The Realization of Pitch as a Socio-pragmatic Identity Marker in Appalachian English

Paul Reed
Linguistics Program
University of South Carolina

INTRODUCTION

The current study uses sociolinguistic interviews to analyze the intonational patterns of Appalachian English (AE) speakers from northeast Tennessee. Using the ToBI transcription of Mainstream American English (Beckman et al. 2007) to locate the rising pitches, this study measures the anchoring of these pitches (H* and L+H*) in stressed syllables from conversational speech and compares it to MAE and other Southern varieties with data from demographically comparable speakers drawn from the Nationwide Speech Corpus (Clopper and Pisoni 2007) and the SLAAP archive (Kendall 2007).

My main research question is how rising pitch is syllabically anchored in Appalachian English and how pitch is used to reflect social differentiation.

Preliminary data showed that AE speakers have later alignment than Southern American English varieties and MAE. Thus, my hypothesis is that this alignment is a feature of this variety of AE.

PARTICIPANTS

24 participants from northeast Tennessee formed the cohort pool. Participants were stratified by age (Older and Younger), gender/sex (12 male, 12 female), and education (College and High School/ Technical certifications). In addition, the AE speakers are categorized by local orientation (positive, neutral, negative) based on responses to questions about feelings toward the local region (following the methodology of Haddican et al. 2013).

Demographically similar speakers from the SLAAP archives were chosen to represent other Southern varieties. Additionally, this study utilized MAE control speakers from the Nationwide Speech Corpus.

DATA

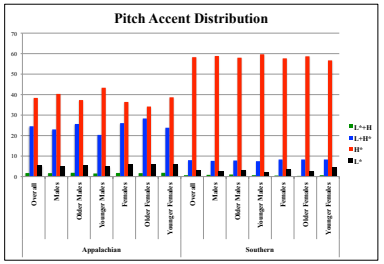
The data were extracted from sociolinguistic interviews. For this study, 70 pitches from a 1-2 minute speech sample were extracted, counted and measured. This was done to make portions of this comparable to the only known study of Appalachian intonation, Greene (2006).

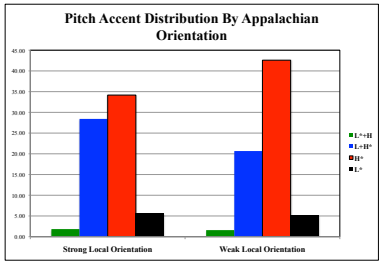
This particular variable was chosen because the Appalachian Dialect Region is considered one of the more divergent varieties in the United States (Wolfram and Christian 1976, Labov et al. 2006, Montgomery and Hall 2004, Greene 2006). Intonation has received a paucity of attention from a sociolinguistic, and especially a sociophonetic, viewpoint. The only detailed study of AE intonation patterns is Green 2006, which observed a higher incidence of L+H* accents (a rising pitch on stressed syllables) among AE speakers, compared to speakers of MAE or other SAE varieties. But, precisely how these pitch accents were phonetically realized was not investigated. The phonetic realization of pitch has been shown to have regional variation in American English (Arvaniti and Garding 2007, Clopper and Smiljanic 2007) and other English varieties (Grabe et al 2000, Grabe 2004, Atterer and Ladd 2004, Ladd et al. 2009). However, the extent to which speakers construct their regional and cultural identities through pitch accent (and intonation more broadly) remain virtually unexplored from a sociophonetic perspective.

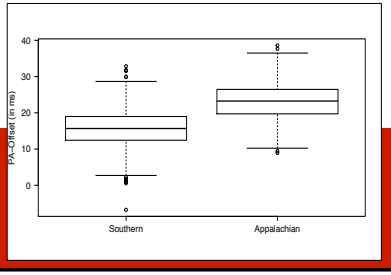
METHODOLOGY

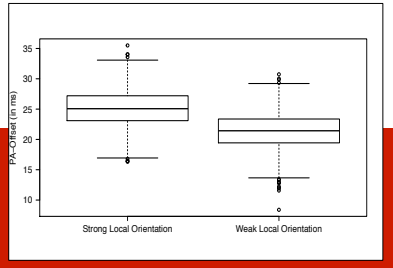
There were two stages in this investigation. First, I selected 1-2 minute selections from the latter half of the interviews. I then used ToBI transcription techniques for these selections. I counted the occurrence of all pitch accents, following Greene (2006).

Second, I followed the procedure outlined in Thomas (2011) to measure syllabic anchoring. The first step is to identify where in the stressed syllable (as measured from the onset of the stressed vowel) the highest point of the pitch accent occurs. The beginning of the vowel is identified, and the location of this highest point of the pitch accent relative to this point is measured; this is called the pitch accent offset (Ladd et al. 2009) The measure demonstrates where the pitch accent is anchored in the syllable. Slight variations of this methodology were used in Grabe et al. (2000); Grabe (2004); Ladd et al. (2009); Clopper and Smiljanic (2011) to analyze regional variation in intonation, so this method is robust and useful.









RESULTS

The two left upper charts above show the distributional data. The Appalachian speakers were significantly different from the Southern speakers (the Southern speakers were not different from the Mainstream speakers), and the Appalachian speakers with Strong Local orientation were significantly different from those with a Weak Local Orientation. I conducted chi-squared tests on the counts for H* and L+H*, and the results were significant at the p=.0001 level. Appalachian speakers used more L+H* and less H*. The other two pitch accents had too few counts to test. Those speakers with a Strong Local Orientation

The PA-Offset averages for the Appalachian and Southern speakers is shown in the rightmost figure above. The average PA-Offset for the Southern speakers was 15.7 ms, and the average for the Appalachian speakers was 23.1. I conducted a t-test on these numbers, and the two groups of speakers were significantly different (p<.0001). Thus, the Appalachian speakers have a greater PA-Offset. Those speakers with a Strong Local Orientation had an average PA-Off of 25.1 and those with a Weak Local Orientation had an average PA-Off of 21.4. A t-test on these values showed a significant difference (p<.00001).

DISCUSSION, LIMITATIONS AND FUTURE DIRECTIONS

Given the striking results, it appears that Appalachian speakers' L+H* is used in a different way than other English varieties. The overall frequency of the pitch accent is different, and it is phonetically realized differently. The speakers who have a more local orientation use the pitch accent most, and also have the longest PA-Offset. This may mean that this pitch accent is a way to signal an allegiance to the region and that this is a socio-pragmatically useful feature. Since many other Appalachian features tend to be stigmatized in the broader culture (a-prefixing, /ay/ monophthongization, lexical items), the frequent use of rising pitch and a later alignment may be a strategy to signal an Appalachian identity without the stigma of other features.

The next step is to determine if the excursion (the change in F0 from the local low to the local high) is different for these speakers as well. It may be that by having a larger excursion, it takes longer to reach the maxima. Thus, the later PA-Offset may be a result of greater changes in fundamental frequency.

The study provides some insight into the subtle contextual and linguistic factors that influence when and how speakers signal local identity. Previously under-investigated features provide a robust way to signal social differentiation. Thus, more attention must be paid to prosodic variation as well.

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