Cayuga "Accent" or Intonation: Bridging Lexical Stress and Phrase-Level Prosody

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This study addresses the previous interpretation of word prominence in Northern Iroquoian languages, focusing on a critical reassessment of what has been termed as "accent" in Cayuga. Building on the foundational descriptive works of [1] and [2-3], which predominantly concentrated on Cayuga words in isolation, this study explores the relationship between lexical stress and phrase-level intonation in Cayuga, addressing the potential conflation of lexical and phrasal prosody [4] made by these earlier studies. Cayuga "accent," as described in earlier studies, is determined by a complex system of accentuation based on the penultimate vowel's moraic count (from left edge) and quality, as well as the number and type of consonants following the penult, and the word's position in the sentence.

This research utilizes a speech corpus of Cayuga, comprising recordings (totaling over 2.5 hrs) from four native Cayuga speakers, aged 54 to 79 years (appx. mean age 66.5 year), and encompassing a range of speech forms - from traditional stories and personal narratives to formal recitations of the Thanksgiving Address ([5], [6]), a speech typically given in Longhouse meetings. By employing a variety of genres in the analysis, we attempt to ascertain the generality and consistency of identified intonational patterns across different forms of Cayuga speech. The study investigates the fundamental frequency (f0) contours of the final three syllables in polysyllabic words, where stress placement varies.. It uses Generalized Additive Mixed Models (GAMMs) to model these contours, focusing on how stress placement (penultimate vs. antepenultimate) and position in the sentence (final vs. non-final) affect them. Due to the limited number of speakers, separate GAMMs were fitted for the sonorant portions of each type, facilitating a detailed analysis of intonational patterns specific to each speaker, words

The study's findings reveal complex pitch variations in Cayuga, dependent on both the position of stress within words and the word's placement in the sentence. For words with antepenultimate stress, a consistent peak in f0 was observed on the antepenult, regardless of the word's prosodic position. In non-final positions, these words exhibit an additional f0 peak word-finally. In contrast, sentence-final position leads to a fall in pitch following the antepenult peak. In a similar fashion, words with penultimate stress demonstrate a f0 peak on the penult, with subsequent variation in the pitch contour - a rise towards the word edge for sentence non-final words and a fall for words in sentence-final position. For one participant, Enos Williams (EW) whose recordings consisted solely of the Thanksgiving Address, the analysis of the f0 melody revealed a distinct pattern based on the word's position in the sentence. In non-final positions, EW's speech exhibited a fall-rise (scooped) pattern, where the pitch descended from the stressed syllable and then ascended again at the end of the word. Conversely, in sentence-final positions, EW demonstrated a rise-fall pattern, with the pitch initially rising to the stressed syllable, followed by a plateau and then a decline at the end of the word. This strikingly different pattern is likely due to the speech genre, but paralleled the broader pattern where the melody differs by stress location and the word's phrase position.

This reevaluation enriches our understanding of Cayuga's suprasegmental features and is crucial for prosodic theory, highlighting distinct intonational phenomena as separate yet interacting elements. Discerning between edge-associated phrase tones and pitch accents, this study challenges the traditional view of "accent" in Iroquoian languages. Insights into Cayuga's prosody reveal the interplay of intonation and stress within its polysynthetic structure, enriching our understanding of prosodic variation, especially in languages with complex morphosyntax. This research emphasizes phrasal context's importance in prosodic analysis, advancing Intonational Phonology using an indigenous, lesser-documented language.
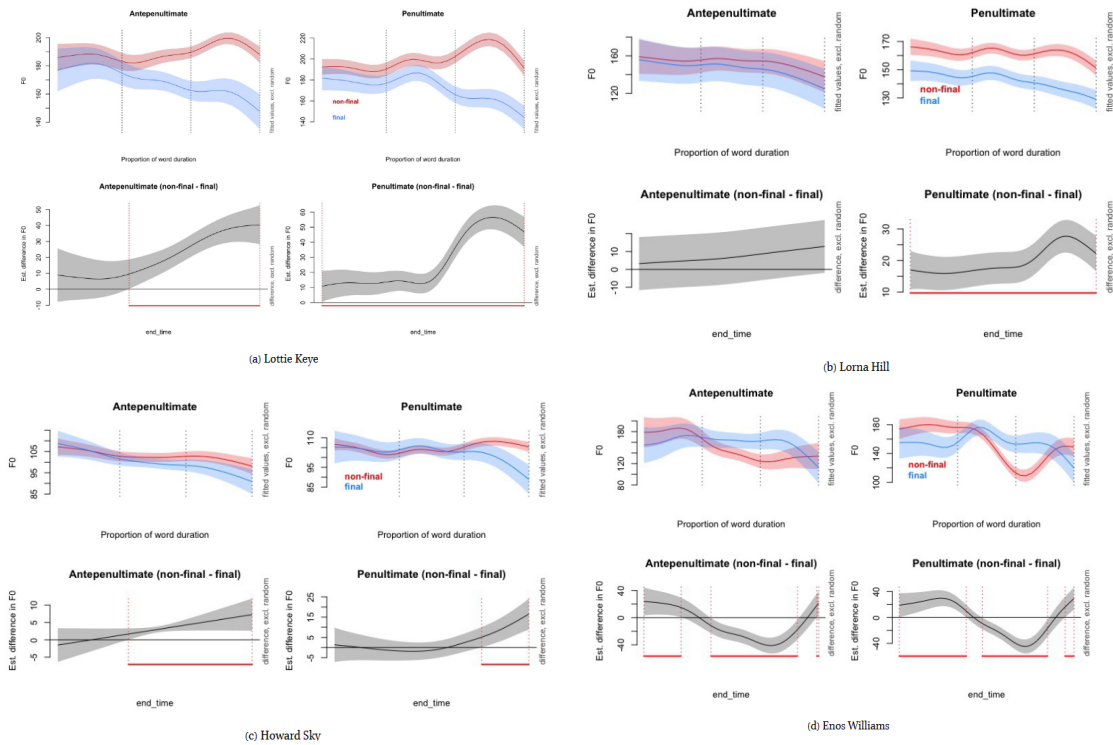
Fig. 1. GAMM smooth and difference plots of f0 for final three syllables of polysyllabic words of four speakers of Cayuga. Each subplot consists of a set of two smooth and difference plots according to the position of primary stress (antepenultimate on the left, penultimate on the right). Each smooth plot contains smooths for words in sentence-final (red) and sentence non-final (blue) contexts. Difference plots distinguish which portions of the smooths significantly differ according to phrase context.
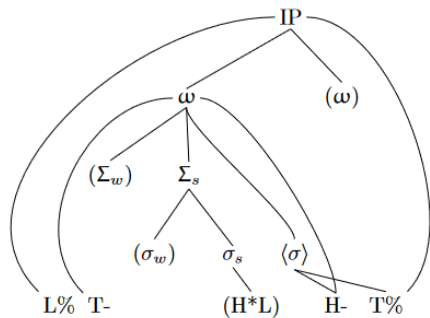

Fig. 2. Intonational structure of Cayuga consisting of two levels; prosodic word (ω) and the intonational phrase (IP) defined by edge-tones as well as the optional H*L pitch accent associated with the primary stressed syllable.
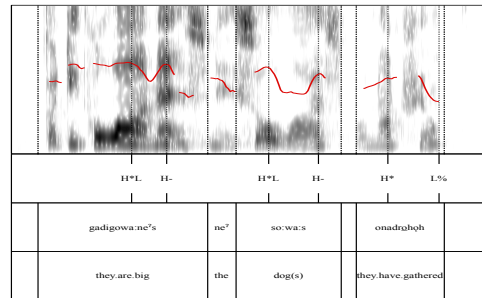

Fig. 3. Example Cayuga Intonational Phrase — *gadigowá:nęˀs neˀ só:wa:s onádrǫhǫh* "the dogs that gathered were big" — with word-final peaks on all but the final word and a fall on the stressed syllable of both the first and final words.

References

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