SC)

The verb in (4) is *wi:lh* 'X sits' and the *nak=* phrase specifies the location where X is sitting. The location, however, is not an argument of *wi:lh*: it is not part of the verb's meaning and does not correspond to an event-participant or variable in its lexicographic definition.

Underived verbs in UNT are either monovalent (5), bivalent (6), or trivalent (7):

- (5) *xa'kha'chí: ktama'hawásli'*
i'x-i'k-ha'chi: i'k-tama'hawas-li'
 PST-1SG.SBJ-be.drunk 1SG.SBJ-fall.down-PFV
 'I was drunk and I fell down.' (RM)
- (6) *wi'x nakine'héya'*
wi'x na-kin-ne'he-ya'
 you FUT-1OBJ-SG.OBJ-fan-IPFV:2SG.SBJ
 'You're going to fan me (in the sweatlodge).' (BC)
- (7) *wan tzu'ma'já:t, kinta:tá' kista:'maxkí:n*
wan tzu'ma'já:t kin-ta:tá' kin-Ø-Ø-maxki:-n
 say girl 1PO-father 1OBJ-SG.OBJ-3SG.SBJ-give-2OBJ
 'Says the girl, my father gave me to you (in marriage).' (LB)

The single argument of monovalent verbs like those in (5) is, naturally, a subject, and the non-subject argument in underived bivalent verbs like (6) is a primary object (Beck 2016). While the first- and second-person objects both control agreement in the underived trivalent verb in (7), the primary object is the Recipient/Affected and the secondary object is the Theme. The main evidence for this is the effect of the suppressive antipassive suffix *-nin/-nun/-nan*, which targets the Recipient rather than the Theme, as shown in (8):

- (8) *na'kmaxki:nín kistánku'*
na-i'k-Ø-Ø-maxki:-nín *kin-stánku'*
 FUT-1SG.SBJ-**3OBJ-SG.OBJ**-give-**ANTIP**_{SUPPR} 1PO-younger.sibling
 'I'm going to give my younger sister away (in marriage).' (LB)
 (Not: 'I'm going to make gifts / a gift to my younger sister')

As we saw in (7), *maxkí*: 'X gives Y to Z' is normally trivalent, with both a Theme and a Recipient; however, when the antipassive *-nín* is added, the verb becomes bivalent and the Recipient is suppressed—it can no longer be expressed in the clause. As argued in Beck (2016), this suggests that the Recipient argument is more “privileged” in syntactic terms and so is a better candidate for primary object than the Theme.

There are no other underived valency classes, nor are there any other grammatical relations in UNT syntax than subject, primary object, and secondary object. UNT nevertheless has large numbers of multivalent stems with three, four, or even five objects, derived through an extensive set of causative and applicative morphemes. The more productive of the two causatives is a circumfix that can be applied to both monovalent and bivalent stems:

- (9) *ja: ma:púpu:’, xku'tánli'*
ja: Ø-Ø-ma:-pupu-u:’ *Ø-xku'tán-li'*
 NEG 3OBJ-SG.OBJ-**CAUS**-bubble-**CAUS**:2SG.SBJ:PFV 3SG.SBJ-sour-PFV
 'You don't boil it, it goes sour.' (DR)

- (10) *tama:ku'kí:lh tza'má pú:ru*
Ø-Ø-ta-ma:-ku'ka:-i:-lh *tza'má pú:ru*
 3OBJ-SG.OBJ-3PL.SBJ-**CAUS**-carry-**CAUS**-PFV that burro
 'They make the burro carry the load.' (MR)

Following the antipassive criterion, the Causee in the causatives of bivalent bases is the primary object. The second causative, *ma'ha-* ('STIMULUS'), adds an indirect cause to certain kinds of intransitive bases (e.g., *pu'n* 'X blossoms' < *ma'hapú'n* 'A causes X to blossom').

UNT also has an indefinite voice which suppresses the expression of the Actor:

- (11) *ja: kimaxki:kán kintapálh*
ja: kin-Ø-maxki:-kan kin-tapálh
 NEG **1OBJ-SG.OBJ**-give-**IDF** 1PO-price
 'I haven't been given my salary.' (LC)
- (12) *wi'x ma:ma'hta'ha'lhni:pá:'ka'*
wi'x Ø-Ø-ma:-ma'hta'ha'lh-ni:-pa:'-ka'
 you **3OBJ-SG.OBJ**-CAUS-guard-CAUS-PROG:2SG.SBJ-**IDF**:2SG.SBJ
 'You have been made to guard it.' (MR)

In the first and third persons (11), this voice simply suppresses the subject and leaves the object(s) intact; with second persons (12), the erstwhile object triggers second-person subject agreement on the verb. The indefinite voice can also be used with monovalent verbs to express indefinite or generic Actors (e.g., *ni:kán* ‘(people) die [*ni:*]’). In this respect, the indefinite voice resembles the impersonal voices of European languages in that it affects subject of both transitive and intransitive verbs, although there is no option for expressing the agent in an oblique phrase as there is in, say, Dutch.

With some verbs, *-kan* forms can have reflexive interpretations—the overlap between agent suppression and reflexivity being reminiscent of the multiple functions of the Spanish *se*. The indefinite voice can also be combined with the antipassive to create verbs with zero syntactic valency (*tzo’hnunkán* ‘(people) write [*tzo’h-*]’).

3 Applicatives in UNT

UNT has five applicatives—four prefixes (*li:-* ‘INSTRUMENTAL’, *ta:-* ‘COMITATIVE’, *la’h-* ‘ALLATIVE’, and *pu:-* ‘CONTAINING INSTRUMENTAL’) and one suffix (*-ni* ‘BENEFACTIVE’). These applicatives are freely combinable both which each other and with the causatives, creating complex multivalent verbs like that in (13):²

- (13) *a’htú’ chiwíx i’ka:ta:’pu:la’hmakamílh tza’ká:t kistánku’ tza’má chi’xkú’*
a’h-tu’ chiwíx i’k-ka:-ta:’-pu:-la’h-makamín-lh tza’ká:t
 CLF-two rock 1SG.SBJ-PL.OBJ-CINST.APPL-CTNR-ALL.APPL-throw-PFV sling
kin-stánku’ tza’má chi’xkú’
 1PO-younger.sibling that man
 ‘I and my brother threw two rocks at that man with a sling.’ (LB)

The verb in (13) is *ta:’pu:la’hmakamín* ‘X throws Y at G using N along with C’, formed from *makamín* ‘X throws Y’ in combination with the comitative applicative *ta:-*, which adds a Co-Actor (C) role to the verb, the allative applicative *la’h-*, which adds a Goal (G), and the containing instrumental *pu:-*, which adds a Containing Instrument (N). The applied objects added by applicatives are secondary objects (Beck 2016), and so in that sense resemble the prepositional objects required by the English gloss to express the non-Patient/Theme semantic roles. Note that in (13) the controller of agreement is the plural primary object (*a’htú’ chiwíx* ‘two rocks’); however, secondary objects can also control agreement, as seen in (7) above, and in (15) and (42) below. First- and second-person objects always control agreement; competition for control of agreement by third-persons is resolved on the basis of topicality and other discourse factors.

2 The four prefixal applicatives have a “preferred” order *li:-* >> *tq:-* >> *pu:-* >> *la?*; however, there are verbs where the order is different, reflecting distinct derivational histories.

Applicatives play a functional role in UNT grammar analogous to that of prepositions and oblique “semantic” cases in other languages, and are promiscuous in the sense that they combine with almost any verbal base. Applicative forms account for 1,080/4,754 verbal headwords in the UNT lexical database, and speakers readily accept novel forms when these are suggested in an appropriate context. As derivational elements used in word formation, applicatives affect the meaning of their bases in a variety of ways: many uses of all five applicatives are entirely compositional, while others are non-compositional but transparent (i.e., psychologically plausible), and still others are fossilized and idiomatic—although, as I will show in the following sections, even these are by and large associated with fairly consistent semantic domains.

3.1 *-ni'* ‘BENEFACTIVE’

The benefactive applicative, *-ni'*, appears in 293 lexical entries representing 251 independent derivations.³ More so than the other applicatives discussed below, *-ni'* has a broad range of semantic effects on its base, adding participants in a variety of non-Patient roles resembling those marked with dative case in Indo-European languages (particularly, and likely not coincidentally, indirect objects in Spanish). The overall effect of the benefactive applicative is to add an event-participant that is lower than a Patient on the scale of typical semantic features of transitive objects (Hopper and Thompson 1980); given that these semantic features are somewhat heterogeneous, it is not surprising that the specific semantic roles associated with *-ni'* are as well.

Over half of the benefactive forms in the lexical database add a semantic role that we can characterize as Affected (159 entries, 152 independent derivations)—a participant less directly involved in the action than a Patient but which nevertheless experiences some effect from it. Several of these forms are given in Table 1. In all of these examples, *-ni'* adds an event participant (B) whose interests are impacted either positively (*la'hka:nani'* ‘X weeds a crop for B’), negatively (*ha'lha:ni'* ‘X steals Y from B’), or in an indeterminate or context-specific way (*la'htzini'* ‘X looks at Y belonging to B’).

Table 1: *-ni'* Affected.

<i>chu'lani'</i> ‘X rinses out Y for B’	(< <i>chu'lá</i> ‘X rinses out Y’)
<i>ha'lha:ni'</i> ‘X steals Y from B’	(< <i>ha'lhá:n</i> ‘X steals Y’)
<i>he:ma:kti:ni'</i> ‘X removes Y from Z’s back for B’	(< <i>he:ma:kti:</i> ‘X removes Y from Z’s back’)
<i>la'hka:nani'</i> ‘X weeds a crop for B’	(< <i>la'hka:nán</i> ‘X weeds a crop’)
<i>laksakni'</i> ‘X chooses Y for B’	(< <i>laksák-</i> ‘X chooses Y’)

³ “Independent” derivations are those based on different roots or derived stems, excluding antipassives, anticausatives, and causatives of previously counted applicative forms, as well as combinations of previously counted applicative bases with an additional applicative.

Table 1 (continued)

<i>la'htzini'</i> 'X looks at Y belonging to B'	(< <i>la'htzín</i> 'X sees Y')
<i>la'hwani'</i> 'X disintegrates affecting B'	(< <i>la'hwán</i> 'X disintegrates')
<i>lhta'nhni'</i> 'X pulls Y belonging to B'	(< <i>lhta'nhk-</i> 'X pulls Y')
<i>makwani'</i> 'X suffices for B'	(< <i>makwán</i> 'X suffices')
<i>ma:sputu:ni'</i> 'X uses up Y belonging to B'	(< <i>ma:sputú:</i> 'X uses up Y')
<i>pu:la'hwaxtuni'</i> 'X eats the insides of Y belonging B'	(< <i>pu:la'hwaxtú</i> 'X eats the insides of Y')
<i>tatu'kxni'</i> 'X breaks affecting B'	(< <i>tatú'kx-</i> 'X breaks')
<i>tu'ksni'</i> 'X hits Y affecting B'	(< <i>tu'ks-</i> 'X hits Y')

Benefactives can be formed from monovalent (14), bivalent (15), and multivalent (16) bases:

- (14) *kilaktzu'nuni'má:lh kila:xáx*
kin-Ø-Ø-lak-tzu'nu-ni'-ma:lh *kin-la:xáx*
 1OBJ-SG.OBJ-3SG.SBJ-INTNS-shrivel-BEN.APPL-PROG 1PO-orange
 'My oranges are shrivelling up on me.' (PS)
- (15) *kinha'lha:ni'ka' kinkawa:yúj*
kin-Ø-ha'lha:n-ni'-ka' *kin-kawa:yúj*
 1OBJ-SG.OBJ-steal-BEN.APPL-IDF 1PO-horse
 'My horse was stolen from me.' (LB)
- (16) *kakinhe:ma:'kti:ni'chi' tza'má tzu'ma'já:t kis'á'ta', wan chi'xkú'*
ka-kin-he:-ma:'kti:-ni'-chi' *tza'má tzu'ma'já:t kin-s'á'ta'*
 OPT-1OBJ-SG.OBJ-back-remove-BEN.APPL-DIST:2SG.SBJ that girl 1PO-child
wan chi'xkú'
 say man
 'Take my child off that girl's back there for me! says the man.' (PS)

The sentence in (14) is based on *laktzu'nuni'* 'X shrivels up on B', from the monovalent *laktzu'nú* 'X shrivels up', while *ha'lha:ni'* 'X steals Y from B' in (15) is derived from bivalent *ha'lhá:n* 'X steals Y'. The verb in (16) is *he:ma:'kti:ni'* 'X removes Y from Z's back for B', which is based on the trivalent verb *he:ma:'kti:* 'X removes Y from Z's back'.

As with all applied objects in UNT, the benefactive object is a secondary object, as we can see in the following examples illustrating the usage of the antipassive form of the verb *ha'lha:ni'* 'X steals Y from B' (seen in [15] above):

- (17) *kit i'kha'lha:nani'n wi'x*
kit i'k-Ø-ha'lhá:n-nan-ni'-n *wi'š*
 I 1SG.SBJ-SG.OBJ-steal-ANTIP_{SUPPR}-BEN.APPL-2OBJ you
 'I stole from you.' (LB)

As shown in Beck (2016), primary objects are distinguished from secondary objects in that the former, and not the latter, are suppressed by the antipassive suffix; in (17) it is the basic object, not the applied object expressing the Affected, that is removed from the clause. This is different from the pattern reported for Tlachichilco Tepehua (Watters 1987) and Papantla Totonac (Levy 2002), where benefactive applied objects (but not other applied objects) are primary objects.

Not unexpectedly, the benefactive applicative can also add a Recipient (28 lexical entries, 20 independent derivations). Several examples are shown in Table 2. The Recipient role in these verbs corresponds not only to the endpoint in verbs of transfer (*maka:ni'* 'X sends Y to B'), but also to the recipient in verbs of sharing (*kilhche'heni'* 'X shares a chunk of Y with B') and paying/owing (*lakle:ni'* 'X owes Y to B').

Table 2: *-ni'* Recipient.

<i>kilhche'heni'</i> 'X shares a chunk of Y with B'	(< <i>kilhche'hé</i> 'X breaks off a chunk of Y')
<i>lakle:ni'</i> 'X owes Y to B'	(< <i>laklé:n</i> 'X owes Y')
<i>le:ni'</i> 'X takes Y to B'	(< <i>le:n</i> 'X takes Y')
<i>li:maka:ni'</i> 'X holds Y out to B'	(< <i>li:maká:n</i> 'X holds Y out')
<i>li:mini'</i> 'X brings Y to B'	(< <i>li:mín</i> 'X brings Y')
<i>maka:ni'</i> 'X sends Y to B'	(< <i>maká:n</i> 'X sends Y')
<i>makamini'</i> 'X throws Y to B near speaker'	(< <i>makamín</i> 'X throws Y towards speaker')
<i>tama'hxte'hni'</i> 'X is left for B'	(< <i>tama'hxte'h-</i> 'X is left there')
<i>xo'honi'</i> 'X gives Y in payment to B'	(< <i>xo'hó</i> 'X gives Y in payment')
<i>xte'hni'</i> 'X leaves Y for B'	(< <i>xte'h-</i> 'X leaves Y behind')

The benefactive also adds Addressees to expressions of verbal and non-verbal communication (32 entries, 24 independent derivations). A few examples are given in Table 3. Several forms in this group are trivalent and include the message as an argument (*wani'* 'X says Y to B'); however, UNT also has a number of monovalent verbs of vocalization (*pixlí:* 'X sings', *ta'sá* 'X vocalizes') and gesture (*makawán* 'X makes a sound or gesture with hands') that, when affixed with *-ni'*, create verbs of communication that do not include the message as part of their valency.

Table 3: *-ni'* Addressee.

<i>helhaski'ni'</i> 'X asks B about Y'	(< <i>helha-</i> 'mouth' + <i>ski'n</i> 'X asks for Y')
<i>helhpanhni'</i> 'X betrays a confidence to B'	(< <i>helhpánh-</i> 'X betrays a confidence')
<i>helhs'olini'</i> 'X whistles at B'	(< <i>helhs'olí</i> 'X whistles')
<i>makawani'</i> 'X waves to B'	(< <i>makawán</i> 'X makes a sound or gesture with hands')
<i>pixlí:ni'</i> 'X sings to B'	(< <i>pixlí:</i> 'X sings')
<i>ta'sani'</i> 'X calls out to B'	(< <i>ta'sá</i> 'X vocalizes')
<i>tzo'hni'</i> 'X writes Y to B'	(< <i>tzo'h-</i> 'X writes Y')
<i>wani'</i> 'X says Y to B'	(< <i>wan</i> 'X says Y')

In addition to these three semantic roles, all of which are indirectly affected by the action of the Actor, there are roles associated with the benefactive where the participant is essentially unaffected by or peripheral to the event. For instance, the database contains 11 entries (9 independent derivations) where the applied object expresses a stimulus for some kind of emotional state (Table 4). Another set of 20 entries (14 independent derivations) add a participant that acts as a spatial reference point for the event. Several of these are shown in Table 5. Note that in those cases where the action of the verb is directed towards the new participant, that participant is not the actual endpoint or physical target of the action, which distinguishes these uses of *-ni'* from the allative *la'h-* (§ 3.4). For some of the forms in this group (e.g., *tza:'laní'* 'X runs away from B') the new semantic role may in fact be more a Motive—or at least an entity that motivates the action—than a Direction, and so these might be more akin to those in Table 4.

Table 4: *-ni'* Emotional stimulus.

<i>jikwaní'</i> 'X is afraid of B'	(< <i>jikwán</i> 'X feels fear')
<i>lha'hwaní'</i> 'X gets tired of B'	(< <i>lha'hwán</i> 'X gets tired')
<i>ma:xananí'</i> 'X is ashamed in front of B'	(< <i>ma:xanán</i> 'X is ashamed')
<i>si:'tzi:ní'</i> 'X gets angry with B'	(< <i>si:'tzi:</i> 'X gets angry')

Table 5: *-ni'* Direction.

<i>he:mini'</i> 'X turns X's back on B'	(< <i>he:mín</i> 'X stands with back (<i>he:-</i>) to speaker')
<i>kilhwani'</i> 'X opens one's mouth at B'	(< <i>kilhwán</i> 'X opens X's mouth')
<i>la'hatze'hni'</i> 'X hides X's face from B'	(< <i>la'hatzé'h-</i> 'X hides X's face')
<i>pu:'laní'</i> 'X leads B'	(< <i>pu:'lá</i> 'X goes first')
<i>sta:laní'</i> 'X follows B'	(< <i>sta:lá</i> 'X comes behind')
<i>tza:'laní'</i> 'X runs away from B'	(< <i>tza:'lá</i> 'X flees')

In another group of *-ni'* forms (31 entries, 20 independent derivations), the applicative adds what seems to be a Ground—that is, an entity that frames or defines the locus of the event (Table 6). Many of these forms are derived from verbs built on stative bases—either bound roots like *-nu:* 'inside, contained' and *-xtu* 'outside, projecting', or stative posture verbs like *wilá* 'be seated'. The semantic role of Ground is the only one associated with the benefactive that is typically inanimate and non-human. There are also 12 independent derivations in the database that have idiosyncratic meanings.

Table 6: *-ni'* Ground.

<i>la'hnu:ní'</i> 'X is stuck in B'	(< <i>la'hnú:</i> 'X is stuck')
<i>ma:'hs'oní'</i> 'X illuminates B'	(< <i>ma:'hs'ó</i> 'X casts light')
<i>ma:nu:ní'</i> 'X puts Y into B'	(< <i>ma:nú:</i> 'X puts Y in')

Table 6 (continued)

<i>ma:xtuní</i> 'X takes Y out of B'	(< <i>ma:xtú</i> 'X takes Y out')
<i>pu'ní</i> 'X buds on B'	(< <i>pu'n</i> 'X buds')
<i>taxtuní</i> 'X comes out of B'	(< <i>taxtú</i> 'X leaves')
<i>wilaní</i> 'X is placed on B'	(< <i>wilá</i> 'X is seated')
<i>xtu'tuní</i> 'X sucks Y from B'	(< <i>xtu'tú</i> 'X sucks on Y')
<i>yujní</i> 'X falls off of B'	(< <i>yuj-</i> 'X descends')

In addition to verbs where *-ni'* acts as an applicative, adding an object, there are 14 verbs (12 independent derivations) in which *-ni'* does not increase the valency of its base (Table 7), but instead simply changes the semantic role of a non-Actor participant from a Patient- or Theme-like role to something lower on Hopper and Thompson's (1980) scale of semantic transitivity. Consider, for example, the sentences in (18) and (19) based on the verb *la'hamilí*: 'X covers Y's face with a cloth' and its *-ni'* form, *la'hamili:ni'* 'X shelters B's face with a cloth':

(18) *kila'hamilí:lh**kin-Ø-Ø-la'ha-mili:-lh*

1OBJ-SG.OBJ-3SG.SBJ-face-cover-PFV

'It covered my face.' (RM)

(19) *na'kla'hamili:ní kis'á'ta' ja: kasnó'hli' ú:'ni'**na-i'k-Ø-Ø-la'ha-mili:-ni'*

FUT-1SG.SBJ-3OBJ-SG.OBJ-face-cover-BEN.APPL

kin-s'á'ta' ja:

1PO-child NEG

ka-Ø-Ø-sno'h-li'

OPT-3OBJ-SG.OBJ-3SG.SBJ-whip-PFV

ú:'ni'

air

'I'm going to cover my child so that the wind doesn't blow on her.' (RM)

The base form here in (18) is used when the cloth is in direct contact with the person or object being covered (the same form could be used, for example, when talking about covering a plate of food to keep it warm), whereas in (19) what is being covered, the child, is not necessarily in contact with the cloth—for instance, the child could be in a cradle with a blanket draped over it or carried in someone's arms under a shawl. The use of *-ni'* here is semantically related to the benefactive applicative in that the action affects the child, but the child is not directly/physically involved. Because the applied object added by *-ni'* is a secondary object, the lower semantic transitivity is accompanied by lower syntactic transitivity: the primary object is exchanged for a secondary object (an object inaccessible to suppression by the antipassive), making *la'hamili:ni'* syntactically intransitive.

Table 7: Detransitivizing *-ni'*.

<i>a'hahi:ni'</i> 'X believes B's words'	(< <i>a'hahí</i> : 'X believes idea Y')
<i>la'halhtalaní</i> 'X locks B in by jamming the door'	(< <i>la'halhtalá</i> 'X covers opening Y with a board')
<i>la'hamili:ni'</i> 'X shelters B with a cloth'	(< <i>la'hamilí</i> : 'X covers Y's face with a cloth')
<i>lakpuwani'</i> 'X desires B'	(< <i>lakpuwán</i> 'X thinks about Y')
<i>lhajani'</i> 'X makes a profit on B'	(< <i>lhajá</i> 'X earns wage Y')
<i>ma'hla'htzini'</i> 'X serve as a midwife to B'	(< <i>ma'hla'htzín</i> 'X sees another person's Y')
<i>pi'tani'</i> 'X presses B (e.g., button)'	(< <i>pi'tá</i> 'X pokes Y causing discomfort')
<i>wili:ni'</i> 'X puts B up against object; X strikes B'	(< <i>wilí</i> : 'X places Y')
<i>xki'yuju:ni'</i> 'X scrubs B off a surface'	(< <i>xki'tyujú</i> : 'X scrubs Y')
<i>x'a'ha:yuju:ni'</i> 'X wipes B off a surface'	(< <i>x'a'ha:yujú</i> : 'X wipes Y clean')

Similarly, the last two examples in Table 7 are based on a bound stem *-yuju*: 'X takes Y down' (< *yuj*: 'X descends' + *-u*: 'TRANSITIVIZER') and describe the action of wiping or scrubbing a substance off of something. Without *-ni'*, what is being cleaned is expressed as the primary object (20), but in the *-ni'* form, the applied object expresses the substance being removed (21):

- (20) *i'kli:a'kpu:x'a'hayujú: mesa kili:x'a'hán*
i'k-Ø-Ø-li:-a'kpu:-x'a'hayuju: *mesa kin-li:-x'a'há-n*
 1SG.SBJ-3OBJ-SG.OBJ-INST.APPL-wipe.clean table 1OBJ-INST.APPL-scrape-NMZ
 'I'm wiping the tabletop with my brush' (PS)
- (21) *x'a'ha:yuju:ni'má:lh pintura nakmesa*
Ø-Ø-Ø-x'a'ha:yuju:-ni'-ma:lh *pintura nak=mesa*
 3OBJ-SG.OBJ-3SG.SBJ-wipe.clean-BEN.APPL-PROG paint LOC=table
 'She wipes away the paint from the table.' (RM)

The verb in (21) is not transitive because the endpoint of the action is not a discrete or individuated object but a substance. Substances are low on the scale of semantic transitivity, which motivates the verb's syntactic intransitivity (i.e., its lack of a primary object). While *-ni'* does not count as an applicative in forms in Table 7, the association of both applicative and non-applicative *-ni'* with non-Actor participants on the lower end of the scale of semantic transitivity points to an etymological connection between them.

3.2 *li:-* 'INSTRUMENTAL'

The most prolific of the UNT applicatives is the instrumental *li:-*, which appears in 551 lexical entries representing 490 independent derivations in the lexical database. The instrumental applicative has two functions: one is to add the semantic role of Instrument/Means (I) to the valency of its base, the other to add the Reason (R) for which an

event occurs. In either function, the instrumental applicative is near-freely combinable with any verb expressing an action that can be performed with some sort of implement or for any kind of motive.

In the database, there are 292 lexical entries (261 independent derivations) where *li:-* adds an Instrument or a Means to the valency of its base—that is, it adds an applied object expressing either some implement or tool deliberately used by the Actor, or some entity that serves as a means of realizing the action expressed by the verb. As we can see in Table 8, *li:-* combines with monovalent (*kuxtú-* ‘X weeds’), bivalent (*nik-* ‘X clubs Y’), and multivalent bases (*ma:wí-* ‘X feeds Y to Z’).

Table 8: *li:-* Instrument/Mean.

<i>li:ha'pí</i> ‘X locks Y with I’	(< <i>ha'pí</i> ‘X locks Y’)
<i>li:ho'nún</i> ‘X drinks I’	(< <i>ho'nún</i> ‘X drinks’)
<i>li:lhawá</i> ‘X makes Y out of I’	(< <i>lhawá</i> ‘X makes Y’)
<i>li:kuxtú</i> ‘X weeds with I’	(< <i>kuxtú</i> ‘X weeds’)
<i>li:ku'chú:</i> ‘X heals Y with I’	(< <i>ku'chú:</i> ‘X heals Y’)
<i>li:lhká:</i> ‘X measures the length of Y with I’	(< <i>lhka:</i> ‘X measures the length of Y’)
<i>li:ma:wí:</i> ‘X feeds Y to Z using I’	(< <i>ma:wí:</i> ‘X feeds Y to Z’)
<i>li:ník-</i> ‘X clubs Y with I’	(< <i>nik-</i> ‘X clubs Y’)
<i>li:slantá</i> ‘X glues Y with I’	(< <i>slantá</i> ‘X glues Y’)
<i>li:sná't-</i> ‘X winds Y around I’	(< <i>sna't-</i> ‘X twists Y’)

There are also 96 lexical entries (69 independent derivations) where *li:-* adds an Integrant—an entity that is involved in or makes possible the event but is not deliberately wielded by the Actor (Table 9). The applied objects in these forms are, broadly-speaking, inanimate non-Patient participants or abstractions unaffected by the event or action of the Actor. This set includes 16 forms derived from one of 4 motion verbs that express events of taking/bringing (e.g., *le:n* ‘X takes I’ < *a'n* ‘X goes’; *li:chín* ‘X arrives here with I’ < *chín* ‘X arrives here’).

Table 9: *li:-* Integrant.

<i>le:n</i> ‘X takes I’	(< <i>a'n</i> ‘X goes’)
<i>li:a'hachuyá:</i> ‘X hears I that isn’t there’	(< <i>a'hachuyá:</i> ‘X has auditory hallucinations’)
<i>li:a'hlhche'hxlá</i> ‘X trips on I’	(< <i>a'hlhche'hxlá</i> ‘X stumbles’)
<i>li:chá:n</i> ‘X arrives there with I’	(< <i>chá:n</i> ‘X arrives there’)
<i>li:chín</i> ‘X arrives here with I’	(< <i>chín</i> ‘X arrives here’)
<i>li:chiwi:nán</i> ‘X speaks about I’	(< <i>chiwi:nán</i> ‘X speaks’)
<i>li:kinkalá</i> ‘X reeks of I’	(< <i>kinkalá</i> ‘X reeks’)
<i>li:lhti'pí'n</i> ‘X (water) is made murky by I’	(< <i>lhti'pí'n</i> ‘X (water) is murky’)
<i>li:pa:stá'k-</i> ‘X is reminded of Y by I’	(< <i>pa:stá'k-</i> ‘X remembers Y’)
<i>li:pa'lha:nán</i> ‘X vomits up I’	(< <i>pa'lha:nán</i> ‘X vomits’)
<i>li:pixkú'n</i> ‘X gets mumps from I’	(< <i>pixkú'n</i> ‘X has mumps’)

Table 9 (continued)

<i>li:pixlí:</i> ‘X sings I’	(< <i>pixlí:</i> ‘X sings’)
<i>li:smaní:</i> ‘X is accustomed to I’	(< <i>smaní:</i> ‘X feels at ease’)
<i>li:mín</i> ‘X brings I’	(< <i>mín</i> ‘X comes’)

The *li:-* applicative is also used to add a Reason for an event occurring, as in (22):

- (22) *xa'ka:namá:lh tza'má chi'xkú', katu:wálh li:xa'ká:*
Ø-xa'ka:nan-ma:lh tza'má chi'xkú' katu:wálh
 3SG.SBJ-get.angry-PROG that man anything
Ø-Ø-Ø-li:-xa'ká:
 3OBJ-SG.OBJ-3SG.SBJ-INST.APPL-get.angry
 ‘That man is always scolding, he gets mad about anything.’ (CF)

While there are 164 lexical entries where *li:-* has exclusively this effect on the meaning of its base (Table 10), it is difficult to meaningfully quantify words of this type. This is both because *li:-* Reason seems to be almost universally applicable (and so the number of entries in the database is at best a convenience sample), and because *li:-* Reason forms can be derived from the same bases as *li:-* Instrument forms, creating homophonous words with different senses:

- (23) *kili:lhtu'kúlh cha:'tín hó'ni' a'htín kuchí:lu*
kin-Ø-Ø-li:-lhtu'ku-lh cha:'tín hó'tni' a'h-tin kuchí:lu
 1OBJ-SG.OBJ-3SG.SBJ-INST.APPL-stab-PFV CLF-one drunk.person CLF-one knife
 ‘The drunk stabbed me with the knife.’ (PS)
- (24) *kili:lhtu'kúlh wa:má wa:káx i's'á'ta'*
kin-Ø-Ø-li:-lhtu'ku-lh wa:má wa:káx i'x-s'á'ta'
 1OBJ-SG.OBJ-3SG.SBJ-INST.APPL-stab-PFV this cow 3PO-child
 ‘The cow gored me because of its calf.’ (RM)

Here, we seem to have two different senses of *li:lhtu'kú* < *lhtu'kú* ‘X stabs Y’—‘X stabs Y with I’ (23) and ‘X stabs I because of R’ (24). This might lead us posit two homophonous prefixes, one which adds Instruments and the other Reasons; however, there are a couple of arguments against this. One is simply distributional: the two hypothetical affixes never seem to co-occur and speakers do not accept suggested forms with two instance of *li:-* or with meanings along the lines of ‘X Vs with I because of R’. The other argument is that Reasons and Instruments occupy adjacent semantic domains, and some of the verbs formed with *li:-* add participants that could also be thought of as reasons for an event taking place (e.g., *li:la'hawi'tí* ‘X is made dizzy by I’, *li:taku'xatzí:* ‘X feels

suffocated by I' < *taku'xatzí*: 'X feels suffocated'). It seems more likely that Instrument vs. Reason is a context-driven interpretation of a single element with a vaguer meaning.

Table 10: *li*:- Reason.

<i>li:a'htuyún</i> 'X worries about R'	(< <i>a'htuyún</i> 'X worries')
<i>li:a'kchuyá</i> : 'X acts crazy because of R'	(< <i>a'kchuyá</i> : 'X acts crazy')
<i>li:ka'tzán</i> 'X feels pain because of R'	(< <i>ka'tzán</i> 'X feels pain')
<i>li:kú'n</i> 'X swells up because of R'	(< <i>ku'n</i> 'X is swollen')
<i>li:la'hlih'óp-</i> 'X melts because of R'	(< <i>la'hlih'óp-</i> 'X melts')
<i>li:lhtatá</i> 'X feels sleepy because of R'	(< <i>lhtatá</i> 'X sleeps')
<i>li:ma:xanán</i> 'X is ashamed because of R'	(< <i>ma:xanán</i> 'X is ashamed')
<i>li:ní</i> : 'X dies because of R'	(< <i>ní</i> : 'X dies')
<i>li:ská:k-</i> 'X dries out because of R'	(< <i>ská:k-</i> 'X dries out')
<i>li:taxtú</i> 'X leaves because of R'	(< <i>taxtú</i> 'X leaves')

An interesting feature of the Reason use of *li*:-, one certainly tied to its promiscuity and textual frequency, is that it has a constructional use in expressions that are equivalent to English *that's why* and *because* clauses:

- (25) *lhú:wa' wi:lh xka:n, u:tzá: li:luh:wán xuj*
lhú:wa' Ø-wi:lh xka:n u:tzá: Ø-li:-luh:wán xuj
 many 3SG.SBJ-sit water that 3SG.SBJ-INST.APPL-be.many mosquito
 'There is a lot of water, that's why there are so many mosquitos.' (LA)

- (26) *li:taxtúlh i tza'má hawá'cha' xlhawasti:kán*
 Ø-Ø-Ø-li:-taxtu-lh i tza'má hawá'cha'
 3OBJ-SG.OBJ-3SG.SBJ-INST.APPL-leave-PFV JUNCT that boy
i'x-Ø-Ø-lhawasti:-kan
 PST-3OBJ-SG.OBJ-mistreat-IDF
 'The boy left because he was treated badly.' (RM)

Rather than using a conjunction to relate an event and its reason for occurring, Totonacan languages add an instrumental applicative to the main verb and express the reason in a separate clause that functions as the applied object. Sentences like (26) are used most frequently by older speakers, while younger speakers tend to use the borrowed Spanish conjunction *porque* instead.

3.3 *ta:'*- ‘COMITATIVE’

The comitative applicative, *ta:'*-, appears in 139 entries (84 independent derivations). In the most general sense, *ta:'*- adds a Co-Actor (C) or some other entity that co-performs or assists the Agent in carrying out the event described by the verb.

In 39 independent forms, including those shown in Table 11, *ta:'*- adds an animate Co-Actor, and speakers readily accept novel suggested forms with this meaning. The comitative can be added to monovalent (*ta:'á'n* ‘X goes with C’ < *a'n* ‘X goes’) and bivalent verbs (*ta:'x'á:* ‘X shucks Y with C’ < *x'a:* ‘X shucks corn’), as well as to more complex stems formed with causatives (27) and other applicatives (28):

- (27) *na'kta:'ma:tanhapu:yá:n minkí'wi'*
na-i'k-Ø-ta:'-ma:tanhapu:ya:-n *min-kí'wi'*
 FUT-1SG.SBJ-SG.OBJ-CMT.APPL-CAUS-at.hill.bottom-IPFV-2OBJ 2PO-tree
 ‘I’m going to get your wood down the slope with you.’ (SC)
- (28) *nai'ka:ta:'li:tanká: pu:laktín kí'wi' chí'xkuwín kimachi:tká'n*
na-i'k-Ø-ka:-ta:'-li:-tan-ka: *pu:lak-tin kí'wi'*
 FUT-1SG.SBJ-3OBJ-PL.OBJ-CMT.APPL-INST.APPL-buttocks-chop CLF-one tree
chí'xkú'-win kin-machi:t-ka'n
 man-PL 1PO-machete-PL.PO
 ‘I and the men will cut down a tree with our machetes.’ (LB)

The verb in (27) is *ta:'ma:tanhapú:* ‘X helps C get Y down a hill’, derived from the causative stem *ma:tanhapú:* ‘A takes X down a hill’ (< *tanhapú:* ‘X is at the bottom of a slope’). In (28), *ta:'li:tanká:* ‘X with C chops Y down using I’ is based on *li:tanká:* ‘X chops Y down using I’ (< *li:-* ‘INSTRUMENTAL’ + *tanká:* ‘X chops Y down’). In both examples, the Co-Actor controls object agreement.

Table 11: *ta:'*- Co-Actor.

<i>ta:'á'n</i> ‘X goes with C’	(< <i>a'n</i> ‘X goes’)
<i>ta:'chiwi:nán</i> ‘X converses with C’	(< <i>chiwi:nán</i> ‘X speaks’)
<i>ta:'hama:nán</i> ‘X plays a game with C’	(< <i>hama:nán</i> ‘X plays a game’)
<i>ta:'la'hslá'h-</i> ‘X helps C stir Y’	(< <i>la'hslá'h-</i> ‘X stirs Y’)
<i>ta:'lá</i> ‘X performs an activity with C’	(< <i>la</i> ‘X performs an activity’)
<i>ta:'li:tanká:</i> ‘X with C chops Y down using I’	(< <i>li:tanká:</i> ‘X chops Y down using I’)
<i>ta:'ma:tanhapú:</i> ‘X helps C get Y down a hill’	(< <i>ma:tanhapú:</i> ‘X takes Y down a hill’)
<i>ta:'pu:la'hmakamín</i> ‘X with C shoots Y at G using I’	(< <i>pu:la'hmakamín</i> ‘X shoots Y at G using I’)
<i>ta:'pu'tzá</i> ‘X searches for Y with C’	(< <i>pu'tzá</i> ‘X searches for Y’)
<i>ta:'x'á:</i> ‘X shucks Y (corn) with C’	(< <i>x'á:</i> ‘X shucks Y [corn]’)

Eleven independent comitative forms express an event where the Actor shares a mental state—either literally (*ta:'li:ka'tzì:* ‘X agrees with C with respect to Y’ < *li:ka'tzì:* ‘X agrees to/about Y’) or vicariously (*ta:'pa:tí:* ‘X feels C’s suffering’ < *pa:tí:* ‘X suffers’)—with a Co-Experiencer (Table 12). The forms here are divided between those with *ta:'* alone and those forms that have both *ta:'* and the reciprocal *la:'*. In the latter cases, the comitative has no effect on the valency of the basic verb, but instead “retransitivizes” a detransitivized reciprocal verb form:

- (29) *ja: lakahí, ja: ta:'to:laku'tún*
ja: Ø-Ø-Ø-lakahí: *ja: Ø-Ø-Ø-ta:'-tawilá-ku'tún*
 NEG 3OBJ-SG.OBJ-3SG.SBJ-like NEG 3OBJ-SG.OBJ-3SG.SBJ-CMT.APPL-sit-DSO
 ‘She doesn’t like him, she doesn’t want to marry (lit. sit with) him.’ (CF)
- (30) *xlaká'n xtala:s'o'ha:lha:'wán porque tala:lakahí:*
xlaká'n i'x-ta-la:-s'o'há-lha:'wán porque ta-la:-lakahí:
 they PST-3PL.SBJ-RCP-hug-walk because 3PL.SBJ-RCP-like
 ‘They walk around embracing each other because they like each other.’ (NS)
- (31) *kata:'la:lakahí:*
ka-Ø-Ø-ta:'-la:-lakahí:
 OPT-3OBJ-SG.OBJ-CMT.APPL-RCP-like:2SG.SBJ:PFV
 ‘May you and she like each other!’ (LC)

The transitive verb *lakahí:* ‘X likes Y’ is shown in (29). Its reciprocal form in (30) (*la:lakahí:* ‘X and Y like each other’) is intransitive and obligatorily has a plural subject, whereas the comitative form in (31) (*ta:'la:lakahí:* ‘X is mutually fond of Y’) has a singular subject and is once again transitive. In this form, *la:'* allows for the expression of mutuality, but the comitative allows the point of view of one of the two participants to be taken, that participant being expressed as the subject.

Table 12: *ta:'* Co-Experiencer.

<i>ta:'ka'tzanajwán</i> ‘X feels C’s pain’	(< <i>ka'tzanajwán</i> ‘X feels pain’)
<i>ta:'la'halhu:má:n</i> ‘X sympathizes with C’	(< <i>la'halhu:má:n</i> ‘X sympathizes with Y’)
<i>ta:'la:lakahí:</i> ‘X and C are attracted to each other’	(< <i>lakahí:</i> ‘X likes Y’)
<i>ta:'la:pa:xkí:</i> ‘X loves C who reciprocates’	(< <i>pa:xkí:</i> ‘X loves Y’)
<i>ta:'la:la'htzín</i> ‘X watches out for C’s interests’	(< <i>la'htzín</i> ‘X sees Y’)
<i>ta:'la:lén</i> ‘X gets along with C’	(< <i>le:n</i> ‘X takes Y’)
<i>ta:'li:ka'tzì:</i> ‘X agrees with C with respect to Y’	(< <i>li:ka'tzì:</i> ‘X is in agreement about Y’)
<i>ta:'li:puwán</i> ‘X feels sadness for C’	(< <i>li:puwán</i> ‘X feels sadness’)
<i>ta:'ma'hka'tzì:</i> ‘X feels C’s physical discomfort’	(< <i>ma'hka'tzì:</i> ‘X feels a physical sensation’)
<i>ta:'pa:tí:</i> ‘X feels C’s suffering’	(< <i>pa:tí:</i> ‘X suffers’)
<i>ta:'tala'hapu'tzì:</i> ‘X feels compassion for C’s loss’	(< <i>tala'hapu'tzì:</i> ‘X suffers a loss’)

The comitatives in Tables 11 and 12 add either Co-Actors or Co-Experiencers to the valency of their bases, and so conform to our general expectations of the semantic effect of a comitative. There are, however, 8 independent forms where the applied phrase expresses what might be called an Accessory—an event-participant that accompanies the Actor in some sense but does not necessarily perform the same action or experience the same mental state (Table 13). The applied object in these verbs expresses an additional participant that is in close proximity to or joined with the Actor, as seen in these examples based on *ta:'tamá:* 'X lies down with C' (< *tamá:* 'X lies down'):

Table 13: *ta:'-* Accessory.

<i>ta:'la:chi'pá</i> 'X and C are stuck to each other'	(< <i>chi'pá</i> 'X is stuck to Y')
<i>ta:'la:li:tapi'tzí</i> 'X and C have neighbouring land'	(< <i>la:li:tapi'tzí</i> 'X has neighbouring land' [pl. subj.])
<i>ta:'la:pe'hxtó'h-</i> 'X and C are close to each other'	(< <i>pe'hxtó'h-</i> 'X is close to Y')
<i>ta:'stúk-</i> 'X is joined with C end to end'	(< *- <i>stuk</i> 'joined')
<i>ta:'tala'hxtó'h-</i> 'X and C get together'	(< <i>tala'hxtó'h-</i> 'X is joined together')
<i>ta:'talakxtimí:</i> 'X and C get together'	(< <i>talakxtimí:</i> 'X gathers, X comes together')
<i>ta:'tamá:</i> 'X lies down with C'	(< <i>tamá:</i> 'X lies down')
<i>ta:'tape'hxtimí:</i> 'X and C are shoulder to shoulder'	(< <i>tape'hxtimí:</i> 'X lines up at the shoulder')
<i>ta:'yá:lh</i> 'X stands holding C'	(< <i>ya:lh</i> 'X stands')

- (32) *lakxtím kinta:'tamá:lh kinchichí'*
lakxtím kin-Ø-Ø-ta:'-tama:-lh kin-chichí'
 lined.up 1OBJ-SG.OBJ-3SG.SBJ-CMT.APPL-lie-PFV 1PO-dog
 'My dog lay down at my side.' (PS)

- (33) *ta:'tamá:lh i'xtakú'ka:' minkawa:yúj katanlha'háki:'*
Ø-Ø-Ø-ta:'-tama:-lh i'x-takú'ka:' min-kawa:yúj
 3OBJ-SG.OBJ-3SG.SBJ-CMT.APPL-lie-PFV 3PO-load 2PO-horse
ka-Ø-Ø-tanlha'háki:'
 OPT-3OBJ-SG.OBJ-slap.on.behind:2SG.SBJ:PFV
 'Your horse lay down with its load, get it up!' (PS)

In (32), there is no necessity that the added participant ('T') also be lying down, only that it be in close proximity to the Actor (the dog). In (33), the added participant is inanimate and so cannot have co-performed the action of lying down along with the horse. Additionally, there is a third sense of *ta:'tamá:*, seen in (34), where the verb does imply a sort of co-action by the new participant:

- (35) *la'hyújli' tza'má tzu'ma'já:t*
 Ø-Ø-Ø-la'h-yuj-li' tza'má tzu'ma'já:t
 3OBJ-SG.OBJ-3SG.SBJ-ALL.APPL-go.down-PFV that girl
 'He came down to the girl.' (MR)
- (36) *nakila'ha'nkán nakinchík nalhu:wa:wa'yankán*
na-kin-Ø-la'h-a'n-kan nak=kin-chík na-lhu:wá'-wa'yán-kan
 FUT-1OBJ-SG.OBJ-ALL.APPL-go-IDF LOC=1PO-house FUT-much-eat-IDF
 'They are going to come to me at my house and they will feast.' (PS)

The first example is from a story in which a man is working on the roof of a house and comes down to speak with a pretty girl. In the second example, the Goal participant is expressed by the first-person object prefix *kin-*. Note that the clause also contains a locative adverbial *nakinchík* 'at my house', which is the preferred way of expressing inanimate destinations with verbs of motion, as in (37):

- (37) *ka'ná:j nakXico*
i'k-a'n-ya:-uj nak=Xico
 1SG.SBJ-go-IPFV-1PL.SBJ LOC=Xicotepec
 'We_{EXCL} are going to Xicotepec.' (BC)

The verb in (37) is *a'n* 'X goes'. The destination is expressed as an adverbial, but does not constitute a syntactic or semantic argument of the verb either here or in (36) above.

Table 15: *la'h-* Goal of Motion.

<i>la'hchá:h</i> 'X arrives at G over there'	(< <i>cha:h</i> 'X arrives there')
<i>la'hchín</i> 'X arrives at G here'	(< <i>chín</i> 'X arrives here')
<i>la'hmín</i> 'X comes to G'	(< <i>min</i> 'X comes')
<i>la'htaa'hcho'hó:</i> 'X goes for a walk to G'	(< <i>taa'hcho'hó:</i> 'X goes for a walk')
<i>la'htakút-</i> 'X crosses the river to get G'	(< <i>takút-</i> 'X crosses the river')
<i>la'hxta'ya'hnán</i> 'X glides down to G'	(< <i>ta'ya'hnán</i> 'X glides')
<i>la'hyúj-</i> 'X comes down to G'	(< <i>yuj-</i> 'X descends')
<i>la'há'n</i> 'X goes to G'	(< <i>a'n</i> 'X goes')

The motion verbs *a'n* 'X goes' and *min* 'X comes' also give rise to 11 forms where the applied object expresses a Target towards which the Actor directs the action but which is not actually reached or affected by it. These verbs are all based on a combination of *a'n* or *min* with a part prefix, as seen in Table 16. As with the forms in Table 15, the applied objects found with these verbs are generally animate.

More commonly, the Terminal Point, being third person, is Ø and is understood from context, as in (40):

- (40) *na'kla'htama'hajú: nakincazuēla*
na-i'k-Ø-Ø-la'h-tama'haju: Ø nak=kin-cazuēla
 FUT-1SG.SBJ-3OBJ-SG.OBJ-ALL.APPL-immersed.hand 3 LOC=1PO-cooking.pot
 'I'm going to put my hand in the pot to reach it.' (RM)

In (40) there is an understood 'it' the speaker is reaching for; the *nak=* phrase defines a wider location into which the speaker is reaching, but does not express the Goal itself. The contrast is clearer if we compare this sentence to the same verbal base without the applicative:

- (41) *katama'hájú: namibolsa*
ka-tama'haju: nak=min-bolsa
 OPT-immersed.hand:2SG.SBJ:PFV LOC=2PO-pocket
 'Put your hands in your pockets!' (PS)

The verb in (41), *tama'hájú:* 'X immerses X's hands' (< *ta-* 'inchoative' + *ma'ha-* 'hand' + *-ju:* 'be down in'), is intransitive and the *nak=* phrase simply defines the locus of the immersion rather than a Goal of motion.

Table 18: *la'h-* Terminal Point.

<i>la'htakilhpu:tá</i> 'X bends over to reach G'	(< <i>takilhpu:tá</i> 'X bends over')
<i>la'htalakapa'jtzú</i> 'X moves closer to G'	(< <i>talakapa'jtzú</i> 'X moves closer')
<i>la'htalakatzunají:</i> 'X gets closer to G'	(< <i>talakatzunají:</i> 'X gets closer')
<i>la'htama'hájú:</i> 'X reaches in for G with one's hand'	(< <i>tama'hájú:</i> 'X reaches into a container')
<i>la'htanú:</i> 'X is inside G'	(< <i>tanú:</i> 'X goes inside')
<i>la'htawaká'lh</i> 'X climbs up to G'	(< <i>tawaká'lh</i> 'X goes up high')

3.5 *pu:-* 'CONTAINING INSTRUMENT'

The containing instrumental applicative, *pu:-*, appears in 79 entries in the database forming part of 73 independent derivations. The applied object of *pu:-* (N) expresses a container, enclosing object, or container-like device that surrounds either the Actor or the Undergoer/Patient. Like the applied object of *li:-*, the object of *pu:-* is used as an Instrument/Mean of realizing the action expressed by the verb.

There are 37 lexical entries (35 independent derivations) where *pu:-* adds a Containing Instrument (Table 19). The necessity that the applied object be container-like imposes restrictions on the verb—for instance, *pu:chi'pá* 'X traps Y in N' can be used only

with container-like traps such as nets or baskets (but not snares), while *pu:cha'panán* 'X grinds in N' (< *cha'panán* 'X grinds') only applies to grinding in instruments such as mortars, molcajetes, and metates, and not to grinding, say, on the ground with a rock.

Table 19: *pu:-* Containing Instrument.

<i>pu:cha'panán</i> 'X grinds in N (e.g., mortar)'	(< <i>cha'pa</i> 'X grinds Y' + <i>-nan</i> 'ANTIP _{SUPPR} '))
<i>pu:chi'pá</i> 'X traps Y in N (e.g., net)'	(< <i>chi'pá</i> 'X traps Y')
<i>pu:kukta'lá</i> 'X hits Y with a stone thrown in N (e.g., sling)'	(< <i>kukta'lá</i> 'X hits Y with a stone')
<i>pu:la'hchulú:t-</i> 'X cools Y by pouring it out of N'	(< <i>la'hchulú:t-</i> 'X cools liquid Y by pouring it')
<i>pu:la'hs'á't-</i> 'X skims froth off boiling cane syrup with N'	(< <i>la'hs'á't-</i> 'X skims froth off boiling cane syrup')
<i>pu:li:mín</i> 'X brings Y inside N'	(< <i>li:mín</i> 'X brings Y')
<i>pu:lé:n</i> 'X takes Y inside N'	(< <i>le:n</i> 'X takes Y')
<i>pu:ma:wí:</i> 'X feeds Z to Y in N (e.g., bowl)'	(< <i>ma:wí:</i> 'X feeds Z to Y')
<i>pu:skuj-</i> 'X works in N (work clothes)'	(< <i>skuj-</i> 'X works')
<i>pu:wa'yán</i> 'X eats from N (dish)'	(< <i>wa'yán</i> 'X eats')

Because this type of instrument is generally third person and inanimate, and is rarely plural, there are very few sentences like (42) that show overt agreement with the applied object:

- (42) *ah'tú' tsa'ká:t i'ka:ta:'pu:la'hmakamílh chiwíx kistáunku' tza'má chi'xkú'*
ah'-tu' tsa'ká:t i'k-Ø-ka:-ta:'-pu:-la'h-makamin-lh
 CLF-two sling 1SG.SBJ-3OBJ-PL.OBJ-CMT.APPL-CINST.APPL-ALL.APPL-direct-PFV
chiwíx kin-stáunku' tza'má chi'xkú'
 stone 1PO-brother that man
 'I and my brother threw stones at that man with two slings.' (LB)

Examples like (43), which show agreement with some other object, are much more common:

- (43) *kintapu:lé:lh i'xkuxta:lhká'n*
kin-Ø-ta-pu:-le:n-lh i'x-kuxta:lh-ka'n
 1obj-SG.OBJ-3PL.SBJ-CINST.APPL-take-PFV 3PO-sack-PL.PO
 'They carried me in their sack.' (PS)

Here, the controller of agreement is the primary object, expressing what is carried, rather than the secondary applied object, the container.

Another semantic role (18 forms, 18 independent derivations) associated with *pu:-* is that of Conveyance (Table 20). In these forms, the applicative combines with a verb of motion to express a Vehicle (44), Conduit (45), or Path (46):

- (44) *pu:milh pu:lháuj*
 Ø-Ø-Ø-*pu:-min-lh* *pu:lháuj*
 3OBJ-SG.OBJ-3SG.SBJ-CINST.APPL-come-PFV vehicle
 ‘He came in a car.’ (RM)
- (45) *tubo pu:mimá:lh xka:n*
tubo Ø-Ø-Ø-*pu:-min-ma:lh* *xka:n*
 pipe 3OBJ-SG.OBJ-3SG.SBJ-CINST.APPL-come-PROG water
 ‘The water comes through pipes.’ (CF)
- (46) *xi:wán ja: pu:milh tej naka:’xa:wátna’ milh*
xi:wán ja: Ø-Ø-Ø-*pu:-min-lh* *tej nak=ka:’-xa:wát-na’*
 Juan NEG 3OBJ-SG.OBJ-3SG.SBJ-CINST.APPL-come-PFV path LOC=PLC-corn-PL
 Ø-*min-lh*
 3SG.SBJ-come-PFV
 ‘Juan didn’t come on the road, he came through the cornfield.’ (CF)

Note that all three of these examples are based on the same verb, which shows us that each of the three specific roles (Vehicle, Conduit, Path) played by the new participant in the event is a context-specific interpretation of a single, vaguer, semantic role (Containing Instrument).

Table 20: *pu:-* Conveyance.

<i>pu:án</i> ‘X rides in N’	(< <i>a’n</i> ‘X goes’)
<i>pu:mín</i> ‘X comes inside N’	(< <i>min</i> ‘X comes’)
<i>pu:paxyalhnán</i> ‘X goes for a ride on N’	(< <i>paxyalhnán</i> ‘X goes for a stroll’)
<i>pu:taa’hapú:</i> ‘X goes downhill in N’	(< <i>taa’hapú:</i> ‘X goes downhill’)
<i>pu:taa’kxtú</i> ‘X goes upstream in N (boat)’	(< <i>taa’kxtú</i> ‘X goes uphill’)
<i>pu:takút-</i> ‘X crosses river in N’	(< <i>takút-</i> ‘X crosses river’)
<i>pu:xki’wa’hnán</i> ‘X swims using N as a float’	(< <i>xki’wa’hnán</i> ‘X swims’)
<i>pu:yúj-</i> ‘X comes down using N (e.g., ladder, rope)’	(< <i>yuj-</i> ‘X descends’)

In several forms (18 lexical entries, 15 independent derivations), *pu:-* increases the valency of the base by adding a Container that is not an Instrument, but instead is simply an object within which the action of the verb is accomplished (Table 21). In some cases, like the instance of *pu:ma:ska:kí:* ‘X puts Y into N to dry it’ (< *ma:ska:kí:* ‘X dries Y’) in (47), the applied object might be construed as a Containing Instrument, but this is strictly a contextual interpretation of the general semantic role of Container:

- (47) *pu:ma:ska:ki:kán pi'n pu:skuyún*
 Ø-Ø-*pu:-ma:-ska:k-i:-kan* *pi'n pu:skuyún*
 3OBJ-SG.OBJ-CINST.APPL-CAUS-dry-CAUS-IDF chili smoking.rack
 'They dry the chilies on the smoking rack.' (CF)

In (47), N is a rack used specifically for smoking chiles and so can be understood as an Instrument for drying; however, the same verb can be used with other types of objects (tarps, bowls) which would simply be locations. Thus, *pu:ma:ska:ki:* is less selective than verbs like *pu:cha'panán* 'X grinds in N (e.g., mortar)' from Table 19 above, and the new semantic role specified by the applicative is simply a Container.

Table 21: *pu:-* Container.

<i>pu:cha'hanán</i> 'X washes nixtamal in N'	(< <i>cha'hanán</i> 'X washes nixtamal')
<i>pu:helhtawahá:</i> 'X studies in N (school)'	(< <i>helhtawahá:</i> 'X studies')
<i>pu:ma:ska:ki:</i> 'X puts Y into N to dry it'	(< <i>ma:ska:ki:</i> 'X dries Y')
<i>pu:mojó:</i> 'X puts Y inside N'	(< <i>mojó:</i> 'X puts Y in')
<i>pu:pa:tí:</i> 'X suffers inside of N'	(< <i>pa:tí:</i> 'X suffers')
<i>pu:pú'x-</i> 'X picks Y and puts it in N'	(< <i>pu'x-</i> 'X picks Y')
<i>pu:tastó'h-</i> 'X gets together inside of N'	(< <i>tastó'h-</i> 'X gathers')
<i>pu:tojó:</i> 'X gets inside of N'	(< <i>tojó:</i> 'X is immersed or contained')
<i>pu:waká'lh</i> 'X is hanging inside N'	(< <i>waká'lh</i> 'X is up high')
<i>pu:wilí:</i> 'X puts Y inside of N'	(< <i>wilí:</i> 'X places Y')

pu:- is unique among the UNT applicatives in that it has an obvious cognate in the part prefix *pu:-* 'vagina; container'. Like all part prefixes in Totonacan (Levy 1999), the part prefix *pu:-* acts as a limitative (Mel'čuk 1994), serving to delimit what Langacker (1991) refers to as the "active zone" of one of the event participants—that is, the subpart of that participant most affected by the action. We can see the typical use of part prefixes in (48):

- (48) *pu:masli'tzá' wa:má ha:'x*
pu:-mas-li'=tzá' wa:má ha:'x
 CTNR-rot-PFV=now this gourd
 'This gourd is rotten on the inside.' (CF)

In the verb *pu:mas-* 'X is rotten on the inside' (< *mas-* 'X rots'), *pu:-* merely delimits the active zone (the interior) of the entity that is rotting (the gourd), but does not add a new semantic role to the event. The verb with and without *pu:-* is monovalent.

Because of these differences in meaning and syntactic effect, the two *pu:-* prefixes have to be treated as separate morphemes. This predicts that the two can appear in the same verb form. Consider the examples in (49)–(51):

- (49) *nai'klhká: wa:má kí'wi'*
na-i'k-Ø-Ø-lhka: wa:má kí'wi'
 FUT-1SG.SBJ-3OBJ-SG.OBJ-measure this tree
 'I'm going to measure (the length of) this wood.' (RM)
- (50) *i'kpu:lhká:lh kinkú'xi'*
i'k-Ø-Ø-pu:-lhka:-lh kin-kú'xi'
 1SG.SBJ-3OBJ-SG.OBJ-CTNR-measure-PFV 1PO-corn
 'I weigh my corn.' (RM)
- (51) *na'kpu:pu:lhká: pu:pu:lhká:n i kinkú'xi'*
na-i'k-Ø-Ø-pu:-pu:-lhka: pu:pu:lhká:n i kin-kú'xi'
 FUT-1SG.SBJ-3OBJ-SG.OBJ-CINST.APPL-CTNR-measure scale JUNCT 1PO-corn
 'I'm going to weigh my corn in a scale.' (RM)

Example (49) shows the bivalent verb *lhka:* 'X measures Y'; in (50) we have *pu:lhka:* 'X weighs Y', which is also bivalent and bears the part prefix *pu:-* in recognition of the fact that weighing something usually entails placing it in a bag or container of some kind (in the time before mechanical scales).⁴ The verb in (51), *pu:pu:lhka:* 'X weighs Y in N', on the other hand, has both the partonym *pu:-* and the *pu:-* applicative. The addition of the applicative *pu:-* makes it trivalent, and only with this form can the instrument used to do the weighing, the scale, be expressed.

The relationship between the *pu:-* part prefix, the *pu:-* applicative, and the non-instrumental valency-increasing *pu:-* is not only an interesting example of grammaticalization, but is also significant for family-internal reconstruction. While *li:-* is the principal instrumental applicative in the Totonac branch of the family, *pu:-* is the more frequent instrumental in the Tepehua branch (Beck 2012). In one of the three Tepehua languages, Huehuetla, the general applicative is *pu:-* and the cognate of *li:-*, *ti:-*, is more limited (Smythe Kung 2007)—as it is in Tlachichilco Tepehua, which has both *pu:-* and *pa:-* ('belly') instrumentals in addition to *ti:-* (Watters 1987). The third Tepehua language, Pisaflores, uses both *pu:-* and *ti:-* as general instrumentals (J. Watters, p.c.), suggesting a complex history for instrumental applicatives in the family.

⁴ This use of the part prefix is not, strictly speaking, limitative in the sense of defining an active zone on the object being measured, so much as it defines a type of spatial domain in which the action takes place, also a common function of part prefixes.

4 Conclusion

Based on the questionnaire provided for this volume, UNT presents the following profile:

Morphology

- 1.1 The main AC is marked by affixation.
- 1.2 not relevant
- 1.3 There is virtually no allomorphy affecting any of the applicatives.
- 1.4 Applicativized verbs are inflectionally identical to basic verbs.

Syntax

- 2.1 The applied phrase is realized as a secondary object.
- 2.2 The syntactic status of the applied phrase's companion arguments does not change between the BC and the AC.
- 2.3 There are no restrictions on the stacking of applicatives or their combination with voices.
- 2.4 ACs do not form a special verb class.
- 2.5 Applied objects are potential controllers of agreement, subject to conditions based on person and discourse status.
- 2.6 Applied objects are accessible to relativization and are accessible to linearization operations used to express Information Structure.

Semantics

- 3.1 Each applicative assigns a specific semantic role or one of a set of semantically related roles to the applied phrase.
- 3.2 Each of the four applicatives is the only way the semantic role they are associated with can be expressed.
- 3.3 not relevant
- 3.4 not relevant
- 3.5 The role of applicatives is to create lexical items expressing events involving a certain set of participants, so the choice between the AC and the BC is meaning-driven rather than discourse-sensitive. Applied objects are accessible to linearization operations used to express Information Structure and topic continuity.

Lookalikes

not relevant

Abbreviations

ALL.APPL	allative applicative
ANTIP _{SUPPR}	suppressive antipassive
BEN.APPL	benefactive applicative
CINST.APPL	containing instrumental applicative
CMT.APPL	comitative applicative
CONJ	conjunction
CAUS	causative
CTNR	container
DCS	decausative
DEB	debitative
DSD	desiderative
EXCL	exclusive
FUT	future
HREL	human relative
IDF	indefinite voice
IPFV	imperfective
INST.APPL	instrumental applicative
INTJ	interjection
INTNS	intensive
LOC	locative
NEG	negative
NMZ	nominalizer
OBJ	object
OPT	optative
PFV	perfective
PL	plural
PO	possessive
PROG	progressive
PST	past
QUOT	quotative
RCP	reciprocal
RPT	repetitive
SBJ	subject
SG	singular
SUBST	substitutive
TRZ	transitivizer
-	affix boundary
=	clitic boundary

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