

A'ingae Syllabic Weight

and its two dimensions in lexical stress assignment

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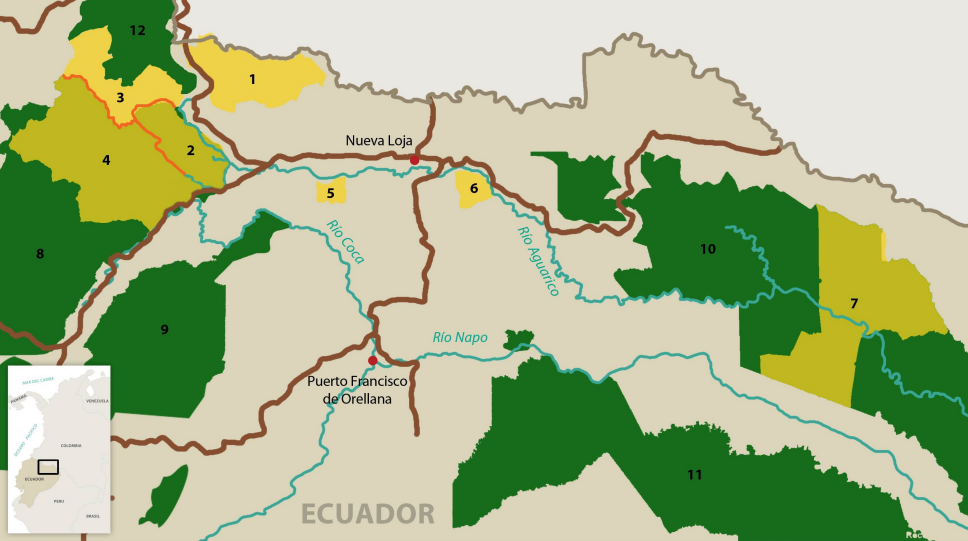
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advised by Scott AnderBois




- indigenous to Ecuador and southern Colombia
- traditionally hunter-gatherer, now less so
- threats:
 - territorial intrusion
 - poaching
 - environmental pollution
 - illegal oil extraction
- **a'ingae** person=MANN *in the way of the people*
- understudied language isolate



 PROTECTED AREAS

- 1. Cofán Bermejo Ecological Reserve
- 8. Cayambe Coca Ecological Reserve
- 9. Sumaco Napo Galeras National Park
- 10. Cuyabeno Wildlife Reserve
- 11. Yasuní National Park
- 12. La Bonita Municipal Reserve

 COFÁN TERRITORIES

- 1. Cofán Bermejo Ecological Reserve
- 2. Sinagoe
- 3. Río Cofanes
- 4. Cofán co-managed area
- 5. Duvuno
- 6. Dureno
- 7. Zábalo

PRELIMINARIES II

- weight $\stackrel{def}{=}$ how “heavy” a syllable is

- heavy nuclei:

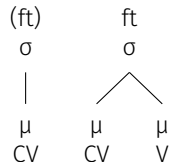
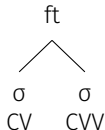
- long vowels
- **diphthongs** (two vowels in one syllable)

- codas (syllable-final consonants): **glottal stops**

(×)
gentle

(×)
genteel

- mora $\stackrel{def}{=}$ a subsyllabic unit that determines syllable weight
 - weight-insensitive
 - weight-sensitive



- extrametricality $\stackrel{def}{=}$ invisibility to stress rules
 - applicable to peripheral constituents
 - right edge unmarked
 - does not chain

(×)
(× .)(× .)
university⟨tet⟩
university_{POLISH}

LITERATURE REVIEW

- little research on the language's suprasegmental phonology
- Borman (1962) denies weight sensitivity
- right-aligned stress placement
 - penultimate (next to the last)
 - antepenultimate (third last)

(×)
(× .)(× .)
sifot^hõ⁺m^bi
float=NEG
not float

- Fischer and Hengeveld (in press) link stress and morphology
 - inflectional morphology does not affect stress
 - derivational morphology affects stress

diphthongs and glottal stops contribute to weight
in two different ways

based on elicitations with Hugo Lucitante '19

L L
pãⁿdza
hunt

L L L
atapa
breed

H L
fiite
help

L L L
pãⁿdza+je
hunt=INF
to hunt

L L L L
atapa+je
breed=INF
to breed

H L L
fiite+je
help=INF
to help

L H
fĩⁿdii
sweep

L L H
atapõẽ
breed-CAUS
make breed

H H
fiitĩã
help-CAUS
make help

syllabic trochee

 $(\times .)$
 $\sigma \sigma$

foot layer

 $\times \dots$
 \leftarrow

word layer

 $(\quad \times)$
 $\dots \times)$

(×)

(× .)

pāⁿdza

hunt

(×)

(× .)

atapa

breed

(×)

(× .)

fīite

help

(×)

(× .)

pāⁿdza+je

hunt=INF

to hunt

(×)

(× .)(× .)

atapa+je

breed=INF

to breed

(×)

(× .)

fīite+je

help=INF

to help

(×)

(× .)

fīⁿdii

sweep

(×)

(× .)

atapōē

breed-CAUS

make breed

(×)

(× .)

fīitīā

help-CAUS

make help

* $\left(\begin{array}{c} \times \\ \end{array} \right)$

$\left(\begin{array}{c} \times \\ \cdot \end{array} \right)$

pãⁿdza+'he

hunt-IMPF

be hunting

* $\left(\begin{array}{c} \times \\ \end{array} \right)$

$\left(\begin{array}{c} \times \\ \cdot \end{array} \right)$

pãⁿdzã+ⁿgi

hunt-VEN

come to hunt

$\left(\begin{array}{c} \times \\ \end{array} \right)$

$\left(\begin{array}{c} \times \\ \cdot \end{array} \right)$

fĩⁿdĩi+'he

sweep-IMPF

be sweeping

$\left(\begin{array}{c} \times \\ \end{array} \right)$

$\left(\begin{array}{c} \times \\ \cdot \end{array} \right)$

fĩⁿdĩĩ+ⁿgi

sweep-VEN

come to sweep

moraic trochee $ \begin{array}{c} (\times \cdot) \quad (\times) \\ \sim \quad \sim \quad \text{or} \quad - \end{array} $	lexicon
foot layer $ \begin{array}{c} \times \dots \\ \leftarrow \end{array} $	$\langle + 'he \rangle$ -IMPF
word layer $ \begin{array}{c} (\quad \times) \\ \dots \times) \end{array} $	$\langle +^{\eta} gi \rangle$ -VEN

(×)

(× .)

pãⁿdza⟨+'he⟩

hunt-IMPF

be hunting

(×)

(× .)

pãⁿdzã⟨+ⁿgi⟩

hunt-VEN

come to hunt

(×)

(×)

fĩⁿdĩi⟨+'he⟩

sweep-IMPF

be sweeping

(×)

(×)

fĩⁿdĩĩ⟨+ⁿgi⟩

sweep-VEN

come to sweep

(×)

(× .)

pāⁿdza

hunt

(×)

(× .)

atapa

breed

(×)

(×)

fīite

help

(×)

(× .)

pāⁿdza+je

hunt=INF

to hunt

(×)

(× .)(× .)

atapa+je

breed=INF

to breed

(×)

(×)(× .)

fīite+je

help=INF

to help

*(×)

(×)

fīⁿdīi

sweep

*(×)

(× .)(× .)

atapōē

breed-CAUS

make breed

*(×)

(×)(× .)

fīitīā

help-CAUS

make help

mora extrametricality

 $\mu \longrightarrow \langle \mu \rangle / . \mu _$

moraic trochee

$$\begin{array}{cc} (\times \cdot) & (\times) \\ \sim \sim & \text{or} \quad - \end{array}$$

foot layer

$$\begin{array}{c} \times \dots \\ \longleftarrow \end{array}$$

word layer

$$\begin{array}{c} (\quad \times) \\ \dots \times) \end{array}$$

lexicon

 $\langle + 'he \rangle$
 -IMPF

 $\langle +^{\eta}gi \rangle$
 -VEN

(×)
 (× .)
pãⁿdza
 hunt

(×)
 (× .)
atapa
 breed

(×)
 (×)
fiiite
 help

(×)
 (× .)
pãⁿdza+je
 hunt=INF
to hunt

(×)
 (× .)(× .)
atapa+je
 breed=INF
to breed

(×)
 (×)(× .)
fiiite+je
 help=INF
to help

(×)
 (× .)
fĩⁿdi⟨i⟩
 sweep

(×)
 (× .)
atapõ⟨ẽ⟩
 breed-CAUS
make breed

(×)
 (×)
fiiitĩ⟨ã⟩
 help-CAUS
make help

- stress is sensitive to syllabic weight
- **diphthongs** count as **heavy**
- difficult to spot due to:
 - mora extrametricality
 - rightmost primary stress
 - rarity of diphthongs

SECOND COMPLICATION

(×)

(× .)

fi't^hi

kill

(×)

(× .)

pāⁿdza

hunt

*(×)

(×)(× .)

fi't^hi+je

kill=INF

to kill

(×)

(× .)

pāⁿdza+je

hunt=INF

to hunt

(×)

(×)(× .)

fi't^hi+je

kill-PASS

be killed

(×)

(× .)

pāⁿdza+je

hunt-PASS

be hunted

mora extrametricality

 $\mu \longrightarrow \langle \mu \rangle / . \mu _$

moraic trochee

 $(\underset{\sim}{\times} \underset{\sim}{.}) \quad (\underset{-}{\times})$
or

glottal prominence

 $\sigma' \longrightarrow \overset{\times}{\sigma'}$

foot layer

 $\times \dots$
←

word layer

 $(\quad \times)$
 $\dots \times)$

lexicon

 $\langle + 'he \rangle$

-IMPF

 $\langle + ^{\eta} gi \rangle$

-VEN

~~×~~

+je

-PASS

(×)
 [× .]
fi't^hi
 kill

(×)
 [× .]
fi't^hi+je
 kill=INF
to kill

(×)
 (× .)
fi't^hi+je
 kill-PASS
be killed

(×)
 (× .)
pãⁿdza
 hunt

(×)
 (× .)
pãⁿdza+je
 hunt=INF
to hunt

(×)
 (× .)
pãⁿdza+je
 hunt-PASS
be hunted

CONCLUSIONS

- **two dimensions** of syllabic weight
 - **diphthongs** make for heavy syllables
 - **glottal stops** trigger foot construction before parsing
- broader theoretical interest
 - Hayes (1995) distinguishes syllable **quantity** from **prominence**
 - the two phenomena are **constrained differently**
 - overall **confirmation** for the theoretical split
 - **revisions** of particular constraints might be warranted

Thank you!

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References



Alexandra Y. Aikhenvald.

Languages of the Amazon.

Oxford University Press, 2012.



Scott AnderBois and Chelsea Sanker.

Reconstruction of A'ingae Prenasalized Stops.

Presentation given at Third Symposium on Amazonian Languages (SAL3). University of California, Berkeley, 2019.



Marlytte Bub Borman.

Cofán Phonemes.

In Benjamin Elson, editor, *Studies in Ecuadorian Indian Languages: I*, pages 45–59. Instituto Lingüístico de Verano (Summer Institute of Linguistics), Mexico, D. F., 1962.

REFERENCES II



Marlytte Bub Borman.

Vocabulario cofán: Cofán-castellano, castellano-cofán.

Instituto Lingüístico de Verano (Summer Institute of Linguistics),
Quito, 1976.



Marlytte Bub Borman and Enrique Criollo.

La cosmología y la percepción histórica de los cofanes de acuerdo a sus leyendas.

Instituto Lingüístico de Verano (Summer Institute of Linguistics),
1990.



Gabriela Caballero.

Morphologically Conditioned Stress Assignment in Choguita Rarámuri.

Linguistics, 49(4):749–790, 2011.



Cofán Survival Fund.

A map of Cofán territory and communities, 2016.

URL <http://www.cofan.org/cofan-people>.

Accessed on 14 April 2019.



Peter B. Denes and Elliot N. Pinson.

The Speech Chain.

Bell Telephone Laboratories, Murray Hill, NJ, 1963.



Rafael Fischer and Kees Hengeveld.

A'ingae (Cofán/Kofán).

In Patience Epps and Lev Michael, editors, *Amazonian Languages. An International Handbook*. De Gruyter Mouton, Berlin, forthcoming.

REFERENCES IV



Matthew Gordon.

Stress Systems.

The Handbook of Phonological Theory, Second Edition, pages 141–163, 2011.



Roberto Bear Guerra.

A photo from *Life in Oil: The Cofán*, 2016.

URL <https://bearguerra.com/the-cofan/7ik9eim0x9skp3xm0ksd92kspi14ps>.

Accessed on 14 April 2019.



Morris Halle and Jean-Roger Vergnaud.

An Essay on Stress.

MIT Press, 1987.

REFERENCES V



Michael Hammond.

Constraining Metrical Theory: A Modular Theory of Rhythm and Destressing.

Indiana University Linguistics Club, 1984.



Bruce Hayes.

Metrical Stress Theory: Principles and Case Studies.

The University of Chicago Press, Chicago and London, 1995.



Bruce Philip Hayes.

A Metrical Theory of Stress Rules.

PhD thesis, Massachusetts Institute of Technology, 1980.



Paul Kiparsky and Morris Halle.

Towards a Reconstruction of the Indo-European Accent.

Studies in Stress and Accent, pages 209–238, 1977.

REFERENCES VI



Ilse Lehiste.

Suprasegmentals.

MIT Press, Cambridge, 1970.



Karuvannur Puthanveetil Mohanan.

The Theory of Lexical Phonology, volume 6 of Studies in Natural Language and Linguistic Theory.

Springer Science & Business Media, 2012.



Kenneth Pike.

Stress Trains in Auca.

In D. Abercrombie, Dennis B. Fry, P. A. D. MacCarthy, N. C. Scott, and J. L. M. Trim, editors, *In Honour of Daniel Jones*, pages 425–31. Longmans, London, 1964.



Alan Prince.

Relating to the Grid.

Linguistic Inquiry, pages 19–100, 1983.



Alan Prince.

Improving Tree Theory.

In *Annual Meeting of the Berkeley Linguistics Society*, volume 11, pages 471–490, 1985.



Chiara Repetti-Ludlow, Haoru Zhang, Hugo Lucitante, Scott AnderBois, and Chelsea Sanker.

A'ingae (Cofán).

Journal of the International Phonetic Association, forthcoming.

REFERENCES VIII



Gary F. Simons and Charles D. Fennig.

Ethnologue: Languages of the World, Twenty-first edition.

SIL International, Dallas, Texas, 2018.

URL <http://www.ethnologue.com>.

Online version.



Donca Steriade.

Greek Accent: A Case for Preserving Structure.

Linguistic Inquiry, 19(2):271–314, 1988.



María Elena Tobar Gutiérrez.

Modo, tiempo y aspecto en Cofán.

Master's thesis, Universidad de los Andes, Bogotá, 1995.



Marine Vuillermet.

A grammar of Ese Ejja, a Takanan language of the Bolivian Amazon.

PhD thesis, Université Lumière Lyon 2, Lyon, 2012.



Haoru Zhang, Rachel Gutman, Hugo Lucitante, Chiara Repetti-Ludlow, Scott AnderBois, and Chelsea Sanker.

A phonetic sketch of A'ingae (Cofán).

Presentation given in the Center for Indigenous Languages of Latin America. The University of Texas at Austin, 2017.