STATUS SUFFIXES AT THE SYNTAX-PROSODY INTERFACE: A CORPUS STUDY OF CHICHICASTENANGO K'ICHE'

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Elizabeth Wood

elizabethwood@utexas.edu

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Overview

1. Status suffixes and 'phrase–final' morphemes

2. A corpus study
    1. The corpus
    2. Categorization of syntactic and prosodic phrase position
    3. Results

3. A possible analysis: a recursive prosodic structure

STATUS SUFFIXES AND PHRASE-FINAL MORPHEMES

Marking phrase edges

- Common across languages:

    - Final lengthening (Beckman & Edwards 1987)

    - Pauses (Krivokapić 2007)

    - Voice quality, phrase-final creak (Davidson 2021)

    - Tones (Katsika et al. 2014)

    - Pitch reset (Yang & Wang 2002)

- The Mayan languages: phrase-final morphemes

Status suffixes as 'phrase–final' morphemes

(1)   ʃ-in-aːtin-∅   iwiːɾ

CPL-B.1SG-bathe-**SS.M**   yesterday

'I bathed yesterday.' (Larsen 1988)

(2)   iwiːɾ   ʃ-in-aːtin-**ik**

yesterday   CPL-B.1SG-bathe-**SS.F**

'Yesterday I bathed.' (Larsen 1988)

Basic generalization: 'Final' suffix when verb is last element

Status suffixes as 'phrase–final' morphemes

(3)   k-in-kuːn-**ik**   k-in-ɓeː-k

     INCPL-B.1SG-be.able-**SS.F**   INCPL-B.1SG-go-SS.F

     'I am able to go.' (Larsen 1988)

> More data:
> 'Final' suffix when verb is last element of the clause (Mondloch 1981; Larsen 1988; Can Pixabaj & Sis Iboy 2004; Barrett 2007)

Status suffixes as 'phrase-final' morphemes

- Phrase-final forms also attested:
  - When sentence repeated slowly word by word (Henderson 2012)
  - Preceding a vocative (Henderson 2012)
  - Preceding certain clitics (Tyers & Henderson 2021)
  - Correlated with final high/rising pitch contours (boundary tones) (Henderson 2012; Royer 2021)

More data:
'Final' suffix when verb is last element of the Intonational Phrase (Henderson 2012; Royer 2021; Tyers & Henderson 2021)

Elicited vs. Spontaneous speech

- Previous work on this topic (mostly) based on elicited examples of specific constructions

  - Limited to contexts that have been of interest to researchers

  - Hard to identify patterns dependent on discourse/large context for grammaticality (Chelliah and De Reuse 2011)

A CORPUS STUDY

Goals

- Exploration of overall distribution of phrase-final and phrase-medial status suffixes in all environments present in the corpus, not restricted to contexts already identified as relevant

- Test of whether clause position or IP position better predicts the alternation

- (Effect of consonant clusters: stems ending in clusters do not alternate based on position)

A corpus of Chichicastenango K'iche'

- Spontaneous narrations (stories, history, recipes, discussion of local traditions)

- Speakers of variety of ages, genders, and locations within Chichicastenango

- Recorded 2018–2019

- 2 h 40 min total time

- Transcribed in orthography with English and Spanish translations

- If speaker gave permission, archived (audio and transcription) in AILLA (The K'iche' collection of Elizabeth Wood, ailla.utexas.org)

Verbs in the corpus

- Included all verbs with status suffixes that vary in form in medial and final contexts:

- Excluded if restart/hesitation/unfinished

- Also for the data discussed here, excluded all verbs ending in consonant clusters
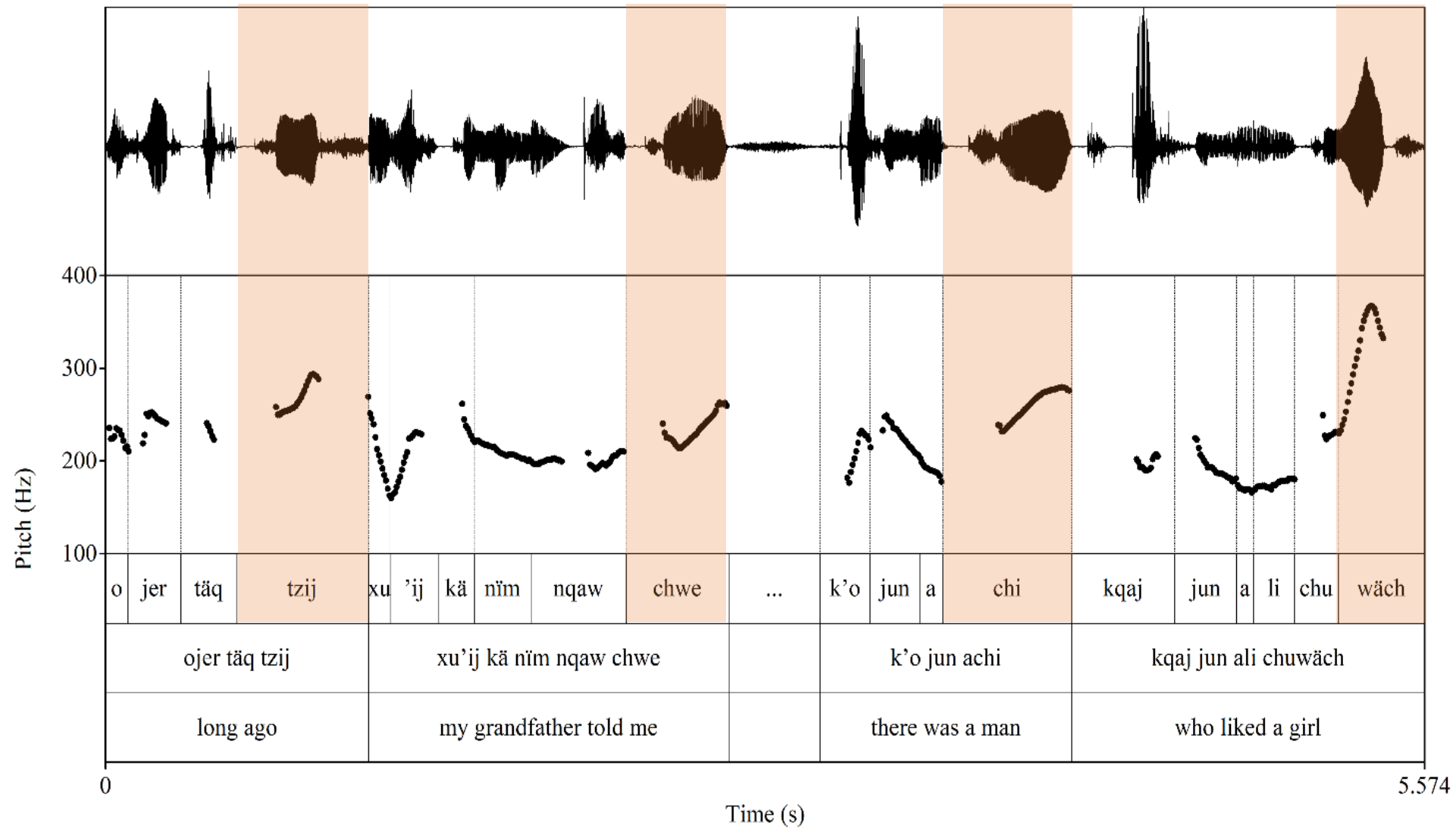
- Total of 2630 tokens

Categorization

- Type of status suffix:
  - phrase-final: -ɪk, -ɔq, -ɔ/ʊ -aʔ/oʔ/uʔ
  - phrase-medial: ∅, -a/o/u

Categorization: syntactic position

- Syntactic position: clause-final or clause-medial

    - Clause: finite verb/non-verbal predicate + all dependent arguments and modifiers

    - Clause-final: last element of clause and/or precedes a new clause

    - Clause-medial: all other verbs

- Some questionable (but very infrequent) cases: ideophones, quotatives, vocatives, relational nouns

Categorization: prosodic position

- Identifying Intonational Phrases (IP) in naturalistic data not a trivial task

- Many works on K'iche' and related languages, including those on status suffixes, discuss IP-final boundary tones (Nielsen 2005; Henderson 2012; Velleman 2014; Burdin et al. 2015): high/rising pitch contours

- Looking for boundary tones:
  - Rise on final syllable of the verb that reached highest relative height in surrounding context
  - These tended to occur at the ends of topicalized phrases and the ends of sentences/clauses

- Marked in examples as accent mark ´

o	jer	täq	tzij	xu	'ij	kä	nïm	nqaw	chwe	...	k'o	jun	a	chi	kqaj	jun	a	li	chu	wäch

ojer täq tzij	xu'ij kä nïm nqaw chwe		k'o jun achi	kqaj jun ali chuwäch
long ago	my grandfather told me		there was a man	who liked a girl

Results: clause position

Clause position	Total	Phrase-medial status suffix	Phrase-final status suffix
Medial	2227	2090 **(93.8%)**	137 (6.2%)
Final	403	9 (2.2%)	394 **(97.8%)**

Clause–medial verbs with phrase–final status suffixes

Contexts:
- Followed by demonstrative pronouns
- Followed by discourse particles
- Followed by pause or speech filler
- Other

Clause–medial verbs with phrase-final status suffixes

- Followed by demonstrative pronouns
    - 71 tokens
    - Uncertain analysis
    - Discourse functions: certainty, possibility, hope, response to request (López Ixcoy 1997; 1999; Sam Colop 1990)
    - Scoping over full proposition (Bliss & Wiltschko 2020 for Blackfoot) → outside of clause?
    - Some verbs followed by demonstrative pronouns have phrase-medial status suffixes

(4)   sabado   k-ɔχ-t͡ʃkʊn-**ɪk**   ɾíʔ

          Saturday   INCPL-B.1PL-work-**SS.F**   DEM

          'On Saturdays we work.' (txt;talentos, 0:06:00)

Clause-medial verbs with phrase-final status suffixes

- Followed by Spanish discourse particles
  - 9 tokens
  - Similar to demonstrative discourse particles → outside of clause?

(5)   kwando   ja   k-∅-q-ɪl-**ɔ**   pwés

        when   already   INCPL-B.3S-A.1PL-see-**SS.F**   then

        'When we already see it then...' (txt;3recipes, 0:03:31)

Clause–medial verbs with phrase–final status suffixes

- Followed by pause/speech filler
  - 13 tokens
  - Additional material afterthought → outside of clause?

(6)   ʃ-in-t͡ʃ(ə)kʊn-**ík** …   ɾ-ukʼ   ɾ   n   ɾ   n-qáw

CPL-B.1SG-work-SS.F   A.3SG-with   DET   A.1SG   DET   A.1SG-father

'I worked … with my… my father.' [txt;mr, 0:08:33]

Clause–medial verbs with phrase-final status suffixes

- Other, unexplained
  - 44 tokens

(7)   kɛɓɾqən   ʃ-∅-u-ʔun-**ɔ**   q-uk'   oχéɾ

          earthquake   CPL-B.3SG-A.3SG-do-**SS.F**   A.1PL-with   before

          'An earthquake that happened to us in the past.' [txt;earthquake, 0:00:15]

(8)   ɓəχt͡ʃéʔ   k-∅-k'əm-**ɔ**   k-ʃk'áj

          early   INCPL-B.3SG-A.3PL-take-SS.F   A.3PL-stick

          'Early they take their sticks.' [txt;mushrooms, 0:07:12]

Clause–final verbs with phrase–medial status suffixes

- 9 tokens
- Unexplainable under a syntactic analysis
- Most verbs followed by embedded clause have phrase-final status suffixes

(9) χe ta ɾ k-∅-i-ʔən-∅ t͡ʃeɾ

like.that IRR DET INCPL-B.3SG-A.2PL-do-SS.M COMP

k-∅-it͡ʃəp-ɔ́

INCPL-B.3SG-A.2PL-catch-SS.M

'That is not how you catch them.' (lit: 'It's not like that that you do it that you catch them.') [txt;fishing, 0:05:23]

Results: IP position

With boundary tone	Total	Phrase-medial status suffix	Phrase-final status suffix
No	2285	2079 **(91.0%)**	206 (9.0%)
Yes	345	20 (5.8%)	325 **(94.2%)**

Verbs with boundary tones and phrase–medial status suffixes

- 20 tokens
- Likely not boundary tones and no IP boundary – more research needed on K'iche' intonation

(10)   ʃ-∅-in-t͡ʃə́p-∅   χu   laχ   amló
        CPL-B.3SG-A.1SG-catch-**SS.M**   one   little   fly
        'I *caught* a little fly.' [txt;mushrooms, 0:04:47]
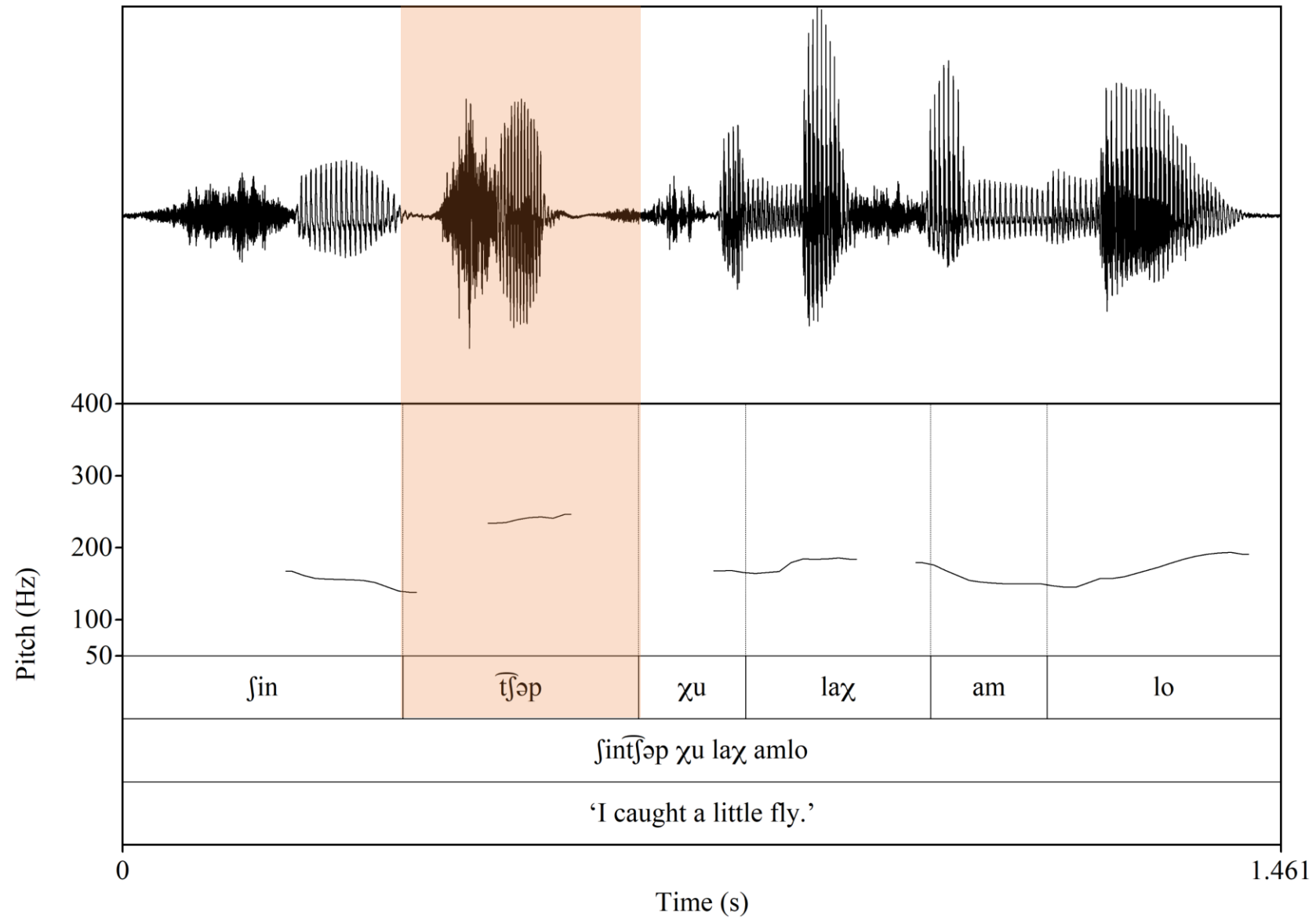
Verbs without boundary tones with phrase-final status suffixes

Contexts:
- Followed by an embedded clause
- Followed by a matrix clause (mostly quotative verbs)
- Followed by an independent clause
- Followed by an ideophone
- Followed by a demonstrative pronoun
- Followed by a discourse particle
- Other

Verbs without boundary tones with phrase–final status suffixes

- Followed by an embedded clause
  - 32 tokens
  - Clause boundary → no IP boundary?
  - Some verbs followed by embedded clause have a boundary tone, some do not

(11)   k̲-∅-q-ɪl-<mark>ɔ</mark>   ja   mqʼɪn   t͡ʃ   ɾ   q-tʼuʔj
         INCPL-B.3SG-A.1PL-see-SS.F   already   hot   again   DET   A.1PL-pot
         t͡ʃu   qʼáqʼ
         PREP   fire
         'We see that our pot is now hot on the fire.' [txt;3recipes, 0:03:11]

Verbs without boundary tones with phrase–final status suffixes

- Followed by a matrix clause
  - 8 tokens
  - Clause boundary → no IP boundary?
  - Some verbs followed by matrix clause have a boundary tone, some do not

(12)   t͡siχ   k-∅-kəm-ɪk   ʃ-∅-u-ʔiχ   aɾɛ́ʔ
            true   INCPL-B.3S-die-SS.F   CPL-B.3SG-A.3SG-say   3SG
            '… it is true that she will die, he said.' [txt;owl, 0:02:00]

Verbs without boundary tones with phrase-final status suffixes

- Followed by demonstrative pronoun or discourse particle
  - 71 tokens
  - Clause boundary (?) → no IP boundary?

(13)   sabado   k-ɔχ-t͡ʃkʊn-**ɪk**   ɾíʔ

               Saturday   INCPL-B.1PL-work-**SS.F**   DEM

               'On Saturdays we work.' (txt;talentos, 0:06:00)

Verbs without boundary tones with phrase–final status suffixes

- Others, unexplained
  - 38 tokens

(14) kɛɓɾqən ʃ-∅-u-ʔun-<mark>ɔ</mark> q-uk' oχéɾ

earthquake CPL-B.3SG-A.3SG-do-**SS.F** A.1PL-with before

'An earthquake that happened to us in the past.' [txt;earthquake, 0:00:15]

(15) ɓəχt͡ʃéʔ k-∅-k'əm-<mark>ɔ</mark> k-ʃk'áj

early INCPL-B.3SG-A.3PL-take-SS.F A.3PL-stick

'Early they take their sticks.' [txt;mushrooms, 0:07:12]

Summary

- Neither clause nor IP (as correlated with boundary tone) explain all of the cases
- Biggest problem for syntactic analysis: medial suffixes at clause boundaries
- Biggest problem for prosodic analysis: final suffixes without boundary tones

A POSSIBLE ANALYSIS: RECURSIVE IP STRUCTURE

A proposal

- Not all IP boundaries marked with boundary tones

- If we take phrase-final suffixes as diagnostic for IP boundary, and high/rising pitch contour as evidence for highest IP boundary in recursive structure, we can account for all of the variability in the data with different prosodic parsing of the same syntactic structures

- This analysis relies on:

  - Recursive prosodic structure (Selkirk 2011; Ito & Mester 2012, Myrberg 2013), contradicting the Strict Layer Hypothesis (Selkirk 1984; Nespor & Vogel 1986)

  - Syntax-prosody mismatches & variable prosodic parsing of same syntactic structure (c.f. Royer 2021)

Verbs preceding demonstrative and discourse particles

- Two attested structures:
  - Phrase-final status suffix on verb, boundary tone on particle

$$[\ [\ \text{clause} \ ]_{\text{IP}} \ \text{particle} \ ]_{\text{IP}}$$

$$[\ [\ \text{sabado kɔχtʃkʊn-ɪk} \ ]_{\text{IP}} \ \text{ɾíʔ} \ ]_{\text{IP}}$$

  - Phrase-medial status suffix on verb, boundary tone on particle

$$[\ \text{clause particle} \ ]_{\text{IP}}$$

$$[\ \text{xeqaχ-}\varnothing \ \text{ɾíʔ} \ ]_{\text{IP}}$$

Verbs preceding embedded clauses

- Three attested structures:
  - Phrase-final status suffix and boundary tone on matrix verb

$$[\text{matrix-clause}]_{IP} [\text{embedded-clause}]_{IP}$$

$$[\text{kawɪl-ɔ́}]_{IP} [\text{su ɾ kuja ɾ χaʔ}]_{IP}$$

  - Phrase-final status suffix on matrix verb, boundary tone on embedded clause

$$[[\text{matrix-clause}]_{IP} [\text{embedded-clause}]_{IP}]_{IP}$$

$$[[\text{kqɪl-ɔ}]_{IP} [\text{ja mqʼɪn tʃˀɾ q-tʼuʔj tʃu qˈáqˈ}]_{IP}]_{IP}$$

  - Phrase-medial status suffix on matrix verb, boundary tone on embedded clause

$$[\text{matrix-clause embedded-clause}]_{IP} / [\text{matrix-clause} [\text{embedded-clause}]_{IP}]_{IP}$$

$$[\text{kiʔin-} \varnothing \text{ tʃeɾ kitʃəpɔ}]_{IP} / [\text{kiʔin-} \varnothing \text{ [ʃeɾ kitʃəpɔ}]_{IP}]_{IP}$$

Summary

- In a corpus of spontaneous narratives, phrase-final status suffixes do not occur perfectly correlated with either clause boundaries nor high/rising pitch contours (boundary tones)

- A clause-based analysis is impossible due to some phrase-medial suffixes in positions that are clearly clause-final

- An IP-based analysis is possible by reconsidering distribution of boundary tones: phrase-final suffixes at all IP boundaries and boundary tones only at the highest IP

- This analysis includes:
  - Recursive IPs
  - Mismatches between clause and IP boundaries

Thank you/Maltyox!

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Questions/comments?

elizabethwood@utexas.edu

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The status suffixes of Chichicastenango K'iche'

		Phrase-medial	Phrase-final
Intransitive	Plain	∅	–ɪk
	Dependent	∅	–ɔq
Root transitive	Plain	∅	–ɔ/ʊ
	Dependent	–o/u/a	–oʔ/uʔ/aʔ