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Heavy feet and glottal stops in A'ingae,

or the morphophonology of A'ingae lexical stress

Maksymilian Dąbkowski

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Brown University

PROTECTED AREAS

COFAN TERRITORIES

people and language

- the Cofán people
  - indigenous to Ecuador and Colombia
  - traditionally hunter-gatherer (Cepek, 2012)
- the A'ingae language
  - language isolate
  - ca. 1 500 speakers (Repetti-Ludlow et al., 2019)
  - highly complex morphophonology (Dąbkowski, in prep.)
    - interaction between glottal stops and stress
    - glottal stops contribute to "foot-level weight"
    - data elicited from three Ecuadorian speakers

- structural
  - heavy nuclei (long vowels, diphthongs)
  - codas

(1) a. *gen<u>t</u>le* b. *gen<u>teel</u>*

(English)

- qualitative
  - voiceless onsets
  - low vowels

(2) a. *<u>kàà</u>gàì* b. *bĭí<u>sàì</u>*

‘word’ ‘red’

(Pirahã, D. Everett and K. Everett, 1984)

puzzle and solution

- glottal stops influence stress assignment

(3) a. *fe<u>tha</u>-ye*
'open-INF'

b. *fi'thi-ye*
'kill-INF'

- in a way unattributable to syllabic weight
- despite the presence of syllabic weight distinctions
  - there are no long vowels
  - only diphthongs contribute to syllabic weight
  - glottal stops are the only codas
- typologically unattested stress assignment
- glottal stops contribute to foot-level weight
- novel application of "weight" beyond the syllable

Borman (1962) and Fischer and Hengeveld (forthcoming)

- contrastive

(4) a. *chiga*
'god'

b. *chi'ga*
'not want'

(5) a. *an=mba*
'eat=SS'

b. *a'mba*
'yuca'

(6) a. *umba*
'up'

b. *u'mba*
'be full'

(7) a. *tsa=ma*
'that=ACC'

b. *tsa='ma*
'that=FRS'

- apostrophes are codas, nasals are not

Repetti-Ludlow et al. (2019)

- the only coda
- only in codas
  - sometimes metathesized

(8) a. *tsa'u*
'house'

b. *tsau'–'pa*
'house–N,' 'nest'

- often suffix-initial: *–'je* 'IMPV,' *–'ja* 'CNTR,' *–'ya* 'VER,' ...
  - responsible for many glottal minimal pairs

		penultimate		regular (penultimate)		weight-sensitive
(10)	a.	*fetha*	b.	*fetha-ye*	c.	*fetha-'je*
		'open'		'open-INF'		'open-IMPV'
(11)	a.	*fûite*	b.	*fûite-ye*	c.	*fûite-'je*
		'help'		'help-INF'		'help-IMPV'
(12)	a.	*fûndûi*	b.	*fûndûi-ye*	c.	*fûndûi-'je*
		'sweep'		'sweep-INF'		'sweep-IMPV'

- regular suffixes: *-ye* 'INF,' *-khu* 'RCPR,' *-ji* 'PRCM,' ...
- weight-sensitive suffixes: *-'je* 'IMPV,' *-'ngi* 'VEN,' *-'nga* 'AND,' ...

penultimate stress by default

weight-sensitive stress
to the left of a glottal stop

- penultimate default suggests trochees (left-dominant feet)
- glottal-stop pattern suggests weight sensitivity

c. (10) (*fetha-'*)*je* (11) (*fûite-'*)*je* (12) *fû*(*ndûi-'*)*je*

'open-IMPV' 'help-IMPV' 'sweep-IMPV'

- observe that glottal stops are final in the head foot
- reveals the A'ingae foot shape: (L L), (H L), (H)
  - branching-head trochee
- what about glottal stops final in the head syllable?

(3) b. (*fi'thi*)-*ye*

'kill-INF'

- glottal stops must be located in the head foot
  - in the head foot $\stackrel{def}{=}$ in the coda of either head foot syllable
- ALIGN(ʔ, R, WDHD, R), or ALIGNʔ
  every glottal stop is right-aligned with a word head
  - word head $\stackrel{def}{=}$ head syllable $\vee$ head foot
  - aligned with a word head $=$ in the head foot

  (McCarthy and Prince, 1993; Prince and Smolensky, 1993)
- underspecifies the position of stress

c. (10)	*(fetha-'))je*	
	**fe(tha-'je)*	
	'open-IMPV'	
(11)	*(fûite-'))je*	
	**fûi(te-'je)*	
	'help-IMPV'	

- a low-ranking constraint pushes for word-initial feet
  - independently motivated by initial dactyls

  (Furby, 1974; Hayes, 1980, 1995; McCarthy and Prince, 1993)
- ALIGNʔ ranking derives complexities (Dąbkowski, in prep.)

- structural and qualitative weight alike
  attract stress to the heavy syllable, not the heavy foot
- the applicability of weight to feet is a typological novelty

- glottal stops are deleted in certain environments

(13) a. *a*(*tapa*)
‘reproduce’

b. *a*(*tapa-’*)*chu*
‘reproduce-SBRD’

(14) a. (*áfa*)*se*
‘insult’

b. (*áfa*)*se-chu*
‘insult-SBRD’

- proposal
  glottal stops must be located in the head foot
- consequence
  glottal stops outside of the head foot are deleted

conclusions

glottal stops contribute to weight
at the foot level

which is a typological novelty

and accounts for stress patterns
as well as glottal stop deletion

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references i

- Aikhenvald, Alexandra Y. (2012). *Languages of the Amazon*. Oxford University Press.
- Alderete, John D. (1999). "Morphologically Governed Accent in Optimality Theory". Doctoral dissertation. University of Massachusetts Amherst. DOI: 10.4324/9781315054834.
- – (2001). "Dominance Effects as Transderivational Anti-faithfulness". In: *Phonology* 18.2, pp. 201–253. DOI: 10.1017/S0952675701004067.
- Anttila, Arto (1997). "Variation in Finnish Phonology and Morphology". Doctoral dissertation. Palo Alto: Stanford Universty.
- Borman, Marlytte Bub (1962). "Cofán Phonemes". In: *Studies in Ecuadorian Indian Languages*. Vol. I. Ed. by Banjamin Elson. Linguistic series 7. México, D. F.: Instituto Lingüístico de Verano (Summer Institute of Linguistics), pp. 45–59.

references ii

- Borman, Marlytte Bub (1976). *Vocabulario cofán: Cofán-castellano, castellano-cofán*. Vocabularios indígenas 19. Quito: Instituto Lingüístico de Verano (Summer Institute of Linguistics).
- Borman, Marlytte Bub and Enrique Criollo (1990). *La cosmología y la percepción histórica de los cofanes de acuerdo a sus leyendas*. Cuadernos etnolingüísticos 10. Quito: Instituto Lingüístico de Verano (Summer Institute of Linguistics).
- Caballero, Gabriela (2011). "Morphologically Conditioned Stress Assignment in Choguita Rarámuri (Tarahumara)". In: *Linguistics* 49.4, pp. 749–790.
- Cepek, Michael (2012). *A Future for Amazonia: Randy Borman and Cofán Environmental Politics*. University of Texas Press.
- Dąbkowski, Maksymilian (in prep.). "The Morphophonology of A'ingae Lexical Stress". Honors thesis. Providence, RI: Brown University.

references iii

- Eberhard, David M., Gary F. Simons, and Charles D. Fennig, eds. (2019). *Ethnologue: Languages of the World. Twenty-second edition*. Online version. Dallas, Texas: SIL International. URL: `http://www.ethnologue.com`.
- Everett, Dan and Keren Everett (1984). “On the Relevance of Syllable Onsets to Stress Placement”. In: *Linguistic Inquiry*, pp. 705–711.
- Fischer, Rafael and Kees Hengeveld (forthcoming). “A’ingae (Cofán/Kofán)”. In: *Amazonian Languages. An International Handbook*. Vol. 1: *Smaller Language Families and Isolates*. Ed. by Patience Epps and Lev Michael. Handbooks of Linguistics and Communication Science (HSK) 44. Berlin: De Gruyter Mouton.
- Furby, Christine E. (1974). “Garawa Phonology”. In: *Pacific Linguistics. Series A. Occasional Papers* 37, pp. 1–11.

references iv

- Hayes, Bruce (1980). “A Metrical Theory of Stress Rules”. Doctoral dissertation. Cambridge, MA: Massachusetts Institute of Technology.
- – (1985). “Iambic and Trochaic Rhythm in Stress Rules”. In: *Annual Meeting of the Berkeley Linguistics Society*. Vol. 11, pp. 429–446.
- – (1995). *Metrical Stress Theory: Principles and Case Studies*. University of Chicago Press.
- Hualde, José Ignacio and Xabier Bilbao (1993). “The Prosodic System of the Basque Dialect of Getxo: A Metrical Analysis”. In: *Linguistics* 31.1, pp. 59–86.
- McCarthy, John J. and Alan Prince (1986). “Prosodic Morphology”. In: *Linguistics Department Faculty Publication Series* 13. URL: `https://scholarworks.umass.edu/linguist_faculty_pubs/13`.

references v

- McCarthy, John J. and Alan Prince (1993). “Generalized Alignment”. In: *Yearbook of Morphology*. 12. URL: https://scholarworks.umass.edu/linguist_faculty_pubs/12.
- Orgun, Cemil Orhan (1996). “Sign-based Morphology and Phonology with Special Attention to Optimality Theory”. Doctoral dissertation. University of California, Berkeley.
- Poser, William John (1984). “The Phonetics and Phonology of Tone and Intonation in Japanese”. Doctoral dissertation. Massachusetts Institute of Technology.
- Prince, Alan (1980). “A metrical theory for Estonian quantity”. In: *Linguistic Inquiry*, pp. 511–562.
- – (1990). “Quantitative Consequences of Rhythmic Organization”. In: *CLS*. Vol. 26: *Papers from the Parasession on the Syllable in Phonetics and Phonology*. II, pp. 355–398.

references vi

- Prince, Alan and Paul Smolensky (1993). “Optimality Theory: Constraint Interaction in Generative Grammar”. In: *Rutgers Optimality Archive*. ROA-101. URL: http://roa.rutgers.edu/.
- Repetti-Ludlow, Chiara, Haoru Zhang, Hugo Lucitante, Scott AnderBois, and Chelsea Sanker (2019). “A’ingae (Cofán)”. In: *Journal of the International Phonetic Association*, pp. 1–14. DOI: 10.1017/S0025100319000082.