Negation in Itunyoso Triqui: descriptive and corpus-based analyses

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Roadmap

1. Background: Triqui phonology and morphology
2. Basic syntax
3. Negators and their use; the interaction of aspect and negation

The Triqui languages

- 3 major language variants with limited mutual intelligibility.
- All complex tone languages within the Mixtecan family.
- The average distance between the major Triqui regions is ~5 km, but it is very mountainous terrain with large elevation differences.
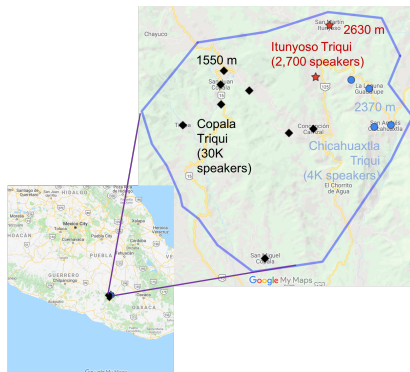
The Triqui languages split off from Mixtecan about 2,500-3,000 years ago. Mixtecan is a major branch within Otomanguean (which is itself a very old family).
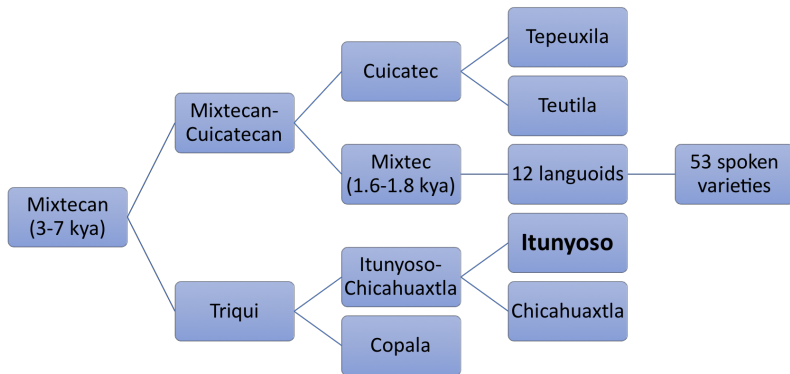
The Itunyoso Triqui text corpus

In addition to about 40 hours of elicitation and experimental recordings, we have 29 hours of spontaneous/unscripted speech from 34 speakers.

Content is Triqui culture, ethnobiology, history, narratives, and folktales. Most involve conversational dyads with separately mic'd speakers; 289 recordings.

All transcribed and time-aligned in ELAN, with a large portion translated into Spanish.

Phonological aspects of Itunyoso Triqui

- About 70% of the Triqui lexicon is polysyllabic words.
- Consonant length contrast in onsets of monosyllables.
- Oral and nasal vowels; final stress (lengthening)
- An important distinction between roots with coda /ʔ/ and roots with coda /h/ (for both the phonology and the morphology)
- Complex tone system

ββeh⁵	'straw mat'
ββe⁴	'hair'
nne³	'plough'
nne²	'to lie (tr.)'
nne¹	'naked'
tʃe⁴³	'my father'
nne³²	'water'
nne³¹	'meat'
nnãh¹³	'towards here'

Triqui morphology – pronominal suffixes/clitics

Tone is used lexically and morphologically (and syntactically!) in Itunyoso Triqui. It has a very high functional load and marks many morphological categories (alongside glottal consonants).

	nne^3	'to be sitting'	ri^{3}ã̃^{32}	'face'
1s	nneh^5	'I am sitting'	ri^{4}ã̃h^4	'my face'
2s	nne^4=reʔ^1	'I am sitting'	ri^{3}ã̃^{1}=reʔ^1	'your face'
1p/du	nneʔ^4	'we are sitting'	ri^{4}ũ̃ʔ^4	'our face'
3.top	nneh^3	'they are sitting'	ri^{3}ã̃h^3	'their face'
3m	nne^3=sih^3	'he is sitting'	ri^{3}ã̃^{32}=sih^3	'his face'
3f	nne^3=ũ̃h^3	'she is sitting'	ri^{3}ã̃^{32}=ũ̃h^3	'her face'
1p.incl	nne^3=neʔ^4	'we are sitting'	ri^{3}ã̃^{32}=neʔ^4	'our face'

Speech act participants modify the tonal structure of roots, but other person marking does not modify root structure.

Toggling

Both 1s and 3top person marking on verbs (as subjects) and nouns (as possessors) involve what is known as a morphological toggle or **exchange rule** (DiCanio, 2016; DiCanio et al., 2020).

Bare root	Gloss	Inflected stem	Gloss
(a) a^4nĩː^{43}	'to stop'	a^4nĩɦ^4	'I stop'
(b) so^{3}ʔoː^3	'be deaf'	so^{3}ʔoɦ^{45}	'I am deaf'
(c) nneː^3	'plough'	si^3-neɦ^{45}	'my plough'
(d) ku^{3}ruː^{32}	'granary'	si^3-ku^{1}ruɦ^1	'my granary'
(e) jãː^{32}	'salt'	tãɦ^3	'my salt'
(f) a^4nĩɦ^4	'to get dirty'	a^4nĩː^{43}	'I am getting dirty'
(g) jo^{3}ʔoɦ^{45}	'land'	to^{3}ʔoː^{43}	'my land'
(h) nneɦ^3	'dream'	si^3-neː^{32}	'my dream'
(i) ni^{3}naɦ^3	'to be tired'	ni^{3}naː^{32}	'I am tired'
(j) jãɦ^3	'paper'	tãː^{43}	'my paper'

Triqui morphology – aspect

Triqui is tenseless. Verbs distinguish three aspects: habitual/progressive (unmarked), perfective, and potential.

The *segmental* shape of the perfective and potential aspect are identical. They differ in terms of tone. Vowel-initial and consonant-initial verbs have distinct aspectual allomorphs.

Root	Gloss	Perfective form	Potential form
$a^3\beta i\Omega^3$	'*to die*'	$k\text{-}a^3\beta i\Omega^3$	$k\text{-}a^2\beta i\Omega^2$
$u^4 n\tilde{a}h^4$	'*to run*'	$k\text{-}u^4 n\tilde{a}h^4$	$k\text{-}u^2 n\tilde{a}h^2$
$t\int u^3\Omega\beta i\Omega^3$	'*to be afraid*'	$ku^3\text{-}t\int u^3\Omega\beta i\Omega^3$	$ku^2\text{-}t\int u^3\Omega\beta i\Omega^3$
$re\Omega^3$	'*to lose*'	$ke^3\text{-}re\Omega^3$	$ke^1\text{-}re\Omega^1$
$n\tilde{\imath}^3\Omega\tilde{\imath}^3$	'*to know*'	$ki^3\text{-}n\tilde{\imath}^3\Omega\tilde{\imath}^3$	$ki^2\text{-}n\tilde{\imath}^3\Omega\tilde{\imath}^3$
$na^3 no\Omega^3$	'*to look for*'	$ki^3\text{-}na^3 no\Omega^3$	$ki^2\text{-}na^2 no\Omega^2$

Aspectual tone

The perfective prefix/alternation does not involve insertion of a tone on vowel-initial verb roots, but the /kV^3-/ prefix, which applies to consonant-initial verbs, carries tone /3/.

The potential prefix/alternation always involves tonal lowering to tone /2/, either in the initial syllable of the verb or *across the entire verb root*.

Transcriptional orthography – a quick guide

The transcriptional orthography has a 1:1 phoneme:grapheme mapping. These characters are *identical* to those used by the community's practical orthography (but the latter uses accent diacritics instead of numbers).

- Tone is a superscript still

- Geminates are doubled consonants (β: > 'bb')

- Obvious substitutions: /j/ > 'y', /tʃ/ > 'ch', /ɾ/ > 'r', /β/ > 'b'

- Glottal stop is 'h'; /a^{3ʔ}nĩʔ^3/ > a^{3}hninh^3 'to tidy up'

- Coda [h, ɦ] is 'j'; /tʃaɦ^1/ > chaj^1 'I am going to eat'

- Prenasalized stops are sequences, as are labialized velars; /^{ŋ}g^{w}i^{31}/ > ngwi^{31} 'person.'

- Nasal vowels are written as vowel + 'n', e.g. [jã^{32}] > yan^{32} 'tongue'

- Vowel length is not represented b/c it is redundant.

Itunyoso Triqui syntax

Word order in Itunyoso Triqui is VSO, with locatives/obliques always following the object and with adverbial phrases more freely occuring either pre-verbally or after the object.

(1)   Ko^{4}hoj^4 ne^{3}sih^1 ni^{3}kyanj^5
      perf.drink.1s soda   Tlaxiaco

      'I drank soda in Tlaxiaco.'

(2)   Ku^{3}ki^3 kaj^3 ka^{2}min^{32}=yunj^1
      Yesterday perf.run.over car=1s.obj

      'Yesterday the car ran over me.'

Pre-verbal position is reserved for arguments or obliques which are under focus or marked with the topical marker be^4.

(3) Juan^{43} ki^3-ranj^3 chu^{3}che^{32}
     Juan   perf-buy chicken

     '**Juan** bought the chicken.' (not someone else)

(4) Be^4 nga^1 ka^{3}min^{43} baj^{32} nih^2=sij^3 nan^2 tah^4,   ta^{1}koj^1
     top with car   go   pl=3m   dir   elder.interr, by.foot
         nan^2 tah^4
         dir   elder.interr

     'Did they go by car, my elder? or by foot, my elder?'

While direct object pronouns exist for animates (as clitic pronouns), there are no inanimate direct object pronouns. These are obligatorily omitted.

(5)   Ngo^{2}yun^1 ki^2-ta^{3}ha^{32}=chuj^3 ni^2 a^{3}ta^3=chuj^3 ba^{3}hanj^3=chuj^3
      At.once   pot-grab=anim   and carry=anim go=anim

    rej^3
    part.hearsay

'All at once it will grab (the food) and carry (it) away, they say.'

(*Line 23, Cuento de águila de Cuquila; 10/6/2014; Crescencio de la Cruz Ramírez and Wilfrido Cruz Martínez*)

Use of Itunyoso Triqui aspect

Unmarked verbs in Itunyoso Triqui are variably interpreted as progressive/imperfective or as habitual. An optional si^3- prefix marks overt progressive aspect.

(6) Ya^{3}hyoj^2 a^{3}chi^3=sij^3 na^{3}to^{32}
     daily   peel=3m   banana

'He peels bananas every day.'

(7) Sa^{3}ni^2 un^3 si^3-hyaj^3 yu^{3}hunj^2 *Beatriz* nan^3? Bin^3 si^3 sah^1 u^{2}rua^{43}
     but   what   prog-do   woman   Beatriz   prox?   be   comp   good   very
        k-a^{3}hmin^{32}=unj^3 sa^{3}ni^2 ma^{2}han^3=neh^4 nun^3 cha^{2}kaj^2=neh^4 kwe^{4}nta^{43}
        perf-speak=3f   but   self=1p.incl   neg   pot.take=1p.incl   account

'But what is this woman Beatriz doing? What she said is/was very good, but *we* didn't pay attention.'

(*Line 55, El Partido Morena; 06/9/2015; Carmen López González and Nieves López Guzmán*)

Perfective/Potential use

The Itunyoso Triqui perfective is used with completed actions, irrespective of time. The potential marks actions that are incomplete, irrespective of time. Typical uses are below:

(8) Ka^3-neh^5 rian^{32} me^{4}sa^{43}
     perf-be.sitting.1s face table

'I sat on the table.'

(9) Ka^2-neh^5 rian^{32} me^{4}sa^{43}
     pot-be.sitting.1s face table

'I am going to sit on the table.'

(10) Cha^2=reh^1 ta^{13} k-a^{3}ra^3 ri^{3}ki^4=reh^1
      pot.eat=2s until.pot perf-fill stomach=2s

'You will eat until you get full.' $\sim$ 'Eat until you get full.'*(command)*

(11) Cha^{41}=reh^1 ta^1 k-a^{3}ra^3 ri^{3}ki^4=reh^1
      perf.eat=2s until.perf perf-fill stomach=2s

'You ate until you got full.'

There is a lot more here to talk about, but that will have to wait for another time. These are not perhaps the most ideal examples.

Negation

The language has four negation strategies which are conditioned by phrase type and verbal aspect.

The last two interact with verbal aspect in a complex way, conditioning a 'flip' in the morphological shape of the verb when it is negated, as in Copala Triqui (Hollenbach, 1976).

Word	Meaning	Context
ni^3taj^2	negative existential, 'be none'	nominal
se^4	counterfactual, negative focus' e.g. 'not A, but B'	nominal
nun^3	standard negator, 'not'	verbal
si^3	prohibitive; future negator	verbal

Nominal negation: ni^3taj^2 and se^4

There are two nominal uses of the ni^3taj^2 'neg.exist' in Triqui: as a negative existential (in 12), as 'do not have' when coupled with a possessed NP (in 13). Both are pre-nominal.

(12) Ta^1koj^1 ka^3hanj^2=sij^3 nan^2 yu^3be^{32}. Ta^1koj^1 si^3 ni^3taj^2 ka^3min^{43}
         By.foot   perf.go=3m   dir   part.decl.   By.foot   because   neg.exist   car

         k-a^4chin^{43} taj^{13} yu^3mej^3
         perf-pass   as.such   part.neg.

         'By foot they went. By foot because there was no car that passed by as such.'

(13) Ni^3taj^2 si^3-chi^1cheh^1 k-a^1bih^1 a^4ngo^{43} ra^3ha^3 chu^3manh^3
         neg.exist   poss'd-rights.1p   pot-leave.1p   another   part/hand   town

         'We don't have the right to leave/go to another part of town.'

(Itunyoso Triqui lacks a verb 'have' – an existential is coupled with a possessed nominal. ba^2 si^3-ka^3min^{43}=sij^3, lit. exist poss'd-car=3m 'His car exists' may be translated as 'He has a car.')

The Itunyoso Triqui word se^4 functions as a focus-sensitive negative operator with noun phrases. As focus is marked pre-verbally, se^4 precedes the fronted NP.

(14)   Se^4 ma^{2}hanj^5 na^{3}han^3+ra^{43},   sa^{3}ni^2 ma^{2}han^4=reh^1
     neg.foc   self.1s   burn+want,   but   self.2s=2s
      na^{3}han^3+ra^{43}
      burn+want

     'It's not **me** (who) is angry, **you** are angry.'

(15)   Se^4 Jwan^{43} ki^3-ranj^3,   ma^{2}hanj^5 ki^3-ranj^3 chu^{3}che^{32}
     neg.foc   Juan   perf-buy,   self.1s   perf-buy   chicken

     'It wasn't **Juan** (who) bought (it), **I** bought the chicken.

Extended verbal uses

Neither of the verbal negators can be used with nominal negation, but the nominal negators *can* be used with a compementizer to mark verbal negation. For se^4, it only marks contrastive sentential focus.

(16)   Ni^{3}taj^2 si^2 a^{3}chin^3 chi^{3}hna^{32} ri^{3}ki^4=reh^1
         neg.exist   comp   be.lacking   hunger   stomach.2s=2s

   'You are not hungry.' $\sim$ 'It's not that you are hungry.'

(17)   Se^4 si^2 cha^{1}kanj^1,   ma^{2}han^4=reh^1 cheh^3
         neg.foc   comp   be.tall.1s,   self.2s=2s   be.short

   'It's not that **I am tall**, **you** are short.

Contrastive Focus with different negators

But you can use many different negators to mark contrastive focus.

(18)   ki^3-ranj^4=sij^3 na^{3}to^{32} cha^2=sij^3 nih^4?
        perf-buy=3m   plantain   pot.eat=3m   pol.part

     'Did the man buy plantains to eat?'

(19)   **se^4**   na^{3}to^{32} ki^{3}ranj^4=sij^3 manj^5 | nu^{3}ta^1 ki^{3}ranj^4=sij^3 aj^5.
        neg.foc plantain   perf-buy=3m   dis.part | tamale   perf-buy=3m   part

    'He didn't buy PLANTAINS; he bought TAMALES.'

(20)   **nun^3**   ki^{2}ranj^2=sij^3 na^{3}to^{32} cha^2=sij^3 | nu^{3}ta^1 ki^3-ranj^4=sij^3
        neg   pot-buy=3m   plantain   eat.pot=3m | tamale   perf-buy=3m
          cha^2=sij^3
          pot.eat=3m

    'He didn't buy plantains to eat; he bought TAMALES to eat.'

(21) Tsih^1 cha^{43} ya^{3}haj^3 mman^4 ri^{3}ki^3 cha^{3}tan^3
    sweet perf.taste chile perf.exist stomach pineapple

      cha^{43}=chuj^3 nih^4
      perf.taste=3anim pol.part

    'Did the peppers taste sweet under the pineapple that the animal ate?'

(22) **ni^{3}taj^2** si^3 tsih^1 chaj^3 | chu^{2}naj^2 cha^{43} ya^{3}haj^3
    neg.exist comp sweet taste.3top | spicy taste pepper

      mman^4 ri^{3}ki^3 cha^{3}tan^{32} cha^{43}=chuj^3.
      perf.exist inside pinapple perf.eat=3anim

    'They didn't taste SWEET; the peppers were SPICY in the pineapple it ate.'

Verbal negation

The standard negator is *nun^3*. It may be used with verbs marked for any aspect, but the morphology on such verbs varies depending on the verb's lexical aspect. Negation is always pre-verbal, without exception.

(23) Nun^3 ka^3-hnah^3 nni^4=reh^1 tu^{3}kwaj^5
      neg   perf-come mother.2s=2s house.of.1s

      'Your mother did not come to my house.'

(24) Nun^3 u^{3}nun^3=nej^3 sta^{3}hanj^3 sti^{4}la^{43} nej^3
      neg   listen/understand=3p language Spanish also

      'They do not understand Spanish either.'

In many contexts, use of this negator involves a flip in the morphological marking for aspect in Itunyoso Triqui. Negation of a perfective verb, requires use of potential aspect morphology on the verb root. Negation of a potential verb requires use of perfect aspect morphology on the verb root.

(25) Nun^3 ka^{2}hanj^3=sij^3 ni^{3}kyanj^5
      neg   pot.go=3m   Tlaxiaco

      'He did not go to Tlaxiaco.'

(26) Nun^3 (*si^3)   ki^3-ni^{3}hinj^5 nni^4=reh^1
      neg   (*neg.pot) perf-know/see.1s mother.2s=2s

      'I will not see your mother.'

More examples

The same pattern is found in Copala Triqui (Hollenbach, 1976, 1992), but no explanation for the pattern has been given.

(27)   Ta^3+sah^1 nun^3 ki^3-hyaj^3 ka^{3}na^{43}=unj^3 ni^2 k-a^{2}hbe^3
       this+good   neg   perf-do   win=3f   then   pot-able
       ki^3-cha^{4}kwij^4=unj^3.
       perf-help=3f

'And if she will not win (the election), then she will (still) have been able to help (us).'

(*Line 96, El Partido Morena; 06/9/2015; Carmen López González and Nieves López Guzmán*)

The potential negator si^3

When coupled with a verb in the perfective aspect, si^3 functions as a general negator for sentences with a *potential* reading. It *also* requires a morphological flip of aspects.

(28)   Si^3 ki^3-ni^{4}hya^{43} nni^4=reh^1
       neg.pot   perf-see.1s   mother.2s=2s

     'I will not see your mother.'

(29)   Si^3 k-oh^3 ku^{3}man^1
       neg.pot   perf-hit   rain

     'It is not going to rain.'

When used with a potential verb, si^3 functions as a prohibitive.

(30)   Si^3 k-oh^1=reh^1
       neg.pot pot-hit=2s

       'Don't hit!'

(31)   Si^3 ka^{2}hanj^2=reh^1 rian^{32} chrunj^5 ta^3
       neg.pot pot.go=2s   face   box   this

       'Don't go on top of those boxes.'

For some reason, use of si^3 is not permitted with a perfective form of a stative experiencer verb like ni^3hin^3 'know/see', but it is grammatical with a perfective form of the active verb ni^3hyaj^2 'see/watch.'

This suggests that there may be a more complex interaction between the choice of these two general negators and the lexical aspect of the verb.

But what about the comparative evidence for this?

Copala Triqui (Hollenbach, 1976)

In Copala Triqui, the same pattern occurs, but the cognate form with nun^3 – ne^3 only occurs with progressive/unmarked verbs and potential verbs (where we'd expect the perfective).

The cognate form with si^3 – se^2 only occurs with perfective verbs (where we'd expect the potential), just like in Itunyoso Triqui.

The use of nun^3 with perfective verbs as well in Itunyoso Triqui is perhaps an innovation as a parallel with si^3.

In Copala Triqui, manner adverbs can precede or follow the verb. When they precede the verb (and follow the negator), the aspectual flip does not occur.

(16) za²⁵ gučuh⁴ žini³ yuwe²¹ âh
The boy will lay the palm mat down well.

(17) gučuh⁴ za²⁵ žini³ yuwe²¹ âh
The boy will lay the palm mat down well.

(20) nę³ za²⁵ gučuh³⁴ žini³ yuwe²¹ âh
The boy didn't lay the palm mat down well.

(21) nę³ gučuh⁴ za²⁵ žini³ yuwe²¹ âh
The boy didn't lay the palm mat down well.

The aspectual flip also only affects the first verb in andative/venitive constructions.

> (33) nę³ ga²na²⁵ žini³ gača⁴ žini³ âh
>   *The boy didn't come to sing.*
> (34) zę⁴ ga²na²³ žini³ gača⁴ žini³ âh
>   *The boy won't come to sing.*

But whether the flip affects both verbs with embedded VPs is unclear. Sometimes it does (with 'learn how'), but sometimes it doesn't (with 'know how').

(39) ginari²³ žini³ nanuwą³² žini³ goto³²
        âh
    The boy learned how to mend the shirt.

(40) nę³ ginari²⁵ žini³ nanuwą⁵ žini³
        goto³² âh
    The boy didn't learn how to mend the shirt.

(46) nę³ gene²ę⁵³ žini³ nanuwą⁵ žini³
        goto³² âh
    The boy didn't know how to mend the shirt.

(47) gene²ę⁵³ žini³ nanuwą⁵ žini³ goto³²
        âh
    The boy will know how to mend the shirt.

Verbs that only take potential complements (expressing purposes) do *not* show a flip for the potential verb complement.

Summary of the Copala Triqui restrictions

1. The toggle of aspect has an adjacency restriction between the negator and the verb, as we see with adverbs.

2. Certain verb + complement pairs involve a flip of both verb aspects, while others do not.

Do these same restrictions hold for Itunyoso Triqui? Some preliminary examples...

Verb + verb complements

(32)   Nun^3 k-a^{2}ra^2+chi^{3}hna^{32}=sij^3 ka^{3}hanj^2 na^{2}kaj^2=sij^3
      neg   pot-toss+hunger=3m   perf.go   pot.carry=3m

      'They didn't accept going to bring them (again).'

(33)   ma^{2}han^3=neh^4 ni^2 nun^3 k-a^{2}nin^2+ra^{43}=neh^4 si^3
      self=1p   and   neg   pot-stop+want=1p   comp
        ki^2-cha^{4}kwij^4=neh^4=unj^3
        pot-help=1p=3f

      'We, ourselves did not think / were not thinking about
      helping her.'

Purposive verbal complements or "infinitival constructions" (e.g. go to do X) always involve use of the potential aspect in Itunyoso Triqui.

So, VP complements might not undergo the aspectual flip if they happen to fall into these categories (as we see on the previous slide).

Several verbs *can* be marked

(34)   Nun³ chu⁴man⁴³+ra⁴³ be³lu³ Ku⁴ti⁴³ ta³ ka²-bin³
       neg   arrive+want   elder   Kuti   this pot-be

'It was that this elder, Kuti, did not believe (that they were going to resolve the problem).'

And adverbs do not seem to block the rule in Itunyoso Triqui.

(35)   Be⁴ ta³ bin³ nun³ kwi³   k-a¹chi¹hi¹ te⁴lu⁴³ ngwi³¹
       top this be   neg now/day   pot-begin   many   person
         ka²na²   ku²nun²=nej³
         pot.weed.soil pot.sow=3p

'It's that many people have not yet started to weed and sow.'

More examples

(36) ni^2 nun^3 ki^1-rih^1+ra^{43}=chuj^3 taj^1 ki^2-hyaj^3=chuj^3
      And neg   pot-get+want=anim how pot-do=anim

'And the animal did not understand how it did it.'

(37) Si^3 a^{3}taj^2=unj^3 ka^{3}hanj^2=unj^3 si^{3}si^2 nun^3 ka^{2}taj^2=unj^3
      comp say=3f   perf.go=3f   if/that neg   pot.say
      si^{3}si^2 k-a^{2}bi^{32} a^{3}kwa^{4}hnin^{43} nej^3 a^{3}hyoj^3 nej^3
      if/that pot-leave today   and tomorrow then,
      a^{3}taj^2
      say.'

'What she was saying when she left, (it's) that she didn't say
that she would leave today or tomorrow then, they say.'

It's unclear how the same restrictions play out with the potential negator si^3 (it's hard to extract corpus examples because the word is synonymous with complementizer si^3.

(38)   Si^3 ki^3-ranj^4=neh^4 nne^{32} nne^{32} un^3...   a^{3}ka^{32}
        neg.pot   perf-buy=1p.incl   water   water   um...   filters

            ri^{3}ki^3 ka^{3}min^{43} man^3
            stomach   car   that

'We would not buy the oil that filters under that car.'

Why the flip in aspect?

Most Mixtecan languages make a basic morphological distinction between a realis/imperfective and an irrealis stem. The completive/perfective is marked with special morphology.

Irrealis			Imperfective			Imperfective Causative			
kāsī	lānā		sēsī	láná		ðā	kásí	láná	kítí
kasi^{MH}	lana^{MH}	H	sesi(^{H})	lana^{MH}	H	ða(^{H})	kasi^{MH}	lana^{MH}	kiti^{MH}
eat	child	IPFV	eat	child	IPFV	CAUS	eat	child	animal
The child will eat.			*The child is eating.*			*The child is feeding the animals.*			

Example from Southeastern Nochixtlán Mixtec (McKendry, 2013, 35).

The irrealis aspect is typically *unmarked*, but the completive is marked with either a prefix or tonal inflection (related to the historical loss of the prefix).

Table 5. The verbal paradigm of four exemplary verbs in YM.

	'hang' (tr)	'drag' (tr)	'break' (tr)	'boil' (intr)
IRR	chi^3kun^2	$ku^3{+}ñu^3u^3$	$ta\text{ʔ}^3bi^4$	kwi^1so^1
NEG.IRR	$chi^{14}kun^2$	$ku^{14}{+}ñu^3u^3$	$ta\text{ʔ}^{14}bi^4$	$kwi^{14}so^1$
CPL-1	$ni^1\text{-}chi^3kun^2$	$ni^1\text{-}ju^3{+}ñu^3u^3$	$ni^1\text{-}ta\text{ʔ}^3bi^4$	$ni^1\text{-}si^1so^1$
CPL-2	$chi^{13}kun^2$	$ju^{13}{+}ñu^3u^3$	$ta\text{ʔ}^{13}bi^4$	si^1so^1
INCPL	chi^4kun^2	$ju^4{+}ñu^3u^3$	$ta\text{ʔ}^4bi^4$	si^4so^1
STAT	ndi^4kun^2	---	$ta\text{ʔ}^4bi^4$	---
PROG	$chi^4{+}ndi^3kun^2$	$ñu^4u^4$	---	---

Example from Yoloxóchitl Mixtec (Palancar et al., 2016).

There is an overt marker of an incompletive (imperfective) in some Mixtec languages – it seems to specifically be used for achievement predicates.

Table 6. Tone allomorphy for the incompletive.

	Syllable structure	LEX	INCPL	CPL-I	INCPL	
a	disyllabic	/1-1/	> /4-1/	ni^1-ki^1xin^1	ki^4xin^1	'fall asleep'
	monosyllabic			ni^1-tu^1un^1	tu^4un^1	'catch fire, light up'
b	disyllabic	/1-3/	> /4-13/	ni^1-ka^1ku^3	ka^4ku^{13}	'escape'
	monosyllabic			ni^1-ka^1an^3	ka^4an^{13}	'get accustomed'
c	disyllabic	/1-4/	> /4-14/	ni^1-ka^1xan^4	ka^4xan^{14}	'sneeze'
	monosyllabic			ni^1-ku^1un^4	ku^4un^{14}	'for chilli to be ground into sauce'
d.1	disyllabic	/3-3/	> /4-3/	ni^1-ka^3ba^3	ka^4ba^3	'lie down to sleep'
				ni^1-nda^3ba^3	nda^4ba^3	'fall'
d.2	monosyllabic	/3-3/	> /4-4/	ni^1-chi^3i^3	chi^4i^4	'get wet'
				ni^1-$ka?^3a^3$	$ka?^4a^4$	'emit a sound'
				ni^1-ku^3u^3	ku^4u^4	'occur, happen'
				ni^1-$chi?^3i^3$	$chi?^4i^4$	'harvest' (tr)
e.1	disyllabic	/3-4/	> /4-4/	ni^1-ku^3chi^4	ku^4chi^4	'feel sad'[21]
				ni^1-ka^3ba^4	ka^4ba^4	'turn' (tr.)
e.2	monosyllabic	/3-4/	> /4-24/	ni^1-ka^3a^4	ka^4a^{24}	'slip'
				ni^1-ku^3un^4	ku^4un^{24}	'grind [chilli] for sauce'

Example from Yoloxóchitl Mixtec (Palancar et al., 2016).

Conclusions

What does this have to do with the Triqui aspectual toggle under negation?

The function of the aspectual prefixes is unique based on aktionsarten for verbs. It may be that unique negators were reserved for certain lexical aspect and verb aspect combinations.

And this may have led to a particular arrangement that then got generalized as a pattern related to negation, not to aspect itself.

This is all completely speculative though. We still have little idea. Neither did Hollenbach (1976).

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