

Nominal morphology and stem formation

Linguistics 460/560

The Structure of Itunyoso Triqui

Week 4

I. Forming nominal stems from roots

- In Triqui, we have to distinguish between a root form of a noun and the stem that is used when something “happens” to the noun.
- Two morphological processes affect the shape of a noun
 - **Possession** – alienable nouns undergo several special nominal stem formation processes.
 - **Compounding** – the second member of a head-initial compound undergoes tonal changes

Roadmap

1. Possession

- a) Inalienable possession
- b) Alienable possession
 - i. Tonal rules
 - ii. Regular processes
 - iii. Consonant mutation
 - iv. Irregular tone forms
 - v. Irregular nouns
- c) Animal possession

2. Compounding

- a) True compounds and tonal processes
- b) Pseudo-relative clause compounds

We will not be discussing clitics right away (though you will see them). They require a lot of their own discussion and have their own complexity.

I. Possession

General morphosyntactic rule

- For both inalienably-possessed and alienably-possessed nouns, the possessor follows the possessum, regardless of how it is realized.

root	ta ³ koh ⁵			‘foot’
endoclititic	ta ³ ko ⁴³			‘my foot’
enclitic	ta ³ koh ⁵ = sih ³			‘his foot’
full NP	ta ³ koh ⁵ foot	ŋgo ² ŋgo ² each	ju ³ βeh ³ thread	‘the foot/bottom of each thread’

- The rule is different for animals, as we’ll see.

Triqui nominal possession - examples

(1a) ka³siʔ³
'honey'

(1b) si³-ka²siʔ³
POSS'D-honey
'honey of'

(1c) si³-ka²siʔ³ = neh³
POSS'D-honey = 3P
'honey of them = their honey'

(2a) jo⁴
'tall basket / tenate'

(2b) to⁴
POSS'D.basket
'tall basket of'

(2c) to⁴ = sih³
POSS'D.basket = 3M
'his tall basket'

Classes of nouns (secret “noun classes”?)

- Not all nouns in Triqui change their shape or tone with possession. We must distinguish among **animals**, **inalienably-possessed nouns**, and **alienably-possessed nouns**.

Animal		Inalienably-possessed		Alienably-possessed	
tʃu ³ βe ³	‘dog’	nnĩ ³	‘mother’	ru ³ ne ³²	‘bean’
tʃa ³ kah ⁵	‘pig’	ta ^{3ʔ} nĩh ⁵	‘child.of’	yãh ³	‘paper’
tʃa ³ tʃih ²	‘sheep’	ra ³ ʔa ³	‘hand’	ri ³ ya ³²	‘straw, twigs’
ri ³ u ³	‘hummingbird’	kkãh ³	‘sandal’	swa ⁴ tu ⁴³	‘shoe’
k ^w i ⁴ juh ⁴	‘raccoon’	c ⁿ a ³ βi ³	‘hat’	ka ³ to ⁴	‘shirt’

Two stages of derivation

Root	/ru ³ ne ³² /	/ja ³² /
	‘beans’	‘tongue’
Stage 1: Stem formation	si ³ -ru ² ne ²	—
Stage 2: Person marking (cliticization)	si ³ -ru ² ne ² =sih ³	ja ³² =sih ³
	‘his beans’	‘his tongue.’
—or—	si ³ -ru ² ne ² si ³ e ⁴ nte ⁴³	ja ³² si ³ e ⁴ nte ⁴³
(concatenation)	‘the president’s beans’	‘the president’s tongue’

1.1 Inalienable possession

- These are things that are not quite *possessed* but which indicate an inherent relation between the possessor and **possessum**.
- In Triqui, the inalienable class consists of kinship terms, body parts, and certain items of clothing (sandals, huipiles, pants, hat).
- Inalienably-possessed nouns **do not undergo nominal stem formation**. The root = the stem.

Inalienably-possessed nouns

- (3a) $ra^3\eta a^3$ 'hand'
(3b) $ra^3\eta a^3 = sih^3$ 'his hand'
- (4a) $ta^{3\eta} nu\eta^3$ 'uncle'
(4b) $ta^{3\eta} nu\eta^3 = \tilde{u}h^3$ 'her uncle'
- (5a) $t\eta i^3 roh^2$ 'pants'
(5b) $t\eta i^3 roh^2 = ne\eta^4$ 'our (INCL) pants'

1.2 Alienably-possessed nouns

- Alienably-possessed nouns consist of every other noun that is not an animal.
- Natural items (stone, dirt, plants, flowers), food items, items produced by humans, etc.
- The class of alienably-possessed nouns is quite a bit larger than the inalienable class.

Nominal stem formation (regular)

- Regular alienably-possessed nouns take the possessed prefix /si³-(²)/ when followed by a possessor.
- This prefix conditions tonal changes on polysyllabic roots with tones /3/ and /32/, but it otherwise does not affect the tonal/segmental shape of the root.

/3/ > 2.3

ko³?o³

‘plate’

si³-ko²?o³

‘plate of’

si³-ko²?o³ = sih³

‘his plate’

/32/ > 2

sũ³²

‘work’

si³-sũ²

‘work of’

si³-sũ² = sih³

‘his work’

On the status of tone /32/

- Recall that tone /32/ spreads across disyllabic roots with a final coda, e.g. /re³koh²/ ‘branch.’
- These pattern with other tone /32/ words under stem formation, changing to tone /2/.
 - si³-re²koh²=sih³ ‘his tree branch’
 - si³-ru²ne²=neh³ ‘their beans’ < ru³ne³² ‘bean’
- This behavior suggests these roots have the same tone, but it is just distributed differently across the word.

Other examples – no morpheme-induced changes

			<u>Regular phonology</u>
si ³ -na ³	‘bed of...’	/nna ³ /	degemination
si ³ -ka ³ to ⁴	‘shirt of...’	/ka ³ to ⁴ /	
si ³ -nu ⁴ βi ⁴³	‘church of...’	/nu ⁴ βi ⁴³ /	
si ³ -ru ³ kuh ⁵	‘tree bark of...’	/ru ³ kuh ⁵ /	
si ³ -tʃũh ⁵	‘box of...’	/tʃũh ⁵ /	
si ³ -tʃo ¹	‘pot soot of...’	/tʃo ³¹ /	low tone spreading
si ³ -ka ¹ ʃũʔ ¹	‘shadow of...’	/ka ³ ʃũʔ ¹ /	low tone spreading

y-initial root mutation

- Most roots which begin with /j/ undergo a mutation to /t/ under possession. If it is geminate, it stays geminate.

$j\tilde{a}^{32}$	‘salt’	compare to....	ja^{32}	‘tongue’
$t\tilde{a}^{32}$	‘salt of’		$ja^{32} = \tilde{u}h^3$	‘her tongue’
$t\tilde{a}^{32} = \tilde{u}h^3$	‘her salt’		$j\tilde{a}ʔ^3$	‘tooth’
			$j\tilde{a}ʔ^3 = sih^3$	‘his tooth’
ja^3ko^1	‘trash’			
$ta^3ko^1 = sih^3$	‘his trash’			

Productivity

- The /si³-/ prefix is quite productive, e.g. si³-me⁴sa⁴³ ‘table of’, but the y-mutation rule is no longer productive.

ja⁴ku⁴³

‘garlic’ (< *ajo*)

si³-ja⁴ku⁴³=sih³

‘his garlic’

*ta⁴ku⁴³

ja^{3ʔn}duh³

‘fertilizer’

si³-ja^{2ʔn}duh³=sih³

‘his fertilizer’

*ta^{3ʔn}duh³

Suppletive possessed stems

Root	Possessed Noun	Gloss
$\beta\beta e^{32}$	$tu^3\beta e^{32}$	‘maguey cactus’
$\beta\beta e^4$	$tu^3\beta e^4$	‘hair’
$m\dot{m}i^{31}$	$tu^3m\dot{i}^2$	‘bridge’
$m\dot{m}i^{32}$	$tu^3m\dot{i}^2$	‘sweet potato’
$m\dot{m}i^{?3}$	$tu^3m\dot{i}^{?3}$	‘soap’
$nne^{?3}$	$tu^3ne^{?3}$	‘straw rope’

There is a set of words that also take an “irregular” /t(V)-/ prefix under possession.

- Other “prefixes” also occur. All of the words that have this irregularity begin with geminates. Recall the origin of initial geminates though.

Allomorph	Root	Possessed Noun	Gloss
/t-/	a ³ ruʔ ³	ta ³ ruʔ ³	‘squash bowl’
/ta ³ -/	nne ³²	ta ³ ne ³²	‘water’
	nnih ³	ta ³ nih ³	‘leather’
/ti ³ -/	tʃũh ⁵	ti ³ tʃũh ⁵	‘box’
	ʔnih ⁴⁵	ti ³ ʔnih ⁵	‘corn’
	tsi ³²	ti ³ si ²	‘ear of corn’
	tsiʔ ³	ti ³ siʔ ³	‘fermented cactus drink (pulque)’
/tʃi ³ -/	tʃah ³	tʃi ³ tʃaʔ ⁴	‘music’
	nna ³¹	tʃi ³ na ¹	‘farmland’

Look at the historical forms!

Itunyoso	Chichahuaxtla	Copala	Reconstructed Proto-Triqui	Gloss
ββe ³²	wwe ³²	ju ³ ve ³²	*/ju ³ we ³² /	<i>maguey</i>
ββeh ³⁵	wwe ⁵	ju ³ ve ⁵	*/ju ³ weh ⁵ /	<i>straw mat</i>
ββe ³	wwe ³	ju ³ va ³¹	*/ju ³ wa ³¹ /	<i>brave</i>
ββeh ³	wwehe ³	ju ³ veh ³	*/ju ³ weh ³ /	<i>boundary stone</i>
βĩ ³	wwĩ ³	a ³ vi ³²	*/a ³ wĩ ³² /	<i>to be</i>
nna ²	na ² na ²	na ² na ²	*/na ² na ² /	<i>slowly</i>
nni [?] ²	a ² ni [?] ¹	ja ³ ni [?] ¹	*/ja ³ ni [?] ¹ /	<i>ugly, gross</i>
mmi [?] ³	mmi [?] ³	ju ³ mi [?] ³	*/ju ³ mi [?] ³ (i)/	<i>soap</i>
mmi ³¹	mmi ³¹	ju ³ mi ¹	*/ju ³ mi ¹ /	<i>bridge</i>
mmi ³²	mmi ³²	ju ³ me ³	*/ju ³ mi ³ /	<i>sweet potato</i>
ttah ³⁵	ta ⁵	(u)ta [?] ³	*/u ³ ta ⁵ /	<i>to be above</i>
ttuh ³⁵	tu ⁵	i ³ tu ⁵	*/i ³ tuh ⁵ /	<i>knot, goiter</i>
ttu ³²	si ⁵ tu ²	i ³ tu ³²	*/i ³ tu ³² /	<i>thief</i>
ttfih ²	tfih ²	(i)tfih ²	*/itfih ² /	<i>seven</i>
ttfi [?] ²	tfi [?] ²	(i)tfi [?] ²	*/itfi [?] ² /	<i>ten</i>
ttsoh ³	tsoho ³	ni ³ tsoh ³	*/ni ³ tsoh ³ /	<i>female's belt</i>

The suppletion we see here is simply the same y-mutation rule applying to the historical shape of the root.

Tonally-irregular possessed stems

- For 8 nouns, the tone of the possessed stem has tone /1/. 🙄

Root	Possessed stem	Gloss
na ^{3?} nĩh ⁵	si ³ -na ^{1?} nĩh ¹	‘black cherry/capulín’
ko ³ no ³ ?o ⁴	si ³ -ko ¹ no ¹ ?o ¹	‘medicine’
snã ⁴ ?ãh ⁴	si ³ -snã ¹ ?ãh ¹	‘language’
ku ³ ru ³²	si ³ -ku ¹ ru ¹	‘granary’

Completely suppletive stems

- Just a handful of nouns have completely suppletive possessed stems. The origin of suppletion with ‘egg’ and ‘tree’ is clear, but the other forms are a mystery.

Root	Possessed stem	Gloss	1S stem	Gloss
$\beta e\uparrow^3$	$tu^3k^w a^4$	‘house’	$tu^3k^w ah^5$	‘my house’
a^4sih^4	$si^3-k\tilde{a}\uparrow^3$	‘clothing’	$si^3-k\tilde{a}^3\uparrow\tilde{a}h^5$	‘my clothing’
$tʃi:uh^3$	$tʃi^3ruh^4$	‘egg’	$tʃi^3ru^{43}$	‘my egg’
$tʃi:\tilde{u}^3$	$tʃi^3r\tilde{u}h^5$	‘tree’	$tʃi^3r\tilde{u}^{43}$	‘my tree’

1.3 Animals

- Unlike both inalienable and alienable nouns, animals are possessed via a pre-posed head, which functions like a kind of **animal classifier**.

tʃu³βe³ ‘dog’
tã⁴ = sih³ tʃu³βe³ ‘his dog’
ANIM.CL = 3M dog

tʃi³lu³ ‘cat’
tãh⁵ tʃi³lu³ ‘my cat’
ANIM.CL.1S cat

How long can the possessor be here?

tsi ⁴ jãh ⁴	tã ⁴	ma ³ ri ⁴ a ⁴³	ŋga ¹	jwã ⁴³	tsu ³ βe ³
bark	ANIM.CL	Maria	with	Juan	dog
		possessor	conj	possessor	possessum

‘Maria and Juan’s dog is/was barking.’

The possessor can be complex here and still intercede between the animal classifier and the possessum.

Nominal possession and stem-formation

Summary

Inalienable nouns

No stem
formation/prefixation

Possessum + possessor

tʃa³¹ = sih³

head=3M
'his head'

Alienable nouns

Stem-formation
processes (tone
change, onset
mutation, irregulars)

Possessum + possessor

si³-k^we²kĩ³ = sih³

POSS'D-onion=3M
'his onion'

Animals

No stem
formation/prefixation

Classifier + possessor
+ possessum

tã⁴ = sih³ tʃa³kah⁵

ANIM.CL=3M pig
'his pig'

II. Nominal compounds

- The Triqui lexicon consists of about 2,000 roots, but there are easily an additional 1,000 compound words, many of which have not been discovered/examined yet.
- The structure of *all* Triqui compounds is **head + modifier**.
- The head in nominal compounds is usually a superordinate category.
- Importantly, all compounds consist of **two prosodic words**.

Simple compounds

Simple compounds do not undergo any phonological processes. They are simply the result of prosodic word concatenation.

Simple compound

Root	Root	Compound
<hr/> tʃu ³ k ^w ah ⁵	stu ³ ku ³²	tʃu ³ k ^w ah ⁵ stu ³ ku ³²
‘snake’	‘jewelry, ring’	‘coral snake’
 sĩh ⁵	tʃu ³ mãh ³	sĩh ⁵ tʃu ³ mãh ³
‘person’	‘Cuquila’	‘person from Cuquila’
 k ^w :eh ³²	tʃa ³ kah ⁵	k ^w :eh ³² tʃa ³ kah ⁵
‘edible green’	‘pig’	‘Medicago Polymorpha’

Tone-changing compounds

Tone-changing compounds involve a replacement of the modifier's tone with /2/, or sometimes /1/. The entire prosodic word's tone is replaced.

Tone-changing compound

Root	Root	Compound
$tʃu^3k^w ah^5$ 'snake'	$tʃi^3 ri^3$ 'intestines'	$tʃu^3k^w ah^5 tʃi^2 ri^2$ 'red-striped beetle'
$sĩh^5$ 'person'	$tu^{3?} \beta i^3$ 'lightning'	$sĩh^5 tu^{2?} \beta i^2$ 'Mixtec person'
$k^w :eh^{32}$ 'edible green'	$t:o^{31}$ 'milk'	$k^w :eh^{32} t:o^2$ 'dandelion green'

Modifier structure

- We can see a clear compositional structure to the simple and tone-changing compounds, but there are also **bound prosodic word modifiers**. These morphemes do not occur outside of the compound.

Compound	Gloss	Compound	Gloss
k ^w ɛh ³² ska ² ki [?] ²	‘Cyclanthera integrifolia’	tʃi ³ ũ ³ ra ³ neh ²	‘Quercus candicans’
‘edible green + ?’		‘tree + ?’	
kɔh ³² ja ² ka ²	‘Irusine diffusa’	pa ² la ³ mi ³ⁿ du ³	‘species of spiny lizard’
‘plant + ?’		‘lizard + ?’	
tʃu ³ ku ³ sa ³ⁿ di ⁴ o ⁴³	‘dragonfly’	kĩã ³ na ³ jo [?] ³	‘chilacayote squash’
‘animal + ?’		‘squash + ?’	

Possession in compounds

- Recall that possession involves nominal stem formation. How do you do this and retain the integrity of the compound? Or the integrity of the tone-changing modifier?
- Possession of compounds is often done via pre-posing of the head *before* the compound.
- This way, only the head undergoes stem formation.

Pre-posing possession in compounds

Compound	tʃiːũ ³ ri ³ aŋ ³ tree evergreen 'evergreen tree'	kɔh ³ tʃa ³ ko ³ plant wasp 'wasp hive'
Possessed compound (1S)	tʃi ³ rũ ⁴³ tʃiːũ ³ ri ³ aŋ ³ POSS'D.tree.1S tree evergreen 'my evergreen tree'	si ⁴ -ko ⁴³ kɔh ³ tʃa ³ ko ³ POSS'D-plant.1S plant wasp 'my wasp hive'
Possessed compound (3F)	tʃi ³ rũh ⁵ =ũh ³ tʃiːũ ³ ri ³ aŋ ³ POSS'D.tree=3F tree evergreen 'her evergreen tree'	si ³ -koh ³ =ũh ³ kɔh ³ tʃa ³ ko ³ POSS'D-plant=3F plant wasp 'her wasp hive'

A similar strategy is used with inalienable noun compounds.

Question: Are these actually compounds? Or just translated as such?

Compound	tʃu ³ k ^w ã ³ ʔã ³ be ³ lu ³ grandmother elder 'great grandmother'	ra ³ ʔa ³ ʃi ³ hand big 'thumb'	ra ³ ʔa ³ ri ² ã ² hand face 'index finger'
Possessed compound (1S)	tʃu ³ k ^w ã ⁴ ʔã ⁴³ be ³ lu ³ grandmother.1S elder 'my great grandmother'	ra ³ ʔah ⁵ ʃi ³ hand.1S big 'my thumb'	ra ³ ʔah ⁵ ri ² ã ² hand.1S face 'my index finger'
Possessed compound (3M)	tʃu ³ k ^w ã ³ ʔã ³ =sih ³ be ³ lu ³ grandmother=3M elder 'his great grandmother'	ra ³ ʔa ³ =sih ³ ʃi ³ hand=3M big 'his thumb'	ra ³ ʔa ³ =sih ³ ri ² ã ² hand=3M face 'his index finger'