

The Perspicuity of the Syntax-Prosody Interface

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Theories of Intonation

- Pike: First to propose the modern phonological hierarchy in a theoretical context; initial pioneer of intonational studies - **Intonemes**
- Cruttenden & British School: Potentially infinite contours
- Bolinger: Began principled limitations on patterns
- Liberman & Pierrehumbert: pioneering formalization and phonetic analysis
- ToBI: Serious issues to confront.

Theories of the Intonation-Syntax Interface

- Bresnan, Selkirk, inter alia (continuing the program of syntactocentrism).
- Information Structure & intonation
- Intonation is read off of phonological constituents, not morphosyntactic constituents.

Recovery & Planning: Breen, Watson, and Gibson 2010

- The best model for the data included two factors predicting the size of the acoustic measure / the likelihood of a ToBI boundary:
- (1) **recovery**: the size of the largest most-recently completed semantically-related constituent up to two phonological phrases; and
- (2) **planning**: the length of the largest upcoming constituent which was not an argument of the most-recently processed head up to two phonological phrases.



Phonological Boundaries in the Dark

- The first texts I transcribed, learn to recite very well, and used to convince the Pirahas I wasn't terribly stupid were processed without knowing what they meant – just general subject matter.

(1) //hĩ?wəgəĩfĩ?əgəĩfĩhĩ hĩa bəəfĩhĩa bĩssəə//
 (2) Pəhĩ hĩa bəəfĩ hĩa bĩssəə hĩa?fĩhĩ?Pĩ
 (3) Pəiyə sàə gəbəgəə/kəgəĩfĩ hĩa?Pĩ
 (4) sīgĩā/hĩālc?hĩ ĩ Pəiā səbā sīfĩkə
 (5) bāĩPəəPəə Pəhĩ hĩa bāĩ hĩābā/hĩPəə/sīfĩkə
 (6) hĩPəəhũ hĩa bā PəPəiyə sīhĩābā hĩa bāĩ sīfĩkə

?ípə?osĩ//?āitācĩĩ/?āitācĩĩ pəwē
 pəwē ĩs//kəhālbə?lboĩ huē//?ibəlihuē gəbāhā
 ?āi/ kəhālbə kəhālbəbəogĩā gəhūā gāhā tāfə
 kəhāĩ bəbəogĩāĩ tāĩ sītāĩ/kəhāĩ ?iowē sītāĩ
 ?ā?āhũ sītābāĩ? ĩ sī tā bāāsī tāgāĩ gəbəwēh

Nonlinear relationships

- Pike's 'skewing' of hierarchies
- Steedman, others

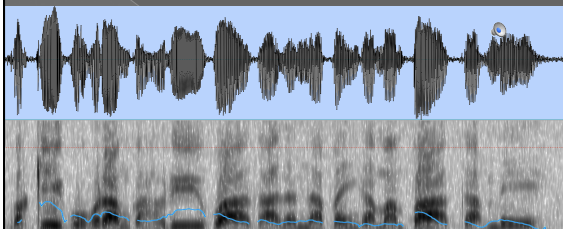
Methodology

- Reading vs. natural
- Psychological vs. linguistic distributional analysis
- Willie Humboldt says: **connected discourse**

Wari' (Chapakura): Intentional State Constructions

- Quotative
- [Ma' co mao na -in, Guajará]
- that:prox:hearer m/f:rp/p go:sg
3s:rp/p -3nGuajará
- (Brazilian city)
- Na_j -nam_k 'oro narima_k 'taramaxicon_j
- 3s:rp/p -3pf collective woman
chief
- "'Who went to Guajará?' (said) the chief to the women.'

Wari' Parenthetical (cf. Nicole Dehé)



Maqui' co hwará cahiru cwa' ca' nana pain ca mama' caca me.
They came, those who had long bird-arrows, when they went after birds.

Phonological Preliminaries 1: Pirahã Stress

- Stress the rightmost token of the heaviest syllable in the last three syllables of the word.
 - Stress = amplitude
 - CVV > GVV > VV > CV > GV
 - (C = voiceless; G = voiced)
- (! = stress; ' = high tone)
 - a. t!tigi 'small parrot'
 - b. !pigi 'swift'
 - c. tsábi 'mean, wild'
 - d. txábi 'to stay'
 - e. t!lhi 'bamboo'
 - f. x!hi 'forehead'
 - g. t!xi 'honey bee'
 - h. t!hi 'tobacco'

Phonological Preliminaries 2: Tone Rules in Pirahã And word-level intonation

- 1. HH/LL → MM/*L*L
[CVV] → [CVV]
- A H or L tone sequence associated with identical vowels in a monosyllabic word is lowered: H to M and L to *L (extralow).
- 2. a. [H L ...] → [M L ...]
b. [L H L ...] → [L M L]
- A H tone between two Ls or at the beginning of a word followed by a L tone is lowered to M.
- 3. a. H L H → H M H
b. H L L → H M L
- A L tone between two H tones or following a H tone word finally is M.
- Rules 2 and 3 further show that the beginning of a word acts as a lowering environment and the end as a raising environment. Everett (1978) refers to this as word-level intonation.

Channels of Discourse

- a. **HUM SPEECH:** Disguise, Privacy, Intimacy, Talk when mouth is full, Child language acquisition
- b. **YELL SPEECH:** Long distance, Rainy days, Most frequent use – between huts & across river
- c. **MUSICAL SPEECH:** ('big jaw') New information, Spiritual communication, Dancing, flirtation
- d. **WHISTLE SPEECH:** (sour or 'pucker' mouth) Hunting, – same root as 'to kiss' or shape of mouth Men-only (as in ALL whistle after eating lemon))



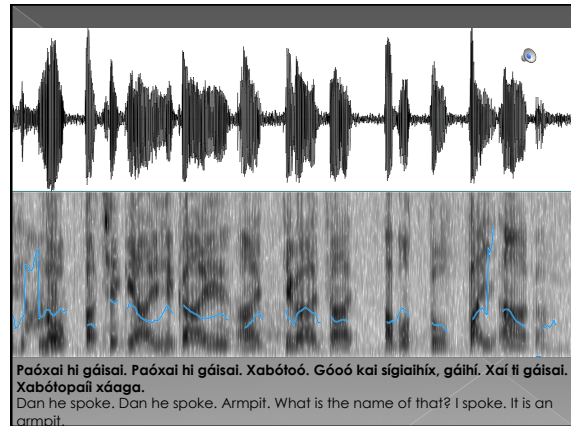
Functionality Constraint

- tí piai ~ kí piai ~ kí kiai ~ pí piai ~ /í piai ~ /í /ai ~ tí piai, etc. (*tí tiai, *gí jiai, *bí biai) 'me too'
- /apapai ~ kapapai ~ papapai ~ /a/a/ai ~ kakakai ~ (*tapapai, *tatatai, *bababai, *gagagai) 'head'
- /isilhoái ~ kisihoái ~ písihoái ~ pihiihoái ~ kíhihoái ~ (alternations with /t/s)

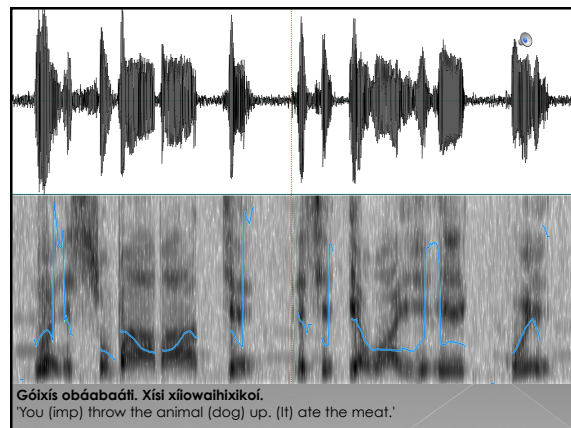
Constraint on functional load and necessary contrast (Everett (1985)):

- a. Greater Dependence on the Channel → Greater Contrast Required
- b. Lesser Dependence on the Channel → Less Contrast Required

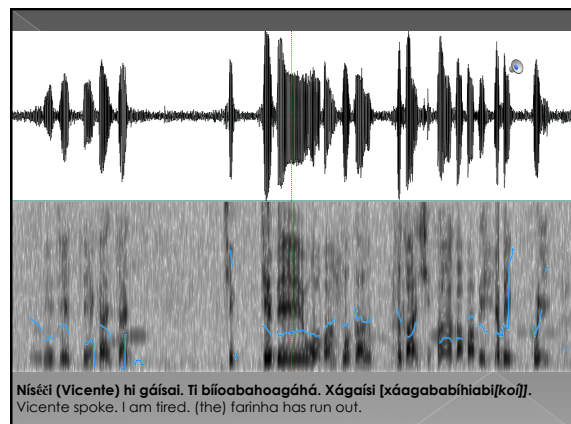
Question-answer pair



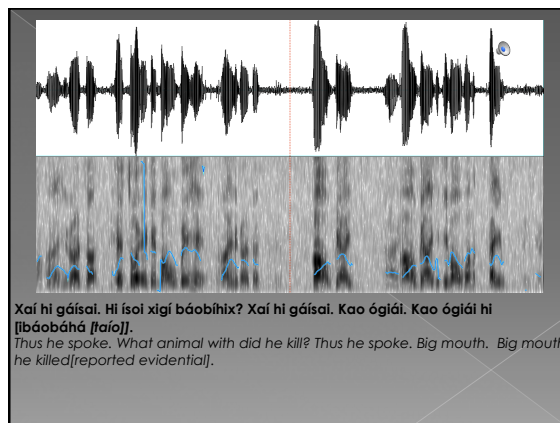
Action - Justification



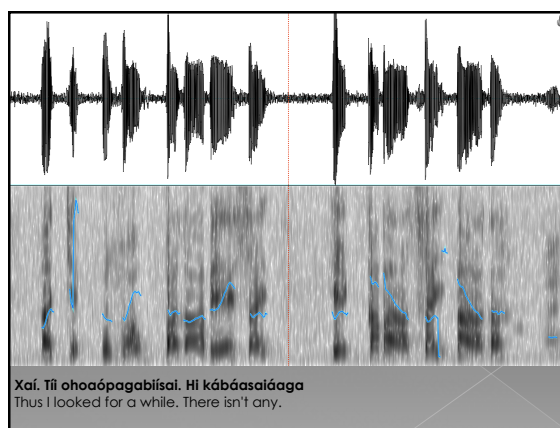
Quotative + Result & Reason (with narrow morphological emphasis)



Narrow Focus, Morphological Focus

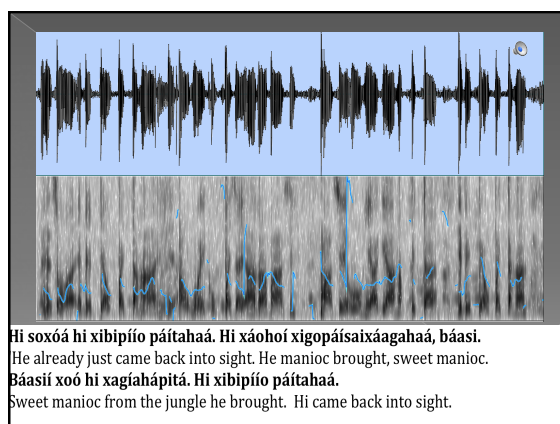


Action – Contraexpective Result



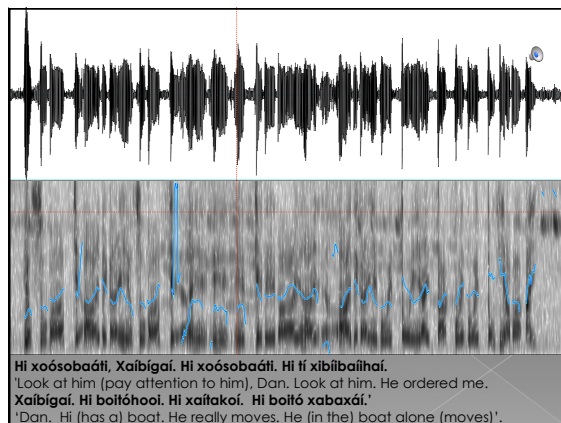
Xibipio – Important cultural concept

Note the Rising intonation across sentence boundaries.

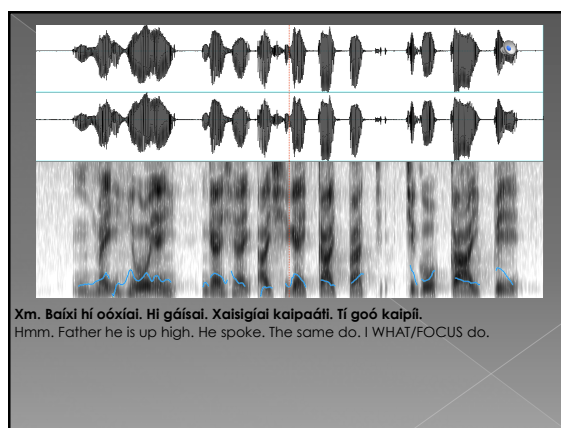


Sequence of sentences with rising intonation (no question)

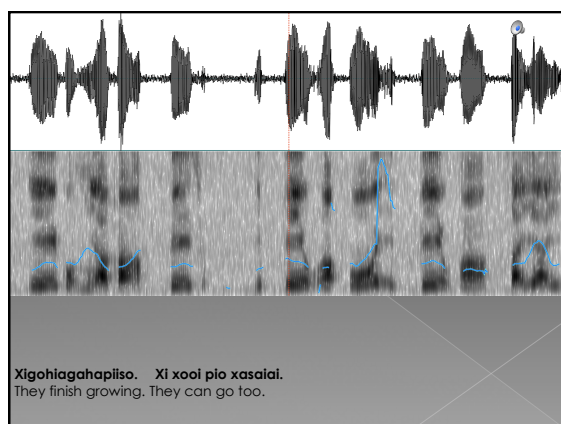
- This sequence includes a command clause.

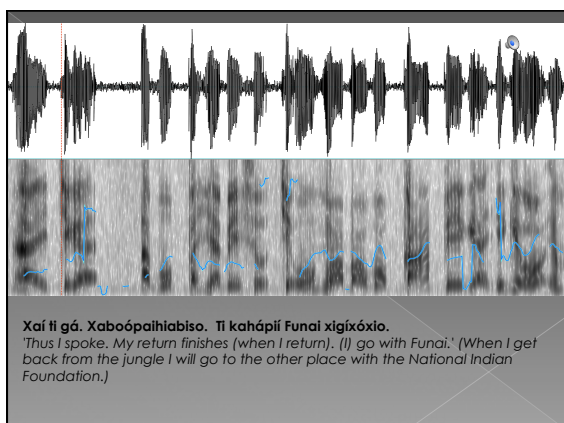


"Relative Clause" (restricted reference)

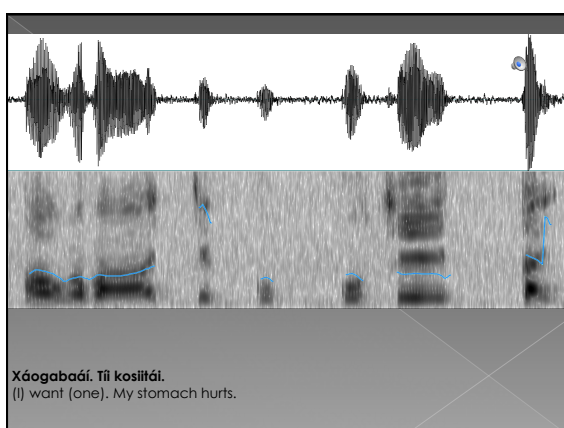


Temporal Clause





Desire - Reason



ToBI & RaP issues

- "First, several lines of evidence suggest that listeners hear more or fewer perceptual categories than ToBI models." (BDKG, 8)
- "A second, related drawback of ToBI is its lack of a consistent, transparent mapping between labeling distinctions and phonetic and/or perceptual events." (BDKG, 8)
- Rhythm and Pitch (RaP; Dilley & Brown 2005) – Same issues
- Lieberman (1965; 1985)
- Breen, Dilley, Kraemer, Gibson (2010)
- Breen, Gibson, Watson (2010)

Conclusion:

- Non-perspicuity:
 - IP can be a word, a phrase, a sentence, a paragraph.
- Each language as a unique case?