Towards a unified account of tone lowering in Copala Triqui: A look at 'denominalized adjectives'

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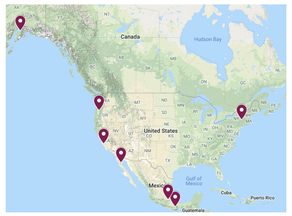
Language Background

- Copala Triqui (CT) is an Otomanguean language of the Mixtecan branch
- Poor mutual intelligibility with other Triqui languages: Itunyoso (DiCanio 2008) and Chicahuatxla (Hernández 2017)
- ≈ 30,000 speakers
- Originally spoken in the northwest region of Oaxaca, Mexico in San Juan Copala
- Many CT speakers now live in diaspora communities in Oaxaca City, Mexico's Northwest, and the U.S. coasts
- Existing description by Hollenbach (1974, 1984, 2015) who worked with monolingual speakers in San Juan Copala during the 1960s and 1970s
- Our data comes from 6 speakers living in diaspora in Albany, NY and Oaxaca City, MX



Lexical Tone

- Eight lexically contrastive tones; 5 represents the highest tone and 1 the lowest tone

5 level tones: 1, 2, 3, 4, 5
3 contour tones: 13, 31, 32

Figure 1: Hollenbach (2008)

- Tone usually distinctive only on the final syllable, and tone on non-final syllables is predictable

Grammatical Tone

- Tones fall into two registers (Hollenbach 1984):
  - Upper register: 5, 4, 3, 32, 31
  - Lower register: 2, 1, 13

	Group 1	Group 2	Group 3a	Group 3b	Group 4a	Group 4b	Group 5a	Group 5b
Upper register	31	32	3	3	4	4	5	5
Lower register	1	2	1	13	1	2	1	2

Figure 2: Correspondence between upper and lower registers

- Many tone lowering processes: aspect, negation, possession, appositives, predicate focus, so-called denominalized adjectives, derivation of adverbs
- All tone lowering follows paradigm in Fig. 2.

- **Inflectional tone lowering**: Verbs have an upper register citation form; most verbs also have a lower register form

- Non-potential aspects (Upper register)

(1) Chá[4] Juán[4]
eat.NONPOT Juan
'Juan is eating/ate.'

- Potential aspect (Lower register)

(2) Cha[2] Juán[4]
eat.POT Juan
'Juan will eat.'

- **Derivational tone lowering**: Prepositions have an underlying upper register tone and an 'adverbial' lower register form.

- Preposition (Upper register)

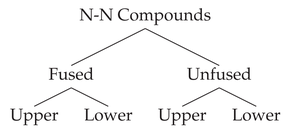
(3) xcó[4] quij[4]
beyond mountain
'beyond the mountain'

- Adverbial form (Lower register)

(4) chéé[5] xco[1]
walk beyond
'walk backwards'

Nominal Compounds

- We find that Copala Triqui has four types of nominal compounds that differ along two dimensions:
  1. Degree of phonological merger: simplex prosodic-ω or complex prosodic-ω
  2. Tone Register: citation tone (high register) or tone lowering (low register)



- **Research questions:**
  1. Where in the grammar is the process of compounding located: lexical or structural?
  2. What is the nature of the tonal overlay? Does it belong to a categorical head or a particular syntactic configuration?

Fused Compounds

- Simplex prosodic-ω compounds or "fused compounds" (Hernández 2014) involve the loss of word boundary (Hollenbach 1984)
- Head-initial: Noun + Modifier (Hollenbach 1984)
- Behave like single prosodic-ωs based on Triqui-specific criteria, Ex. non-final syllables are CV (see Hernández 2014, 2017 for Chicahuaxtla Triqui)

(5) ta[3].ga[3] /to'cuá[4] aga'[3]/
house.metal
'jail'

(6) ya[5].nuj[13] /ya'anj[5] nuj[3]/
instrument.skin
'drum'

- Demonstrate a range of behavior with respect to conforming to Copala Triqui tonotactics
  - (5) obeys the rule of default tone (tone 3 on all non-final syllables when final syllable is tone 3 or higher)
  - (6) maintains contrastive lexical tone of N_1
- Second root lowers in some, but not all cases; the high-low mapping conforms to the register system shown in Figure 2

Unfused Compounds

- The compound consists of two roots that each behave like an individual prosodic-ωs
- Roots independently conform to Triqui phono- and tonotactics, but the compound as a whole does not
- Sometimes $\sqrt{2}$ lowers and sometimes it maintains its lexical tone (more below)
- Whether the tone of the modifying root lowers is not determined by properties inherent to the head or the modifier
- A single root can be i) a head that combines with a modifier that lowers (7), ii) a head that combines with a modifier that surfaces in its upper register form (8), iii) a modifier that lowers (9), or iv) a modifier that surfaces in its upper register form (10)

(7) yo'óó[5] ya'an[2]
dirt fire
'hot dirt' or 'lava'

(8) yo'óó[5] scúj[5]
dirt cow
'cultivable land'

(9) ve'[3] yo'oj[1]
house dirt
'dirty house'

(10) culi'ii[32] yo'óó[5]
beetle dirt
'dung beetle'

Tone Lowering Phonology

- Not sandhi: tone lowering not influenced by tone of preceding root

(11) manzaná[4] rmii[2] /rmii[32]/
apple ball
'round apple'

(12) ra'vii[32] rmii[2] /rmii[32]/
orange ball
'round orange'

- Mapping between upper register form and lower register form is not (entirely) predictable (see Figure 2)

(13) tacaan[3] yu've'[1] /yu've'[3]/
mountain snow
'snowy mountain'

(14) mesá[4] aga'[13] /aga'[3]/
table metal
'iron table'

- Tone lowering is not the result of a floating tone: Floating tones tend to be concatenative, but these have to be construed as completely replacive here
- Tone lowering in these compounds is best understood as a low tone overlay (see McPherson (2014) for Dogon languages)
- ⇒ Open Questions: How do we account for tone in the first syllable of the fused compounds? How do we account for tonal overlay in both types of compounds? This is a morphosyntactic question as well as a phonological one.

References

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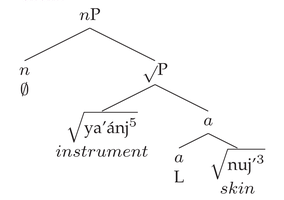
Analysis

- Hollenbach (2008) describes these compounds as:
  - Lexicalized N-N compounds
  - Lexicalized N-A compounds, where A is denominalized via tone lowering (also in the lexicon)
- At least the unfused compounds do not seem lexicalized: our consultants accept and easily assign meaning to tone lowering on nouns in novel compounds
- Two approaches to tone lowering that we consider:
  1. **Categorical approach:** Presence of an a^0 head triggers the tonal overlay
  2. **Structural approach:** Tonal overlay occurs in a particular syntactic configuration

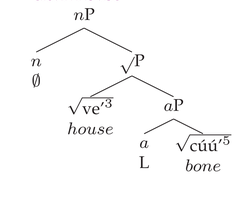
Categorical approach

- Following framework of Distributive Morphology
- An acategorial root merges with an a^0 head, which triggers the tonal overlay on the root
- Fused compounds are formed when a category head and the root undergoes m-merger, which then undergoes m-merger with the root it modifies
- For unfused compounds, a phrasal category —*a*P or *n*P— modifies the head

(15) Fused with lowering:
yá[5]nuj[13] /ya'ánj[5] nuj[3]/
'drum'



(16) Unfused with lowering:
ve'[3] cuj'[1] /ve'[3] cúú'[5]/
'clean house'

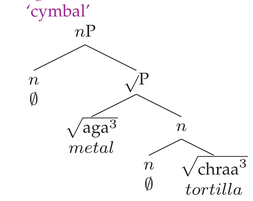


- Problem #1: It is possible to make tripartite compounds with lowering, but not without.
- Problem #2: More than two root adjectives can modify a single noun, so tone overlay does not quite render an adjective

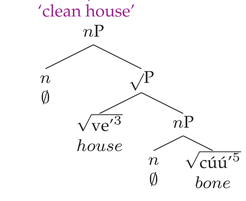
Structural approach

- Root compounds without lowering are derived via m-merger
- Those with lowering involve phrasal modification
- When a root (as opposed to a head) combines with a phrase, the modifying phrase is produced with the low register tone

(17) Unfused without lowering:
aga[3] chraa[3]
'cymbal'



(18) Unfused with lowering:
ve'[3] cuj'[1] /ve'[3] cúú'[5]/
'clean house'



- Fused compounds in this case would be derived in the same way as unfused compounds; however, the roots of the fused compounds—which are limited to existing forms—incorporate in the syntax
- This approach has the potential to unite all of the different environments where tone lowering takes place