Verbal morphology: forms and aspect
Linguistics 460/560 - The structure of Itunyoso Triqui
Week 5
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I. What's a verb?

(1) There are several *types* of verbs in Itunyoso Triqui. Just as we have compound nouns, we can have compound verbs too.

Simplex		**Compound (verb + noun)**		
sih^{4}	'arrive'	ʔjah^{3}	sũ^{32}	'to work'
sih^{4} = sih^{3}	'he is arriving'	do	work	
		ʔjah^{3}	sũ^{32} = sih^{3}	'he is working'

(2) There is a second type of verb in Triqui which we will call an *essence predicate*, following the term used by Cruz and Stump (2018). These consist of a motion verb and the verb 'to want' /ɾa^{43}/~/ɾu^{4}a^{43}/, which we code as a *desiderative.*

(3) All essence predicates are verbs of emotion, perception, and cognition. It is, in fact, the primary way to convey this type of verbal meaning in the language.

(4) Examples of compound verbs and essence predicates.

	Compound verbs	**Essence predicates**
	na^{3}bin^{3} ra^{2}ha^{3}	na^{3}han^{3} ra^{43}
Interlinearization	become hand.of	to.burn DESID
Gloss	'to receive'	'to be angry'
	n-a^{4}rij^{4} sun^{32}	sij^{4} ra^{43}
Interlinearization	ITER-plant work	to.arrive DESID
Gloss	'to elect (someone)'	'to dare (to do something)'
	ri^{32} kwe^{4}sa^{43}	u^{3}tinh^{3} ra^{43}
Interlinearization	take.out force/fuerza	to.slice DESID
Gloss	'to overwork oneself'	'to tax one's memory' –or– 'to rack one's brain'

(5) You'll notice here that the meaning of the essence predicate is rather metaphorically-derived, e.g. *anger* = *burning.* However, the remainder of them (there are about 30-40) are harder to decompose.

(6) A shared property of these across Otomanguean languages is something that is nominal referring to a body part as the second element.

(7) Comparative examples of essence predicates in different Otomanguean languages

Jicayán Mixtec (García Mejía 2012) 'do + **heart**' = 'to believe'

ni²=ka'an²³=ra²	chi'in²¹	[ti²=na²=kw-i²nu³	i²ni²=yu¹]
PERF=PERF.odernar=3M	PRE:DAT.1SG	SUB=EXH=NT.hacer	corazón=1SG

'Él me ordenó que yo creyera (en algo pero no era necesario creer).' {txt022}

Isthmus Zapotec (Pickett and Black 2001) '**liver**' *lá'dzi* is incorporated into the verb

Gucalá'dxibe	*gú'yabe*	*ni*
quiso.él	ver.él	lo
C-suceder-hígado-3P	P-ver-3P	3C

'Él quiso verlo'

Riuulá'dxibe	*gú'yabe*	*ni*
gusta.él	ver.él	lo
H-entrar-hígado-3P	P-ver-3P	3C

'A él le gusta verlo'

San Juan Quiahije Chatino (Cruz and Stump 2018) *riq²* is 'essence'

Essence predicate	Gloss	Component parts
nkqan⁴ riq²	's/he remembered'	[sit essence]
sa⁴ riq²	's/he was smart, fast, agile'	[light essence]
ndon⁴² riq²	's/he was happy'	[standing essence]
sqwi⁴ riq²	's/he remembered'	[exist essence]
senq¹⁴ riq⁰	's/he was upset'	[CBM essence]
qna³ riq²	's/he pitied'	[pity essence]
xkuq⁴² riq²	's/he was sad'	[turn.around essence]
ndwe⁴ riq²	's/he worried'	[minced essence]
skwa³ riq²	's/he was fed up'	[lying essence]
tqi⁴ riq²	's/he hated'	[sick essence]
sqwe³ riq²/tye³²	's/he was generous/happy'	[good essence/chest]
liqa¹⁴ riq⁰	's/he was taciturn'	[slow essence]
chin⁴ nga²⁴ tye³²	's/he was scared/queasy'	[ugly feel chest]
ndya³² riq² tye³²	's/he liked'	[like essence chest]
xqan¹ nga⁰⁴ tye³²	's/he felt angry'	[mean feel chest]

(7) The word /ɾu⁴a⁴³/ in Itunyoso Triqui actually comes from /ʈ̪su⁴βa⁴³/ 'squash seed'; perhaps with an interpreted meaning like 'core of.' This type of essence predicate construction for emotion verbs is pan-Otomanguean.

(8) A characteristic of both verb compounds and essence predicates in Itunyoso Triqui is that verbal aspect is *only* marked on the first word (the head).

II. Verbal morphology and aspect

(9) Triqui (and many Otomanguean languages) does not mark tense, but verbal aspect. The temporal dynamics of events are interpreted from how the sentence is situated relative to other events in the discourse.

(10) We'll cover examples of why this is an *aspectual system* and not a tense system as we go along.

(11) The *unmarked* form of the verb is the imperfective. The use of an unmarked verb can result in a habitual reading or a progressive reading, irrespective of the time of the event.

(12) ja^{3ʔ}joh^{3} a^{3}tʃi^{3}=sih^{3} na^{3}to^{32}
daily peel=3M banana
'Daily he peels bananas.'

(13) na^{3}noʔ^{3}=sih^{3} si^{3}-la^{4}pih^{4}
look.for=3M POSS'D-pencil.1S
'He is looking for my pencil ~ He looks for my pencil.'

(14) ki^{3}-ni^{43} jja^{3} nne^{4}=ɾeʔ^{1} a^{4}ɾũ^{1}=ɾeʔ^{1}
PERF-fall.1S when be.sitting=2S write=2S
'I fell when you were sitting and writing.'

(15) We can force a habitual reading for the verb in (12) with the word 'daily', but this meaning is always a possible interpretation as we see in (13).

(16) Note the use of the perfective in (14) as it situates the event as a completed action. The only possible interpretation of 'sit' and 'write' here is that they were ongoing actions at some point before the falling event and that they continued past the falling event. Thus, the translation is that these are past imperfectives now. However, the forms have not changed.

(17) We interpret the tense here - it is not being overtly marked.

(18) Incidentally, another term for what we're calling *perfective* in the Otomanguean literature is *completive (completivo)*.

(19) Most verbs have three forms - *imperfective* (unmarked), *perfective,* and *potential.*

a^{3}tʃi^{3}	peel	a^{3}tʃi^{3}=neʔ^{4} sa^{4}na^{43}	'we are peeling the apple'
k-a^{3}tʃi^{3}	PERF-peel	ka^{3}tʃi^{3}=neʔ^{4} sa^{4}na^{43}	'we peeled/have peeled the apple'
k-a^{2}tʃi^{3}	POT-peel	ka^{2}tʃi^{3}=neʔ^{4} sa^{4}na^{43}	'we will peel the apple'

(20) The perfective and potential forms are segmentally identical, but differ in terms of tone. Tone /2/ is used with the potential aspect, but the perfective does not involve change of tone on the verb stem.

(21) Some verbs have only *two* forms - something like an irrealis/potential and a realis/perfective: mmã^{1} 'to exist (pluractional)', tʃa^{2} 'to eat', tʃi^{2}ɾaʔ^{2} 'to break', tʃa^{2}kah^{2} 'to get married', and causative-marked verbs.

mmã^{1}	POT.exist	Mmã^{1}	bbih^{1}	sĩʔ^{3}	tʃu^{4}βa^{43}	ka^{3}mĩ^{43}
		POT.exist	two	child	inside.of	car
		'There are two children inside the car.'				
mmã^{4}	PERF.exist	Mmã^{4}	bbih^{1}	sĩʔ^{3}	tʃu^{4}βa^{43}	ka^{3}mĩ^{43}
		PERF.exist	two	child	inside.of	car
		'There are two children inside the car.'				

(22) The tone changes associated with the potential aspect require some explanation, but let's first focus on the allomorphy associated with the prefixation.

2.1 Segmental allomorphy with aspect

(23) The perfective and potential aspectual prefixes are identical, but differ in terms of tone. Thus, we can think of verbs as *aspect-marked* and *unmarked*. This means that the non-tonal allomorphy for prefixes is the same (DiCanio 2022).

(24) There are two basic allomorphs of aspect: /k-/ and /kV-/. We observe the former in vowel-initial verbs and the latter in consonant-initial verbs.

(25) Vowel-initial verbs in the perfective and potential aspect

Root	Gloss	Perfective form	Potential form
a^{3}βiʔ^{3}	'*to die*'	ka^{3}βiʔ^{3}	ka^{2}βiʔ^{2}
a$^{3?}$ŋgaʔ^{3}	'*to laugh*'	ka$^{3?}$ŋgaʔ^{3}	ka$^{2?}$ŋgaʔ^{2}
a^{3}tʃĩh^{5}	'*to ask for*'	ka^{3}tʃĩh^{5}	ka^{1}tʃĩh^{1}
a^{3}no^{1}ʔoh^{1}	'*to wait*'	ka^{3}no^{1}ʔoh^{1}	ka^{2}no^{1}ʔoh^{1}
i^{3}ta^{3}	'*to whip*'	ki^{3}ta^{3}	ki^{2}ta^{3}
oʔ^{3}	'*to hit / to give*'	koʔ^{3}	koʔ^{1}
u^{4}nãh^{4}	'*to run*'	ku^{4}nãh^{4}	ku^{2}nãh^{2}
u^{3}nu^{3}	'*to listen*'	ku^{3}nu^{3}	ku^{2}nu^{3}

(25) Vowel-initial verb roots are fairly common. Of the 512 verbs in the inflectional database, 123 begin with a vowel - mostly /a/ or /u/.

(26) Consonant-initial verbs take a /kV-/ prefix. The prefix has tone /3/, but the shape of the vowel varies. For verbs where the initial vowel of the root is /i, e, u/, the vowel in the prefix harmonizes with the root as /ki-/, /ke-/, or /ku-/, respectively. This is non-low vowel harmony (/o/ is very rare in consonant-initial verbs).

Root	Gloss	Perfective form	Potential form
$tʃu^{3}ʔβiʔ^{3}$	'*to be afraid*'	ku^{3}-$tʃu^{3}ʔβiʔ^{3}$	ku^{2}-$tʃu^{3}ʔβiʔ^{3}$
nu^{32}	'*to be inside*'	ku^{3}-nu^{32}	ku^{2}-nu^{32}
$tʃu^{4}mã^{43}$	'*to arrive*'	ku^{3}-$tʃu^{4}mã^{43}$	ku^{2}-$tʃu^{2}mã^{2}$
$rũ^{4}$	'*to trample*'	ku^{3}-$rũ^{4}$	ku^{2}-$rũ^{2}$
$reʔ^{3}$	'*to lose*'	ke^{3}-$reʔ^{3}$	ke^{1}-$reʔ^{1}$
$ne^{3}ke^{32}$	'*to cover*'	ke^{3}-$ne^{3}ke^{32}$	ke^{2}-$ne^{3}ke^{32}$
Exceptions			
$nu^{4}k^{w}a^{43}$	'*to stretch*'	ki^{3}-$nu^{4}k^{w}a^{43}$	ki^{2}-$nu^{2}k^{w}a^{2}$
$tʃũ^{3}ʔũ^{4}$	'*to adorn*'	ki^{3}-$tʃũ^{3}ʔũ^{4}$	ki^{2}-$tʃũ^{2}ʔũ^{4}$

(27) If a consonant-initial root has the vowel /a/, it *also* takes the prefix /ki-/. No harmony occurs here.

Root	Gloss	Perfective form	Potential form
$tʃi^{4}ʔjãh^{4}$	'*to bark*'	ki^{3}-$tʃi^{4}ʔjãh^{4}$	ki^{2}-$tʃi^{2}ʔjãh^{2}$
$ʔjah^{3}$	'*to do*'	ki^{3}-$ʔjah^{3}$	ki^{2}-$ʔjah^{3}$
$na^{3}noʔ^{3}$	'*to look for*'	ki^{3}-$na^{3}noʔ^{3}$	ki^{2}-$na^{2}noʔ^{2}$
$nĩ^{3}ʔĩ^{3}$	'*to know*'	ki^{3}-$nĩ^{3}ʔĩ^{3}$	ki^{2}-$nĩ^{3}ʔĩ^{3}$
$ɾã^{4}ʔãh^{4}$	'*to dance*'	ki^{3}-$ɾã^{4}ʔãh^{4}$	ki^{2}-$ɾã^{2}ʔãh^{2}$
sih^{4}	'*to arrive*'	ki^{3}-sih^{4}	ki^{1}-sih^{1}

(28) In addition to these, there is a small set of 8 verbs, mostly consisting of stative predicates, which take a /ka-/ prefix. This looks *eerily* like a fused copula verb /$βa^{32}$/ 'to be.'

Root	Gloss	Perfective form	Potential form
nne^{3}	'*to be sitting*'	ka^{3}-ne^{3}	ka^{2}-ne^{3}
$kĩʔ^{3}$	'*to smell/stink*'	ka^{3}-$kĩʔ^{3}$	ka^{2}-$kĩʔ^{3}$
$ru^{3}mĩ^{3}$	'*to roll*'	ka^{3}-$ru^{3}mĩ^{3}$	ka^{2}-$ru^{2}mĩ^{3}$
$ʔnaʔ^{3}$	'*to come*'	ka^{3}-$ʔnaʔ^{3}$	ka^{2}-$ʔnaʔ^{2}$

(29) Finally, verbs which begin with either /β/ or /ββ/ undergo a mutation to /k/ or /kk/. Though, /βe/ > /k^{w}e/.

Root	Gloss	Perfective form	Potential form
βa^{2}	'*to be (existential)*'	ka^{32}	ka^{2}
βah^{4}	'*to grind on a grinding stone*'	kah^{4}	kah^{2}
βãh^{5}	'*to dig*'	kãh^{5}	kãh^{2}
ββeh^{4}	'*to jump*'	k^{w}eh^{4}	k^{w}eh^{2}

(30) *Summary of aspectual allomorphy*

Root type	Perfective	Potential	Context
Vowel-initial	k-	k-^{2} or k-^{1}	
Consonant-initial	ku^{3}-	ku-^{2}	before roots with [u]
	ki^{3}-	ki-^{2}	before roots with [i]
	ke^{3}-	ke-^{2}	before roots with [e]
	ka^{3}-	ka-^{2}	before stative roots
	–unmarked–	tone /2/ on root	certain telic predicates
	ki^{3}-	ki-^{2}	elsewhere, including roots with [a]
Mutation	β > k	β > k^{2}	before /β/
	β > k^{w}	β > k^{w2}	before /βe/

2.2 Tone and the potential aspect

(31) The potential prefix has two tonal behaviors.

(a) It involves a floating tone /2/, e.g. /k²-/ or /kV²-/. This remains in the /kV-/ prefix before consonant-intial roots or in the initial syllable of vowel-initial roots.

(b) It involves *complete tonal overwrite* of the verb stem with tone /2/.

(32) The first pattern is illustrated here - tone stays put (in a way).

Class	Root	Gloss	Potential form
V-initial	a^{3}ni^{3}	'*to expel*'	ka^{2}ni^{3}
V-initial	a^{3}tʃi^{3}	'*to peel*'	ka^{2}tʃi^{3}
V-initial	u^{3}tã^{3}	'*to suck*'	ku^{2}tã^{3}
C-initial	tʃi^{3}ʔi^{4}	'*to defecate*'	ka^{2}-tʃi^{3}ʔi^{4}
C-initial	ni^{3}kah^{2}	'*to carry*'	ki^{2}-ni^{3}kah^{2}
C-initial	ta^{3}βi^{32}	'*to ascend*'	ki^{2}-ta^{3}βi^{32}

(33) The second pattern involves complete tonal overwrite and is illustrated here on both vowel-initial and consonant-initial verbs. These involve overwrite with tone /2/.

Root	Gloss	Potential form
$a^3tʃih^3$	'*to grow*'	$ka^2tʃih^2$
$a^4tʃĩ^{43}$	'*to pass by*'	$ka^2tʃĩ^2$
$u^4tʃũh^4$	'*to smell*'	$ku^2tʃũh^2$
$tʃu^4mã^{43}$	'*to arrive*'	ku^2-$tʃu^2mã^2$
$na^3ɾi^3yũ^3$	'*to measure*'	ki^2-$na^2ɾi^2yũ^2$
$ʔnaʔ^3$	'*to come*'	ka^2-$ʔnaʔ^2$
$nãh^5$	'*to wash*'	ki^2-$nãh^2$

(34) But in a handful of verbs (16), the stem is replaced with tone /1/ instead.

Root	Gloss	Potential form
$a^3tʃĩh^5$	'*to ask for*'	$ka^1tʃĩh^1$
$a^3kĩh^5$	'*to call*'	$ka^1kĩh^1$
nah^4	'*to remain*'	ki^1nah^1
$noʔ^3$	'*to look for*'	$noʔ^1$
$oʔ^3$	'*to hit, to give*'	$koʔ^1$

(35) What determines whether the *entire verb stem* is replaced with a low tone or not? It seems to be a prevailing pattern across Triqui languages. Perhaps it is easier to perceive the aspectual difference if the entire stem tone is replaced.

(36) This seems to also be a change in progress - complete tonal overwrite is more common if the stem is vowel-initial (and hey, the initial syllable's tone is already replaced).

	Final syllable or root retains underlying tone	Entire root has low tone
Vowel-initial verb	27 (26%)	78 (74%)
Consonant-initial verb	123 (55%)	103 (45%)
All verbs	150 (45%)	181 (55%)

(37) For consonant-initial verbs, complete overwrite is less common.

(38) The presence of intermediate stages (where just *two* of the first three syllables undergoes tonal overwrite) also suggests that this is sound change in progress.

Table 14: Stipulative stages of morphophonological change with the potential aspect with synchronic forms illustrating each stage

Stage	Process	Example	Gloss	Root
(1)	Prefix /k(V)^2/-	ka^2-tʃi^{3}ʔi^4	'*to defecate*'	C-initial
		k-a^{2}tʃi^3	'*to peel*'	V-initial
(2)	Reanalysis of the tonal domain to the first syllable of the root	ki^2-nã^{2}ʔã^3	'*to burn (intr)*'	C-initial
(3)	Reanalysis of the tonal domain to the entire root	ku^2-tʃu^{2}mã^2	'*to arrive*'	C-initial
		k-a^{2}tʃĩ^2	'*to pass by*'	V-initial

(39) In the initial stage, only the prefix carries tone.

(40) At later stages, there is a process where listeners reanalyze the tonal domain of the prefix as always including the initial syllable of the root, whether it is vowel-initial or consonant-initial.

(41) At the latest stage, the tonal domain of the prefix is reanalyzed as the *prosodic word*.

(42) So, what marks the potential aspect in Triqui? Is it the /k(V)-/ prefix or the tone? Both co-occur but it seems like tone is the primary exponent of the potential aspect. We'll see examples of this when we look at derivational morphology.

References

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