

Reanalyzing the stative-inchoative alternation in Mazahua

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Overview

- In this work I explore the stative-inchoative alternation in Mazahua (Oto-Manguean) and propose a formal representation of these constructions. The proposal is based on the idea that **inchoative constructions in Mazahua are morphosyntactically derived from statives**: inchoatives are bi-eventive predicates derived from mono-eventive statives.
- Background: Descriptive work on the language has claimed that stative and inchoative verbs belong to two different (lexical) verb classes based on the idea that they combine with different TAM morphology.
- Here I show that this observation is not entirely accurate, and the restricted TAM morphology in stative clauses is due to stative predicates being restricted to combine with imperfective Aspect only in this language.
- I propose that -at least for the verbs analyzed here- inchoative ‘verbs’ in Mazahua are not lexical, but they are complex structures derived in the syntax.

1 Introduction

- Mazahua or Jñatjo/Jñatrjo is an understudied Oto-Manguean language spoken by ~100, 600 people, mainly in central Mexico (INEGI, 2010; Embriz Osorio and Zamora Alarcón, 2012). It is a language in a moderate risk of disappearing (INALI, 2009). Literature on the language and written texts in the language are scarce. There is no standardized writing system.

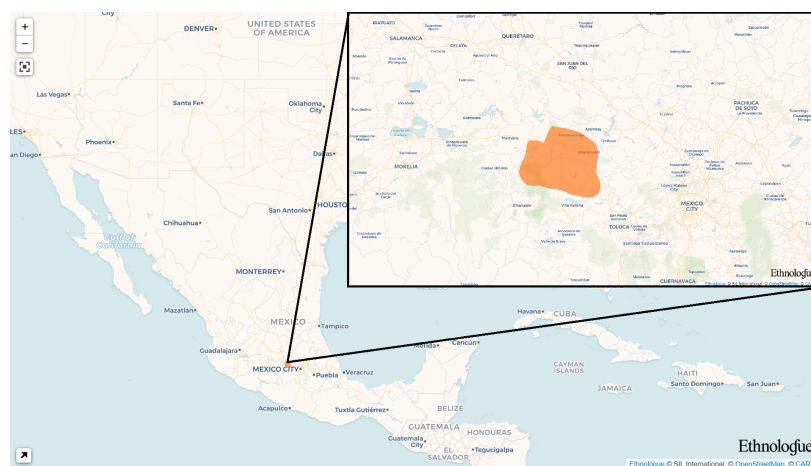


Figure 1: Main area where Mazahua is spoken. (Modified from Eberhard et al. (2019))

¹Data presented in this handout was collected from my own fieldwork unless otherwise indicated

- Word order is VOS. Argument pronouns are usually dropped/non-overt. DP/NP Arguments are not case-marked, but they cross-reference agreement morphemes attached to or close to the verb stem.
- It has a split intransitivity alignment: some intransitive verbs cross-reference their sole argument via verbal suffixes (1)-(2), while others do via proclitics that fuse Person and TAM morphemes (3). This work is concerned with the constructions in (1) and (2) only.

(1) Statives

- a. má = hoʔo-**zi**
 PST.IPFV well/healthy-1 (Glossed: PST.ST elsewhere)
 ‘I was well/healthy’
- b. má = hoʔo-**ts’i**
 PST.IPFV well/healthy-2
 ‘You.sg were well/healthy’
- c. má = hoʔo-**Ø** nù = t’i’i
 PST.IPFV well/healthy-3 DEF.DET kid
 ‘The kid was well/healthy’

(2) Inchoatives

- a. ò = hoyi-**zi**
 PST get.well-1
 ‘I got well/healthy’
- b. ò = hoyi-**ts’i**
 PST get.well-2
 ‘You.sg got well/healthy’
- c. ò = hoyi-**Ø** nù = t’i’i
 PST get.well-3 DEF.DET kid
 ‘The kid got well/healthy’

(3) A-verbs - (activities, accomplishments, achievements, semelfactives...)

- a. ró = tōhō
 A1.PST sing
 ‘I sang’
- b. ì = tōhō
 A2.PST sing
 ‘You.sg sang’
- c. ò = tōhō nù = t’i’i
 A3.PST sing DEF.DET kid
 ‘The kid sang’

- Previous work on Mazahua has claimed that verbs in stative constructions (1) and inchoative constructions (2) belong to different lexical classes (Vargas Bernal, 2013; López Reynoso, 2016; Victoria Sebastián, 2018). This has been mainly motivated by one observation:
 - The set of **TAM proclitics that appear in stative** constructions is **restricted** compared to inchoatives and other dynamic predicates → Based on this, descriptive work on the language has concluded that statives and dynamic verbs have different TAM paradigms.

2 TAM in statives vs dynamic verbs

- Stative verbs can only be combined with the TAM morphemes in (4). Proclitics in (5) combine with inchoative (and other dynamic) verbs cannot be combined with stative (6).

(4) Statives

- a. ná = hoʔo-zì
PRS.IPFV well/healthy-1
'I am well/healthy'
- b. má = hoʔo-zì
PST.IPFV well/healthy-1
'I was well/healthy'
- c. mí = hoʔo-zì
PST.HAB well/healthy-1
'I used to be well/healthy'
- d. rá = hoʔo-zì
FUT.IPFV well/healthy-1
'I will be well/healthy'

(5) Inchoatives

- a. ò = hoyi-zì
PST get.well-1
'I got well/healthy'
- b. rà = hoyi-zì
FUT get.well-1
'I will get well/healthy'

(6) Statives

- a. *ò = hoʔo-zì
PST well/healthy-1
'I was well/healthy'
- b. *rà = hoʔo-zì
FUT well/healthy-1
'I will be well/healthy'

- **Against this observation:** The claim that statives and dynamic verbs have different TAM paradigms is not entirely accurate. In fact, the imperfective Aspect TAM morphemes appearing in stative predicates in (4) can also occur in inchoative (7), A-verbs (8) and even transitive clauses (9) with 3rd person subjects, encoding progressive Aspect.

(7) Inchoatives

- a. ná = hoyi-Ø nù = t'ìi
PRS.IPFV = get.well-3 DEF.DET = kid
'The kid is getting well'
- b. má = hoyi-Ø nù = t'ìi
PST.IPFV = get.well-2 DEF.DET = kid
'The kid was getting well'
- c. rá = hoyi-Ø nù = t'ìi
FUT.IPFV = get.well-3 DEF.DET = kid
'The kid will be getting well'

(8) A-verbs

- a. **ná** = tōhō nù = t'i'i
A3.PRS.IPFV = sing DEF.DET = kid
'The kid is singing'
- b. **má** = tōhō nù = t'i'i
A3.PST.IPFV = sing DEF.DET = kid
'The kid was singing'
- c. **rá** = tōhō nù = t'i'i
A3.FUT.IPFV = sing DEF.DET = kid
'The kid will be singing'

(9) Transitives

- a. **ná** = tʃú^hmĩ-Ø tʃ^hõ?õ k^hà = ^hwâ^hmã
A3.PRS.IPFV = plant-P3 corn LOC = cornfield
'S/he is planting corn in the cornfield'
- b. **má** = tʃú^hmĩ-Ø tʃ^hõ?õ k^hà = ^hwâ^hmã
A3.PST.IPFV = plant-P3 corn LOC = cornfield
'S/he was planting corn in the cornfield'
- c. **rá** = tʃú^hmĩ-Ø tʃ^hõ?õ k^hà = ^hwâ^hmã
A3.FUT.IPFV = plant-P3 corn LOC = cornfield
'S/he will be planting corn in the cornfield'

- That statives use 3rd person/default forms of TAM is not strange. The set of TAM morphemes that occur in inchoative constructions is the same that cross-references 3rd person subjects in A-verb and transitive constructions.

→ I assume TAM morphemes occurring in both inchoative and stative are simply default TAM forms rather than having 3rd person features. Table 1 summarizes the combinations of TAM and different verbs we have seen until now.

TAM Proclitic	Stative	Inchoative	A-verbs and Transitives
ná =	PRS.IPFV	PRS.IPFV = PROG	3.PRS.IPFV = PROG
má =	PST.IPFV	PST.IPFV = PROG	3.PST.IPFV = PROG
mí =	PST.HAB	-	3.PST.HAB
rá =	FUT.IPFV	FUT.IPFV = PROG	3.FUT.IPFV = PROG
Ø =	-	-	3.PRS
ò =	-	PST	3.PST
rà =	-	FUT	3.FUT

Table 1: 3rd person/default TAM morphemes

- **Gloss and translation:** Proclitics in stative verbs have been glossed simply as PRS.ST, PST.ST, etc. in descriptive work.
- The fact that the same forms give a progressive interpretation in dynamic predicates suggests that they are some sort of continuous Aspect morphemes → This is supported by the fact that statives cannot co-occur with punctual Aspects (10a) nor completives (11b), unlike inchoatives (10b)-(11b).

- (10) a. (*já) ná = /má = pot^{hi}-Ø nù = tʃʔõʔõ
 PTL PRS/PST.IPFV black-3 DEF = corn
 ‘The corn is/was black (already)’ Stative
- b. já ò = poki-Ø nù = tʃʔõʔõ
 PTL PST = turn.black-3 DEF = corn
 ‘The corn turned black already’ Inchoative
- (11) a. *ò = jônî je ná = /má = nitʃi-Ø = t^{ho}
 A3.PST eat.INTR and PRS/PST.IPFV full-3 = COMPL
 ‘S/he ate and is/was full’ Stative
- b. ò = jônî je ò = nitʃi-Ø = t^{ho}
 A3.PST eat.INTR and PST full-3 = COMPL
 ‘S/he ate and got full’ Inchoative

★ **Summary:** Statives and inchoatives do not have a different TAM paradigm; set of TAM morphemes in statives are a imperfective (continuous?) subset of the TAM paradigm found in dynamic predicates.

3 Inchoatives as derived from statives

3.1 Morphological similarity

- Inchoatives in Mazahua resemble stative verbs in the morphophonological level Table 2.

Meaning	Statives	Inchoatives
white - whiten	tʔʃi	tʔʃ <k> i
red - blush	mbaha	mba <y> i
black - turn black	pot ^{hi}	po <k> i
sour - become sour	ifʃi	ifʃ <k> i
dirty - get dirty	poʃi	poʃ <k> i
good - get better	hoʔo	ho <y> i
big - grow	noho	no <k> i
wet - get wet	kʔaʔa	kʔa <y> i
stiff - stiffen	iʔi	i <y> i
hard - harden	meʔe	me <z> e
warm - warm up	paʔa	pa <t> i
skinny - become skinny	^h mosʔi	^h mos <k> i

Table 2: Stative and Inchoative alternation

- Mazahua stems are mainly disyllabic, with the structure CVCV, conformed of a Root (first syllable) and a formative (second syllable). The vowel of the formative is underspecified and it is always totally or partially harmonic to the vowel of the Root following well documented phonological rules (Knapp Ring, 2008).
- Based on this, we can see that inchoative verbs in Table 2 share Root with stative verbs. The difference, at the stem level, is the consonant of the formative, which in inchoatives is either /y/ or /k/, or a /t/.

3.2 Inchoatives in Mazahua composed of two subevents

- Inchoative predicates have been argued to be composed of two subevents: a change and an end result. Predicational statives, on the other hand, are just conformed of the result component (Cuervo, 2003, 2014, 2015).
- I follow Cuervo (2003) in that these subevents are each introduced in the structure by a different type of v -head. Simple event predicates are formed by combining a Root with one of the three basic types of event-introducer v -heads (12) (Marantz, 1997). Complex event structures are the result of the combination of two event-introducer v -heads (13).

(12) Event Introducers (Cuervo, 2015, p. 394)

- a. v_{DO} Activities
- b. v_{GO} Verbs of change/happening/motion
- c. v_{BE} States/existentials

(13) Complex event structures

- a. $v_{DO} + v_{BE}$ Causatives
- b. $v_{GO} + v_{BE}$ Inchoatives

- If inchoatives are bi-eventive structures, it is predicted that some adverbial and aspectual modifiers, like iteratives, to modify one subevent or both (Cuervo, 2014; von Stechow, 1995).
- With iteratives, inchoative constructions are ambiguous between a restitutive reading (narrow scope) and a repetitive reading (wide scope) (14). This does not happen with other unaccusatives in the language that are composed of a single event (15).

(14) $ni = \delta = po\int ki-\emptyset \acute{o} = p\acute{a}^h n\acute{o}$
 ITER = PST = get.dirty-3 3.POSS = shirt
 ‘His shirt got dirty again’

Repetitive: The shirt was clean, then it got dirty; then it was washed and got dirty again.

Restitutive: The shirt was dirty. It got washed, and got dirty again.

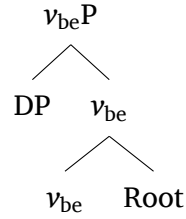
(15) $ni = \delta = ni\gamma i \acute{n}\acute{u} = \delta \epsilon zo$
 ITER = A3.PST = fall DEF = man
 ‘The man fell’

Repetitive: The man fell, then stood up and fell again

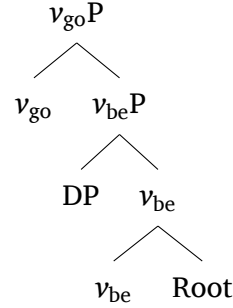
Restitutive: # The man was fallen, then stood up fell again.

- Based on the event decomposition proposal introduced above, I propose the following structures for statives and inchoatives.
- In both structures, a Root is combined with a state-introducer v_{be} . The formed verb introduces its sole argument as a subject in $Specv_{be}P$. Inchoatives have the same base structure, with the addition that a v_{go} is merged on top, introducing the change subevent.

(16) a. Stative constructions



b. Inchoative constructions



3.3 Sole argument in statives and inchoatives is subject

- The sole argument of stative and inchoative verbs patterns like subjects in other constructions, not like objects:

- The sole argument of statives/inchoatives cannot be a bare NP (17), just like transitive subjects, and unlike transitive objects (18).

- (17) a. *má = paʔa-Ø *(nù =)ndéhe*
 PST.IPFV = warm-3 (DEF) = water
 ‘The water was warm’ Stative
- b. *ò = patʔi-Ø *(nù =)ndéhe*
 PST = get.warm-3 (DEF) = water
 ‘The water got warm’ Inchoative
- (18) a. *mí = ně-Ø ndéhe é = pihomi*
 A3.IMPRF want-P3 water DEF = pig
 ‘The pig wanted water’ Transitive
 (Amador, 1979, p. 66)
- b. **mí = ně-Ø ndéhe pihomi*
 A3.IMPRF want-P3 water pig
 ‘Pig(s) wanted water’ Transitive

- The sole argument of statives/inchoatives can be fronted even if they are indefinite NPs (19). This is true for transitive subjects (20b)-(21)a, but not for objects (21)b.

- (19) a. *nà = iʃi má = iʃi-Ø*
 INDEF = apple PST.IPFV = sour-3
 ‘One apple is sour’ Stative
- b. *nà = ɓɛzo ò = tôyĩ-Ø*
 INDEF = man PST = faint-3
 ‘A/One man fainted’ Inchoative
- (20) a. *ò = pɔʔtʔi- dâ = ɓɛzo dâ = pʰăđi*
 A3.PST = kill-P3 INDEF = man INDEF = horse
 ‘A horse killed a man’
- b. *?dâ = pʰăđi ò = pɔʔtʔi-Ø dâ = ɓɛzo*
 INDEF = horse A3.PST = kill-P3 INDEF = man
 ‘A horse killed a man’ San Pedro el Alto Mazahua (Jñatrjo)

Vargas Bernal (2013, p. 36, ex. (35))

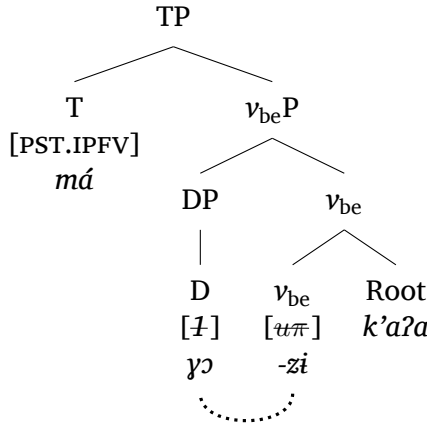
- (21) a. $nà = p^h\check{a}d\check{i}$ $\dot{o} =$ $p\hat{o}t'i-\emptyset$ $nà = \check{b}\check{e}zo$
 INDEF = horse A3.PST = kill-P3 INDEF = man
 'A horse killed a man'
- b. $*nà = \check{b}\check{e}zo$ $\dot{o} =$ $p\hat{o}t'i-\emptyset$ $nà = p^h\check{a}d\check{i}$
 INDEF = man A3.PST = kill-P3 INDEF = horse
 'A man, a horse killed'

4 Structure of the stative-inchoative alternation

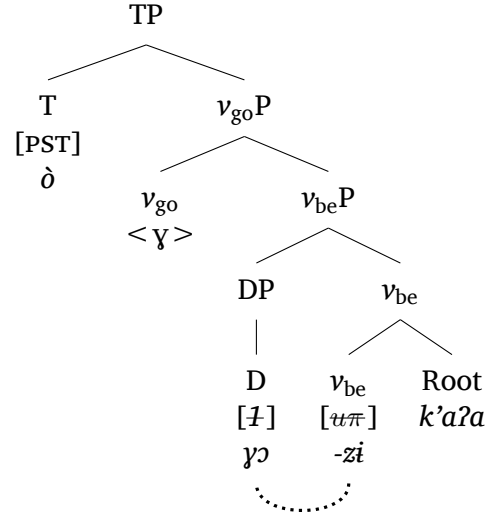
- I assume agreement morphology is spelled out as a result of an Agree relation between a functional head merged with a Probe with unvalued π -features and a DP-Goal bearing interpretable π -features (Chomsky, 2000, 2001).
- Agreement morphology is also assumed to be the spell-out of the functional head/Probe itself (Julien, 2002).
- I have previously proposed (Partida-Peñalva, 2017, 2018) that v_{be} is always merged as a Probe in the structure \rightarrow i.e. this is the active locus of agreement in the language (*c.f.* *Case Parameter/Obligatory Case Parameter* (Levin and Massam, 1985; Bobaljik, 1993)).
- In **stative** sentences like (22a), v_{be} is merged with a π -Probe in the structure, taking a Root as its complement; the verb formed introduces its sole argument in SpecvP. The vhead then looks in its c-command domain for a DP that can value the π -features and enters an Agree relation with the sole argument, valuing the Probe with 1st person features: [π : 1] (22a).
- **Inchoative** constructions like (22b) start as statives, but a change-introducer v_{go} is merged on top of Specv_{be}P. I take this head to be the responsible for the spell-out of the /<y>/ consonant in inchoatives.
- I assume the agreement morphemes (and possibly the inchoative morpheme <y>) are attached to the Root by verb movement.

- (22) a. $má =$ $k'a?a-z\check{i} = y\check{o}$
 PST.IPFV wet-1 = I
 'I was wet'
- b. $\dot{o} =$ $k'ay\check{i}-z\check{i} = y\check{o}$
 PST get.wet-1 = I
 'I got wet'

(23) a. Stative constructions



b. Inchoative constructions



5 Remaining questions

1. Is /<γ>/ a suffix attached directly to the Root or part of a stem alternation that is triggered when Root, v_{be}, and v_{go} are linearized together the same structure?
2. Why is v_{go} not merged with a π-Probe? Is v_{go} a defective v-head that cannot be a locus of agreement? → Unaccusatives like ‘to arrive’/‘to fell’, which would be formed of a Root + v_{go} only, do not cross-reference their argument with a suffix, but with an agreement proclitic associated with T.

6 Conclusions

- Inchoatives and stative verbs in Mazahua do not belong to different lexical classes: they share the same TAM paradigm (with Aspect restrictions), they share the same Root and the morphology of inchoatives can be predicted based on the phonology of the Root.
- Inchoatives are morphosyntactically derived from statives: stative constructions are composed of a Root and a state-introducer v-head, while inchoatives are more complex structures and add a change-introducer v-head on top of the state predicate.
- Sole argument of statives and inchoatives is an internal argument introduced as a subject.

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