Prosody and Intonation in Cayuga

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**Nutshell:** I discuss some prosodic details focus, topic, questions and other speech acts in Cayuga. I discuss the composition of various intonation patterns and suggest a compositional analysis along the lines of Pierrehumbert and Hirschberg (1990).

1 **Background**

> The role of prosody and intonation in language, while having a long history has not often received center stage in linguistic theorizing (Gussenhoven & Rietveld 1992; Ladd 1980; Woo 1972).

> Cayuga (Iroquoian) – fieldwork conducted at Six Nations, southwestern Ontario
Northern Iroquoian: (Mithun 1995; Mithun 2009; Mithun & Henry 1984; Williams 2013).

- yes/no questions have the same prosody as declaratives
- content questions have a distinct prosody.

Barrie (2016): biased polarity questions have yet a distinct prosody.

Mithun (1995): rich agreement morphology \(\rightarrow\) word order not grammatically constrained

Word order based on pragmatics/information structure

Newsworthy items tend to be clause-initial

New information tends to be higher in pitch

Pitch declines over duration of utterance (between breaths)

Beginning of utterance \(\rightarrow\) higher pitch \(\rightarrow\) new information

I consider this earlier research in addition to expressions of surprise and disbelief.

Attempt to analyze units of prosody in the sense of Pierrehumbert and Hirschberg (1990)

2 Methodology

Totem Fields Storyboard method (Matthewson & Burton 2015), adapting it for use with two speakers to elicit conversational data.

Thank-you Notes (Littell 2010) consists of an illustrated dialogue between two people with minimal narration.

Each speaker assumed the role of one of the characters in the story

The researcher goes through the story once with the English dialogue showing

The story was rehearsed in Cayuga two times with the English sentences visible.

Question/answer pairs: one speaker asks the questions, the other answers

then rehearsed twice with no English sentences shown.

then recorded (again with no English visible).
Shopping Story (created by author) used the same methodology.

Thank-you Notes story: answers = presentational focus

Average pitch of focused DP was compared to whole S

3 Results

Two sets of data arise from this study.

- focussed nominals
- speech acts and speaker knowledge

Tone markings

- T% boundary tone at edge of intonational phrase (clause) – usu right edge
- T- phrase accent at edge of phonological phrase (word/word+PRT)
- T* simplex pitch accent associates with accented syllable in a word
- T*+T complex pitch accent contour tone on an accented syllable

3.1 Information Structure and Prosody

Average pitch of stressed syllable on nominal with presentational focus: 193.46Hz

Average pitch of sentence: 155.99Hz

In the following example, kso:t (‘grandmother’) has presentational focus and has such a rise.

Topics, such as neˀ nyagwaiˀ in (2) exhibit tonal compression and are often incorporated, as discussed by Mithun (1984).

(1) So:noht neˀ ahya:yǫˀ neˀ nyagwaiˀ
    Who NE she.gave.you NE bear
    ‘Who gave you the (teddy) bear?’

(2) Kso:t neˀ aˀq̈:g̈ˀ neˀ nyagwaiˀ
    Grandma NE she.gave.me NE bear
    ‘Grandma gave me the bear.’
Pitch on stressed syllable exhibits same pattern as other phrase-internal words:

i. High level pitch following by declination on particles to L- on V

ii. High pitch that falls to L- on V (when focused nominal is adjacent to V)

1st pattern observed above

2nd pattern observed below.

phrase-internal words: ultima always bears stress (Michelson 1988).
As previously mentioned topics are often incorporated.

(3) Sǫ:noht  ahya:yǫˀ neˀ ohwíhsdaˀ
    who FACT-3.SG.M.AG:2.SG.PAT-give-PUNC NE NPREF-money-NFS
    ‘Who gave you the money?’
    Haˀkso:t neˀ  aWhakWhwihstWǫWˀ
    Grandpa NE FACT-3.SG.M.AG:1.SG.PAT-money-give-PUNC
    ‘Grandpa gave me the money.’

3.2 Prosody of Speech Acts

Preliminary results of some speech acts and related intonational tunes

surprise/disbelief

Context: speaker was under the mistaken impression that her interlocutor’s mother lived in Brantford.

(4) Taǫdǫh  sa:dǫh   neˀneˀ  Tganataiˀ  gyedrǫh!
    Toronto you.say NE NE Brantford she.lives
    ‘Toronto, you say?!? She lives in Brantford (right?!?)!’

extremely wide pitch range (max over 400Hz)
Observations: H*+L pitch accent on contrastively focused nominal, Brantford

Extra high tone (eH) on penult/1st σ of Toronto (ultima expected)

Out-of-the-blue polarity question. Speaker is changing topics.

Context: Two friends bumped into each other outside a supermarket. They were discussing their meal plans for the evening. The speaker below introduces a new topic.

New topic: high flat pitch throughout

Polarity question: larger than usual pitch variation

Accented syllable on V (determined by amplitude) bears L* (rather than usual H*)

Final phonological word bears a complex pitch accent: H*-L

(5) a:seʔ gęh to:gyęh?
   it.new Q that
   ‘Is it new?’ (it = previously mentioned shirt)
Williams (2013)

Exclamative       H* H% on final phonological word

Wh-question       H* (on wh-word), L- L% spread over rest of S

Polarity question  one example:

(6)   Jadohswˀédā:nih gę́h?
       ts-atohsweˀtani-h       kę́h
       2.DU.PAT-be.hungry-STAT Q
   ‘Are you both hungry?’

reports H% on question particle (2nd position particle)

Consider non-final question particle.

(7)   ahseyoseheˀ gę́h sanó:haˀ?
       ah-s-yo(ˀ)seh-eˀ       kę́h       sanó:haˀ
       OPT-2.SG.AG-visit-PUNC Q       your.mother
   ‘Are you going to visit your mother?’
Yes/no question clearly ends with L% (in line with prior research)

H on question particle

One analysis: (V+Q.PRT) form one phonological word

Stress is on ultima (as expected for utterance internal words)

Problem: contradicts with Williams’ example above, (6)

Instead, I argue for the following:

Polarity question ends in a L%

Q particle is assigned a H

4 Discussion

Pitch range of contrastively focused nominal is significantly different from pitch range of whole sentence (1-tailed t-test: t-value is 5.9439. p-value is 0.000018.)
We can reliably claim that pitch is used to indicate presentational focus in Cayuga.

Preliminary results on tunes and intonational contours:

Typical tune for Cayuga: \( L^{-} H^{*} L^{\%} \)

- \( H^{\%} \) - found on exclamatives and to signal that the speaker has not finished speaking
- \( H^{*} + L \) - found on exclamative with unexpected information and out of the blue polarity questions
- \( H^{*} + L \) indicates a novel proposition

Contour tones seem to be quite uncommon.

This contrasts with contrast Korean, where several tones cluster on one syllable (Jun 2007).

5 Conclusion

This investigative study set out to examine the prosodic properties of presentational focus in Cayuga.

It was shown that higher than average pitch is used to mark presentational focus.

Intonational contours were also examined.

Typical contour for intonational phrase ends in \( L^{-} H^{*} L^{\%} \)
H% indicates exclamation or intention to continue

complex pitch accent H* +L indicates novelty

References:


