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
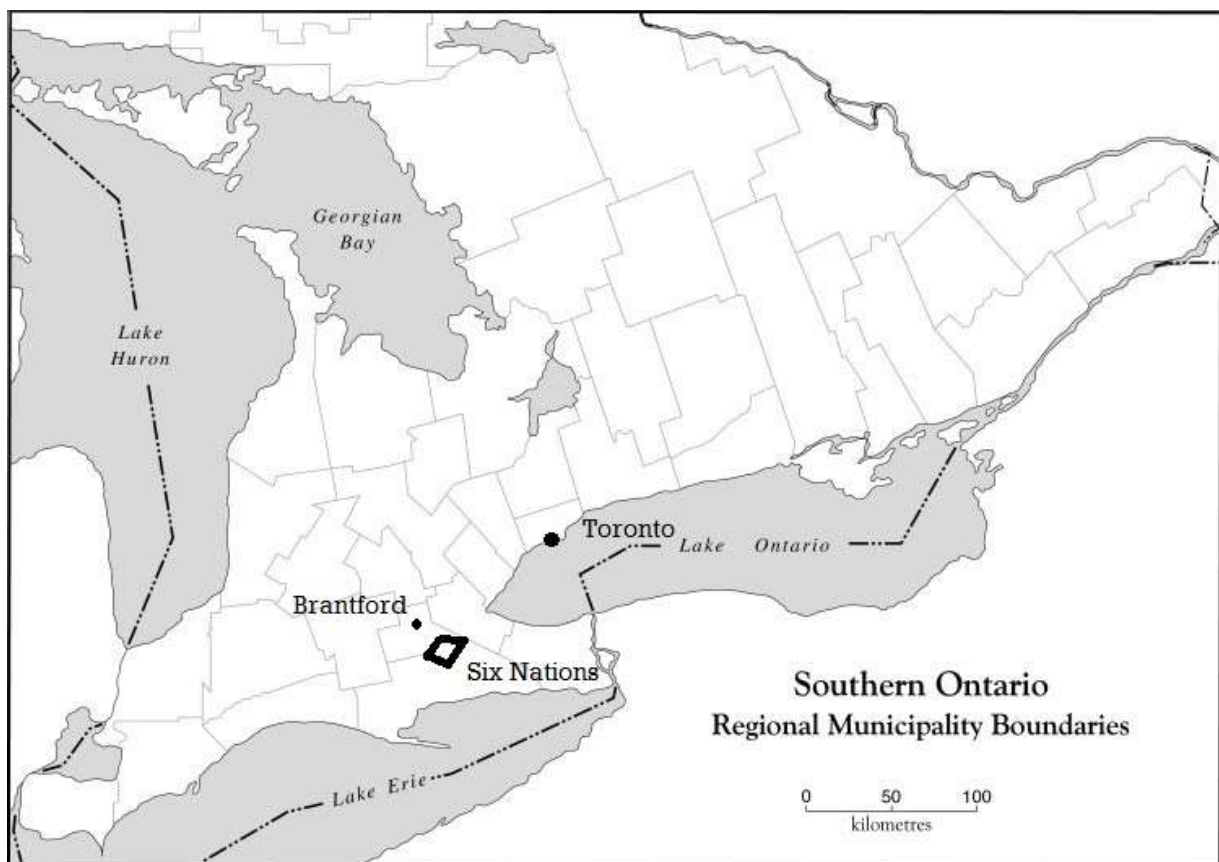
Map modified from the original by Cartographic Office, Department of Geography.   Brock University Map Library

➢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 → 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 → higher pitch → 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 * neʔ nyagwaiʔ* in (2) exhibit tonal compression and are often incorporated, as

discussed by Mithun (1984).

(1)   So:noht   neʔ   ahya:yǫʔ   neʔ nyagwaiʔ
         Who   NE   she.gave.you NE bear
         'Who gave you the (teddy) bear?'

(2)   Kso:t   neʔ aʔǫ:gǫʔ   neʔ nyagwaiʔ
         Grandmother NE she.gave.me   NE bear
         'Grandma gave me the bear.'

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Thank_you_notes_1

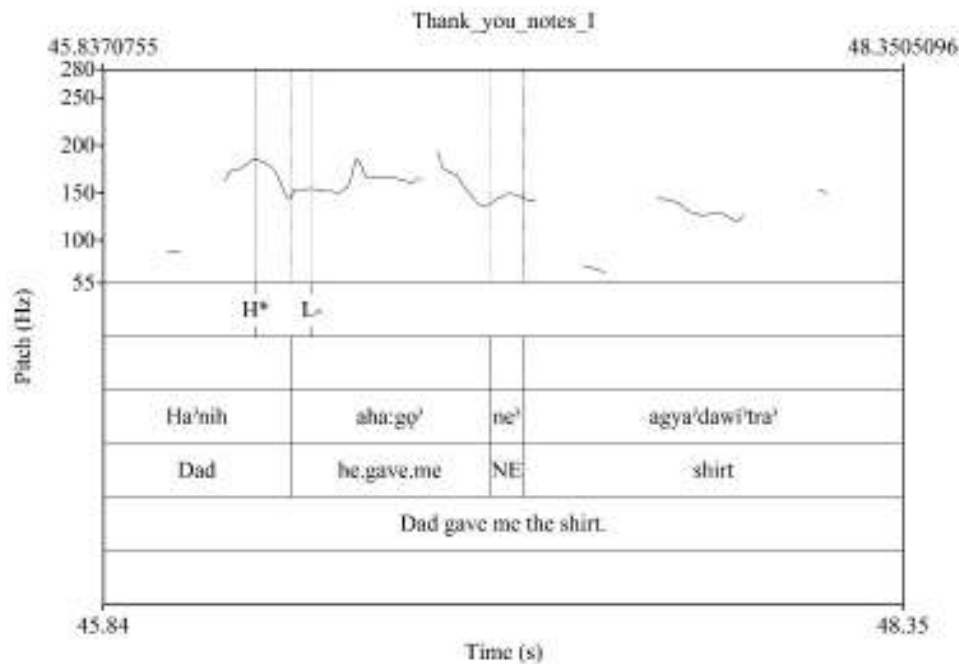| H* | L- | H* | L- | L% |
| Ksoːt | neˀ | aˀoːgoˀ | neˀ | nyágwaːiˀ |

Grandma gave me the bear.
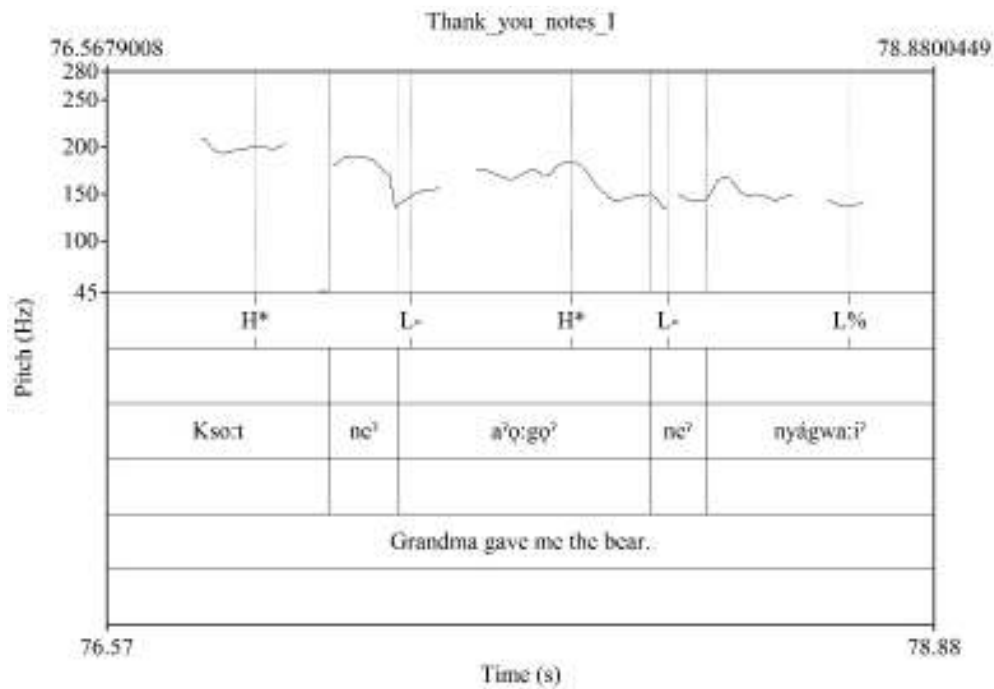
➢Pitch on stressed syllable exhibits same pattern as other phrase-internal words:

    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).

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Thank_you_notes_I

Haʔnih	ahːːgǫʔ	neʔ	agyaʔdawiˀtraʔ
Dad	he.gave.me	NE	shirt
Dad gave me the shirt.			

➤As previously mentioned topics are often incorporated.

(3) Sǫ:noht ahya:yǫʔ neʔ **ohwíhsdaʔ**
     sǫ:noht   a-hya-ǫ-ʔ   neʔ   o-hwihst-aʔ
     who   FACT-3.SG.M.AG:2.SG.PAT-give-PUNC NE   NPREF-money-NFS
     'Who gave you the money?'

     Haʔkso:t neʔ ahák**hwihsdǫʔ**
     haʔkso:t   neʔ   a-hak-hwihst-ǫ-ʔ
     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   neʔneʔ Tganataiʔ   gyedrǫh!
     Toronto   you.say   NE NE Brantford   she.lives
     'Toronto, you say?!? She lives in Brantford (right?)!'

➤extremely wide pitch range (max over 400Hz)

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Cayuga_shopping_conversation_1

eH*		L-		(L-)H-		H*+L	H-		H*+L	L-	L%
Taǫdǫh			sa:dǫh	ne'ne'		Tganatai:'			gyedrǫh		
Toronto			you.say	NE NE		Brantford			she.lives		

Toronto, you say?!? She lives in Brantford!
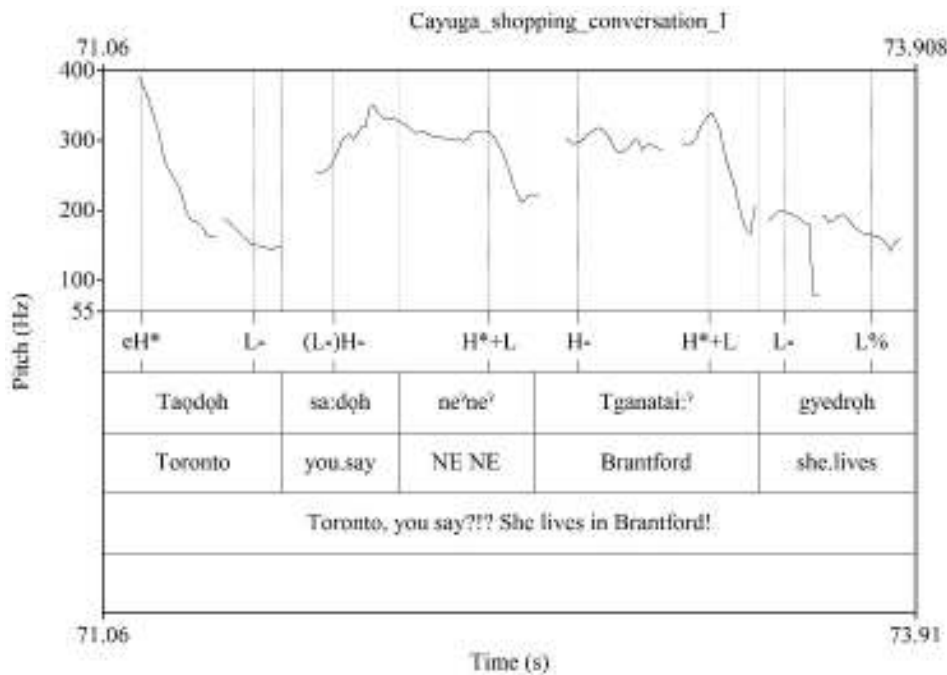
➢Observations: H*+L pitch accent on contrastively focused nominal, *Brantford*

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

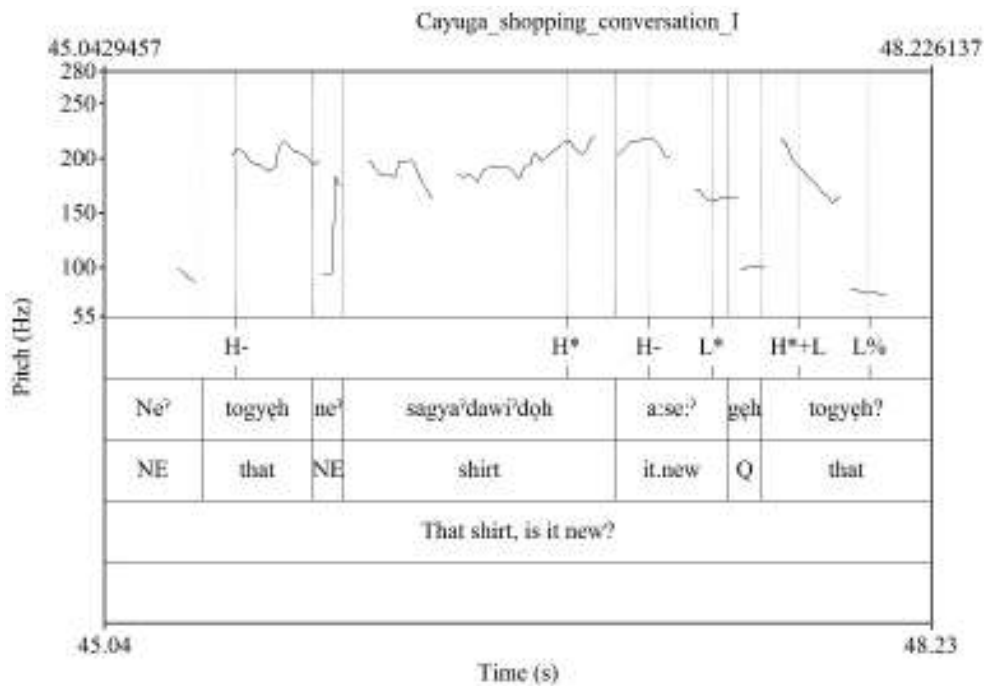discussing their meal plans for the evening. The speaker below introduces a new topic.

➢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:se:' gęh   to:gyęh?
       it.new Q   that
       'Is it new?' (it = previously mentioned shirt)

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Cayuga_shopping_conversation_I

	H-			H*	H-	L*	H*+L	L%
Neʔ	togyęh	neʔ	sagyaʔdawiʔdoh		aːseːʔ	gęh	togyęh?	
NE	that	NE	shirt		it.new	Q	that	

That shirt, is it new?

➢ Williams (2013)

    Exclamative   H* H% on final phonological word

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

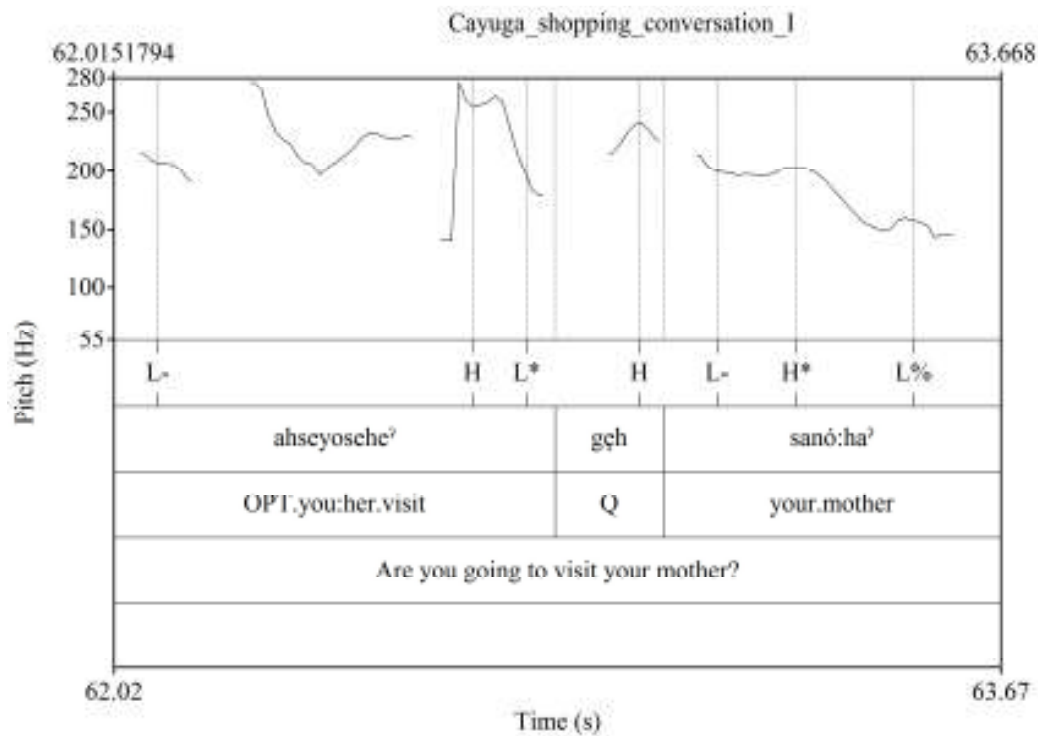   Polarity question   one example:

(6)   Jadohswʼedáːnih gę́h?
        ts-atohsweʔtani-h   kęh
        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)   ahseyoseheʔ gęh sanóːhaʔ?
        ah-s-yo(ʔ)seh-eʔ   kęh   sanóːhaʔ
        OPT-2.SG.AG-visit-PUNC   Q   your.mother
        'Are you going to visit your mother?'

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Cayuga_shopping_conversation_1

L-	H L*	H	L- H* L%
ahseyosche?		gęh	sanó:ha?
OPT.you:her.visit		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.)

Average Frequency

Left = focused nominal
Right = sentence
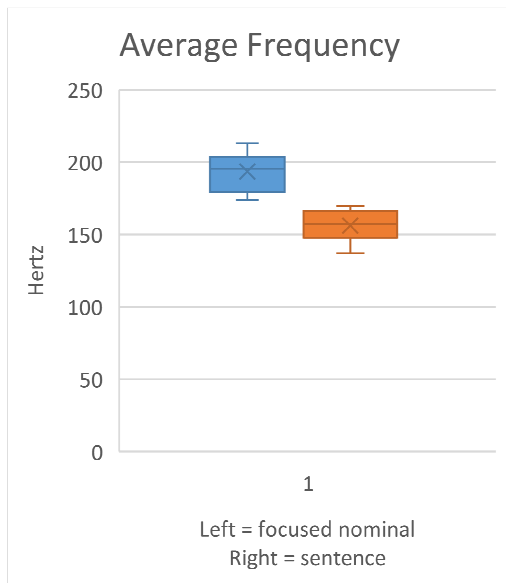
➢We can reliably claim that pitch is used to indicate presentational focus in Cayuga.

➢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%

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➢H% indicates exclamation or intention to continue

➢complex pitch accent H* +L indicates novelty

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