

# MORPHOLOGICAL BOUNDARY GLOTTALS IN A'INGAE: A NEW ARGUMENT FOR [δ]

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## Overview

- **A'ingae** (or **Cofán**, ISO 639-3: con): an understudied and endangered indigenous isolate spoken in Ecuador and Colombia

FOCUS: syntactically conditioned allomorphy of -ʔ

- three **information structure (IS)** morphemes:

- new topic **-ta NEW**, but **-ʔta** when attached to a **TP**
- contrastive topic **-ja CNTR**, but **-ʔja** when attached to a **TP**
- exclusive focus **-yi EXCL**, but **-ʔyi** when attached to a **TP**

PROPOSAL: -ʔ is a realization of T° when adjacent to [δ], where [δ] (Bossi et al., 2019; Mikkelsen, 2015) is a higher-order discourse feature that dominates all the specific IS features

IMPORT: novel morphological evidence for [δ],

i.e. for a hierarchical arrangement of discourse features; of  $\bar{A}$ -feature geometry more broadly (e.g. Aravind, 2018; Baier, 2018)

## Background

- highly agglutinating and exclusively suffixing language
- most functional morphemes are either -CV or -ʔCV; only the IS markers show an allomorphic alternation between -CV and -ʔCV
- all the data were collected by the author

## Data description

- IS markers — generally optional; may appear on various POSs

**PLAIN** (i.e. non-preglottalized) if attached to most constituents, e.g.:

- noun phrases (1a),
- adverbs (2a),
- clauses subordinated overtly with C-heads, such as:
  - same-subject adjunct **-pa** SS (3a),
  - different-subject conditional antecedent **-ʔni** IF.DS (4a)

**PREGLOTTALIZED** when attached directly to:

- infinitive predicates with **-ye** INF (1b, 2b)
- finite predicates (3b, 4b)
- finite clauses with preglottalized IS suffixes are interpreted as same-subject conditional antecedents (3b, 4b)
- IS markers generally do not appear on matrix predicates
- subordinate clauses can be inflected with e.g. the plural subject **-ʔfa** PL(2b), irrealis **-ya** IRR (3a), **-mbi** NEG (4b), **-ye** INF(1b, 2b)
- positive realis singular-subject clauses are unmarked
  - the verb of a finite TP may consist of a bare verbal root
- preceding N nasalizes: **-(ʔ)nda** NEW (4a), **-(ʔ)jan** CNTR, **-(ʔ)ñi** EXCL

## Data and analysis

### (1) PLAIN REALIZATION

a. ON A NOUN PHRASE

yáya=ta =tsû tsámpi=ni já  
 [yáya]<sub>DP</sub>=ta =tsû tsámpi=ni já  
 dad=NEW =3 forest-LOC go  
 “Dad went hunting.”

### (2) a. ON AN ADVERB

tayúpi=ja fíthi=ʔthi =tsû  
 [tayúpi]<sub>advP</sub>=ja fíthi=ʔthi =tsû  
 long ago-CNTR kill-PLA =3  
 “Once upon a time, (s)he killed (many).”

### (3) a. ON AN OVERTLY SUBORDINATED CLAUSE

já-ya-pa-yi =ngi ina-ʔjen  
 [já-ya-ʔ-pa]<sub>CP</sub>-yi =ngi ina-ʔjen  
 go-IRR-T-SS-EXCL =1 cry-IPFV  
 “I’m crying only because I will leave.”

### (4) a. ON AN OVERTLY SUBORDINATED CLAUSE

jí-ʔni=nda =ngi iʔna-ñi  
 [jí-ʔni-ʔni]=nda =ngi iʔna-ñi  
 come-T-IF.DS-NEW =1 cry-IRR  
 “If (s/he) comes, I will cry.”

### PREGLOTTALIZED REALIZATION

b. ON A RAISING VERB COMPLEMENT

ñúʔfa-ye-ʔta =ngi atésû  
 [ñúʔfa-ye-ʔ]<sub>TP</sub>-ta =ngi atésû  
 rest-INF-T-NEW =1 HAB.AUX  
 “I (habitually) rest.”

b. ON AN CONTROL VERB COMPLEMENT

kéʔi án-ʔfa-ye-ʔja séʔpi =ngi  
 [kéʔi án-ʔfa-ye-ʔ-ʔ]<sub>CP</sub>-ja séʔpi =ngi  
 2PL eat-PL-INF-T-C-CNTR forbid =1  
 “I prohibit y’all from eating.”

b. ON A NULL-C° SUBORDINATED CLAUSE

thési=ma áthe-ʔyi =ngi bûthú-ya  
 [thési=ma áthe-ʔ-ʔ]<sub>CP</sub>-yi =ngi bûthú-ya  
 jaguar=ACC see-T-IF.SS-EXCL =1 run-IRR  
 “As soon as I see a jaguar, I will run.”

b. ON A NULL-C° SUBORDINATED CLAUSE

jí-mbi-ʔta =tsû án-ñi  
 [jí-mbi-ʔ-ʔ]-ta =tsû án-ñi  
 come-NEG-T-IF.SS-NEW =3 eat-IRR  
 “If (s)he doesn’t come, (s)he will eat.”

## Vocabulary items

### (5) T REALIZATIONS

- a. T ↔ -ʔ / \_ δ  
 b. T ↔ -∅ / elsw.  
 FINITENESS  
 c. INF ↔ -ye

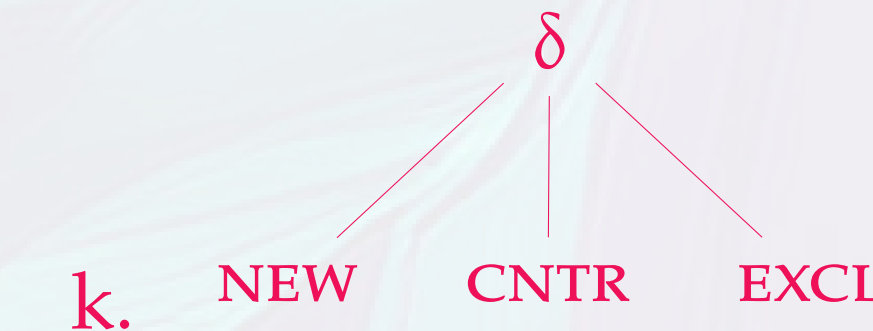
### C-HEADS

- d. IF, SS ↔ -∅  
 e. IF, DS ↔ -ʔni  
 f. SS ↔ -pa  
 g. DS ↔ -si

### IS FEATURES

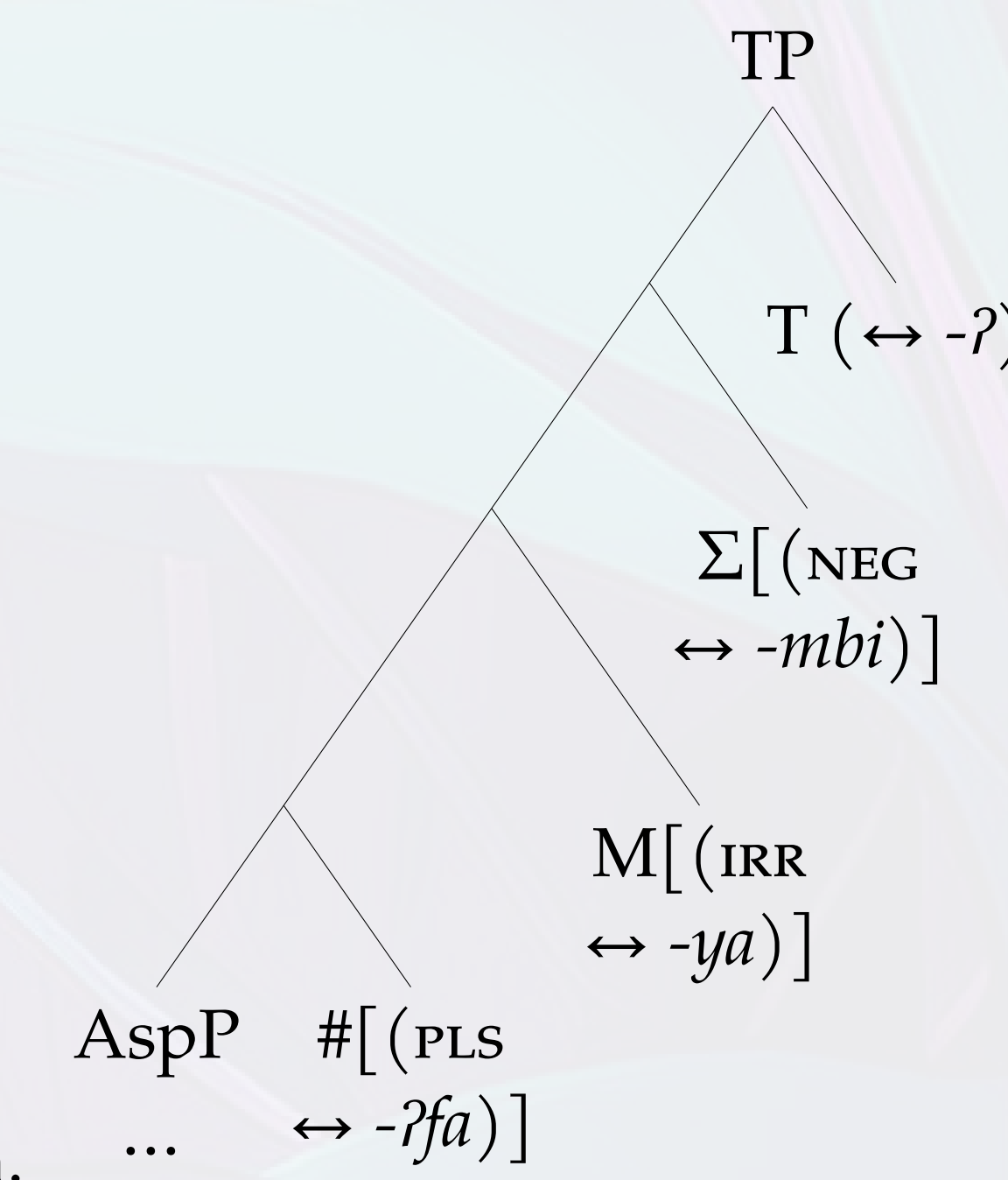
- h. NEW ↔ -ta  
 i. CNTR ↔ -ja  
 j. EXCL ↔ -yi

### IS FEAT HIERARCHY

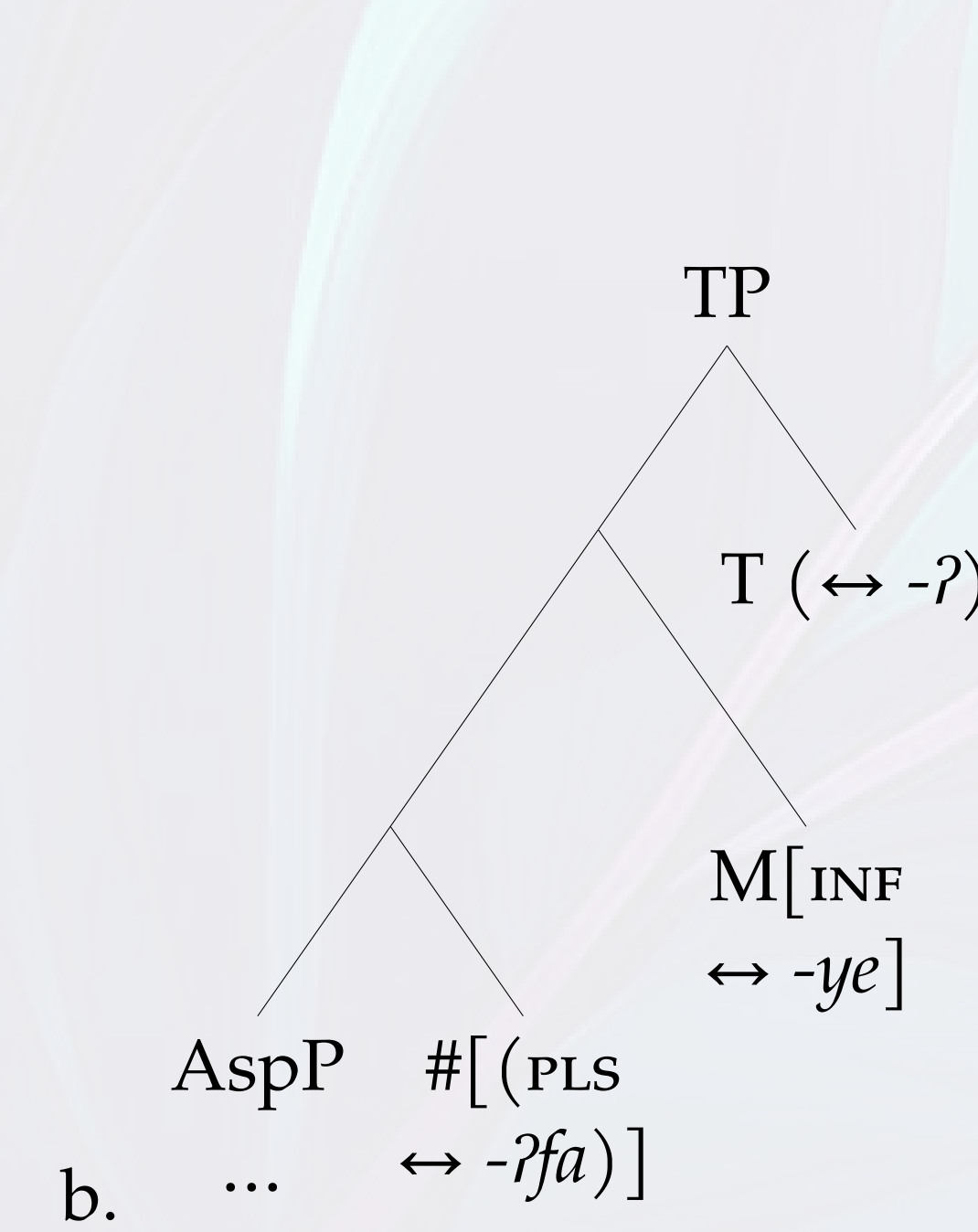


## TP structure

### (6) FINITE TP STRUCTURE



### INFINITIVE TP STRUCTURE



## Analysis description

- all clauses have the TP layer (Shlonsky, 1997); the assumed structure for finite and infinitive TPs is given in (6a-b)
- IS markers form a **natural class**—(i) they encode discourse meanings, (ii) attach to the same constituents, and (iii) are phrase-final
  - the observed systematic alternation between their -CV and -ʔCV forms should be attributed to a shared morphosyntactic property

CLAIM 1: IS morphemes inherit from [δ],

a **superordinate discourse feature** (Bossi et al., 2019; Mikkelsen, 2015), which dominates [NEW], [CNTR], [EXCL] (5k)

CLAIM 2: T° is realized as -ʔ when adjacent to [δ] (5a)

- -ta [NEW], -ja [CNTR], and -yi [EXCL] all inherit from [δ]
  - they all satisfy the environment condition otherwise: T° is realized as phonologically null (5b)
- same-subject conditional C-head is also unpronounced (5d)

WHEN THE IS MARKER ATTACHES TO:

**MOST CATEGORIES**, including DPs (1a) and adverbs (2a), there is **no T°** adjacent to a discourse-marked morpheme

→ -ʔ is **not realized**

**INFINITIVE TPs** (e.g. a complement of a raising predicate),

→ the **adjacent T-head** is **realized** as -ʔ (1b)

**CPs WITH OVERT C°**, there is material between T° and IS

- environments for allomorphy are **strictly local** (Embick, 2010)
- -ʔ is **not realized** (3a, 4a)

**CPs WITH A NULL C°**, such as a complement of a control predicate (2b) or a same-subject conditional antecedent (3b, 4b), there is no overt morphology intervening between T° and the IS marker

- null material is **ignored** for purposes of satisfying allomorphy environments (*pruning* in Embick, 2010, 2015)
- T° is **realized** as -ʔ

## Discussion

- [δ] was previously motivated by word order facts in Danish (Mikkelsen, 2015) and Kipsigis (Bossi et al., 2019)
  - A'ingae IS morphemes pattern alike in triggering T°-allomorphy
    - novel **morphological evidence** for a **hierarchical arrangement of discourse features**, with [δ] inherited by maximal IS features
- cross-linguistically, conditionals and topics are marked in similar, often identical, ways (Haiman, 1978)
  - A'ingae IS morphemes appear optionally (though frequently) on DS antecedents (4d), and obligatorily on SS antecedents (1-4b)
  - yet, conditionality is encoded with separate features (5d, 5e)