

The morphosyntax of pronominal clitics in Itunyoso Triqui

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Frequency (Hz)

5000
4000
3000
2000
1000
0

Pitch (Hz - blue)

200
175
150
125
100
75

n

a¹

s

i¹

ɾ_o

ŋ_o

ĩ⁴

t_ɛ

ĩ²

I. What's a clitic?

- An affix is usually sensitive to the part of speech onto which it attaches.

happen-**ed**

verbal tense suffix

sing-**er-s**

agentive suffix (applies to verbs)

and plural suffix (applies to nouns)

- A clitic, on the other hand, is usually more promiscuous in where it attaches.

the [child]'s book

=book of child

the [man with the yellow hat]'s monkey

≠monkey of hat

Classic work on clitics

- Classic work on clitics examined how English negation functions as a clitic (Zwicky & Pullum 1983).

| | | |
|---------------|---|--|
| I can't go | = | I can not go |
| Can't you go? | ≠ | *Can not you go? (<i>Can you not go?</i>) |
| Wouldn't you? | ≠ | *Would not you? |

Other types of clitics

Romance clitics in Spanish

(1) [Da]=**me**=**lo**
give.INDIC=1S.IO=3S.DO
‘give it to me’

*Da a Juan=**lo** (Dálo a Juan)
give.INDIC to Juan=3S.DO
‘give it to Juan’

(2) **Te**=**lo**=[iba a decir] antes.
2S.IO=3S.DO=go.IMP to tell before
‘I was going to tell it to you before.’

What do these things have in common?

- They need to attach to a word – they **can not occur in isolation**

syntax/morphology

- They are mostly **prosodically-deficient** (non stress-bearing)

phonology

- The ordering of the stem and clitic might be different than the ordering found with the matching non-clitic form.

morphology/syntax

- Unlike affixes, they are **non-selective** in what they attach to.

morphology/syntax

Is it about their syntax or their phonology?

- Phonologists

Oh, I don't know how you would characterize these. Ask the syntacticians. Oh look! There's neat assimilation and tone and...

- Syntacticians

It boils down to the phonology.

(Haspelmath 2023, J.P. Koenig, spring 2024)

Clitics in Otomanguean languages

- Pronominal clitics are a *huge* topic in Otomanguean phonology, morphology, and syntax. They are either clearly clitics or clitic-*like* in most Otomanguean languages, often causing phonological changes on stems.
- Macaulay argues that the Chalcatongo Mixtec pronouns are clitics (or phrasal affixes), contra earlier descriptions by Pike (1944, 1949) who argued that they were simply phonologically-reduced versions of full pronouns (Macaulay 1987).
- Her analysis is based on the observation that the bound pronouns attach either to verbs or to post-verbal adverbial modifiers (**non-selectivity**).

- Marlett (1993) argues that one must distinguish between *prosodic* and *syntactic independence* in the categorization of Zapotec pronouns.
- Those which are *prosodically-independent* may appear in several positions, such as in isolation. Prosodically independent pronouns are always syntactically-independent. Those which are syntactically independent are permitted to occur after non-pronominal subjects.
- Hollenbach's work on Copala Trique (1984) is inconclusive as to the status of bound pronouns (what I call clitics). Phrase-final pronouns are argued to be simple clitics that apply late in the stages of word derivation, but appear similar to affixes in their phonological behavior.
- It can't just be the phonology.

So, it's morphosyntax?

Morphosyntactic arguments for clitic-hood appear in work on Tataltepec Chatino (Sullivant, 2015), Zacatepec Eastern Chatino (Villard, 2015), Teotepec Eastern Chatino (McIntosh, 2016), Zenzontepec Chatino (Campbell, 2014), Betaza Zapotec (Teodocio Olivares, 2009), Guienagati Zapotec (Benn, 2021), Zoochina Zapotec (López Nicolas, 2016), and Chocho (Mock, 1982).

Yet, it is the prosodic criteria for clitic-hood that are highlit in many other sources on Otomanguean languages.

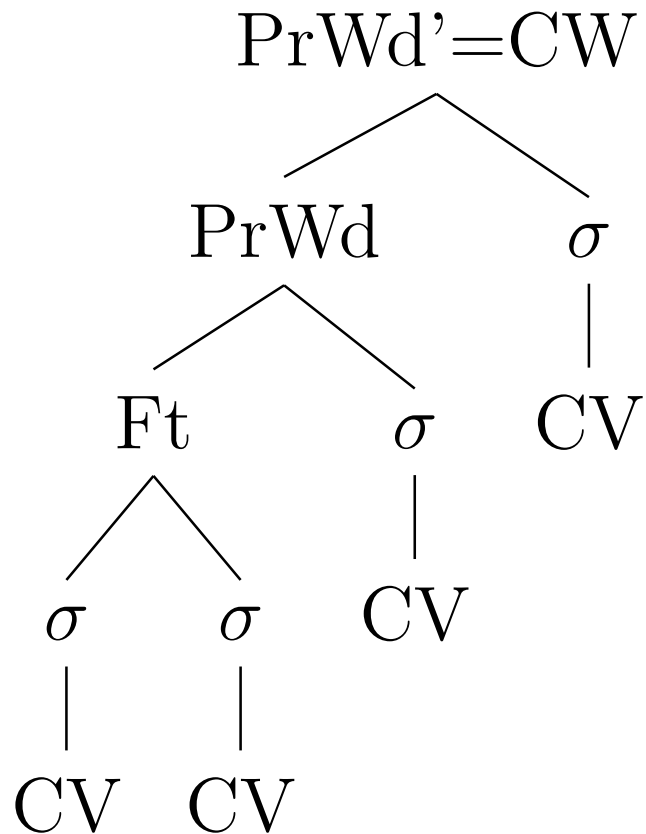
Even in languages with complex clitic-like pronominal systems, authors differ on what constitutes good evidence.

So phonology?

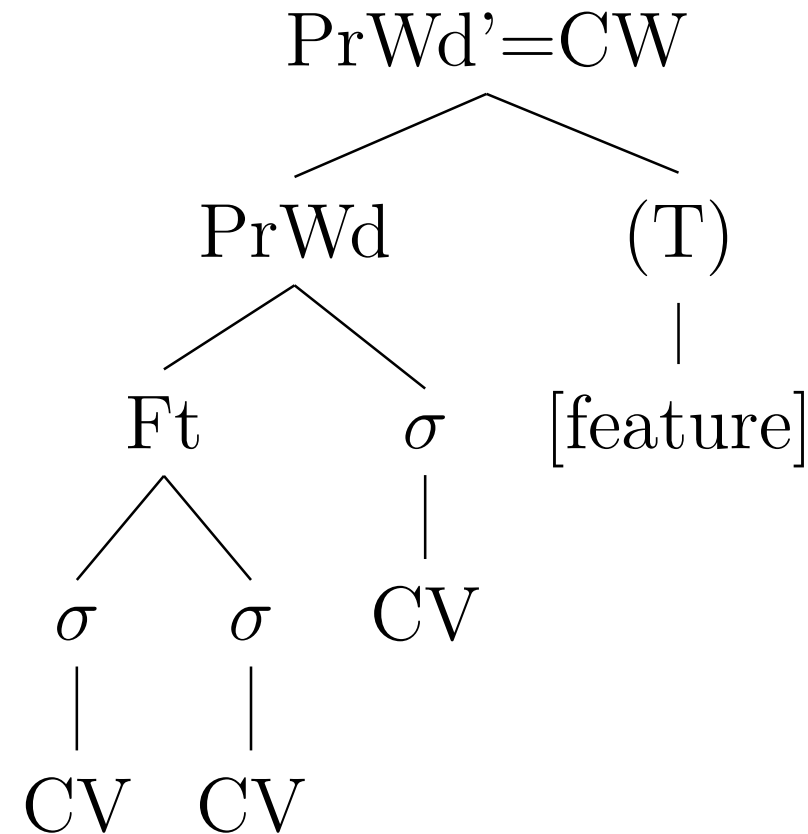
- All else being equal, we expect stems with affixes to comprise a prosodic domain **smaller than that of the cliticized word** (Nespor and Vogel, 1986; Vogel, 2009).
- The prosodic word can be *iterative* and the clitic group comprises the largest grouping here (Anderson 2005).

Two types of iterative prosodic words

CW = cliticized
word



Concatenative iterative prosodic word



**Non-concatenative iterative prosodic word
(b/c tone)**

Enter Zingler (2022) and Haspelmath (2023)

For Zingler, it is **non-selectivity** (morphosyntax) that is the crucial criterion for clitic-hood.

TABLE 1 Differences and similarities between anti-clitics, affixes, clitics, and weak words

| Property | Anti-clitic | Affix | Clitic | Weak word |
|--------------------------------|-------------|-------|--------|-----------|
| Independent phonological word | Partly | No | No | Partly |
| Bound to a domain | Yes | Yes | Yes | No |
| Bound to a specific word class | Yes | Yes | No | No |

“ ‘Clitics’ will be defined as morphemes that can occur with hosts from different word classes but that are dependent on that host domain in terms of at least one parameter of phonological wordhood.”

(Zingler 2022)

Haspelmath (2023)

- Zingler leaves open the range of patterns that could comprise a clitic, including morphemes that alter the phonological shape of their host.
 - **Pro/enclitics** which attach to their hosts without conditioning changes.
 - **Endoclititics** which are hard to phonologically separate from a host.
- Haspelmath argues...

“Forms are continuous segment sequences, which excludes the possibility of “tonal morphs” (Haspelmath 2020: §4). This also means that there can be no tonal clitics, as has occasionally been suggested (e.g. Van de Velde 2009).”

What's a **form**?

- For Haspelmath, all true clitics must be **morphs**. These are **forms**.
- All morphs are separable from each other – they must be interpreted as concatenative (c.f. Haspelmath 2020). Though not stated, this is an item-and-arrangement assumption.
- *"roots by definition are segment sequences"*
- This means that there are *no endoclitics* by Haspelmath's definition, since clitics must be analyzeable as sequences. His definition hinges on the notion that there is not **segmental overlap** (*not his words, but mine*).

A quick aside...

Concatenative morphology (or item-and-arrangement)

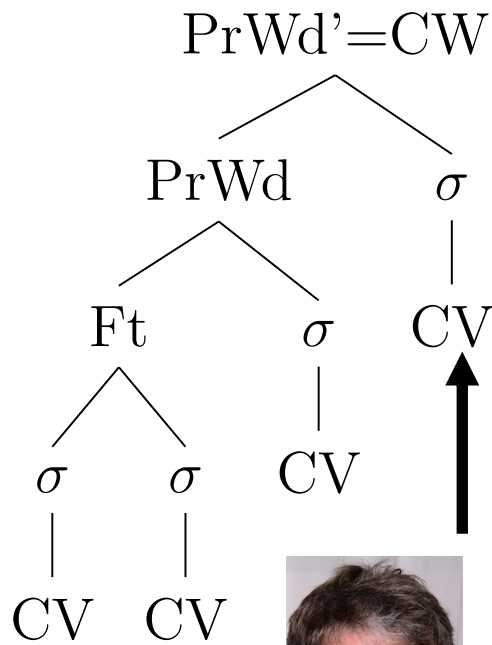
- morphology as string concatenation, e.g. *de-emphasize-d*
- alternations not involving string concatenation might be formally described as such, e.g. infixation as prefixation/suffixation, deletion as insertion of a null element, etc.
- popular within most modular theories

Non-concatenative morphology (or process morphology)

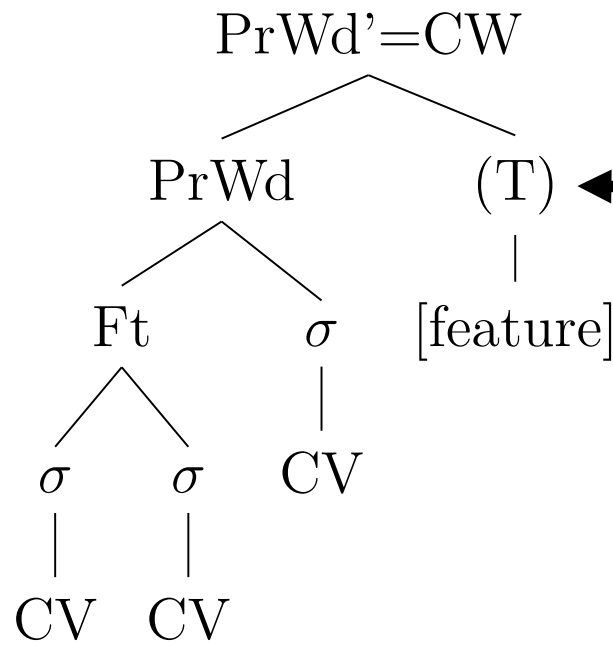
- morphology as operations on word shapes, e.g. templatic morphology, prosodic morphology.
- “the process is the morpheme”*
- popular within non-modular perspectives; constructional approaches.

So... it's phonology?

- A lot of these arguments here rest on looking at non-fusional morphology, but fusional processes **can be analyzed concatenatively**.



“Now that’s a clitic, Christian.”



“That’s not a clitic,
Christian.”

Where does that leave us?

- In many contexts where authors have argued that it is the *phonological criteria* for clitic-hood that defines them, they resultingly demonstrate that **endoclititics** do not have **non-selectivity**.
- In other words, they draw a close link between the fact that a clitic has “fused” to a stem and how it now behaves like an affix.
- Missing from the discussion are cases where the two things are independent. They exist in the literature, but typologists have missed them.
- Can we demonstrate that the morphosyntactic and phonological properties of Triqui “clitic” pronouns are independent?

Some “criteria” for clitics (Zwicky & Pullum 1983)

1. Clitics are **non-selective** in the part of speech they attach to, whereas affixes are sensitive to part of speech.
2. Affixes are more likely than clitic+host combinations to have **accidental or paradigmatic gaps**.
3. Affixes are more likely than clitic+host combinations to have *idiosyncratic phonological shapes*.
4. Affixes are more likely than clitic+host combinations to have *idiosyncratic semantics*.
5. **Syntactic rules** affect affixed words, but not clitic+host combinations.
6. Only clitics may attach to material already containing clitics (**doubling**).

II. Triqui pronouns

Triqui pronouns comprise different types

1. All speech-act participant pronouns (1S, 2S, 1DU) modify the shape of the stem in some way. These are *arguably* **endoclitics**.
2. Remaining pronouns (1P.INCL, 1P.EXCL, 3M, 3F, 3ANIM) do not modify the shape of the stem. These are **enclitics**.
3. Plural pronouns are somewhat compositional (clitic-doubling) and are also **enclitics**.

| Form | Gloss | Pronoun | Category |
|--|--------------------------------|---------|---------------|
| a^3ne^{32} | ‘to bathe (oneself)’ | | |
| a^4neh^4 | ‘I am bathing myself’ | 1S | endoclititic |
| $a^3ne\text{?}^3$ | ‘we (DU) bathe ourselves’ | 1DU | endoclititic |
| $a^3ne^{32}=\tilde{u}h^4$ | ‘we (EXCL) bathe ourselves’ | 1.EXCL | enclitic |
| $a^3ne^{32}=ne\text{?}^4$ | ‘we (INCL) bathe ourselves’ | 1.INCL | enclitic |
| $a^3ne^1=re\text{?}^1$ | ‘you bathe yourself’ | 2 | endoclititic |
| $a^3ne^{32}=sih^3$ | ‘he bathes himself’ | 3.MASC | enclitic |
| $a^3ne^{32}=\tilde{u}h^3$ | ‘she bathes herself’ | 3.FEM | enclitic |
| $a^3ne^{32}=t\text{f}uh^3$ | ‘it bathes itself’ | 3.ANIM | enclitic |
| $a^3ne^{32} (a^3)ni^2\text{?}i\text{f}^4=re\text{?}^1$ | ‘you (pl) bathe yourselves’ | PL=2 | compositional |
| $\sim a^3ne^5=hre\text{?}^1$ | ‘you (pl) bathe yourselves’ | PL=2 | enclitic |
| $a^3ne^{32} (a^3)ni^2\text{?}i^3=sih^3$ | ‘they (masc) bathe themselves’ | PL=MASC | compositional |
| $a^3ne^{32} (a^3)ni^2\text{?}i^3=\tilde{u}h^3$ | ‘they (fem) bathe themselves’ | PL=FEM | compositional |
| $a^3ne^{32} (a^3)ni^2\text{?}i^3=t\text{f}uh^3$ | ‘they (anim) bathe themselves’ | PL=ANIM | compositional |

2.1 How do endoclititics work?

- The 1st person singular involves a *morphological toggle* of a coda /h/. It is inserted if it is absent but deleted if present. Also, tone changes.

tʃa⁴³ ‘ate’ > tʃah⁴ ‘I ate’
tʃãh⁴ ‘to push’ > tʃã⁴³ ‘I pushed’

- The 1st person plural involves insertion of a coda /ʔ/ along with tone and vowel changes, e.g. tʃoʔ⁴ ‘we ate.’
- The 2nd person singular involves an added syllable which conditions tone changes on the stem, e.g. nĩ³ʔĩ³ ‘to know’ > nĩ³ʔĩ⁴=reʔ¹ ‘you know’

Some alternations with the 1S clitic

No final /h/ in stem

so³?o³ ‘to be deaf’

so³?oh⁵ ‘I am deaf’

ja³?a³² ‘cord’

ta⁴?ah⁴ ‘my cord’

tʃi³ ‘ancestor’

tʃih⁵ ‘my ancestor’

Final /h/ in stem

ja³?ah³ ‘chile pepper’

ta³?a⁴³ ‘my chile pepper’

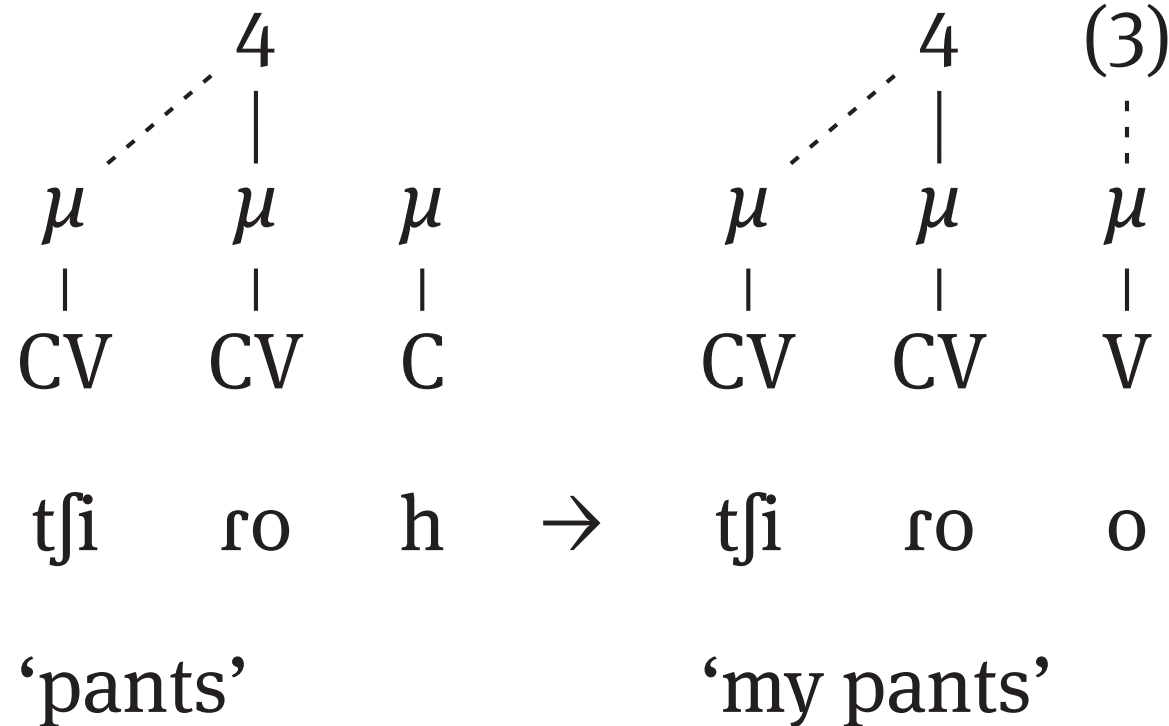
sã³?ãh² ‘money’

si³-sã¹?ã¹ ‘my money’

tʃeh³ ‘father’

tʃe⁴³ ‘my father’

The “concatenative” prosodic solution (DiCanio 2016)



Tones are autosegments that can be associated with prosodic units in a word (Goldsmith 1990).

A floating tone /3/ here (and the *h*-deletion) is the 1st person singular, which associates on the right edge of the stem.

- These types of changes are all very complex changes and beyond the scope of the discussion here, c.f. DiCanio 2016, DiCanio et al. 2020.
- However, it is important to note that person information is either partly or fully encoded on *the stem* with endoclititics.
- These alternations can be captured via processes of tonal spreading/association on the right edge.
- These are not *morphs* according to Haspelmath (but they could be for other theorists).

2.2 Non-selectivity in pronouns

- To demonstrate non-selectivity in the pronoun system, we will want to both look at
 - how pronouns attach to different parts of speech
 - how so-called clitics differ from other full noun phrases
- The second sub-criterion is important if we want to claim that a clitic is essentially a syntactic element just like a full NP is.

Both endoclititics and enclitics apply at the right edge.

$nĩ^3\gammaĩ^3$ ‘to know’

(7) $ki^3-nĩ^3\gammaĩh^5$ endoclititic (1S)

PERF-know/see.1S

‘I knew (it)’

(8) $ki^3-nĩ^3\gammaĩ^3 = sih^3$ enclitic (3M)

PERF-know/see = 3M

‘He knew (it)’

An adverb can intervene after the verb.

- (9) $ki^3-nĩ^3ʔĩ^3$ $ni^{2ʔ}rua^{43} = sih^3$
PERF-know/see much = 3M
‘He knew/saw a lot’

- (10) $ki^3-nĩ^3ʔĩ^3$ $ni^{2ʔ}ruah^4$ **The adverb now has the**
PERF-know/see much.1S **endoclititic.**
‘I knew/saw a lot’

The enclitic and endoclititic pattern together here.

Both enclitics and endoclititics attach to nouns too.

(11) ra³?ah⁵
hand.1S
'my hand'

(12) ra³?a³ = sih³
hand = 3M
'his hand'

ra³?a³ 'hand'

(13) si³-ku⁴³
POSS'D-bone.1S
'my bone'

(14) si³-kuh⁵ = sih³
POSS'D-bone = 3M
'his bone'

kuh⁵ 'bone'

...and to prepositions

(15) tʃi³?ih⁵
about.1S
‘about me’

(16) tʃi³?i⁴ = sih³
about = 3M
‘about him’

(17) ŋgah¹
with.1S
‘with me’

(18) ŋga¹ = sih³
with = 3M
‘with him’

N.B. All 3rd person pronouns look identical to 3M here.

...and even to numbers

(19) $\text{ᵑgo}^2 = \tilde{\text{u}}\text{h}^3$

one = 3F

‘one of them (fem)’

(20) $\text{ᵑgo}^2\text{?}^2$

one.1DU

‘one of us two’

(21) $\text{ᵑgo}^2 = \tilde{\text{u}}\text{h}^4$

one = 1.EXCL

‘one of us (not including you)’

2.3 Syntactic *non*-independence

- None of the pronouns are permitted to occur in isolation. We can most clearly determine this if we look at fronted noun phrases.
- When an entity is *under focus*, it occurs in the pre-verbal position. Instead of the typical VSO word order in Triqui, we get SVO or OVS.

(22) Ku³-tʃu⁴mã⁴³ Basi ni³kjãh⁵
PERF-arrive Basi Tlaxiaco
‘Basileo arrived in Tlaxiaco.’
VSO – normal word order

(23) Basi ku³-tʃu⁴mã⁴³ ni³kjãh⁵
Basi PERF-arrive Tlaxiaco
‘**Basi** arrived in Tlaxiaco.’
SVO – answer to ‘who arrived?’

What's an independent pronoun? (an aside)

- In certain languages with *clitic* pronouns, there may be separate independent words that are free morphemes and not clitics, e.g. Zacatepec Mixtec (Towne et al 2011).

(24) Ndē'o ra.
vimos:nosotros él
Lo vimos.

Rakan ndē'o.
ése vimos:nosotros
Vimos a ese señor.

(25) Ndē'e ra yo.
vio él nosotros
Él nos vio.

Rakan ndē'e yo.
ése vio nosotros
Ese señor nos vio.

- **Itunyoso does not have independent pronouns.** If you wish to place the pronoun under focus, the clitics must attach to the word for 'self' /mã²?ã³/, e.g. mã²?ã³ = sih³ 'He ~ he, himself.'

Any attempt to make the clitic independent results in the $m\tilde{a}^2\eta\tilde{a}^3$ construction being used, as these examples show.

- (26) se^4 $m\tilde{a}^2\eta\tilde{a}h^5$ $ki^3-r\tilde{a}h^3$, $xw\tilde{a}^{43}$ $ki^3-r\tilde{a}h^3$ $t\int u^3t\int e^{32}$
 NEG.EXIST self.1S PERF-buy, Juan PERF-buy chicken

‘It wasn’t *me* who bought (it), *Juan* bought the chicken.’

- (27) se^4 $m\tilde{a}^2\eta\tilde{a}h^5$ $k^w eh^3$ $ri\tilde{a}^{32}$ $t\int i^{3\eta} ga^4$, $m\tilde{a}^2\eta\tilde{a}^4=re\eta^1$ $k^w eh^3$ $ri\tilde{a}^{32}$
 NEG.EXIST self.1S PERF.jump face fence, self=2S PERF.jump face
 $t\int i^{3\eta} a^4$
 fence

‘It wasn’t *me* who jumped over the fence, *you* jumped over the fence.’

(28) *sih³ ki³-ʔjah³ ttu² tʃa³kah⁵
3S PERF-do thievery pig

‘*He* stole the pig.’

(29) mǎ²ʔǎ³=sih³ ki³-ʔjah³ ttu² tʃa³kah⁵
self=3S PERF-do thievery pig

‘*He* stole the pig.’

Clitics can attach to topic markers too

(30) $\beta e h^5$ $k \tilde{a}^2 \text{?} \tilde{a} h^2$ $k a^2 - \text{?} n a \text{?}^2$
TOP.1S POT.go POT-come

‘As for me, I will go and return.’

(31) $\beta e^4 = s i h^3$ $k i^3 - \text{?} j a h^3$ $t t u^2$ $t \text{?} a^3 k a h^5$
TOP=3S PERF-do thievery pig

‘It was him who stole the pig.’

Pronouns are always dependent and non-selective

- The examples here demonstrate that pronouns are **always dependent** on a host in Triqui, regardless of where they occur.
- They are also always **non-selective** – there are no constraint on the type of constituent which they may apply to.
- What other criteria might be important for “clitic-hood”?

Other criteria

2. Affixes are more likely than clitic+host combinations to have accidental or paradigmatic gaps. **There are no gaps (these are pronouns)**
3. Affixes are more likely than clitic+host combinations to have idiosyncratic phonological shapes. ***There are idiosyncratic phonologies***
4. Affixes are more likely than clitic+host combinations to have idiosyncratic semantics. **WEIRD**
5. Syntactic rules affect affixed words, but not clitic+host combinations. **UNCLEAR (prefix vs “suffix”)**
6. Only clitics may attach to material already containing clitics. **Clitic doubling does occur w/endoclitics**

On the weird criteria

- Since the only other affixes in Triqui are possessed prefixes on nouns and verbal prefixes, it is rather odd to compare prefixal morphology with what might be suffixal.
- The clitics do not appear to have any idiosyncratic semantics – they are always just marking person.
- This differs a *little* from the causative/iterative derivational prefixes on verbs, but the inflectional (aspect) or possessed (nominal) prefixation also lacks idiosyncratic semantics.

Some idiosyncratic derivational morphology

- Some of the derivational prefixes (/tu-/ for causatives, /n(a)-/ for iteratives) result in idiosyncratic meanings.

| Underived verb | | Derived verb | |
|---|--------------------------|---|-----------------------------------|
| a ⁴ ?nĩh ⁴ | ‘to open, uncover’ | n-a ⁴ ?nĩh ⁴ | ‘to revive (a person)’ |
| ri ³² | ‘to take out, to get’ | na ³ -ri ³² | ‘to draw or print’ |
| tʃi ³ ?nãh ² | ‘to reproduce, have sex’ | tu ³ -tʃi ³ ?nãh ² | ‘to overplay/copy (music, forms)’ |
| a ⁴ tuh ⁴ | ‘to enter’ | tu ³ -k ^w a ⁴ tuh ⁴ | ‘to sneak someone in’ |
| a ³ k ^w ah ⁴ | ‘to yell’ | tu ³ -ka ³ k ^w ah ⁴ | ‘to honk at (in a car)’ |

(32) $ta^3-ni^{43}=(^1)soʔ^1$
[$ta^3ni^{41}soʔ^1$]
CAUS-lower.1S=2S.OBJ
‘I lowered you (down).’

(33) $ta^3-nih^3=(^1)reʔ^1=sih^3$
[$ta^3nih^1reʔ^1sih^3$]
CAUS-lower=2S=3M
‘You lowered him (down).’

(34) $ta^3-nih^3=sih^3=\tilde{u}h^3$
CAUS-lower=3M=3F
‘He lowered her (down).’

What about clitic doubling?

Only pronouns appear to be able to attach to words with clitics.

This would suggest that these are indeed clitics instead of affixes.

And idiosyncratic phonology?

- There is a *lot* of idiosyncratic phonology associated with the endoclititics in Itunyoso Triqui.
- At least for the things labelled “enclitic”, they seem to pass the “clitic test” and would be considered proper clitics.
- The category of **endoclititic** is tougher though.

Summary of criteria for clitic-hood

| Criterion | Endoclititics | Enclitics | <i>Expectations</i> |
|------------------------------|----------------------|------------------|----------------------------|
| Non-selectivity | yes | yes | <i>yes</i> |
| Prosodic independence | no | no | <i>no</i> |
| Syntactic independence | no | no | <i>no</i> |
| Paradigmatic gaps | no | no | <i>no</i> |
| Idiosyncratic phonology | yes | no | <i>no</i> |
| Clitic doubling | yes | yes | <i>yes</i> |
| Idiosyncratic semantics | no | no | <i>no</i> |
| Sensitive to syntactic rules | ? | ? | <i>no</i> |

What does all this mean?

- The degree of phonological overlap is not, in itself, a criterion for clitic-hood in the world's languages. **Endoclititics exist.**
- The history of endo-cliticization in Otomanguean begins with processes of phonological fusion with some segmental information.

| | | |
|-----------------------|-----------|---------|
| Mixtec (Yucunany): | ndaʔa=jù | |
| Mixtec (Ixtayutla): | ndaʔa=i | [ndaʔi] |
| Mixtec (Yoloxóchitl): | ndaʔa=ʼ | [ndaʔà] |
| | hand=1s | |
| | ‘my hand’ | |

On “phonological overlap”

Phonological overlap is not well-defined. It could refer to several distinct phenomena based on degree of overlap, productivity, and the possible formal representation in terms of concatenability.

- a. **Complete** overlap of a clitic with a root (Triqui 1S) or **partial** overlap of a clitic with a root (Triqui 2S)
- b. Clitic-conditioned root **suppletive allomorphy** (special stem alternants) or **productive morphologically-conditioned phonology** on the stem.
- c. **Non-concatenatable** vs. **concatenable** alternations on stems.

Conclusions

- Endoclititics behave identically morphosyntactically in Itunyoso Triqui to enclitics. An endoclititic simply involves complex morpho-phonological rules, but it is still a clitic.
- Both are non-selective, dependent, and may be joined/doubled.
- Any theory of wordhood relying on phonological criteria must include an in-depth understanding of possible phonological alternations in morphological systems (c.f. Inkelas 2013).

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Forms of the plural

- Several types of indefinite quantifiers can occur where “plural” occurs.

| | | |
|--|----------------|---------------------------------|
| neh ³ | plural/generic | occurs in isolation or w/clitic |
| (a ³)niʔ ² | plural | occurs w/clitic |
| nu ¹ k ^w eh ¹ | dual/‘pair of’ | occurs w/clitic |
| ni ^{2ʔ} rua ⁴³ | many/much | occurs in isolation or w/clitic |

Are plural pronouns clitics or independent pronouns?

(3) $K\tilde{a}^3\tilde{a}h^2 = neh^3 = sih^3$
PERF.leave = PL = 3M
'They left' ~ 'They have left.'

(4a) $*Neh^3 = sih^3$ $k\tilde{a}^3\tilde{a}h^2$
PL = 3M PERF.leave
'They left'

(4b) Juan $k\tilde{a}^3\tilde{a}h^2$
Juan PERF.leave
'Juan left.'

Or are they pro-clitics?

(5) neh³ sĩŋ³ kã³ŋãh²
 3P child PERF.go

‘The **children** left’ ~ ‘(It was) the children (who) left.’

(6) *neh³ kã³ŋãh²
 3P PERF.go

‘They left’ ~ ‘(It was) they (who) left.’