Prosody of Cayuga Content Questions

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1 Nutshell

• investigate the prosody and intonation of content questions in Cayuga (Iroquoian).

• single clause questions -> also examine (i) long-distance (multi-clausal) content questions and (ii) embedded questions (aka indirect questions).

• requires a revision of intonation pattern for single-clause content questions proposed by Williams (2013).

• embedded questions have a similar prosody to main questions

• contrasts with the standardly accepted generalization that embedded questions have the same intonation as declaratives.

• will sketch out a tentative analysis under Match Theory that captures the generalizations here

2 Background

• Cayuga (Northern Iroquoian) - highly endangered language spoken in Southern Ontario (Six Nations) and to a small extent in New York State (Cattaraugus Reserve)

• vigorous revitalization activities underway

2.1 Prosody in Questions

• Few studies address prosody and intonation in Cayuga (Mithun and Henry, 1984; Williams, 2013)

• Mithun and Henry (1984) - yes/no questions no distinct prosody - obligatory question particle, gęh

• Williams (2013) analyzes the prosody of content questions in Cayuga

• content questions: a high pitch accent, followed by a low phrase accent, followed by a low boundary tone

• H* L- L% (Williams, 2013, p. 127)

(1) aʔa:geʔ dęʔ diʔ hodęʔ ḋwadekį:niʔ
'She said, "What do you think we should eat?"'

- gives rise to high pitch on the wh-word followed by a low plateau to the end of the sentence.
- confirmed here

(2) wędóh dí? tóhö: heyagonagraðóh
   when PRT there she.moved.there
   ‘When did she move there?’

- clear pitch compression on verb
- pitch excursions on particles
- one possibility: particle group forms a prosodic word Michelson (1988)
• H* appears on stressed syllable of prosodic word
• L- L% appears at beginning of following prosodic word
• extend Williams’ analysis to include long-distance and embedded questions.

2.2 Long Distance Questions
• obligatory wh-movement in Cayuga, including in long-distance questions (Barrie et al., 2014)

what he.said your.father she.bought.it NE your.mother
‘What did your father say your mother bought?’

2.3 Embedded Questions
• obligatory wh-movement to scope position (Barrie et al., 2014)

(4) John honphpdɔnyɔh söh a?ek ne? swähɔwa?.
John wonders who ate NE apple
‘John wonders who ate the apple.’

• wh-movement to left edge of clause where wh-phrase takes scope

3 Methodology
• storyboard method to elicit content questions (Matthewson and Burton, 2015).

• A story was created to elicit questions about what one person reported another person’s actions to be.

• The scenario consisted of a conversation between two people. One participant asked what the person in the story reported and the other participant answered what they reported.

• The story was created in such a way that the participant had to distinguish between false reports and reality within the context of the story.

• The story was rehearsed several times and then recorded. The pitch tracks were produced with Praat (Boersma and Weenink, 2018).

4 Results
• results generally conform to Williams’ description

• H* on question word

• conforms to Haida (2007) - wh-words are typically focussed

• Long-distance content questions produced interesting results.

• the wh-phrase has a high pitch accent (H*, boldface in (5)) followed by a low plateau (underlining), as per Williams (2013)
• low plateau does not extend to the end of the sentence
• only as far as the next clause edge
• may spill over to next clause
• remainder of the sentence has fairly typical intonation

what he.said Howeniyo he.brought NE Hoseniyo
‘What did Howeniyo say that Hoseniyo brought?’

Howeniyo he.said what he.brought NE Hoseniyo
‘Howeniyo said what Hoseniyo brought.’

• clear compression or eradication (Ladd, 1996; Ishihara, 2007) visible until the start of the embedded verb
• Consider next embedded questions.
• Again, the wh-phrase bears a high pitch accent (H*, boldface) followed by a low plateau to the end of the sentence (underlining).
• compression visible again to the right of the wh-word

• small excursion on verb...possibly due to laryngeal consonants

• Taken together with the results of Williams (2013), these results suggest that Cayuga generally employs the intonation pattern H* L- L% for content questions

• however: low plateau runs to the end of the clause rather than to the end of the sentence.

5 Discussion

• compression associated with wh-questions seems to go to the end of the clause

• does not differ between matrix and embedded clauses

• prosodic hierarchy of Cayuga

• Dyck (2009) - the "word" is a phonological phrase, φ

• TENTATIVE: following Match Theory (Selkirk, 2009)

• consider a multi-clausal utterance

(7) ḡęhę? ahahsá?: gi? shę ni:yö gá:yę?


‘Yes, he finished it. There was just some left.’
• corresponds to following tree

(9)

• constraint against multiply embedded φ’s

• tree structured as follows

(10)
• non-minimal $\phi$ has a phrasal accent: -L at right edge

• in monoclausal environments, overwritten by boundary tone

5.1 Prosodic Marking of Interrogatives

• L compression restricted to maximal $\phi$

• consider a monoclausal wh-question (2)

(11)

$\ast$

(12)

• wh-compression extends to end of $\phi_1$

• (numbers on $\phi$ for identification purposes only)

• consider long-distance questions, (5)
• final embedded subject forms a separate $\iota$

• not considered here

• expected tree

(14)

• violates constraint against multiply embedded $\phi$’s

• restructured as follows
wh-compression extends to end of φ1

5.2 Embedded Questions

- English embedded wh-interrogatives tend to have the same prosody as interrogatives

(16) a. John knows when Bill ate his apple.
    b. John knows that Bill ate his apple.

- Special prosody for embedded wh-questions noted in other languages: Busan Korean (Hwang, 2011), Japanese (Smith, 2005)

- structure for embedded wh, (6)

(17)

• after restructuring, we get the following
wh-compression extends to end of $\phi_1$

![Diagram]

6 Conclusions

- examined the prosody of long-distance and embedded questions in Cayuga
- results build on Williams' (2013) study
- Cayuga generally employs an intonation pattern consisting of a high pitch on the wh-word followed by a low plateau to the end of the clause
- Analyzed under Match Theory as follows
  - verb is its own $\phi$
  - multiply embedded $\phi$'s are restructured
  - maximal $\phi$ after wh-word exhibits tonal compression
- surprising as embedded questions typically have the same intonation as declaratives
- highlights the need for comparative studies on the prosody of interrogatives

References


