

Grammatical notes¹

The discussion below covers those grammatical features of Upper Necaxa Totonac that are felt to be the most useful and relevant to the users of this dictionary in understanding the formal and etymological relationships between head words, and in making some sense of the example sentences included in the dictionary entries and on the DVD. Included are explanations of all the parts of speech recognized in the dictionary, as well as their inflectional patterns and the most common derivational morphology associated with each. The discussion also includes explanations of some of the conventions used for representing the grammatical features of lexical items and, where appropriate, discusses the criteria used to determine when particular morphological formations were considered to merit (or not to merit) the creation of a separate lexical entry for that form. The aim is not to provide a full explication of Upper Necaxa grammar or to discuss every affix or grammatical morpheme recognized in the literal and interlinear glosses, but it is hoped that it will provide enough background for the reader to make full use of the dictionary.

1. Verbal derivational morphology

Upper Necaxa has a wide range of affixes that create new verbs from roots and complex stems. Among the most productive are the valency-altering affixes, which include two causatives, four applicatives, and two valency-reducers.

The causatives, which increase the valency of their bases by adding a new event-participant expressed as a syntactic subject, are the prefix *ma'ha-* ‘stimulus’ and the circumfix *ma:- -ni:* ‘causative’:

- (1) *tza'má muxtúni' ma'hajikwánli' tza'má hawá'cha'*
tza'má muxtú-ni' **ma'ha**-jikwán-li' tza'má hawá'cha'
that drown-NM STM-be.afraid-PFV that boy
‘the drowned person frightened the boy’
- (2) *kima:lhka:kní:ya'*
kin-**ma:**-lhka:k-**ni:**-ya'
1OBJ-CS-be.hot-CS-IMPF:2SG.SUB
‘you are making me hot’

Of the two, the more widespread is *ma:- -ni:* ‘causative’ and for most stems the choice of causative affix is limited to one or the other. The distinction

¹ This material is from Beck (2011); all citations should be made to this source.

between the two affixes seems to be that *ma'ha-* is used for those events caused by non-humans or inanimates, or with verbs such as *jikwán* ‘be afraid’ which express psychological or “internal” processes. In a few cases, speakers disagree about which of the two is most appropriate for a particular verb, and there are dialectal differences in the choice of causative for a few stems.

There are also four applicatives, affixes that increase the valency of their base by adding a new event-participant expressed as an object. Each of the applicatives differs from the others in terms of the semantic role played by the new participant in the event. The benefactive suffix *-ní'* (*-ní* word-finally) generally adds either a beneficiary, maleficiary, recipient, or experiencer:

- (3) *maka:stin xo'honi'yá:n i'xlá kú'xi'*
 mak-a:-s-tin xo'hó-**ní'**-ya:-n i'x-la kú'xi'
 CLF-ADD-DIM-ONE pay-BEN-IMPF-2OBJ 3PO-ONE'S.OWN corn
 ‘he pays you a fraction of the price of the corn’
- (4) *kintu'ksní'ka' kinhawá'cha'*
 kin-tu'ks-**ní'**-ka' kin-hawá'cha'
 1OBJ-hit-BEN-IDF:PFV 1OBJ-boy
 ‘they_{IDF} hit my son on me’

The objects added to the clause by *-ní'* can also express a number of other related semantic roles, depending on the verb in question.

The instrumental *li:-* adds an object expressing an instrument or a motive:

- (5) *kala'hs'á:' xu:nú:'k nali:he:chi:kán xa:'*
 ka-la'h-s'a.' xu:nú:'k na-**li:-**he:-chi:-kan xa.'
 OPT-INTNS-split:2SG.SUB:PFV bark FUT-INST-back-tie-IDF temazcal
 ‘shred that bark! they are going to tie a roof on the *temazcal* with it’
- (6) *la'htapalhí:ka' wa:má chi'xkú', u:tzá: li:ni:lh*
 la'htapalh-la-i:-ka' wa:má chi'xkú' u:tzá: **li:-**ni:-lh
 witch-do-TRNS-IDF:PFV this man that INST-die
 ‘they_{IDF} bewitched this man, that’s why he died’

The suffix *-i:* shown on the verb *la'htapalhí:* ‘bewitch’ in (6) is a fossilized morpheme found on a few stems deriving a transitive verb from an intransitive verb or, in one or two cases, a noun. It may be etymologically related to the suffixal portion of the causative circumfix *ma:- -ni:* discussed above.

The comitative prefix *ta:'-* adds an object referring to someone who performs the action denoted by the verb in conjunction with the actor/subject:

- (7) *tu: klakaski'n nakinta:'pína'*
 tu: i'k-lakaski'n na-kin-ta: '-pin-a'
 NREL 1SG.SUB-want FUT-1OBJ-CMT-go:2SUB-IMPF:2SG.SUB
 'what I want is for you to go with me'
- (8) *kit tzej nakta:'hama:nán s'awini', mat wan tza'má chi'xkú'*
 kit tzej na-i'k-ta: '-hama:nán s'awini' mat wan tza'má chi'xkú'
 I good FUT-1SG.SUB-CMT-play devil QTV say that man
 'I can play (cards) with the Devil, said the man'

The comitative applicative usually adds an animate event-participant to a clause, whereas the instrumental *li:-* generally adds an inanimate participant.

The allative *la'h-* adds an object expressing a goal to verbs denoting telic or directed motion:

- (9) *he: chu:ntzá: tala'há'lh ja:' i'xtama:ki:ni:' i'xlu:wa'ká'n*
 chu:ntzá: ta-la'h-a'n-lh ja:' i'x-ta-ma:ki:-ni:' i'x-lú:wa'-ka'n
 thus 3PL.SUB-ALTV-go-PFV where PAST-3PL.SUB-keep-PF 3PO-snake-PL.PO
 'so they went to where they kept their snake'
- (10) *lhtun la'hmakamín he: xastá'ha' suwá:lh*
 lhtun la'h-maka-min he: xa-stá'ha' suwá:lh
 IDPH ALTV-hand-come and DTV-unripe sapote
 'he whipped it at him, and (it was) an unripe sapote'

This is the least productive of the applicatives and seems to be largely restricted to use with stems based on the motion verbs *a'n* 'go' and *min* 'come'.

Another affix which affects the valency of verbs is the prefix *ta-* 'decausative'. With most transitive verbs, the decausative has the effect of removing the semantic agent (e.g., *xiti'ta* 'he tore it' > *tasti'ta* 'it tore'); however, with certain other transitive verbs, *ta-* creates an intransitive with a reflexive-like reading (*lakaswi:'k-* 'shave sby' > *talakaswi:'k-* 'shave oneself'). The sense of these uses seems to be that the subject comes into the state that would result from the action. This is similar to the effect *ta-* has on most intransitive (and a few transitive stems), which become inchoative or inceptive. Because of these variable effects of *ta-* on the meaning of the stem, all attested decausative forms which are confirmed by a sufficient number of speakers to differ in valency from their base are included in the dictionary.

A second affix which reduces the valency of transitive verbs is the detransitive suffix. The suffix has three forms, depending on the last vowel in the stem:

<i>lakamu'sú</i> : ‘kiss someone’	>	<i>lakamu'su:nún</i> ‘go kissing people’
<i>cha'x-</i> ‘carry something in arms’	>	<i>cha'xnán</i> ‘carry effigy in procession’
<i>si'pi</i> : ‘grind something’	>	<i>si'pi:nín</i> ‘be busy grinding’

There are a few verbs that have irregular detransitive forms, the most common being *wa'yán* ‘eat, dine’ (from *wa* ‘eat’) and *cha'na:nán* ‘plant, sow’ (from *cha'n* ‘plant something’). Verbs affixed with the detransitive suffix generally follow Class 3 conjugational patterns (see section 2.2.1).

With transitive verbs, the detransitive suffix often has a voice-like function suppressing the object, reducing the verb’s syntactic valency by one and creating the expression of an activity or action on a non-specific or generic patient. The meaning of the detransitive form is in most cases transparent, although many forms have taken on lexicalized, more specific meanings (as in the case of *cha'xnán* above). The detransitive is also found with some intransitive stems, particularly verbs of motion, in which case it gives a habitual or atelic reading. No systematic attempts were made to collect detransitives of transitive verbs. However, forms found in texts and elicitation and confirmed by a sufficient number of speakers are given their own entries, as are all known irregular detransitive forms and detransitives formed on intransitive bases.

2. Verbal inflection

Verbs in Upper Necaxa show agreement with their subjects and objects, and bear markers for tense, aspect, mood, and voice. In the dictionary, verbs are classified based on the number of noun phrase arguments they allow and whether they are dynamic or stative, giving the following verb types:

- (vs) – stative verb
- (vst) – stative transitive verb
- (vsdt) – stative ditransitive verb
- (vi) – dynamic intransitive verb
- (vt) – dynamic transitive verb
- (vdt) – dynamic ditransitive verb
- (v3t) – dynamic tri-transitive verb (verb with three objects)
- (v4t) – dynamic quadri-transitive verb (verb with four objects)
- (vimp) – dynamic impersonal verb (verb without nominal arguments)

Glosses for verbs are phrased in such a way that each non-subject argument of the verb is expressed by “sth”, “sby”, or “smwh” (e.g. *maxki*: (vdt) ‘give sth to sby’); subcategorization for particular types of objects is indicated in parentheses

following these abbreviations (e.g., *li:la'hapónh-* (vdt) ‘dig with sth to get at sth (animal) in a hole’). Further verbal sub-classifications based on semi-regular, suppletive, or irregular conjugational patterns are given with each entry.

2.1. Person-marking

Verbs in UNT are inflected to agree with their subjects and, for transitive and multi-transitive verbs, up to two objects. Subject inflections for verbs of all valencies make use of the following affixes:

Table 1. Upper Necaxa subject-markers

	SG	PL
1	i'k-	(i'k-) -uj
2	–	-tit
3	∅	ta-

Although the first-person singular subject marker is a prefix, in rapid speech it may cliticize leftward to the end of a vowel-final adverb or particle if followed by a consonant. It is commonly reduced to /k/.

No affix for second-person singular subjects is shown in Table 1 as its marking depends on conjugation class (section 2.2.1) and the aspect of the verb form. Thus, for the verbs *taxtú* ‘leave’ (Class 1), *tu'ks-* ‘hit’ (Class 2), and *la'htzín* ‘see’ (Class 3), we have the following second-singular forms:

Table 2. Second-person singular subject forms

	IMPERFECTIVE	PERFECTIVE	PERFECT	PROGRESSIVE
Class 1	taxtúya'	táxtu'	taxtuní:'ta'	taxtupá:'
Class 2	tú'ksa'	tú'ksti'	tu'ksní:'ta'	tu'kspá:'
Class 3	la'htzína'	lá'htzi'	la'htzini:'ta'	la'htzimpá:'

Second-person subjects also trigger stem suppletion in a number of verbs, particularly those based – synchronically or diachronically – on the verbs *a'n* ‘go’ and *min* ‘come’, shown in here in the second-person singular:

Table 3. Second-person singular forms for *a'n* ‘come’ and *min* ‘go’

	IMPERFECTIVE	PERFECTIVE	PERFECT	PROGRESSIVE
<i>a'n</i> ‘go’	pína'	pi't	piní:'ta'	pimpá:'
<i>min</i> ‘come’	tána'	ta't	taní:'ta'	tampá:'

Verbs based on either of these stems are marked in the dictionary for membership in the corresponding inflection class (“p-paradigm” for verbs based on *a'n* and “t-paradigm” for verbs based on *min* – these paradigms are given in full below). Some other common verbs have irregular second-person forms – e.g., *cha:n* ‘arrive there’ (IMPF:SG *chipína*), *chin* ‘arrive here’ (IMPF:SG *chitána*), and *hexmá't-* ‘hear, understand’ (IMPF:SG *hexpá'ta*). In these cases, the second person forms of the stems are provided in the relevant entry.

UNT also makes an exclusive/inclusive distinction in the first-person plural:

- (11) a. *tu'ksá:uj*
 tu'ks-ya:-uj
 hit-IMPf-1PL.SUBJ
 ‘we_{INC} hit him’
- b. *i'ktu'ksá:uj*
 i'k-tu'ks-ya:-uj
 1SG.SUB-hit-IMPf-1PL.SUBJ
 ‘we_{EXC} hit him’

The distinction between the two first-person plurals is marked by the presence of the first-person singular prefix in the exclusive verb form.

The object-markers are shown in Table 4:

Table 4. Upper Necaxa object-markers

1	2	3
kin-	-n	Ø

Unlike subject-markers, object-markers make no distinction for number. Object plurality in the second- and third-persons is shown using a separate object-plural prefix *ka:-*. First-person plural objects are marked by combining the plural object prefix (*ka:-*), the first-person object prefix (*kin-*), and the second-person object suffix (*-n*). Multi-transitive verbs with first-singular and second-singular objects take both *kin-* and *-n* (Beck 2006a, 2007b).

A complication in the marking of object plurality arises in those verb forms in which both subject and object are non-third persons and one or both of these are plural. In these cases, speakers use forms which are three-way ambiguous. Verbs with first-person subjects and second-person objects take the first-person singular subject prefix, the plural object prefix, and the second-person object suffix, the expected form for the reading ‘I hit you guys’:

- (12) *i'ka:tú'ksni'*
 i'k-ka:-tu'ks-ni'
 1SG.SUB-PL.OBJ-hit-2OBJ:PFV
 ‘I hit you guys’ or ‘we_{EXC} hit you’ or ‘we_{EXC} hit you guys’

Verbs with second-person subjects and first-person objects, on the other hand, make use of an idiosyncratic form involving the first-person object prefix, the first-person plural subject suffix, and the reciprocal prefix:

- (13) *kila:tú'kswi'*
kin-la:-tu'ks-wi'
1OBJ-RCP-hit-1PL.SUB:PFV
 'you hit us' or 'you guys hit us' or 'you guys hit me'

These patterns are discussed in Beck (2003) and Beck and Mel'čuk (2011).

2.2. Tense, mood, and aspect

Tense- and mood-marking are fairly regular and uniform for all verbs in the language, but aspectual inflections require the division of verbs into inflectional classes, the primary division being between stative and dynamic verbs. Both types of verb show inflection for three tenses (past, present, and future) and four moods (indicative, optative/imperative, potential, and irrealis), but only dynamic verbs have aspectual inflections (imperfective, perfective, progressive, and perfect). These three inflectional categories are not freely combinable; the permissible combinations of tense, aspect, and mood for dynamic verbs, along with their principal exponents, are given below:

Table 5. Tense, aspect, and mood combinations for dynamic verbs

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
INDICATIVE				
FUTURE	na- Ø- -ya:			
PRESENT	Ø- Ø- -ya:	Ø- -li'	Ø- Ø- -ma:	Ø- Ø- -ni:'tán
PAST	i'x- Ø- -ya:		i'x- Ø- -ma:	i'x- Ø- -ni:'tán
OPTATIVE/IMPERATIVE				
	ka- -ya:	ka- -li'	ka- -ma:	ka- -ni:'tán
POTENTIAL				
FUTURE	na- ti- -ya:			
PRESENT	ti'- -ya:	ti'- -li'	ti'- -ma:	ti'- -ni:'tán
PAST	i'x- ti'- -ya:		i'x- ti'- -ma:	i'x- ti'- -ni:'tán
IRREALIS				
FUTURE		ka- ti'- -li'		
PRESENT		i'x- -li'		
PAST		i'x- ti'- -li'		

The indicative and potential moods show the greatest combinatorial potential, being compatible with all aspects and tenses. The optative/imperative is found with all four aspects but is not compatible with tense inflection, while the irrealis seems not to distinguish aspect but does have three tenses. Among the aspects, only the imperfective is found in the future tense, while the perfective is incompatible with tense altogether.

2.2.1. Tense-marking

There are three tenses whose markers interact with the first person subject prefix:

Table 6. Indicative imperfective tense paradigms ($\sqrt{\text{taxtú}}$ ‘leave’)

	PRESENT	PAST	FUTURE
1SG	i'ktaxtú	xa'ktaxtú	na'ktaxtú
2SG	taxtúya'	i'xtaxtúya'	nataxtúya'
3SG	taxtú	ixtaxtú	nataxtú
1PL _{EXC}	i'ktaxtuyá:uj	xa'ktaxtuyá:uj	na'ktaxtuyá:uj
1PL _{INC}	taxtuyá:uj	i'xtaxtuyá:uj	nataxtuyá:uj
2PL	taxtuya:'tít	i'xtaxtuya:'tít	nataxtuya:'tít
3PL	tataxtú	i'xtataxtú	natataxtú

The future tense marker *na-* may be realized in rapid speech as a final /-n/ on vowel-final particles and adverbs when the verb-form begins with a consonant. Less frequently, the past tense prefix also cliticizes leftwards as a final /x/. Tense-marking shows no other idiosyncrasies and is the same for dynamic and stative verbs. The present tense is used in the citation form of verbs appearing as head words of dictionary entries.

2.2.2. Mood-marking

Verbs are inflected for one of four moods – indicative, optative/imperative, potential, and irrealis. The indicative mood, marked by \emptyset -, is equivalent to indicative moods in other languages, while the optative/imperative mood, marked by *ka-*, is used to express desired outcomes or states (including commands). The potential mood, marked by *ti'*-, is used to express things that are not true at the time of reference but are potentially realizable, while the irrealis is used to express things that are not realizable at time of reference. The irrealis mood does not have a discrete marker of its own, but makes use of affixes borrowed from the other tense, mood and aspect paradigms (Beck and Mel'čuk 2011); it is always

inflected as if it were in the perfective aspect. The indicative mood is used in the citation form of verbs appearing as head words of dictionary entries.

Table 7. Present imperfective mood paradigms ($\sqrt{\text{taxtú}}$ 'leave')

	INDICATIVE	OPTATIVE	POTENTIAL	IRREALIS
1SG	i'ktaxtú	ka'ktaxtú	i'kti'taxtú	xa'ktaxtúlh
2SG	taxtúya'	kataxtúya'	ti'taxtúya'	i'xtáxtu'
3SG	taxtú	kataxtú	ti'taxtú	i'xtaxtúlh
1PL _{EXC}	i'ktaxtuyá:uj	ka'ktaxtuyá:uj	i'kti'taxtuyá:uj	xa'ktaxtúj
1PL _{INC}	taxtuyá:uj	kataxtuyá:uj	ti'taxtuyá:uj	i'xtaxtúj
2PL	taxtuya:'tít	kataxtuya:'tít	ti'taxtuya:'tít	i'xtaxtútít
3PL	tataxtú	katataxtú	ti'tataxtú	i'xtataxtúlh

2.2.3. Aspect and aspectual paradigms

The description of Upper Necaxa aspectual marking requires the division of stems into conjugational classes, each showing distinctive patterns in the imperfective and perfective aspects and, to the extent that aspect-suffixes interact with person and number markers, in subject/object agreement. I will begin the discussion with the inflection of dynamic intransitive verbs before moving on to the more complex transitive paradigms. Following this, I describe the predominant irregular verbal conjugations. All the paradigms below are given in the present tense of the indicative mood.

Dynamic intransitive paradigms

Upper Necaxa dynamic verbs can be divided into three conjugations based on differences in their imperfective and perfective aspectual inflections. Classes 1 and 2 consist of vowel-final and consonant-final stems, respectively, while Class 3 contains an idiosyncratic subset of n-final stems. Class 3 is a historical remnant of the conjugation of n-final stems which persists in many other languages in the family and includes all or nearly all n-final stems. Upper Necaxa seems to be regularizing its verbal paradigms by conjugating most n-final stems like other consonant-final stems, and several n-final verbs show free variation in the use of Class 2 and Class 3 conjugations.

Class 1 comprises all stems ending in vowels and is distinguished from other classes by the syncope of the imperfective suffix in the third-person and first-person singular, and by the *-lh* allomorph of the perfective suffix:

Table 8. Class 1 aspectual paradigms ($\sqrt{\text{taxtú}}$ ‘leave’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'ktaxtú	i'ktaxtúlh	i'ktaxtumá:lh	i'ktaxtuní:'
2SG	taxtúya'	táxtu	taxtupá:'	taxtuní:'ta'
3SG	taxtú	taxtúlh	taxtumá:lh	taxtuní:'
1PL _{EXC}	i'ktaxtuyá:uj	i'ktaxtúj	i'ktaxtuma:'náuj	i'ktaxtuni:'táuj
1PL _{INC}	taxtuyá:uj	taxtúj	taxtuma:'náuj	taxtuni:'táuj
2PL	taxtuya:'tít	taxtutít	taxtupa:'na'ntít	taxtuni:'tantít
3PL	tataxtú	tataxtúlh	tataxtuma:'nálh	tataxtuní:'

Class 2 contains two subclasses, Class 2b for n-final stems and Class 2a for stems ending with other consonants. **Class 2a** realizes the imperfective as /a/ in the third-person and in the first-person singular, and uses portmanteau person-aspect suffixes in the perfective:

Table 9. Class 2a aspectual paradigms ($\sqrt{\text{pax-}}$ ‘bathe’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'kpáxa	i'kpáxli'	i'kpaxmá:lh	i'kpaxní:'
2SG	páxa'	páxti'	paxpá:'	paxní:'ta'
3SG	páxa	páxli'	paxmá:lh	paxní:'
1PL _{EXC}	i'kpaxá:uj	i'kpáxwi'	i'kpaxma:'náuj	i'kpaxni:'táuj
1PL _{INC}	paxá:uj	páxwi'	paxma:'náuj	paxni:'táuj
2PL	paxa:'tít	paxtít	paxpa:'na'ntít	paxni:'tantít
3PL	tapáxa	tapáxli'	tapaxma:'nálh	tapaxní:'

Class 2b lacks the short /a/ allomorph of the imperfective suffix, which is removed by syncope in the third-person and first-person singular, as in Class 1:

Table 10. Class 2b aspectual paradigms ($\sqrt{\text{kalthwán}}$ ‘cry’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'kalthwán	i'kalthwánli'	i'kalthwamá:lh	i'kalthwani:'
2SG	kalthwána'	kalthwánti'	kalthwampá:'	kalthwani:'ta'
3SG	kalthwan	kalthwánli'	kalthwamá:lh	kalthwani:'
1PL _{EXC}	i'kalthwaná:uj	i'kalthwánwi'	i'kalthwama:'náuj	i'kalthwani:'táuj
1PL _{INC}	kalthwaná:uj	kalthwánwi'	kalthwama:'náuj	kalthwani:'táuj
2PL	kalthwana:'tít	kalthwantít	kalthwampa:'na'ntít	kalthwani:'tantít
3PL	takalthwán	takalthwánli'	takalthwama:'nálh	takalthwani:'

Class 3 contains a number of high-frequency and archaic n-final stems, as well as most (but not all) stems formed with the detransitive suffix (*-nVn*). While its imperfective forms resemble those of Class 2b (regular n-final) stems, its perfective forms resemble those of Class 1 (vowel-final) stems:

Table 11. Class 3 aspectual paradigms ($\sqrt{\text{wa'yán}}$ ‘eat_{INTR}’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'kwa'yán	i'kwa'yálh	i'kwa'yamá:lh	i'kwa'yani:'
2SG	wa'yána'	wá'ya'	wa'yampá:'	wa'yani:'ta'
3SG	wa'yán	wa'yálh	wa'yamá:lh	wa'yani:'
1PL _{EXC}	i'kwa'yaná:uj	i'kwa'yáuj	i'kwa'yama:'náuj	i'kwa'yani:'táuj
1PL _{INC}	wa'yaná:uj	wa'yáuj	wa'yama:'náuj	wa'yani:'táuj
2PL	wa'yana:'tít	wa'yantít	wa'yampa:'na'ntít	wa'yani:'tantít
3PL	tawa'yán	tawa'yálh	tawa'yama:'nálh	tawa'yani:'

In the dictionary, inflection class is indicated for all n-final stems. Because Class 3 seems to be disappearing, there are a few stems for which not all speakers agree on inflection class and, for some speakers, certain n-final stems can follow either pattern. These stems are marked in the dictionary as “*Cls. 2 or 3.*”

Dynamic transitive paradigms

When person-markers are suffixes, these can interact with the aspect-markers to create more complex verbal paradigms than those seen with the intransitive verbs, particularly when – as in the perfective aspect – the aspectual suffixes follow the person-markers. In the other aspects, the transitive paradigms are essentially the same for all three classes, differing only to the extent that they vary in the intransitive paradigms.

Class 1 transitive verbs in the imperfective aspect differ from intransitive Class 1 verbs only in those forms with an overt object suffix – that is, in the second person- and first person plural-object forms, where the second-person object suffix *-n* protects the imperfective marker *-ya:* from syncope (Table 12). Class 1 verbs with overt object suffixes in the perfective, on the other hand, lose some or all of the exponents of aspect through morphophonemic interaction with the person-marker (Table 13). The progressive paradigm (Table 14) is more regular, as is the perfect paradigm (Table 15). In both cases, just as in the imperfective, the aspect-markers appear as per the intransitive paradigm, except in the presence of the second person object-marker.

Table 12. Class 1 transitive imperfective paradigm ($\sqrt{mu'sú}$: 'kiss')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kmu'su:yá:n	i'kmu'sú:
	2SG	kimu'sú:ya'	–	mu'sú:ya'
	3SG	kimu'sú:	mu'su:yá:n	mu'sú:
	1PL _{EXC}	–	i'ka:mu'su:yá:n	i'kmu'su:yá:uj
	1PL _{INC}	–	–	mu'su:yá:uj
	2PL	kila:mu'su:yá:uj	–	mu'su:ya:'tít
	3PL	kintamu'sú:	tamu'su:yá:n	tamu'sú:
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:mu'su:yá:n	i'ka:mu'sú:
	2SG	kila:mu'su:yá:uj	–	ka:mu'sú:ya'
	3SG	kinka:mu'su:yá:n	ka:mu'su:yá:n	ka:mu'sú:
	1PL _{EXC}	–	i'ka:mu'su:yá:n	i'ka:mu'su:yá:uj
	1PL _{INC}	–	–	ka:mu'su:yá:uj
	2PL	kila:mu'su:yá:uj	–	ka:mu'su:ya:'tít
	3PL	kinka:tamu'su:yá:n	ka:tamu'su:yá:n	tamu'sú:

Table 13. Class 1 transitive perfective paradigm ($\sqrt{mu'sú}$: 'kiss')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kmu'sú:n	i'kmu'sú:lh
	2SG	kimú'su:'	–	mú'su:'
	3SG	kimu'sú:lh	mu'sú:n	mu'sú:lh
	1PL _{EXC}	–	i'ka:mu'sú:n	i'kmu'sú:j
	1PL _{INC}	–	–	mu'sú:j
	2PL	kila:mu'sú:j	–	mu'su:tít
	3PL	kintamu'sú:lh	tamu'sú:n	tamu'sú:lh
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:mu'sú:n	i'ka:mu'sú:lh
	2SG	kila:mu'sú:j	–	ka:mú'su:'
	3SG	kinka:mu'sú:n	ka:mu'sú:n	ka:mu'sú:lh
	1PL _{EXC}	–	i'ka:mu'sú:n	i'ka:mu'sú:j
	1PL _{INC}	–	–	ka:mu'sú:j
	2PL	kila:mu'sú:j	–	ka:mu'su:tít
	3PL	kinka:tamu'sú:n	ka:tamu'sú:n	tamu'sú:lh

Table 14. Class 1 transitive progressive paradigm ($\sqrt{\text{mu}'\text{s}\acute{\text{u}}}$: 'kiss')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kmu'su:má:n	i'kmu'su:má:lh
	2SG	kimu'su:pá:'	–	mu'su:pá:'
	3SG	kimu'su:má:lh	mu'su:má:n	mu'su:má:lh
	1PL _{EXC}	–	i'ka:mu'su:má:n	i'kmu'su:ma:'náuj
	1PL _{INC}	–	–	mu'su:ma:'náuj
	2PL	kila:mu'su:ma:'náuj	–	mu'su:pa:'na'ntít
	3PL	kintamu'su:ma:'nálh	tamu'su:ma:'nán	tamu'su:ma:'nálh
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:mu'su:má:n	i'ka:mu'su:má:lh
	2SG	kila:mu'su:ma:'náuj	–	ka:mu'su:pá:'
	3SG	kinka:mu'su:ma:'nán	ka:mu'su:má:n	ka:mu'su:má:lh
	1PL _{EXC}	–	i'ka:mu'su:má:n	i'ka:mu'su:ma:'náuj
	1PL _{INC}	–	–	ka:mu'su:ma:'náuj
	2PL	kila:mu'su:ma:'náuj	–	ka:mu'su:pa:'na'ntít
	3PL	kinka:tamu'su:ma:'nán	ka:tamu'su:ma:'nán	tamu'su:ma:'nálh

Table 15. Class 1 transitive perfect paradigm ($\sqrt{\text{mu}'\text{s}\acute{\text{u}}}$: 'kiss')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kmu'su:ni:'tán	i'kmu'su:ní:'
	2SG	kimu'su:ní:'ta'	–	mu'su:ní:'ta'
	3SG	kimu'su:ní:'	mu'su:ni:'tán	mu'su:ní:'
	1PL _{EXC}	–	i'ka:mu'su:ni:'tán	i'kmu'su:ni:'táuj
	1PL _{INC}	–	–	mu'su:ni:'táuj
	2PL	kila:mu'su:ni:'táuj	–	mu'su:ni:'tantít
	3PL	kintamu'su:ní:'	tamu'su:ni:'tán	tamu'su:ní:'
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:mu'su:ni:'tán	i'ka:mu'su:ní:'
	2SG	kila:mu'su:ni:'táuj	–	ka:mu'su:ní:'ta'
	3SG	kinka:mu'su:ni:'tán	ka:mu'su:ni:'tán	ka:mu'su:ní:'
	1PL _{EXC}	–	i'ka:mu'su:ni:'tán	i'ka:mu'su:ni:'táuj
	1PL _{INC}	–	–	ka:mu'su:ni:'táuj
	2PL	kila:mu'su:ni:'táuj	–	ka:mu'su:ni:'tantít
	3PL	kinka:tamu'su:ni:'tán	ka:tamu'su:ni:'tán	tamu'su:ní:'

As in the intransitive paradigms, the progressive paradigm in Table 14 is based historically on the stative posture verb *ma:lh* ‘be lying’ (see below).

For all four aspectual paradigms, there are alternative forms for verbs with third-person plural subjects and third person plural objects (3_{PL} > 3_{PL}). Compare the 3_{PL} > 3_{PL} progressive form in Table 14 to the example in (14):

- (14) *tzumaján ka:mu'su:má:lh i'xlakasmu:'ká'n*
 tzumaján ka:-mu'sú:-ma:lh i'x-lakasmú:'-ka'n
 girl:PL PL.OBJ-KISS-PROG 3PO-SWEETHEART-PL.PO
 ‘the girls kiss their sweethearts’

The simultaneous marking of the plurality of both a third-person subject and a third-person object is blocked morphologically, although the plural object prefix *ka:-* is compatible with plural subject marking (including the stative plural marker *-nan* in the progressive) in 3_{PL} > 1_{PL} and 3_{PL} > 2_{PL} forms. The decision whether to mark subject-plurality or object-plurality is made based on the relative discourse-saliency of the event-participants. The same potential alternation applies to Class 2 and 3 transitive paradigms as well.

The **Class 2** transitive paradigms are given in the following tables:

Table 16. Class 2 transitive imperfective paradigm ($\sqrt{tu'ks}$ - ‘hit’)

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'ktu'ksá:n	i'ktú'ksa
	2SG	kintú'ksa'	–	tú'ksa'
	3SG	kintú'ksa	tu'ksá:n	tú'ksa
	1 _{PL} _{EXC}	–	i'ka:tu'ksá:n	i'ktu'ksá:uj
	1 _{PL} _{INC}	–	–	tu'ksá:uj
	2PL	kila:tu'ksá:uj	–	tu'ksa:'tít
	3PL	kintatú'ksa	tatu'ksá:n	tatú'ksa
		PLURAL OBJECT		
SUBJECT	1SG	–	i'ka:tu'ksá:n	i'ka:tu'ksa
	2SG	kila:tu'ksá:uj	–	ka:tú'ksa'
	3SG	kinka:tu'ksá:n	ka:tu'ksá:n	ka:tú'ksa
	1 _{PL} _{EXC}	–	i'ka:tu'ksá:n	i'ka:tu'ksá:uj
	1 _{PL} _{INC}	–	–	ka:tu'ksá:uj
	2PL	kila:tu'ksá:uj	–	ka:tu'ksa:'tít
	3PL	kinka:tatu'ksá:n	ka:tatu'ksá:n	tatú'ksa

Table 17. Class 2 transitive perfective paradigm ($\sqrt{tu'ks}$ - 'hit')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'ktú'ksni'	i'ktú'ksli'
	2SG	kintú'ksti'	–	tú'ksti'
	3SG	kintú'ksli'	tú'ksni'	tú'ksli'
	1PL _{EXC}	–	i'ka:tú'ksni'	i'ktú'kswi'
	1PL _{INC}	–	–	tú'kswi'
	2PL	kila:tú'kswi'	–	tu'kstít
	3PL	kintatú'ksli'	tatú'ksni'	tatú'ksli'
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:tú'ksni'	i'ka:tú'ksli'
	2SG	kila:tú'kswi'	–	ka:tú'ksti'
	3SG	kinka:tú'ksni'	ka:tú'ksni'	ka:tú'ksli'
	1PL _{EXC}	–	i'ka:tú'ksni'	i'ka:tú'kswi'
	1PL _{INC}	–	–	ka:tú'kswi'
	2PL	kila:tú'kswi'	–	ka:tu'kstít
	3PL	kinka:tatú'ksni'	ka:tatú'ksni'	tatú'ksli'

Table 18. Class 2 transitive progressive paradigm ($\sqrt{tu'ks}$ - 'hit')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'ktu'ksmá:n	i'ktu'ksmá:lh
	2SG	kintu'kspá:'	–	tu'kspá:'
	3SG	kintu'ksmá:lh	tu'ksmá:n	tu'ksmá:lh
	1PL _{EXC}	–	i'ka:tu'ksmá:n	i'ktu'ksma:'náuj
	1PL _{INC}	–	–	tu'ksma:'náuj
	2PL	kila:tu'ksma:'náuj	–	tu'kspa:'na'ntít
	3PL	kintatu'ksma:'nálh	tatu'ksma:'nán	tatu'ksma:'nálh
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:tu'ksmá:n	i'ka:tu'ksmá:lh
	2SG	kila:tu'ksma:'náuj	–	ka:tu'kspá:'
	3SG	kinka:tu'ksma:'nán	ka:tu'ksmá:n	ka:tu'ksmá:lh
	1PL _{EXC}	–	i'ka:tu'ksmá:n	i'ka:tu'ksma:'náuj
	1PL _{INC}	–	–	ka:tu'ksma:'náuj
	2PL	kila:tu'ksma:'náuj	–	ka:tu'kspa:'na'ntít
	3PL	kinka:tatu'ksma:'nán	ka:tatu'ksma:'nán	tatu'ksma:'nálh

Table 19. Class 2 transitive perfect paradigm ($\sqrt{tu'ks}$ - ‘hit’)

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'ktu'ksni:'tán	i'ktu'ksní:'
	2SG	kintu'ksní:'ta'	–	tu'ksní:'ta'
	3SG	kintu'ksní:'	tu'ksni:'tán	tu'ksní:'
	1PL _{EXC}	–	i'ka:tu'ksni:'tán	i'ktu'ksni:'táj
	1PL _{INC}	–	–	tu'ksni:'táj
	2PL	kila:tu'ksni:'táj	–	tu'ksni:'tantít
	3PL	kintatu'ksní:'	tatu'ksni:'tán	tatu'ksní:'
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:tu'ksni:'tán	i'ka:tu'ksní:'
	2SG	kila:tu'ksni:'táj	–	ka:tu'ksní:'ta'
	3SG	kinka:tu'ksni:'tán	ka:tu'ksni:'tán	ka:tu'ksní:'
	1PL _{EXC}	–	i'ka:tu'ksni:'tán	i'ka:tu'ksni:'táj
	1PL _{INC}	–	–	ka:tu'ksni:'táj
	2PL	kila:tu'ksni:'táj	–	ka:tu'ksni:'tantít
	3PL	kinka:tatu'ksni:'tán	ka:tatu'ksni:'tán	tatu'ksní:'

Class 2 transitive verbs in the imperfective aspect (Table 16) differ from Class 2 intransitive verbs only in forms where there is an overt object suffix. In the perfective (Table 17), the situation is complicated by the appearance of the portmanteau subject/aspect suffixes typical of Class 2 verbs. For transitive verbs, this series includes an additional member, *-ni'* ‘2OBJ:PFV’ in which the initial /l/ of the perfective suffix is replaced by the object-marker *-n*. As with Class 1 verbs, the transitive progressive forms (Table 18) are identical to those in the intransitive paradigms except for where the final /lh/ of the progressive is replaced by the second-object suffix *-n*. The transitive perfect paradigm (Table 19) for Class 2 also contains no unexpected forms.

Class 3 transitive verbs, like Class 3 intransitives, resemble Class 2b in the imperfective aspect (Table 20) but look more like Class 1 verbs in the perfective (Table 21). The Class 3 progressive (Table 22) and perfect (Table 23) paradigms are fully regular and contain no unpredictable forms. Because membership in this conjugation is unpredictable, inflection class for all n-final transitive stems is indicated in the dictionary entry for that word. When speakers are not consistent or in agreement as to whether particular stems belong to Class 2 or 3, lexical entries bear the notation “*Cls. 2 or 3.*”

Table 20. Class 3 transitive imperfective paradigm ($\sqrt{\text{la'htzín}}$ 'see')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kla'htziná:n	i'kla'htzín
	2SG	kila'htzína'	–	la'htzína'
	3SG	kila'htzín	la'htziná:n	la'htzín
	1PL _{EXC}	–	i'ka:la'htzín	i'kla'htziná:uj
	1PL _{INC}	–	–	la'htziná:uj
	2PL	kila:la'htziná:uj	–	la'htzina:'tít
	3PL	kintala'htzín	tala'htziná:n	tala'htzín
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:la'htzín	i'ka:la'htzín
	2SG	kila:la'htziná:uj	–	ka:la'htzína'
	3SG	kinka:la'htziná:n	ka:la'htziná:n	ka:la'htzín
	1PL _{EXC}	–	i'ka:la'htzín	i'ka:la'htziná:uj
	1PL _{INC}	–	–	ka:la'htziná:uj
	2PL	kila:la'htziná:uj	–	ka:la'htzina:'tít
	3PL	kinka:tala'htziná:n	ka:tala'htziná:n	tala'htzín

Table 21. Class 3 transitive perfective paradigm ($\sqrt{\text{la'htzín}}$ 'see')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kla'htzín	i'kla'htzílh
	2SG	kilá'htzi'	–	lá'htzi'
	3SG	kila'htzílh	la'htzín	la'htzílh
	1PL _{EXC}	–	i'ka:la'htzín	i'kla'htziúj
	1PL _{INC}	–	–	la'htziúj
	2PL	kila:la'htziúj	–	la'htzintít
	3PL	kintala'htzílh	tala'htzín	tala'htzílh
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:la'htzín	i'ka:la'htzílh
	2SG	kila:la'htziúj	–	ka:lá'htzi'
	3SG	kinka:la'htzín	ka:la'htzín	ka:la'htzílh
	1PL _{EXC}	–	i'ka:la'htzín	i'ka:la'htziúj
	1PL _{INC}	–	–	ka:la'htziúj
	2PL	kila:la'htziúj	–	ka:la'htzintít
	3PL	kinka:tala'htzín	ka:tala'htzín	tala'htzílh

Table 22. Class 3 transitive progressive paradigm ($\sqrt{\text{la'htzín}}$ 'see')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kla'htzimá:n	i'kla'htzimá:lh
	2SG	kila'htzimpá:'	–	la'htzimpá:'
	3SG	kila'htzimá:lh	la'htzimá:n	la'htzimá:lh
	1PL _{EXC}	–	i'ka:la'htzimá:n	i'kla'htzima:'náuj
	1PL _{INC}	–	–	la'htzima:'náuj
	2PL	kila:la'htzima:'náuj	–	la'htzimpa:'na'ntít
	3PL	kintala'htzima:'nálh	tala'htzima:'nán	tala'htzima:'nálh
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:la'htzimá:n	i'ka:la'htzimá:lh
	2SG	kila:la'htzima:'náuj	–	ka:la'htzimpá:'
	3SG	kinka:la'htzima:'nán	ka:la'htzimá:n	ka:la'htzimá:lh
	1PL _{EXC}	–	i'ka:la'htzimá:n	i'ka:la'htzima:'náuj
	1PL _{INC}	–	–	ka:la'htzima:'náuj
	2PL	kila:la'htzima:'náuj	–	ka:la'htzimpa:'na'ntít
	3PL	kinka:tala'htzima:'nán	ka:tala'htzima:'nán	tala'htzima:'nálh

Table 23. Class 3 transitive perfect paradigm ($\sqrt{\text{la'htzín}}$ 'see')

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'kla'htzini:'tán	i'kla'htzini:'
	2SG	kila'htzini:'ta'	–	la'htzini:'ta'
	3SG	kila'htzini:'	la'htzini:'tán	la'htzini:'
	1PL _{EXC}	–	i'ka:la'htzini:'tán	i'kla'htzini:'táuj
	1PL _{INC}	–	–	la'htzini:'táuj
	2PL	kila:la'htzini:'táuj	–	la'htzini:'tantít
	3PL	kintala'htzini:'	tala'htzini:'tán	tala'htzini:'
			PLURAL OBJECT	
SUBJECT	1SG	–	i'ka:la'htzini:'tán	i'ka:la'htzini:'
	2SG	kila:la'htzini:'táuj	–	ka:la'htzini:'ta'
	3SG	kinka:la'htzini:'tán	ka:la'htzini:'tán	ka:la'htzini:'
	1PL _{EXC}	–	i'ka:la'htzini:'tán	i'ka:la'htzini:'táuj
	1PL _{INC}	–	–	ka:la'htzini:'táuj
	2PL	kila:la'htzini:'táuj	–	ka:la'htzini:'tantít
	3PL	kinka:tala'htzini:'tán	ka:tala'htzini:'tán	tala'htzini:'

Irregular dynamic paradigms

The verbs *a'n* ‘go’, *cha:n* ‘arrive there’, and all verbs that are synchronically or diachronically derived from them belong to the **p-paradigm** and show stem-suppletion in the second person, replacing /a'n/ with /pin/:

Table 24. P-paradigm ($\sqrt{a'n}$ ‘go’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'ká'n	i'ká'lh	i'ka'má:lh	i'ka'ní:'
2SG	pína'	pi't	pimpá:'	pini:'ta'
3SG	a'n	a'lh	a'má:lh	a'ní:'
1PL _{EXC}	i'ka'ná:uj	i'ká'uj	i'ka'náuj	i'ka'ni:'táuj
1PL _{INC}	a'ná:uj	a'uj	a'náuj	a'ni:'táuj
2PL	pina:'tít	pintít	pimpa:'na'ntít	pini:'ta:ntít
3PL	taá'n	taá'lh	taa'ma:'nálh	taa'ní:'

The second-person stem for *cha:n* (probably historically *cha* ‘distal’ + *a'n* go’) is *chipi-*. In most multi-syllabic stems in this paradigm, the second-singular perfective form *pi't* is optionally realized as *pi'*, the stress shifting leftward as in the regular Class 1 and 3 perfective patterns. In the imperfective, $\sqrt{a'n}$ ‘go’ may also be realized with a final /a:/ in the first- and third-person singular, most commonly in speech from Patla.

The verbs *min* ‘come’, *chin* ‘arrive here’, and all verbs that are synchronically or diachronically derived from them belong to the **t-paradigm** and show stem-suppletion in the second person, replacing /min/ with /tan/:

Table 25. T-paradigm ($\sqrt{li:min}$ ‘bring sth’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'kli:mín	i'kli:mílh	i'kli:mimá:lh	i'kli:mini:'
2SG	li:tána'	lí:ta'	li:tampá:'	li:taní:'ta'
3SG	li:mín	li:mílh	li:mimá:lh	li:mini:'
1PL _{EXC}	i'kli:miná:uj	i'kli:míuj	i'kli:mima:'náuj	i'kli:mini:'táuj
1PL _{INC}	li:miná:uj	li:míuj	li:mima:'náuj	li:mini:'táuj
2PL	li:tana:'tít	li:tantít	li:tampa:'na'ntít	li:tani:'tantít
3PL	tali:mín	tali:mílh	tali:ma:'nálh	tali:mini:'

The imperfective forms of \sqrt{min} ‘come’ are occasionally realized with a final unstressed /a/ in the first- and third-person singular. Verbs based on *chin* have the second-person stem *chitan-*.

Verbs based on *tamá:* ‘lie down’ belong to the **m-paradigm**, which substitutes /pa:/ for /ma:/ in second-person subject forms:

Table 26. M-paradigm ($\sqrt{tamá}$: ‘lie down’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'ktamá:	i'ktamá:lh	i'ktama:má:lh	i'ktaman:i:'
2SG	tapá:'ya'	tápa'	tapa:pá:'	tapa:ní:'ta'
3SG	tamá:	tamá:lh	tama:má:lh	taman:i:'
1PL _{EXC}	i'ktama:yá:uj	i'ktamá:uj	i'ktama:ma:'náuj	i'ktama:ni:'táuj
1PL _{INC}	tama:yá:uj	tamá:uj	tama:ma:'náuj	tama:ni:'táuj
2PL	tapa:'ya:'tít	tapa:'tít	tapa:pa:'na'ntít	tapa:ni:'tantít
3PL	tatamá:	tatamá:lh	tama:ma:'nálh	tatama:ni:'

The suppletive patterns here are similar to those shown by the stative counterpart of *tamá:*, *ma:lh* ‘be lying’ (see below), which also underlies the person-based alternations in the progressive aspect.

The **ta-paradigm** comprises a small class of verbs with stems that end in /t/ in the imperfective aspect and a laryngealized vowel in all other aspects. In spite of the fact that the stem-final consonant is dropped in three of the four aspects, the verb is conjugated as though it belongs to the consonant-final Class 2 conjugation rather than to the vowel-final Class 1. Most but not all of these verbs are mono-syllabic and have a short laryngealized vowel in the root:

Table 27. Ta-paradigm ($\sqrt{swi't}$ - ‘wind something’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'kswí'ta	i'kswí'li'	i'kswi'má:lh	i'kswi'ní:
2SG	swí'ta'	swí'ti'	swi'pá:'	swi'ní:'ta'
3SG	swí'ta	swí'li'	swi'má:lh	swi'ní:
1PL _{EXC}	i'kswi'ta'yá:uj	i'kswí'wi'	i'kswi'ma:'náuj	i'kswi'ni:'táuj
1PL _{INC}	swi'ta'yá:uj	swí'wi'	swi'ma:'náuj	swi'ni:'táuj
2PL	swi'ta'ya:'tít	swi'tít	swi'pa:'na'ntít	swi'ni:'tantít
3PL	taswí'ta	taswí'li'	taswi'ma:'nálh	taswi'ní:

Verbs that follow this pattern are listed according to their imperfective stems.

Another small class of stems belong to the **h-paradigm**, whose members end in /k/ in the imperfective and /h/ in all other aspects:

Table 28. H-paradigm (\sqrt{xwank} - ‘dry out’)

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'kxwánka	i'kxwánhli'	i'kxwanhmá:lh	i'kxwanhni':
2SG	xwánka'	xwánhti'	xwanhpá:'	xwanhni':ta'
3SG	xwánka	xwánhli'	xwanhmá:lh	xwanhni':
1PL _{EXC}	i'kxwanká:uj	i'kxwánhwi'	i'kxwanhma:'náuj	i'kxwanhni':táuj
1PL _{INC}	xwanka:uj	xwánhwi'	xwanhma:'náuj	xwanhni':táuj
2PL	xwánka:'tít	xwanhtít	xwanhpa:'na'ntít	xwanhni':tantít
3PL	taxwánka	taxwánhli'	taxwanhma:'nálh	taxwanhni':

Because the imperfective stem is used throughout the dictionary as the citation form for other verb classes, verbs that follow this conjugational pattern are also listed in the dictionary according to their imperfective stems.

2.3. Voice

The indefinite voice is used either to express action by an indefinite or generic actor or actors (\approx the impersonal “they” in English) or to express the reflexive, as in these forms based on the imperfective form of the verb $\sqrt{tu'ks}$ - ‘hit’:

- (15) a. *kin**tu'ksán*
 kin–tu'ks–**kan**
 1OBJ–hit–IDF
 ‘they_{IDF} hit me’
 ‘I hit myself’
- b. *tu'ksána'*
 tu'ks–**kan**–a'
 hit–IDF–IMPF:2SG.SUB
 ‘they_{IDF} hit you’
 ‘you hit yourself’
- (16) a. *tu'ksán*
 Ø–tu'ks–**kan**
 3OBJ–hit–IDF
 ‘they_{IDF} hit him’
 ‘he hit himself’
- b. *ka:tu'ksán*
 ka:–tu'ks–**kan**
 PL.OBJ–hit–IDF
 ‘they_{IDF} hit themselves’
 ‘they_{IDF} hit themselves’

As shown in (15b), indefinite voice forms take object person-markers in first- and third-person and subject-markers in second-person. The fact that the second person is genuinely a subject is shown by the appearance of the second-person subject form of the progressive marker in (17):

- (17) *kit i'kle:nku'tún he: wi'x ma:ma'hta'ha'lhni:pá:'ka'*
 kit i'k–le:n–ku'tún he: wi'x ma:–ma'hta'ha'lh–ni:–**pa:'–ka'**
 I 1SG.SUB–carry–DSD and you CS–guard–CS–PROG:2SUB–IDF:2SG.SUB:PFV
 ‘I want to take it, but now they’re making you guard it’

Under neither interpretation – the indefinite actor or the reflexive – is it possible to combine the indefinite voice with first-person or second-person plural undergoers. Instead, a third-person plural dynamic verb form is used in contexts with indefinite actors, while a periphrastic expression with the pronoun *á'kstu'* ‘by oneself’ is used for reflexives.

The indefinite voice suffix interacts with the aspect markers:

Table 29. Indefinite voice aspectual paradigm ($\sqrt{tu'ks}$ - ‘hit’)

	IMPERFECTIVE	PERFECTIVE	PERFECT	PROGRESSIVE
1SG	kintu'kskán	kintú'kska'	kintu'kskaní:'	kintu'ksmá:ka'
2SG	tu'kskána'	tú'kska'	tu'kskaní:'ta'	tu'kspá:ka'
3SG	tu'kskán	tú'kska'	tu'kskaní:'	tu'ksmá:ka'
3PL	ka:tu'kskán	ka:tú'kska	ka:tu'kskaní:'	ka:tu'ksmá:ka'

The third-singular perfective form is homophonous with the second-singular perfective form. The indefinite voice can also appear with reciprocals (*la:tu'kskán* ‘they_{IMP} hit each other’) and on some intransitive verbs (*ni:ka'* ‘they_{IDF} died’). Indefinite voice forms of verbs are only included in the dictionary when these are used as conventionalized expressions for objects – e.g., *li:la'hxto'hokán* ‘nail’ (lit., ‘that which is used to fix things together’).

2.4. Reciprocals

Subject-object reciprocity is marked inflectionally by the prefix *la:-*:

- (18) a. *i'kla:tú'kswi'*
i'k-la:-tu'ks-wi'
 1SG.SUB-RCP-hit-1PL.SUB:PFV
 ‘we_{EXC} hit each other’
- b. *la:túkswi'*
la:-tu'ks-wi'
 RCP-hit-1PL.SUB:PFV
 ‘we_{INC} hit each other’
- (19) a. *la:tu'kstít*
la:-tu'ks-tít
 RCP-hit-2PL.SUB
 ‘you guys hit each other’
- b. *tala:tú'ksli'*
ta-la:-tu'ks-li'
 3PL.SUB-RCP-hit-PFV
 ‘they hit each other’

The reciprocal marker may also indicate a reciprocal relation between objects:

- (20) *kla:helhtawilá kincája*
i'k-la:-helh-ta-wilá *kin-caja*
 1SG.SUB-RCP-mouth-DCS-sit 1PO-BOX
 ‘I am piling my boxes on top of one another’

- (21) *i'kla:la'hmojó:lh pá'hlhcha' a'ntzá: ja: xwí:lh pi'n*
 i'k-**la**:-la'h-mojó:-lh pá'hlhcha' a'ntzá: ja: i'x-wi:lh pi'n
 1SG.SUB-RCP-ALTIV-put.in-PFV tomato here where PAST-sit chili
 'I put the tomatoes in together where the chilies were'
- (22) *slumá: la:ma:chi'pi:lh*
 slumá: **la**:-ma:-chi'pá-i:-lh
 glue RCP-CS-hold-CS-PFV
 'he glued them to each other'

This pattern is found with causativized verbs and verbs for arranging objects into spatial configurations such as stacks and rows, but seems not to be predictable; reciprocals of this type are given their own entry in the dictionary.

2.5. Stative verbs

Upper Necaxa has a fairly restricted class of stative verbs which express states, postures, and physical configurations; they are not inflected for aspect, but can appear in all three tenses and four moods. These verbs have corresponding dynamic forms created by the affixation of the decausative prefix *ta-*, which derives a verb meaning 'to come into' the state expressed by the bare stative stem, and the causative prefix *ma-*, which derives a verb meaning 'cause to be' in the state expressed by the stative base:

Table 30. Stative, inchoative, and causative forms

<i>helhxtú</i> 'be unfastened'	<i>tahelhxtú</i> 'come unfastened'	<i>ma:helhxtú</i> 'unfasten sth'
<i>lakí:</i> 'be open'	<i>talakí:</i> 'come open'	<i>ma:lakí:</i> 'open sth'
<i>la'hnú:</i> 'be stuck'	<i>talahnú:</i> 'get stuck'	<i>ma:lahnú:</i> 'get sth stuck'
<i>tzumá:</i> 'be filling'	<i>tatzumá:</i> 'come to fill'	<i>ma:tzumá:</i> 'fill sth'

While the stative base is inherently imperfective and accepts no other aspectual inflections, the *ta-* and *ma-*-derived forms are ordinary dynamic verbs and can be inflected for all aspects. Note also that the causative forms lack the suffix *-(n)i:* found on causatives of dynamic verbs.

The majority of stative verbs are conjugated just as regular verbs are in the indicative or potential mood of the imperfective aspect; however, there is a small but highly productive set of four stative verbs of posture which, although semantically imperfective, are inflected like Class 1 verbs in the

perfective aspect. They also show other peculiarities, the most notable being the appearance of the stative plural suffix *-nan* in forms with a plural subject:

Table 31. Stative posture verbs

	<i>wi:lh</i> 'sit'	<i>ya:lh</i> 'stand'	<i>ma:lh</i> 'lie'	<i>waká'lh</i> 'be high'
1SG	i'kwí:lh	i'kyá:lh	i'kmá:lh	i'kwaká'lh
2SG	wíla'	ya:'	pa:'	wáka'
3SG	wi:lh	ya:lh	ma:lh	waká'lh
1PL _{EXC}	i'kwíla:náuj	i'kyá:náuj	i'kmá:náuj	i'kwaká'náuj
1PL _{INC}	wíla:náuj	ya:náuj	ma:náuj	waká'náuj
2PL	wíla:'na'ntít	ya:'na'ntít	pa:'na'ntít	waká:'na'ntít
3PL	tawíla:nálh	taya:nálh	tama:nálh	tawaká'nálh

The forms of the verb *wi:lh* 'sit' are derived diachronically from different aspectual paradigms of a postural verb **wil*. The first- and third-person singular forms are drawn from the perfective paradigm and the other forms from the imperfective. The historical imperfective form, **wílá*, is used as the base for second-singular and all plural-subject forms, appearing as *wíla:* (with a non-truncated imperfective suffix in the plural-subject forms). The form used in etymological analyses in the dictionary is **wílá*, though the citation form based on *wi:lh* is used as the head word.

Like other statives, the posture verbs take the decausative prefix *ta-* to form inchoatives meaning 'to come into' the posture expressed by their radical; however, these inchoatives remain stative in terms of inflectional potential, though they no longer take the stative plural marker with plural subjects:

Table 32. Inchoative forms of posture verbs

	<i>tawí:lh</i> 'sit down'	<i>taya:lh</i> 'stand up'	<i>tama:lh</i> 'lie down'	<i>tawaká'lh</i> 'go up'
1SG	i'ktawí:lh	i'ktayá:lh	i'ktamá:lh	i'ktawaká'lh
2SG	tawíla'	tayá:'	tápá:'	tawáka'
3SG	tawí:lh	tayá:lh	tamá:lh	tawaká'lh
1PL _{EXC}	i'ktawíla:uj	i'ktayá:uj	i'ktamá:uj	i'ktawaká'uj
1PL _{INC}	tawíla:uj	tayá:uj	tamá:uj	tawaká'uj
2PL	tawíla:'tít	tayá:'tít	tápá:'tít	tawaká'tít
3PL	tatawí:lh	tatayá:lh	tatamá:lh	tatawaká'lh

Each posture verb has a corresponding dynamic form, giving three forms for each radical – a stative ('be in posture X'), an inchoative ('come into posture X'), and a dynamic form ('maintain posture X'):

Table 33. Stative, inchoative, and dynamic forms of posture verbs

STATIVE	INCHOATIVE	DYNAMIC
<i>wi:lh</i> ‘be sitting’	<i>tawí:lh</i> ‘sit down’	<i>tawilá</i> ‘sit’
<i>ya:lh</i> ‘be standing’	<i>tayá:lh</i> ‘stand up’	<i>ta:yá</i> ‘stand’
<i>ma:lh</i> ‘be lying’	<i>tamá:lh</i> ‘lie down’	<i>tamá:</i> ‘lie’
<i>waká'lh</i> ‘be high’	<i>tawaká'lh</i> ‘go up’	<i>tawaká</i> ‘be high’

The stative and dynamic forms of each verb seem to be nearly synonymous, but the dynamic stems follow ordinary Class 1 conjugational patterns and inflect for all four aspects.

Stative posture verbs are intransitive, but combine with bodypart prefixes to form transitive stems, inflected for person and number of subject and object:

Table 34. Stative transitive paradigm (\sqrt{a} 'kpu:wí:lh ‘be sitting on top of sth’)

		SINGULAR OBJECT		
		1	2	3
SUBJECT	1SG	–	i'ka:kpu:wilá:n	i'ka:kpu:wí:lh
	2SG	kina:kpu:wíla'	–	a:kpu:wíla'
	3SG	kina:kpu:wilá	a:kpu:wilá:n	a:kpu:wí:lh
	1PL _{EXC}	–	i'ka:a'kpu:wilá:n	i'ka:kpu:wila:náuj
	1PL _{INC}	–	–	a'kpu:wila:náuj
	2PL	kila:a'kpu:wila:náuj	–	a'kpu:wila:'na'ntít
	3PL	kintaa'kpu:wilá	taa'kpu:wilá:n	taa'kpu:wí:lh
		PLURAL OBJECT		
SUBJECT	1SG	–	i'ka:a'kpu:wilá:n	i'ka:a'kpu:wílh
	2SG	kila:a'kpu:wila:náuj	–	ka:a'kpu:wíla'
	3SG	kinka:a'kpu:wilá:n	ka:a'kpu:wilá:n	ka:a'kpu:wílh
	1PL _{EXC}	–	i'ka:a'kpu:wilá:n	i'ka:a'kpu:wila:náuj
	1PL _{INC}	–	–	ka:a'kpu:wila:náuj
	2PL	kila:a'kpu:wila:náuj	–	ka:a'kpu:wila:'ná'ntít
	3PL	kinka:taa'kpu:wila:nán	ka:taa'kpu:wila:nán	taa'kpu:wíla'

Stative transitive verbs show the same inflectional irregularities as intransitive posture verbs, including the use of the stative plural suffix *-nan*. The inchoative forms of stative transitive verbs do not take the stative plural marker.

The four posture verbs are also very frequently used as bases for V-V quasi-inflectional compounds (Beck 2011). These compounds express the sense of being in the state of performing the action expressed by the compound's dynamic member. Thus, for instance, the verb *lakamin* ‘face this way’ can be

combined with the posture verbs *wi:lh* and *ya:lh* to form the verbs *lakamiwi:lh* ‘be sitting facing this way’ and *lakamiyá:lh* ‘be standing facing this way’, respectively. These verbs – whose transitivity depends on that of the left-hand member of the compound – remain stative and are inflected like ordinary posture verbs. Also like posture verbs, they have inchoative and dynamic forms derived from the inchoative and dynamic forms of their bases:

Table 35. V-V compounds formed on posture verbs

	<i>a'hsa:wí:lh</i> ‘be stuck’	<i>a'hsa:tawí:lh</i> ‘get stuck’	<i>a'hsa:tawilá</i> ‘be stuck’
1SG	i'ka'hsa:wí:lh	i'ka'hsa:tawí:lh	i'ka'hsa:tawilá
2SG	a'hsa:wíla'	a'hsa:tawíla'	a'hsa:tawilá'
3SG	a'hsa:wí:lh	a'hsa:tawí:lh	a'hsa:tawí:lá
1PL _{EXC}	i'ka'hsa:wíla:náuj	i'ka'hsa:tawíláuj	i'ka'hsa:tawilayá:uj
1PL _{INC}	a'hsa:wíla:náuj	a'hsa:tawíláuj:	a'hsa:tawilayá:uj
2PL	a'hsa:wíla:'na'ntít	a'hsa:tawíla:'tít	a'hsa:tawilaya:'tít
3PL	taa'hsa:wíla:nálh	taa'hsa:tawílálh	taa'hsa:tawilá

Each of these of V-V compounds also have forms with the decausative prefix appearing before the stem as a whole (e.g., *taa'hsa:wí:lh*, *taa'hsa:tawí:lh*, and *taa'hsa:tawilá*). Because of the productivity of stative compounding, no systematic effort was made to elicit these compound forms of verbs and – with a few exceptions for illustrative purposes – stative compounds are not given their own lexical entries. Those forms that are included in the dictionary are listed as derivatives of the left-hand (rather than the right-hand) member of the compound. When aspectual compounds that do not have dictionary entries appear in example sentences, these are included without comment in the lexical entry for the left-hand member of the compound.

2.6. Verbal quasi-inflectional morphology

In addition to their rich derivational and inflectional morphology, verbs also play host to a number of affixes that are best treated as “quasi-inflectional” (Mel'čuk 2006: 120) – that is, they do not form new lexemes as do derivational affixes, but on the other hand they do not express obligatory morphological categories, as does inflection. There are twelve affixes in this group:

- te:-* ‘do something in passing [_{PATH}]’
- ki:-* ‘go away to do something and return [_{RT}]’
- ha:'-* ‘expectative [_{EXP}]’
- chá* ‘distal [_{DIST}]’

- chi'* 'proximal [PROX]'
- ku'tún* 'desiderative [DSD]'
- palá* 'repetitive [RPT]'
- ho:'* 'totalitative [TOT]'
- te:lhá* 'ambulative [AMB]'
- he:'* 'debitative [DEB]'

Of this set, three – *palá*, *-chá*, and *-chi'* – show significant allomorphy. The repetitive suffix has two forms, *-palá* and *-pa*, the former associated with the imperfective and perfect aspects and the latter with the perfective and progressive. The distal and proximal suffixes have suppletive second-person subject forms and interact with the aspectual affixes as show below:

Table 36. Distal forms of the verb *√taxtú* 'leave'

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'ktaxtuya:chá	i'ktaxtuchá	i'ktaxtuma:chá	i'ktaxtuni:'tanchá
2SG	taxtuya:chi'	taxtuchi'	taxtupa:'chí'	taxtuni:'tanchí'
3SG	taxtya:chá	taxtuchá	taxtma:chá	taxtni:'tanchá
1PL _{EXC}	i'ktaxtuya:cháuj	i'ktaxtucháuj	i'ktaxtuma:'nancháuj	i'ktaxtuni:'tancháuj
1PL _{INC}	taxtuya:cháuj	taxtucháuj	taxtuma:'nancháuj	taxtuni:'tancháuj
2PL	taxtuya:chipitít	taxtuchipitít	taxtupa:'nanchipitít	taxtuni:'tanchipitít
3PL	tataxtuya:chá	tataxtuchá	tataxtuma:'nanchá	tataxtuni:'tanchá

Table 37. Proximal forms of the verb *√taxtú* 'leave'

	IMPERFECTIVE	PERFECTIVE	PROGRESSIVE	PERFECT
1SG	i'ktaxtuyá:chi'	i'ktaxtúchi'	i'ktaxtumá:chi'	i'ktaxtuni:'tánchi'
2SG	taxtuya:chí'ta'	taxtuchí'ta'	taxtupa:'chí'ta'	taxtuni:'tanchí'ta'
3SG	taxtuyá:chi'	taxtúchi'	taxtumá:chi'	taxtuni:'tánchi'
1PL _{EXC}	i'ktaxtuya:chí'uj	i'ktaxtuchí'uj	i'ktaxtuma:'nanchí'uj	i'ktaxtuni:'tanchí'uj
1PL _{INC}	taxtuya:chí'uj	taxtuchí'uj	taxtuma:'nanchí'uj	taxtuni:'tanchí'uj
2PL	taxtuya:chí'tantít	taxtuchí'tantít	taxtupa:'nanchi'tantít	taxtuni:'tanchi'tantít
3PL	tataxtuyá:chi'	tataxtuyá:chi'	tataxtuma:'nánchi'	tataxtuni:'tánchi'

For transitive forms with a second person object, the suffix *-n* is added immediately following the proximal or distal suffix.

3. Nominal derivational morphology

Upper Necaxa has a number morphemes that derive nouns and adjectives from verbs. While the dictionary contains many deverbal nouns and adjec-

tives that are analyzable but clearly fossilized forms, five fairly regular affixes – four that derive nouns and one that derives both nouns and adjectives – are easily identifiable, as is an apophonic pattern of stress-shift that is probably the reflex of a historical **-h* deverbalizing suffix used to form nouns and adjectives from verbs.

General deverbalizing suffix *-ni'*

The suffix *-ni'* forms words that have syntactic properties either of adjectives or of nouns. A single stem will usually have a preferred use – that is, it will be either adjectival or nominal, though there are a few stems that have both an adjectival and a nominal reading.

<i>ho't-</i> ‘drink _{INTR} ’	>	<i>hó'tni'</i> ‘a drunk’
<i>la'hspút-</i> ‘die’	>	<i>la'hspútni'</i> ‘dead person’
<i>ni:</i> ‘die’	>	<i>ni:n</i> ‘dead person’
<i>mas-</i> ‘rot’	>	<i>másni'</i> ‘rotten’
<i>chaá:</i> ‘ripen’	>	<i>chaá:n</i> ‘ripe’
<i>ku'n</i> ‘swell’	>	<i>kú'ni'</i> ‘caterpillar; swollen’

The nominalizing suffix generally takes the form *-n* when following a vowel-final stem; however, there are a few examples of vowel-final stems taking the full form of the suffix – e.g., *chuyá:ni'* ‘crazy person’ (from *chuyá:* ‘be crazy’), *lakláni'* ‘rotten, broken’ (from *laklá* ‘rot, be broken’).

Some nominalizations require, in addition to *-ni'*, the decausative prefix *ta-*.

<i>hexmá't-</i> ‘hear’	>	<i>tahexmá'tni'</i> ‘noise’
<i>la'hx'á</i> ‘chop (wood)’	>	<i>tala'hx'án</i> ‘chopped wood’
<i>hos-</i> ‘fly’	>	<i>tahósni'</i> ‘flight’
<i>palh-</i> ‘sweep’	>	<i>tapálhni'</i> ‘swept, cleaned’
<i>sto:'nh-</i> ‘stretch’	>	<i>tastó:'nhni'</i> ‘extended, stretched out’

In general, intransitive stems denoting a state or process (other than motion verbs) take only *-ni'*, whereas transitive verbs and intransitive verbs denoting a resultant state take the decausative prefix.

Instrumental prefixes *li:-* and *pu:-*

Nouns denoting instruments are often formed from verbs that express the actions the instrument is designed to perform by combining the nominalizer *-ni'* with either the instrumental *li:-* or the prefix *pu:-* ‘container’:

<i>cha'n</i> ‘plant’	>	<i>li:chá'ni'</i> ‘planting stick’
<i>la'hx'á</i> ‘chop (wood)’	>	<i>li:la'hx'án</i> ‘axe’
<i>lhtamá:</i> ‘glue’	>	<i>li:lhtamá:n</i> ‘mortar’
<i>chi'pá</i> ‘trap’	>	<i>pu:chi'pán</i> ‘fish net’
<i>la'hasná't-</i> ‘embroider’	>	<i>pu:la'hasná'tni'</i> ‘embroidery ring’
<i>ku'chú:</i> ‘cure’	>	<i>pu:ku'chú:n</i> ‘medical clinic’

Of the two, *li:-* is the more generic and is used to form nouns referring to a wide range of instruments, while *pu:-* is used for containers, container-like instruments, or locations. A fair number of instrumental nominalizations are also formed historically by the combination of *li:-* or *pu:-* and **-h* (see below).

Resultative nominalizer *-t*

The suffix *-t* creates nouns that express either a state or an object resulting from the process expressed by the verb, or that refer to an object, substance, or sensation definitive of or typified by that process.

<i>a'halhu'mán</i> ‘have a cold’	>	<i>a'halhu'mát</i> ‘cold’
<i>cha:lá</i> ‘render’	>	<i>cha:lát</i> ‘fat’
<i>ho'n</i> ‘inflate’	>	<i>ho'nút</i> ‘pustule, infection’
<i>li:wán</i> ‘be a certain way’	>	<i>li:wánát</i> ‘size’
<i>lonh-</i> ‘be cold’	>	<i>lonhót</i> ‘malaria’
<i>sput-</i> ‘end’	>	<i>sputút</i> ‘end (time)’

With consonant-final stems, the suffix takes the form *-Vt*, where V is a harmonic copy of the last vowel in the stem. The resultative nominalizer is also found in a few words combined with the instrumental *li:-*, as in *li:cha'nát* ‘seed’ (from *cha'n* ‘plant (crop)'), *li:ta:'tawilát* ‘boyfriend, girlfriend’ (from *ta:'tawilá* ‘sit next to’), and *li:kuxtút* ‘weeds’ (from *kuxtú* ‘weed (land)'). These forms tend to be lexicalized, but generally express a participant involved in the event which is neither an INSTRUMENT nor the direct object of the verbal base.

Agentive nominalizer *-nV'*

Nouns denoting the person or thing that performs a particular action are formed by adding the suffix *-nV'* to the root of the verb denoting that action.

<i>ku'n</i> ‘swell’	>	<i>ku'nú'</i> ‘erysipelas’
<i>tzo'h-</i> ‘write’	>	<i>tzo'hnú'</i> ‘writer’
<i>a'hs'awí</i> ‘trick’	>	<i>a'hs'awini'</i> ‘trickster’
<i>ma'hni:</i> ‘kill’	>	<i>ma'hni:ni'</i> ‘murderer’

<i>ha'lhá:n</i> ‘steal’	>	<i>ha'lha:ná'</i> ‘thief’
<i>lamá</i> ‘burn’	>	<i>lamaná'</i> ‘flame’

The vowel in the suffix is a harmonic copy of the last vowel in the stem and is always stressed (differentiating it from the deverbalizer *-ni'* and the *-nV'* plural suffix described below).

By-product nominalizer -ma'

The last productive nominalizer is the suffix *-ma'* ‘by-product’, which appears with a number of stems forming words describing the secondary product or detritus produced by a process or activity.

<i>chi't-</i> ‘mill sugar cane’	>	<i>chi'tma'</i> ‘bagasse’
<i>la'hstí:t-</i> ‘shred’	>	<i>la'hstí:tma'</i> ‘splinter’
<i>la'hs'á-</i> ‘shred’	>	<i>la'hs'á:m</i> ‘splinter’
<i>pa:s'é't-</i> ‘devein (chili)’	>	<i>pa:s'é'tma'</i> ‘de-veined chili’
<i>palhxtú</i> ‘sweep out’	>	<i>palhxtúm</i> ‘garbage’
<i>x'a:</i> ‘husk corn’	>	<i>x'a:m</i> ‘corn husks’

The vowel in the suffix is dropped with a vowel-final base.

*Forms from *-h*

A number of deverbal expressions are marked by a shift of the final stress to the penultimate syllable and laryngealization of the final vowel (as well as deletion of a final /n/ for Class 2b and 3 stems):

<i>la'hxó'hó</i> ‘pay in kind’	>	<i>la'hxó'ho'</i> ‘substitute’
<i>a'hpíxchí:</i> ‘strangle’	>	<i>a'hpíxchi:'</i> ‘trap made with a noose’
<i>la:ta:'stúk-</i> ‘be articulated’	>	<i>la:ta:'stúka'</i> ‘joint’
<i>he:tzín</i> ‘cushion one’s back’	>	<i>hé:tzi'</i> ‘cushion for back’
<i>ta:'lí:tzi'n</i> ‘laugh along’	>	<i>ta:'lí:tzi'</i> ‘collective laugh’

For Class 2 (C-final) stems, these nominalizations are formed on the third-singular imperfective form of the verb. This type of noun-formation is widespread in terms of the number of stems to which it applies, but is highly lexicalized its distribution and semantic import, suggesting that it may not be a synchronically productive process. Historically, it is probably a reflex of a nominalizer **-h* still attested in some other languages in the family and which still persists in a handful of Upper Necaxa forms, particularly in Chi-

contla. As with the suffix *-ni'*, some words formed in this way vary between nominal and adjectival readings; a number of words with **-h* are adverbs.

Other nominalizers

In addition to the nominalizing suffixes applied to verbs, there are a few more affixes that derive nouns from other parts of speech or from other nouns. The most productive of these is the locative prefix *ka:'-*, which is affixed to the plural form of nouns in names of places or descriptive terms for locations:

<i>kí'wi'</i> 'tree'	>	<i>ki'wi'n</i> 'trees'	>	<i>ka:'ki'wi'n</i> 'forest'
<i>hélhu'</i> 'limestone'	>	<i>helhú'n</i> 'limestones'	>	<i>ka:'helhú'n</i> 'rocky place'
<i>chik</i> 'house'	>	<i>chikni'</i> 'houses'	>	<i>ka:'lakchikni'</i> 'town'
<i>kuká't</i> 'oak'	>	<i>kuká'tna'</i> 'oaks'	>	<i>ka:'kuká'tna'</i> 'El Encinal'

Because of the productivity of this prefix, no systematic attempt was made to elicit nouns formed with *ka:'-*, although forms with culturally significant and/or lexicalized meanings, as well as those with sufficient attestations in text and elicitation, are included in the dictionary. Although in most cases words formed by adding *ka:'-* to nouns are ordinary nouns, some of these words may be used as locative adverbs, and more than a few have become completely re-categorized as such.

ka:'- may also be added to non-nominal bases and the resulting word is generally a locative adverb:

<i>ka'tzán</i> (vi) 'feel pain'	>	<i>ka:'ka'tzán</i> 'rough (terrain)'
<i>ká'kswa'</i> (adj) 'quiet, still'	>	<i>ka:'ká'kswa'</i> 'quiet (place)'
<i>s'ewíwi'</i> (adj) 'cool (liquids)'	>	<i>ka:'s'ewíwi'</i> 'cool (place, climate)'
<i>puks</i> (adv) 'dark'	>	<i>ka:'púkswa'</i> 'dark (place)'
<i>ho:ta:nú:</i> (vi) 'be after noon'	>	<i>ka:'ho:ta:nú:</i> 'every afternoon'

A number of these adverbs form plurals like nouns (e.g., *ka:'li:helhcho'hó* 'enclosed (place)' > *ka:'li:helhcho'hótnu'* 'enclosed (places)') and most can be used nominally in association with the classifier for places *laka-* (*lakatin ka:'li:helhcho'hó* 'an enclosed place') and the locative clitic *nak=* (*naka:'li:helhcho'hó* 'an enclosed place'). A homophonous and probably cognate prefix is also used to form adverbs meaning 'by means of' from nominal bases, as in *ka:'tuján* 'on foot (*tuján*)', *ka:'makán* 'by hand (*makán*)', or *ka:'machí:t* 'with a machete (*machí:t*)'.

Additionally, a handful of intransitive verbs combine with *ka:'-* to form impersonal verbs attributing some property or condition to a place:

<i>lánha</i> ‘be shaded’	>	<i>ka:lánha</i> ‘be shaded (place)’
<i>p'ohlhwanán</i> ‘get dark’	>	<i>ka:'po'hlhwanán</i> ‘get dark (place)’
<i>skunkanán</i> ‘smell fetid’	>	<i>ka:'skunkanán</i> ‘smell fetid (place)’

These verbs tend to take names of places as their subjects.

Another productive prefix used in the formation of nouns is *li:-* ‘generic’, which is used to form NPs with generic or non-specific referents:

- (23) *li:meji:kánu' tala'hxta:'palí:lh a:hempa:tin* partido
li:-meji:kánu' *ta-la'hxta:'palí:-lh* *a:-hempa:-tin* partido
 GNC–Mexican 3PL.SUB–exchange–PFV ADD–CLF–one party
 ‘Mexicans changed to another party’

- (24) *ja:tzá'k la'htzín li:cha:án tatawaka'htzá'*
ja:=tzá' *i'k-la'htzín* *li:-cha:án* *ta-ta-waká'lh=tzá'*
 NEG=now 1SG.SUB–see GNC–ant 3PL.SUB–DCS–be.high=now
 ‘I don’t see ants anymore, they’ve gone up (into their nest)’

Generic *li:-*NPs can be subject complements rather than syntactic arguments:

- (25) *na'klatamá: xali:stánku'*
na-i'k-latamá: *xa-li:-stánku'*
 FUT–1SG.SUB–act DTV–GNC–civic.official
 ‘I’m going to serve as *stánku'* (civic official)’

Because these uses of *li:-* are regular and compositional, such forms are not included in the dictionary

When added to adjectival or adverbial bases, *li:-* forms abstract nouns:

<i>lhi'wi'ki'</i> (adj) ‘strong’	>	<i>li:lhi'wi'ki'</i> ‘strength’
<i>ma:n</i> (adv) ‘only’	>	<i>li:má:n</i> ‘oneself’
<i>skalájwa'</i> (adj) ‘dangerous’	>	<i>li:skalájwa'</i> ‘danger’
<i>tzi'nka'</i> (adj) ‘heavy’	>	<i>li:tzi'nka'</i> ‘weight’

In most cases, the meanings of such words are fairly transparent. Those that have idiosyncratic meanings or unpredictable uses have been given their own dictionary entries, as have those regular forms attested by a sufficient number of speakers in the course of regular elicitation.

Another prefix used to derive nouns is *ta:'-* ‘fellow’, which is added to nouns to designating groups or kinds of people to form inherently possessed nouns meaning ‘a group of the same kind of person as the possessor’:

(26) *i'xta:'puská:n ka:wani*

i'x-**ta:'**-puská:n ka:-wan-ní'
 3PO-FELLOW-WOMAN:PL PL.OBJ-SAY-BEN
 'she said it to her fellow women'

(27) *pus mat chu: chu:ntzá: ka:wili:ní xta:'lakstín*

pus mat chu: chu:ntzá: ka:-wili:ní' i'x-**ta:'**-lakstín
 INTJ QTV PRT thus PL.OBJ-hit 3PO-FELLOW-children
 'well, he fought just the same with his fellow children'

In both of these sentences, the use of *ta:'*- and the possessive prefix gives a reading of 'his/her cohort' or 'those who are the same as him/her'.

The final derivational affix found with any frequency in the head words of dictionary entries is *-(x)ti'* 'inhabitant', a suffix used to form words referring to a place's inhabitants:

<i>he:chiwix</i> 'Ocomantla'	>	<i>he:chiwixti'</i> 'Ocomanteco'
<i>ju:kilú:wa'</i> 'Mazacuatlán'	>	<i>ju:kilú:wá'xti'</i> 'Mazacuateco'
<i>ka:'li:xatojón</i> 'Chicontla'	>	<i>li:xatojonti'</i> 'Chiconteco'
<i>ka:'tziksnán</i> 'Tecpatlán'	>	<i>tziksnánti'</i> 'Tecpateco'

This suffix has some interesting morphological properties, but seems to be falling out of use along with the traditional Totonac names for places. The dictionary contains all of the forms for which we were able to obtain consistent data from our consultants.

4. Nominal inflection and quasi-inflection

Unlike verbs, nouns in Upper Necaxa are uninflected, with the exception of inherent possessed nouns which obligatorily appear inflected for their possessors. Ordinary nouns take optional, quasi-inflectional number-marking, and require classifiers when counted. The language also makes extensive use of bodyparts and meronyms, which form a subclass of noun with specialized combining prefixal forms that are used in a wide range of spatial and verbal expressions.

4.1. Possession and inherently possessed nouns

Possession for all types of noun is indicated by a person-prefix and a number-suffix on the possessed noun:

Table 38. Possessive paradigm ($\sqrt{kúxi}$ ‘corn’)

	SINGULAR	PLURAL
1	kinkú'xi'	kinku'xiká'n
2	minkú'xi'	minku'xiká'n
3	i'xkú'xi'	i'xku'xiká'n

The plural possessive marker is compatible with the nominal plural suffix (e.g., *kinchiká'n* ‘our house’/*kinchikni'ká'n* ‘our houses’), although the two are rarely attested together. When overtly expressed by an NP, the possessor follows the possessed noun, which still bears the possessive affix(es) (e.g., *i'xkú'xi' Juan* ‘Juan’s corn’).

Many nouns in Upper Necaxa, particularly those referring to kinship, bodyparts, or parts of objects, are inherently possessed – that is, they obligatorily appear inflected for a possessor. These are given in the dictionary in unaffixed form, but are listed as a separate part of speech (ni). Where the results are not too convoluted, definitions for such nouns are phrased either in terms of “one’s X” or “its X”, “one” and “it” standing in for the obligatory possessor, or the definitions are given as possessed noun phrases when the exact nature of the possessor is specified by the meaning of the noun (e.g., *i'xa'hán* ‘a cup’s handle’). Possessive forms of nouns do not generally appear as headwords in the dictionary except in lexicalized idiomatic expressions which are considered to merit their own lexical entry or sub-entry (e.g., *i's'o'lút stá'ku'* ‘meteorite’ – literally, ‘its (*i'x-*) urine (*s'o'lút*) star (*stá'ku'*)’).

4.2. Number

Nouns in UNT are not obligatorily marked for number, the number of non-human argument noun phrases being more consistently indicated on the verb:

- (28) *i'ka:pu'tzayá:uj chichí'n*
 i'k-ka:-pu'tzá-ya:-uj chichí'-n
 1 SG.SUB-PL.OBJ-search-IMPF-1 PL.SUB dog-PL
 ‘we_{EXC} look for the dogs’

- (29) *i'ka:pu'tzayá:uj chichí'*
 i'k-ka:-pu'tzá-ya:-uj chichí'
 1 SG.SUB-PL.OBJ-search-IMPF-1 PL.SUB dog
 ‘we_{EXC} look for the dogs’

Although (28) is possible, the sentence in (29) with the singular noun is the more natural expression.

Upper Necaxa has a number of plural markers, the most common being the suffix *-nV'* (where *V* is harmonic with the last vowel of the stem, deleted following vowel-final stems):

<i>chik</i> 'house'	>	<i>chíkni'</i> 'houses'
<i>malhát</i> 'mushroom'	>	<i>malhátna'</i> 'mushrooms'
<i>akaku:lú:klh</i> 'scorpion'	>	<i>akaku:lú:klhnu'</i> 'scorpions'
<i>stá'ya'</i> 'squirrel'	>	<i>stá'yá'n</i> 'squirrels'

Some nouns, mainly those referring to humans, many bodyparts, and some animals, take an alternative marker, *-ni:n*. There are also several suppletive and irregular plurals, and many nouns appear not to have morphological plurals at all. Because plurals are textually infrequent, speakers are not always able to produce plurals of nouns on demand, and occasionally two speakers pluralize the same noun in different ways. Plural forms of nouns are provided in the dictionary, and nouns for which all speakers were unable to produce a plural form are marked as "*pl. *pl.*". When more than one plural form was obtained, both are included in the lexical entry.

4.3. Classifiers

Upper Necaxa makes use of classifiers when counting and in certain quantificational constructions. The classifiers are prefixes on numerals or quantitative adverbs and correspond roughly to shape or animacy (plant, animal, human):

(30) *kilhmaktín másni' sé:'hnu'* (Pt.)

kilhmak –tin	mas–ni'	sé:'hnu'
CLF–ONE	ROT–NM	banana
'a bunch of rotten bananas'		

(31) *kakimáxki:' pa:kitzís lame:táj* (Ch.)

ka–kin–máxki:'	pa: –kitzís	lame:táj
OPT–1OBJ–give:2G.SUB:PEV	CLF–five	bottle
'give me five bottles!'		

Numerals under 20 always appear with a classifier and have no unaffixed form; higher numbers may be used without classifiers.

There are around 30 classifiers in all and many of them (such as *pa:-* in 31b), which comes from *pa:n* 'belly') are based on bodyparts. For countable

nouns, the corresponding classifier is provided in the dictionary. The generic classifier is that used for round objects, *a'h-*, probably related etymologically to the combining form for ‘head’. Animate nouns expressing humans and animals take different classifiers in enumerative constructions depending on the number of things involved: single animals take the classifier *la'ha-* and pluralities take *tan-*; 1 and 2 humans are enumerated with *cha:'-*, while groups of more than 3 are counted with *helha-*. Groups of 3 humans may be counted with either classifier.

Non-countable items such as liquids take the classifier for the relevant measure or container; this is indicated in the lexical entry for such nouns with the notation “*cls. by container*”. A few classifier–numeral combinations are used to express traditional measures. These are given in their own entries in the dictionary combined with the numeral base *-tin* ‘one’. Likewise, certain classifiers like *la'hapu:-* combine with numeral bases to form names of geometric objects (e.g., *la'hapu:tá:'ti'* ‘pyramid’ [lit. ‘four faces’]). Although this is a potentially infinite class of words, examples found in elicitation and confirmed by a sufficient number of speakers are given entries in the dictionary.

Nouns which potentially designate objects of different shapes or types (e.g., *ta:'lakxtím* ‘person or thing of equivalent age or size’) take different classifiers in different cases:

- (32) *cha:'tín mintá:'lakxtím*
cha:'–tin min–ta:'lakxtím
 CLF–one 2PO–same
 ‘a person who is the same as you’

- (33) *la'hatín ixtá:'lakxtím minkawa:yúj*
la'ha–tin i'x–ta:'lakxtím min–kawa:yúj
 CLF–one 3PO–same 2PO–horse
 ‘a horse that is the same as yours’

In (32), *ta:'lakxtím* refers to a human, requiring the classifier *cha:'-*; in (33), it refers to an animal, requiring *la'ha-*. Nouns of this type are marked “*cls. by object*.”

A full list of classifiers and the typical objects they are used to count is given in Appendix D of Beck (2011a).

4.4. Bodyparts and meronymms

Bodyparts and meronyms are inherently possessed nouns. Historically, they seem to have been formed by the combination of a prefix with an “empty” meronymic base, *-n(i')* (/–n/ for vowel-final stems, /ni'/ for consonant-final stems). These words synchronically have a combining form which is used as a prefix on verbs and adjectives in a wide range of constructions:

(34) *lanhs mat lakpa:lásli'*

lanhs mat **lakpa:**–las–li'
 IDPH QTV **side.of.head**–slap–PFV
 ‘whack! he_i hit him_j on the side of the head’

(35) *khe:ka'tzán, kakinhe:lhi'ti'*

i'k–**he:**–ka'tzán ka–kin–**he:**–lhi't–ti'
 1SG.SUB–**back**–hurt OPT–1OBJ–**back**–press–2SG.SUB:PFV
 ‘my back hurts, press on it for me!’

The independent meronym may be used as an ordinary noun (36) or as part of locative expressions, with (37) or without (38) the locative clitic *nak=*:

(36) *kalhi'ti' kinhé:n*

ka–lhi't–ti' kin–**he:n**
 OPT–press–2SG.SUB:PFV 1PO–**back**
 ‘press on my back!’

(37) *tatzukú ma'hasa:'nán ta:lhmá:n na'xhé:n pu:sikwalán*

ta–tzukú ma'ha–sa:'nán ta:lhmá:n nak=i'x–**he:n** pu:sikwalán
 3PL.SUB–begin STM–sound high LOC=3PO–**back** church
 ‘they began to play (music) up on the roof (lit., back) of the church’

(38) *na: la'hwá: ma:he:xtimi:kán xcha:'hé:n pu:sikwalán*

na: la'hwá: ma:–he:–xtim–i:–kan i'x–**cha:'hé:n** pu:sikwalán
 also much CS–back–even–VBL–IDF 3PO–**backside** church
 ‘they will also gather up a lot there behind the church’

Bodyparts and meronyms used in locative expressions such as those in (37) and (38) play the same role played by adpositions in most other languages, this part of speech being absent from Upper Necaxa.

Bodyparts and other meronymic prefixes are combined very productively with verbs, adjectives, and (to a lesser extent) adverbs in a process much like incorporation. For a given verb describing an action with a localizable

target, the prefix indicates a literal part of the object which is the target of that action. There can be several different derived forms, each using a different bodypart:

- a'kchu'kú* 'cut something's head'
pixchu'kú 'cut something's neck'
makchu'kú 'cut something's body'
tu:chu'kú 'cut something's foot'
pi:chu'kú 'cut something's chest'
pa:chu'kú 'cut something's belly'
kinkachu'kú 'cut something's nose/point'
a'hachu'kú 'cut something's branch', etc.

As illustrated by the last example (based on *a'ha-* 'ear'), bodypart terms have extended meanings, these semantic extensions being listed in the entries for the corresponding noun. The most common extensions are given below:

Table 39. Literal and extended meanings of meronyms

MERONYMIC	LITERAL MEANING	REGULAR EXTENSION
<i>a'kpu:-</i>	crown	top surface
<i>mak-</i>	body	bulk, side
<i>pu:-</i>	vagina	container, interior
<i>laka-</i>	face	flat surface
<i>cha: '-</i>	shin	trunk (tree), cylindrical portion
<i>helh-</i>	mouth	irregular surface
<i>kilh-</i>	lips	edge, rim
<i>a'ha-</i>	ear	branch, handle of cup
<i>he:-</i>	back	roof, behind
<i>kinka-</i>	nose	tip, point
<i>pa:-</i>	belly	cross-section, middle portion

Barring idiomatic or lexicalized uses, meronymic + verb combinations where the meronymic still has its literal meaning or one of its regular extended meanings are not given separate entries in the dictionary, and examples containing them are given as part of the lexical entry for the stem. When meronymic prefixes are combined with bound roots, however, they are given their own entries, even if they retain their literal or regular extended meanings. A number of high-frequency bodypart and meronymic prefixes have unpredictable forms (e.g., *tu:-* for *tuján* 'foot') and several have more than one form (e.g., *ma'ha-* and *maka-* for *makán* 'hand'). The combining forms (*comb.*) of all bodyparts and meronyms are provided in the dictionary.

5. Adjectives

Adjectives are a fairly large class in UNT. In terms of their morphology, they are optionally marked for number agreement with the nouns they modify (using the prefix *lak-/la'h-* and/or the nominal plural suffix *-nV'*), and they can be quite freely prefixed with meronymics (e.g., *tzu'tzó'ho'* 'red' > *a'ktzu'tzó'ho'* 'red-headed'). Plural forms of adjectives are not presented in the dictionary at all except where they are irregular, in which case the relevant entries for the singular form give the correct plural. Adjectives are also frequently found with the determinative prefix *xa-*, both when used as modifiers and in copular constructions. Although these last two uses of adjectives are the most frequent, adjectives may also be used adverbially:

- (39) *ka:ná: wilé'hlhwa' stá'kli' kí'wi'*
 ka:ná: **wilé'hlh-wa'** stá'kli' kí'wi'
 truly twisted-SEM grow-PFV tree
 'the tree grew very twisted'

A small number of adjectives that express human characteristics may be used as arguments of verbs; other adjectives are used in this way only with an antecedent understood from context.

Adjectives are frequently found with bodypart and meronymic prefixes specifying the part of the modified object that the property they express is to be attributed to (e.g., *pa:lhú'lu' hawá'cha'* 'fat boy' > *che'he:pa:nlhú'lu' hawá'cha'* 'fat-legged boy'). Such expressions are generally not given separate entries, with the following exceptions:

- 1) meronymic + adjective combinations that are used to create expressions of shape or configuration that are not entirely transparent or have a specific usage (e.g., *kinkahólulu'* 'having a dull point' from *kinka-* 'nose' and *holúlu'* 'rounded');
- 2) meronymic + bound root combinations forming adjectives expressing dimension (e.g., *kilhtzunáj* 'of small circumference' : *kilhchunáj* 'of medium circumference' : *kilhhá'lha'* 'of large circumference'; *pi:tzunáj* 'narrow' : *pi:chunáj* 'of medium width' : *pi:há'lha'* 'wide', etc.) and shape (*a'hxwanhá'la'* 'open on top', *pu:xwanhá'la'* 'concave', etc.);
- 3) meronymic + adjective expressions, particularly those applying to people, having lexicalized, non-transparent meanings (e.g., *lakalhti'li'li'* 'foolish-looking' from *laka-* 'face' and *lhti'li'li'* 'round').

Other than the deverbal expressions discussed above in the context of nominalization, adjectives in UNT are for the most part synchronically underived, although a large number of adjectives are related diachronically to adverbs. There is also an affix *-wa'* 'semblative' which, when added to adjectives, is similar in meaning to the English *-ish*. When added to adverbs, however, the semblative creates adjectives with essentially identical meaning (e.g., *wilé'hlh* (adv) 'twisted' > *wilé'hlhwa'* (adj) 'twisted'). This suffix is quite productive, so no systematic attempt has been made to elicit adjectives ending in *-wa'*. These forms are not included in the dictionary except where they have been found incidentally in texts and elicitation, and confirmed by a sufficient number of speakers.

6. Adverbs and ideophones

Adverbs in Upper Necaxa Totonac form a rather heterogeneous class of words in terms of the meanings they express, although they do include a run-of-the-mill assortment of the expressions of time, manner, and place familiar from Indo-European languages. However, words with such meanings actually constitute a fairly small proportion of adverbs. Much more prevalent are adverbs that describe configurations, orientations, and postures:

a'klakatáj 'inside out'
chi'káj 'open, apart (limbs); loosely folded'
ku'lú'ks 'curled up, balled up, folded once'
ma'hslapúj 'covered, covered over (body of something)'
pi'ló'h 'turned up at the edge'
pu:tzá'j 'lined up with long axis towards the speaker'

Also prevalent are descriptive adverbs, which express property concepts:

<i>chalá'j</i> 'brittle, fragile'	<i>chi'px</i> 'dense'
<i>lampú:lh</i> 'wet'	<i>lhamánh</i> 'rounded, full'
<i>lh'anánh</i> 'red or yellow of ripe fruit'	<i>lhto'jó'h</i> 'baggy, sack-like'
<i>moj</i> 'round and bulky, spherical'	<i>ponhó: 'j</i> 'bubbly, foamy'
<i>stilé'h</i> 'star-shaped'	<i>s'ó'ho'</i> 'salty'
<i>ta: 'j</i> 'lit up, illuminated'	<i>tzu'tzó'hs</i> 'red'

These words correspond to adjectives in English, but can not modify nouns.

Another type of adverb is the dynamic adverb. Dynamic adverbs are derived from configurational adverbs through final *-(V)CV* reduplication and are used when the object in the designated configuration is in motion:

- (40) *a'klhtzáj ya:lh*
a'klhtzá'j ya:lh
head.up stand
 'he's standing with his head held high'
- (41) *a'klhtza'jaja tzu'ma'já:t a'má:lh muxtumá:lh nakha'lha'xká:n*
 a'klhtzá'j-aja tzu'ma'já:t a'n-ma:lh muxtú-ma:lh nak=ha'lha'xká:n
 head.up-DYN girl GO-PROG swept.away-PROG LOC=river
 'the girl is swept away by the river with her head held up [out of the water]'

This method of word-formation is particularly striking given that reduplication is not well-attested as a morphological process in Upper Necaxa or in Tonacan languages in general. Another significant feature of dynamic reduplication in adverbs is that reduplicated forms lack primary word-level stress. Instead, reduplicated adverbs (and ideophones) are pronounced either with undifferentiated stress on each syllable, or with ad hoc word-level accent used for dramatic or rhythmic effect.

Closely related to adverbs are ideophones, a class of words generally used to add expressive or emotive weight to an utterance. Many are onomatopoeic or synesthetic, and they are frequently evocative of an entire scene, including both actor and manner of action:

- (42) *chaj i'kla'hamu'nú:lh tza'má chi'xkú'*
chaj i'k-la'ha-mu'nú:-lh tza'má chi'xkú'
 IDPH 1SG.SUB-face-spray-PFV that man
 'I threw water in the man's face' (RM)
- (43) *kimkimkim la ku:kím*
kimkimkim la ku:kím
 IDPH do firefly
 'the firefly goes along flashing' (LB)
- (44) *honhlulhu li:makawán i'xchá:'n kí'wi'*
honhlulhu li:-maka-wán i'x-cha:'n kí'wi'
 IDPH INST-hand-say 3PO-shin tree
 'the woodpecker makes the tree trunk sound' (RM)

As can be seen in these examples, ideophones show one of two reduplicative patterns, either full reduplication (e.g., *kim* 'flashing (once)' > *kimkim* 'flashing (two or more times)' > *kimkimkim* 'flashing (several times)', etc.) or final CV reduplication (*jalala* 'stones crackling with heat' > *jalalala* 'many stones crackling with heat'). Reduplicated ideophones are much more frequent text-

ually, and ideophones are given as headwords in the entries below in their single reduplicated form. In the dictionary entries for ideophones, definitions are phrased as gerunds (e.g., *honhlhulhu* ‘woodpecker pecking on a tree’). From a strictly syntactic point of view, ideophones probably constitute a subclass of adverb (Beck 2008), although they are presented for heuristic purposes in this dictionary as a separate part of speech.

7. Determiners and deictic adverbs

Upper Necaxa has a number of words used to express spatio-temporal deixis which can be divided into two classes – demonstratives and deictic adverbs. The former take the role of determiners in noun phrases and can also be used pronominally, while the latter are adverbs and generally occur in clause-initial position. The system of deixis consists of six morphemes (including the zero non-demonstrative) which distinguish three degrees of distance as well as a category that might be termed “demonstrativity,” correlating with whether or not the location in question is being pointed to or referred to contrastively. These may appear independently or in combination with one of four suffixes:

Table 40. UNT deictic system

		-má ‘determiner’		-tzá: ‘local’	-nanú: ‘non-local’	-tzananú: ‘long ago’
PROXIMATE	NON-DEM	a:	a:má	a:tzá:	a:nanú:	–
	DEM	wa:	wa:má	wa:tzá:	wa:nanú:	–
MEDIAL	NON-DEM	a'n	a'nmá	a'ntzá:	a'nanú:	–
	DEM	wa'n	wa'nmá	–	wa'nanú:	–
DISTAL	NON-DEM	a:'j	a:'jmá	a:'jtzá:	a:'jnanú:	a:'jtzananú:
	DEM	wa:'j	wa:'jmá	wa:'jtzá:	wa:'jnanú:	wa:'jtzananú:
SPECIFIC		tza'	tza'má	–	tzananú:	–

The forms in the first column are plain deictic adverbs consist of a spatial deictic morpheme plus a demonstrative/non-demonstrative marker. Three bases, -tzá:, -nanú:, and -tzananú:, combine with these morphemes to form deictic adverbs; the fourth base, -má, is used to form determiners and also appears in the interrogative *ja:má* ‘which one?’. In addition, the specific non-local adverb *tzananú:* forms a contrastive pair with another deictic adverb, *tzenú:*, the latter being used for an object or location in the immediate vicinity of the speaker and the former for something more distant, but not outside of the proximal space.

The class of deictic adverbs has two additional forms, *a'ntza'tzá:* ‘right here’ and *wa:tza'tzá:* ‘right here (dem.)’, which appear to be composed of the deictic prefixes and two of the bases; however, these two are poorly attested and not well-understood. It remains to be seen if there are other members of this set or if they are simply idiosyncratic formations.

8. Pronouns

Pronouns can be subdivided into personal and interrogative/relative pronouns. The former are identical in syntactic distribution to ordinary nouns.

Table 41. Lexical pronouns

	SINGULAR	PLURAL
1	<i>kit</i>	<i>kinán (Pt.)/kinanká'n (Ch.)</i>
2	<i>wi'x</i>	<i>wi'xinán</i>
3	<i>xla</i>	<i>xlaká'n</i>

The plural of the third-person *xla* is formed with the plural possessor suffix *-ka'n*, which is also found in the Chicontla variant of the first-person plural. In addition to the third-person form in the table, there are three demonstrative pronouns which seem to be based on the demonstrative element *w-* found in the deictic paradigm in Table 40 – *u:tzá:* ‘this one’, *u:tunún* ‘these’, and *u:tu'nká'* ‘this very one’.

Interrogative/relative pronouns can serve in one of two syntactic roles – either as a relative pronoun introducing a relative clause, or as an interrogative. The most common of these are *tí:* and *tu:*, the former being used for humans and the latter with non-humans. For each pronoun of this type, the distinct uses are given separate sub-entries in the dictionary.

9. Conjunctions

The most frequent sentence-level conjunctions in Upper Necaxa are the Spanish borrowings *ásta* ‘until’ (Sp. “hasta”), *he:* ‘and’ (Sp. “y”), *ho:* ‘or’ (Sp. “o”), and *porque* ‘because’. However, Upper Necaxa, particularly as spoken by the older generation, tends to favour parataxis as the primary method of conjoining clauses. There are also ten or so native conjunctions, as well as a half-dozen words that belong primarily to other lexical classes (particularly adverbs) which seem also to be used to subordinate clauses (although they may in fact simply be adverbs at the beginning of paratactically-subordinated

clauses). Noun phrases are almost always conjoined with *he*: ‘and’ (even in contexts where Spanish would use *o* ‘or’), although older speakers occasionally use the adjective *pó'htu* ‘all’ for this purpose.

10. Particles and interjections

Particles appear in pre-verbal position but can not form their own utterance. Interjections are like particles in their distribution within the sentence (pre-verbal) but, unlike particles, can and frequently do form stand-alone utterances. Both word-classes are morphologically inert, do not reduplicate, and generally express speaker attitude or evidentiality.

11. Compounding

Aside from the use of stative posture bases to form quasi-inflectional compounds discussed above, compounding is not a particularly widespread or productive process in Upper Necaxa (Beck 2011b). For nouns, compounds are found mainly in the names of flora and fauna, most of these being descriptive N-N or V-N compounds; for verbs, V-V compounds are attested sporadically, but – as with the nouns – these compounds seem to be lexicalized and compounding in general is not very productive for most radicals. There are, however, five dynamic verbs which combine quite freely with other verbs – *a'n* ‘go’, *lha:wán* ‘wander around’, *ma'há:n* ‘throw, throw away’, *tayá* ‘take’, and *wilí*: ‘put’. These verbs have fairly consistent meanings when used as the base for a V-V compound whose righthand member is a verb meaning ‘X’: *a'n* creates a verb meaning ‘go in the manner of X’, *lha:wán* a verb meaning ‘wander around doing X’, *ma'há:n* a verb meaning ‘wasting or discarding the product of X’, and *tayá* a verb meaning ‘take or grab in the manner of X’. The fifth verb, *wilí*: has developed a largely grammaticalized resultative meaning (e.g., *lakchu'kuwilí*: ‘leave/have sth cut into pieces’ < *lakchu'kú* ‘cut sth up’). There are also several compounds based on *wa* ‘eat’ (‘eat in the manner of X’ or ‘eat the results of X’) and *taa'hcho'hó*: ‘go for a stroll’ (‘go about doing X’). Phonologically, compounds are recognizable by the extension of the primary stress domain to the penult syllable of the righthand member and in some cases (particularly in N-N compounds) by a number of juncture effects on the final syllable of the lefthand member. Vowel-final stems often show vowel-lengthening, and n-final stems frequently lose their final segment and lengthen the preceding vowel. Other final consonants are preserved before a stop but may be lost when the righthand member of the compound starts with a

resonant. Morphologically, nouns that are the lefthand members of compounds often appear in the plural (quite frequently an archaic plural form), and there are a number of compounds that contain elements (glossed here as ‘connective [CNN]’) that are unanalyzable.

Additionally, there are half a dozen lexemes that exist only as bound forms, as the lefthand (non-head) members of compounds belonging to the nominal or verbal lexical classes. These are

ho:'s- ‘sink’

sa:- ‘stuck’

skaka- ‘late at night’

sku'na:- ‘holy’

tu:- ‘relationship as a result of remarriage’

tzi'ntzi:- ‘small’

Words containing these elements were probably once genuine compounds whose lefthand member has fallen out of use as an independent radical. These compounding lexemes are treated in the same manner as similar elements (e.g., *Sino-*, *osteo-*) are in English dictionaries and given their own lexical entries. They are designated “(cmlx)” in lieu of being assigned an actual part of speech.