CHAPTER 5

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Appalachia, Monophthongization, and Intonation

Rethinking Tradition

1. Introduction

The Appalachian Regional Commission (www.arc.gov) recognizes Appalachia as the mountainous region that stretches from northern Georgia to Pennsylvania. For nearly 150 years metropolitan America has viewed Appalachia as a region of interest, yet this interest has suffered from misinformation and distorted portrayals. John C. Campbell (1921:xxi) states that "Appalachia is a land about which, perhaps, more things are known that are not true than of any part of our country." Sadly, this almost century-old statement rings as true today as ever. Some of the misinformation includes ideas that the region is culturally distinct from the rest of American culture. Additionally, the region is seen as culturally monolithic in spite of the fact that it spans thirteen states and includes millions of people. Portions of the monolithic idea derive from pervasive issues throughout (but not limited to) the region, such as low educational attainment and poverty. However, the roots of these problems, such as the role of extractive industry, and the present nuanced reality are typically missed. Articles and commentary regularly appear that promote circulating tropes of poverty and violence, regardless of their veracity or applicability when focusing on Appalachia (e.g., Williamson 2014). Frequent portrayals of the region's high rates of poverty and its reliance on exploitative industry, coupled with the vast amounts of governmental investment

and aid since the highly publicized federal War on Poverty beginning in the 1960s, have buttressed preexisting stereotypes of the region's population as backward and uneducated (e.g., Luhman 1990; Ayers 1996:70–71).

Gleaned from the notions of a distinct culture that is internally monolithic, there are widespread beliefs that certain cultural practices within Appalachia, such as Child balladry and handicrafts (e.g., Whisnant 2008), have changed little from those that early British and Irish colonists and immigrants brought with them in the eighteenth century. Such a belief relies upon the idea that the distinctive culture has allowed such practices to continue without change for centuries, and thus further demonstrates the idea that Appalachia remains in the past, avoiding progress.

The reality of this dynamic, variated, evolving region gets lost within such cultural misunderstandings. A large body of literature demonstrates the internal cultural variation of Appalachia (see, e.g., Billings, Gurney, and Ledford 2000; Abramson and Haskell 2006). Further, this same literature shows that Appalachia is not necessarily completely distinct from other regions — it shares many aspects with other southern and rural regions. And, as with many stigmatized regions and cultures, native Appalachians are not unaware of circulating tropes — in fact, many actively work to contest much of the stigma.

One principal way that residents react against circulating stigmatization is by being very locally oriented. Scholarly descriptions of the region and its various cultural practices find place and place attachment are central (e.g., Jones 1994; Abramson and Haskell 2006). For example, many natives of East Tennessee (where the data for the present study originate) respond to questions about where they are from with "East Tennessee" or even the particular section of East Tennessee (see the author's answer, "upper north East Tennessee," and responses in Montgomery 1995:73). Further, this sense of attachment can be very localized, potentially even to a particular parcel of ancestral land, often known as the homeplace (Cox 2006). I term this local attachment "rootedness."

As Appalachia has a stigmatized status as a region, Appalachian English (AE) has a particularly stigmatized status as a language variety. This, of course, derives from cultural stereotypes and misinformed beliefs. Some people believe that AE, akin to other cultural practices, is somehow a historical variety of English, little changed from what was spoken when the region was founded.[1] This "Shakespearean English" myth reinforces the notion that the language and region both are stuck in the past. Like other stigmatized varieties, some believe that poverty, lack of education, and cultural

backwardness make AE somehow lesser (see Luhman 1990; Greene 2010; Reed 2014). The reality, of course, is that AE is not monolithic and that it is continuing to evolve and change.

A growing body of literature has now demonstrated that Appalachian speech varieties diverge in some respects from Mainstream American English and other Southern American English varieties (e.g., Pederson, McDaniel, and Adams 1986–93; Carver 1987; Labov, Ash, and Boberg 2006),[2] and the AE speech varieties are also not monolithic, hence the growing scholarly preference for the term "Appalachian Englishes." Much of the literature on intraregional variation has largely focused on vocalic and morphosyntactic features. While some studies have indicated that some traditional features, such as /aɪ/-monophthongization and *a*-prefixing, may be receding (Labov, Ash, and Boberg 2006; Jacewicz, Fox, and Salmons 2011a, 2011b), others have found that these features are not just persisting but possibly even advancing (Irons 2007; Greene 2010). In particular, Greene (2010) argues that the presence of AE features is part of a local identity and that speakers who use many AE phonological forms do so in opposition to standard language ideologies that denigrate any nonmainstream variety (see Lippi-Green 1997, 2012).

As with many stigmatized varieties, AE speakers exhibit a bifurcation of allegiance and acceptance regarding AE (see Lippi-Green 1997:221–28). Research has begun to show how some speakers associate a strong sense of pride and identification with local language (Greene 2010; Reed 2012, 2014). In conversations for the present study, participants had a variety of opinions. Some would say, "You try to not sound like a country bumpkin, like a hillbilly."[3] Others referenced their own "bad grammar," "country slang," or perhaps "horrible sound."[4] However, others expressed pride: "This is how we talk, there's nothing wrong with it," and "it's like artwork, man, I love it!"[5] Such varied responses indicate that standard language ideologies have made quite an impact, but at the same time, pride in the local variety is also present. Typically, the participants who express pride in the speech varieties also often mention how much the local region and community mean to them. The present study illustrates that such feelings of belonging, or rootedness, affect not only the affection of participants toward AE but also their actual linguistic behavior.

However, other research suggests that some natives orient *away* from the region culturally and, concomitantly, linguistically (Greene 2010; Reed 2012, 2014). Such a change in orientation is perhaps due to intense negative perception and stigma of the region and ways of speaking that are associated with it. Thus, the variation present may be related to how much or how

little a speaker is attached to the local area. This idea fits into our evolving understanding of variation, which includes individual identity, summarized by Foulkes, Scobbie, and Watts (2010:717): "The array of structured variation available to an individual, coupled with other factors such as ideology . . . can be seen as a rich resource from which the individual can choose elements in order to project their identity and achieve particular communicative goals." All participants are individuals, and thus researchers must incorporate individual identity in their investigations of speech.

This study takes this idea of individual identity and presents new insight into a traditional AE linguistic feature, /aɪ/-monophthongization and initial insight into a newly identified variable, relatively frequent rising pitch accents. I chose /aɪ/-monophthongization because it features prominently in most studies of AE (e.g., Hall 1942; Wolfram and Christian 1976; Irons 2007; Greene 2010; Reed 2014) and in lay descriptions (see Venable 2013). Also, Feagin (2000:342) describes it as "the most notable unchanging element in southern states' pronunciation." In contrast, practically nothing has been written about rising pitch accents in AE aside from anecdotal mention, with the exception of Greene (2006). However, Botinis (2000:2) writes that "intonation is the most characteristic vocal means for communicating paralinguistic and indexical information"; thus, intonation should be an area where variation could be present. I hypothesized that an increase in rootedness increases both the rate of monophthongal realizations and the rate of rising pitch accents. I further hypothesized that an increase in rootedness changes how the pitch accents are realized. Incorporating a speaker's rootedness, an aspect of their personal identity, allows for better understanding of the language variation present.

2. General Methodology

I drew all data for the present study from sociolinguistic interviews with twenty-two participants (eleven male, eleven female) drawn from a convenience sample. All participants were from Sneedville, a small rural town located in Hancock County, Tennessee, on the border between central and southern Appalachia. Participants were stratified by age: older (sixty and older) and younger (sixty or below). This was a natural age break for this particular cohort.

I also categorized speakers by their rootedness using responses to questions posed during the interview portion, following the methodology of Haddican and colleagues (2013). This method involves asking participants three

questions about their feelings toward the local area. A positive response is scored +1, a negative response is scored –1, and a neutral or indeterminate response is scored 0. Thus, the scores could range from –3 to 3. Participants with scores of 2 or greater were considered rooted; those who were 1 or below were nonrooted.[6]

I did not use socioeconomic status to stratify participants. Any type of class or status measure does not capture the social reality in Appalachia. Hurst (1992) argues that class (or what we might understand as class) is elusive in Appalachia. He argues that class/status functions differently in Appalachia, based more on local traditions and connections, geographic/cultural isolation, differing economy, and popular stigmatization. Participation and belonging are much more crucial than income or consumption. Thus, rootedness is more appropriate for classification than socioeconomic status or other typical status/class measures.

Each interview had three sections: a conversation portion, a reading passage, and word list. Each interview took place in a quiet room in the participant's home or workplace. Interviews lasted between forty-five to ninety minutes (averaging sixty minutes) and were recorded on a Tascam DR-40 digital recorder with an Audio Technica BP-896 or a Shure MX183 omnidirectional condenser lavalier microphone. I orthographically transcribed the interviews and subsequently force aligned using the FAVE suite (version 1.1.3; zenodo.org/record/9846#.WW6c7lG1vX4).

3. Monophthongization

Monophthongization extends across the language varieties of most of the southern United States, from the Mid-Atlantic coast to Texas (Kurath and McDavid 1961; Pederson, McDaniel, and Adams 1986–93; Wells 1982; Thomas 2001; Labov, Ash, and Boberg 2006). Several systems of monophthongization exist (Thomas 2003), and its use is socially stratified (Pederson 1983; Bernstein 2006). Monophthongal realizations, particularly in prevoiceless contexts, are inversely correlated with class and education (Pederson 1983; Pederson, McDaniel, and Adams 1986–93; Bernstein 2006) and are primarily associated with rural areas (Hazen and Fluharty 2004; Irons 2007; Greene 2010).

With respect to Appalachia, a number of case studies (Hall 1942; Wolfram and Christian 1976; Greene 2010; Reed 2014) have consistently shown that it is a prominent feature in AE. Broader studies also suggest that monophthongization in Appalachia is more progressive than other areas with monophthongal varieties (Pederson, McDaniel, and Adams 1986–93; Pederson

1983; Labov, Ash, and Boberg 2006). In AE, the process occurs in all phonetic contexts (open syllables, prevoiced, and prevoiceless) at much higher rates than in other monophthongal areas, occasionally approaching categorical monophthongal realizations (Hall 1942; Wolfram and Christian 1976; Pederson, McDaniel, and Adams 1986–93; Greene 2010).

AE speakers (and Southerners in general) along with other American English speakers are aware of monophthongization and its status as a regional and subregional linguistic caricature (Plichta and Preston 2005). Virtually every popular depiction of southern and Appalachian speech (see, e.g., Venable 2013) displays monophthongal /aɪ/ as a noteworthy feature. Moreover, it is a source of stigma, and as such, many respondents comment on the perception of monophthongal pronunciations, such as the following statement from a participant in the present study: "I had people to ask me to say, 'nice white rice,' and I would, and they would laugh. I realized that, that they were laughing at how I was saying it."[7] Despite its stigma, monophthongization has persisted, particularly in Appalachia and in other southern areas, particularly in rural regions (e.g., Bernstein 2006; Irons 2007; Greene 2010; Reed 2014).

3.1. MONOPHTHONGIZATION METHODOLOGY

From each interview, I extracted the first twenty-five prevoiceless /aɪ/ tokens from the conversation portion. I also included thirty prevoiceless /aɪ/ tokens from the reading passage. Thus, there were fifty-five total tokens for each of the twenty-two speakers, for a total of 1,210 prevoiceless tokens. I impressionistically coded these tokens for monophthongal realizations.

3.2. MONOPHTHONGIZATION RESULTS

These speakers, in the aggregate, were quite monophthongal, with an overall rate of 83 percent prevoiceless monophthongal realization (88 percent in conversation, 79 percent in reading). Since all speakers were native Appalachians, these rates of prevoiceless monophthongization were not unexpected. These speakers, born and raised in Appalachia, as a whole utilized features of this particular variety of AE.

Overall, males were 86 percent monophthongal in prevoiceless contexts (91 percent in conversation, 82 percent in reading), and females, 81 percent (86 percent in conversation, 76 percent in reading). *t*-Test results show that male and female means significantly differed (overall: $t = 2.2817$, df = 21.71, $p = 0.03$; conversation: $t = 2.1207$, df = 21.501, $p = 0.046$; reading: $t = 2.2354$, df = 21.912, $p = 0.036$).

Separating by age gave similar results of monophthongization being the norm. Older speakers were 85 percent monophthongal overall (89 percent in conversation, 82 percent in reading), and younger speakers, 82 percent (88 percent in conversation, 76 percent in reading). What is surprising here is that younger speakers did not significantly differ from older speakers overall or in conversation. However, in reading the two groups did significantly differ ($t = 2.1302$, $df = 19.003$, $p = 0.046$). Other studies have found that monophthongization decreases across age groups; however, this was not the case in my sample from Sneedville. This difference in reading may be attributable to education, which had greatly improved within Hancock County since 1960 (Tennessee State Government, 2017).

Overall, older males were 88 percent monophthongal (91 percent in conversation, 86 percent in reading), and older females, 82 percent (86 percent in conversation, 78 percent in reading). Younger males were 84 percent monophthongal overall (90 percent in conversation, 78 percent in reading), and younger females, 80 percent (86 percent in conversation, 74 percent in reading). Here the results start to show some patterning based primarily on task and age. In the conversation, the groups are quite indistinguishable. However, in the reading portion, younger females use fewer monophthongs.

When I included rootedness in the measures, a pattern clearly emerged. Overall, rooted speakers were 87 percent monophthongal, 91 percent in conversation, and 83 percent in the reading passage. Contrast this with nonrooted speakers, who were 80 percent monophthongal overall, 86 percent in conversation, and 75 percent in the reading. Figure 5.1 shows these results graphically.

Rootedness and sex also display the same pattern. Rooted males were 91 percent monophthongal overall, 95 percent in conversation, and 87 percent in reading; nonrooted males were 82 percent overall, 87 percent in conversation, and 77 percent in reading (figure 5.2, left). Rooted females were 84 percent monophthongal overall, 88 percent in conversation, and 79 percent in reading; nonrooted females were 78 percent overall, 85 percent in conversation, and 72 percent in reading (figure 5.2, right).

3.3. MONOPHTHONGIZATION DISCUSSION

For these speakers, rooted speakers have more prevoiceless monophthongal tokens. This better explains the variation than does age or sex, as the differences hold across these factors. Greene (2010) noted that her eastern Kentucky speakers might use prevoiceless monophthongization as a reaction against standard language ideologies. This may well be the case here, but

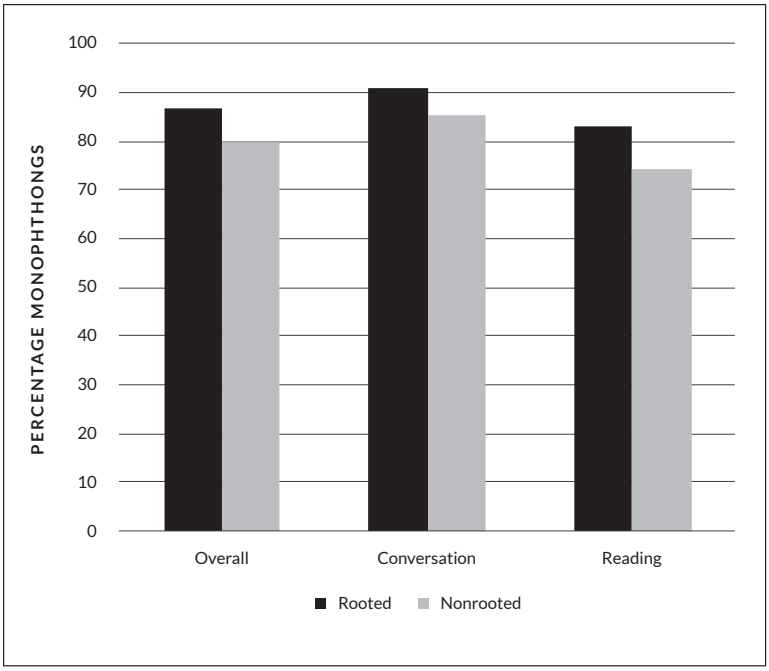
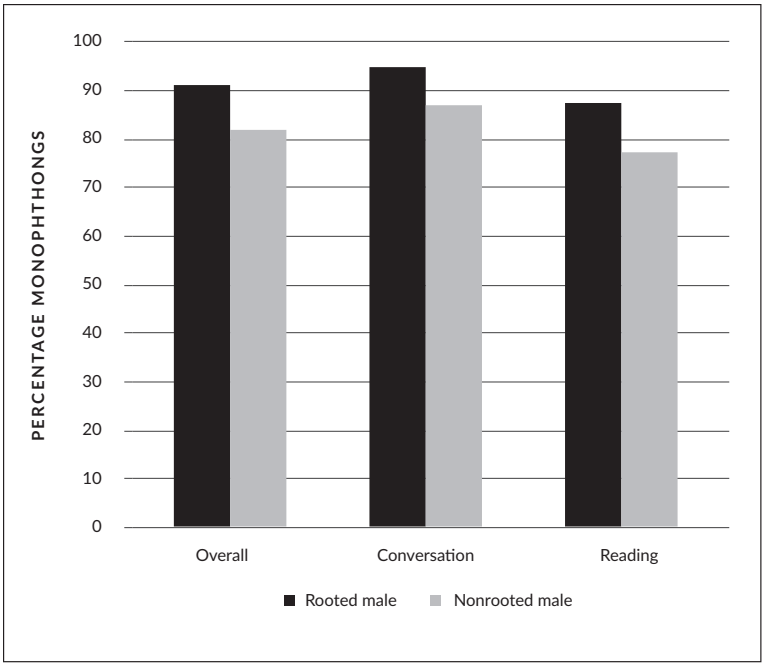


FIGURE 5.1. Monophthongal realizations by rootedness and interview task

additionally, high rates of prevoiceless monophthongization may signal to others that the local region is important, that local affiliation is important, and might serve as a socially unifying feature.

4. Intonation

A less salient feature of AE is the presence of a relatively high rate of rising pitch accents. Researchers have found that the relative frequency of pitch accents and the phonetic realization of pitch vary regionally in American English (e.g., Greene 2006; Arvaniti and Garding 2007; Clopper and Smiljanic 2011). For AE, there are anecdotal mentions of intonation. Williams (1992:17) writes, "Forming the rhythmic patterns of speech of the people of the southern mountains are low intonations and leisurely pace." From this impressionistic description, low intonations would have to be contrasted with higher ones. Further, speakers in the present study often mention "tone," "pace," or "rhythm" as something they recognize in speech of friends and neighbors.[8] There are other descriptions of how one can recognize a fellow speaker based on "how we talk" (e.g., Sloane 2009). Since many of these anecdotes appear



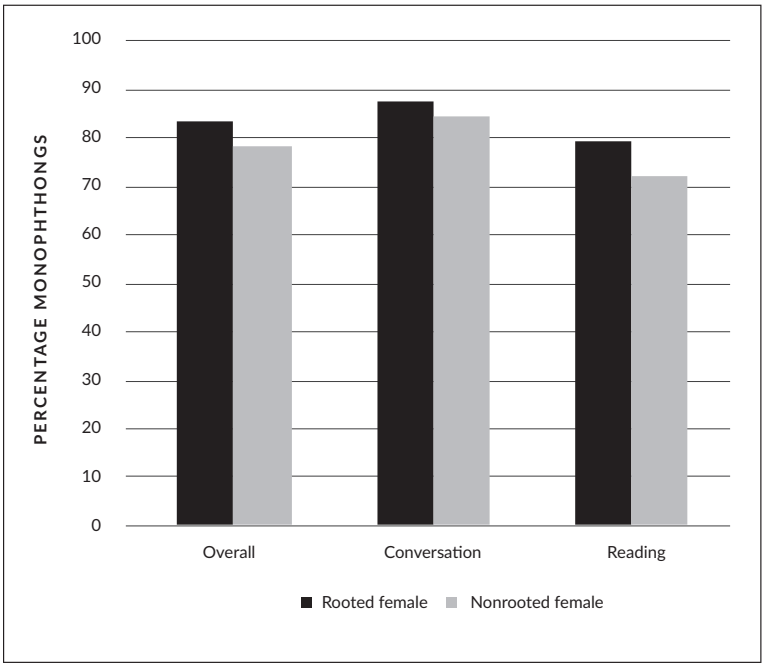


FIGURE 5.2. Monophthongal realizations by rootedness and interview task for males (top) and females (bottom)

to reference intonation, it is surprising that there is a distinct lack of intonation studies.

The only detailed study of AE intonation patterns to date is Greene (2006), which found a higher incidence of L+H* accents (a rising pitch on stressed syllables) among speakers in a northeastern Kentucky community, compared to speakers of Mainstream American English or other Southern American English varieties. However, Greene did not investigate precisely where the pitch accent was anchored in the syllable, nor did she consider possible correlations with local identity, both of which the present study includes.

4.1. INTONATION METHODOLOGY

The intonation analysis required a two-step process, both performed in Praat (version 5.3.14, www.praat.org). The first step was to label a section of speech following the ToBI (Tones and Break Indices) guidelines. ToBI (Beckman and Elam 1997) involves marking all tones and break indices. Tones include pitch accents and boundary tones. American English has five pitch accents; four of these are a high tone (H*), a low tone (L*), and their combinations, L+H* and L*+H. The difference between these latter pitch accents is that the L*+H may extend into the following syllable (Arvaniti and Garding 2007:549). The fifth pitch accent identified is H+!H*.[9] I labeled three to five minutes of speech following the ToBI conventions, drawn from the middle of the conversational portion of the interview. I counted 100 pitch accents from each speaker and then tabulated the occurrence of each of the different pitch accents.

The second step was to measure the peak alignment of L+H* pitch accents, the pitch accent that occurs at a higher percentage in AE than in other American English varieties (Greene 2006). Using slightly adapted methodology outlined in Ladd and colleagues (2009), I calculated pitch accent onset (PAOn), a measure of the amount of time (in milliseconds) from the onset of the vowel containing the pitch accent to the highest pitch point.

4.2. INTONATION RESULTS

The use of intonation by these speakers, in the aggregate, was very similar to that of the participant cohort in Greene (2006). The most frequent pitch accent was H*, followed very closely by L+H* (figure 5.3). The frequency of L+H* was not significantly different from L+H* frequency from speakers in Greene's study (goodness-of-fit chi-square test: $\chi(1) = 0.10973$, $p = 0.7405$). Greene found that this relative frequency of L+H* was significantly different from mainstream English varieties and some other Southern American English varieties. Thus, the overall relative frequency of my speakers would be different from these varieties as well.

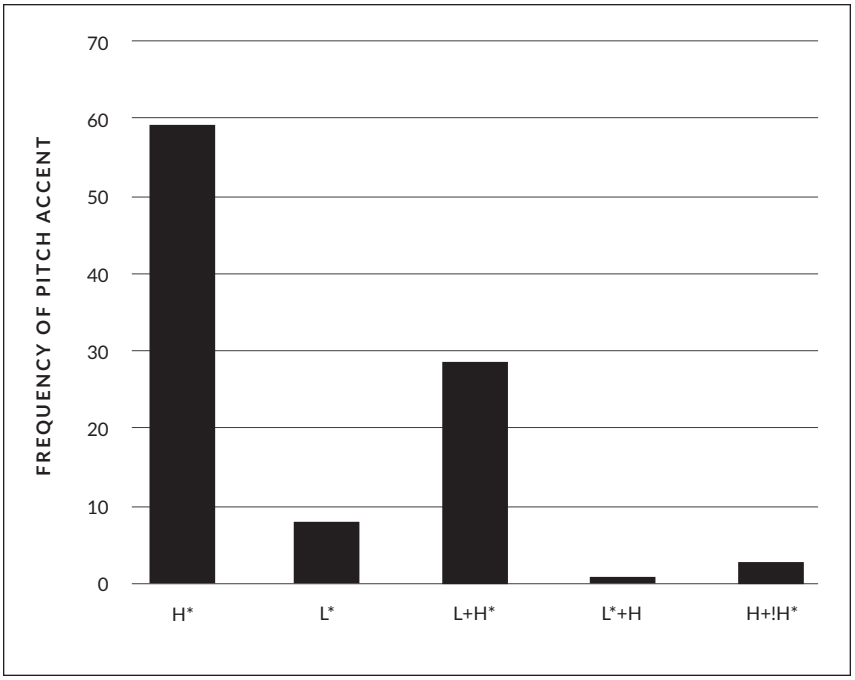
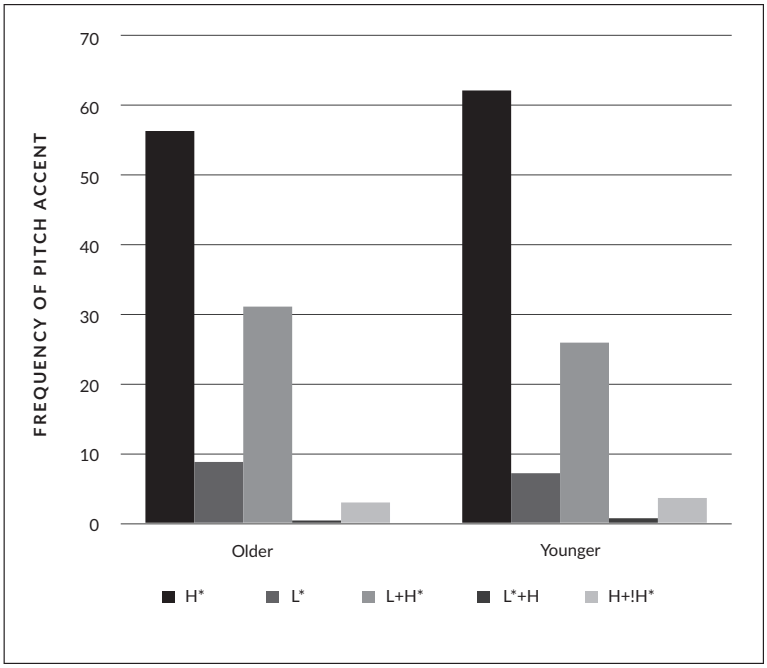


FIGURE 5.3. Average distribution of pitch accents for all speakers

To better understand how the social factors of gender, age, and rootedness impact the frequency of L+H*, I ran a mixed-effects logistic regression analysis, with speaker age, gender, and rootedness with two-way interactions as fixed independent variables, and individual speaker as a random independent variable. Main effects of age ($z = 2.575$, $p = 0.01$) and rootedness ($z = 3.397$, $p < 0.001$) were significant in the model, as was the age × rootedness interaction ($z = -2.689$, $p = 0.007$). Younger speakers had fewer L+H* pitch accents than older speakers, and rooted speakers produced relatively more L+H* than nonrooted speakers (figure 5.4).

To analyze PA-On, I ran a mixed-effect linear regression model, with speaker age, speaker gender, and rootedness and two-way interactions as fixed independent variables, individual speaker as a random independent variable, and PA-On as the dependent variable. No main effects were significant. However, the gender × age interaction was significant ($t = -2.201$, $p = 0.04$): younger males' PA-On were 46 milliseconds shorter than other groups. Additionally, the age × rootedness interaction was significant ($t = 2.969$, $p = 0.00811$): younger nonrooted speakers' PA-On is 53.385 milliseconds longer on average than other groups.



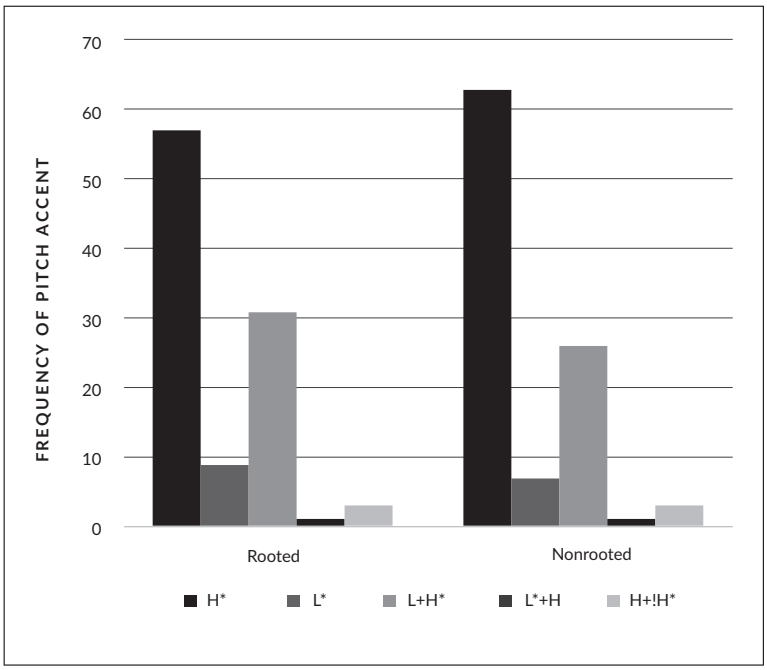


FIGURE 5.4. Distribution of pitch accents by speaker age (top) and rootedness (bottom)

4.3. INTONATION DISCUSSION

These results show that rooted speakers have a relatively higher frequency of L+H* pitch accents. There also appears to be an age effect, with younger speakers having slightly fewer L+H* pitch accents. With respect to PA-On, younger males had earlier L+H* peaks, while younger nonrooted speakers had later peaks. Thus, it appears that earlier peaks can signal both age and rootedness. Given that these particular features, relatively frequent rising pitch accents with earlier peaks, are not stigmatized, this may be a way to signal local attachment and belonging (rootedness) without opening a speaker to the stigma associated with other AE features, such as /aɪ/-monophthongization.

5. Conclusions

Taken together, these results reveal effects of rootedness on two features of AE. The results for monophthongization are consistent with previous literature on AE (e.g., Greene 2010; Reed 2014). However, where those studies anecdotally mention that monophthongization is related to local identity, the present study empirically shows that rootedness is important for the frequency of prevoiceless /aɪ/-monophthongization. The more rooted speakers are, the more frequent their monophthongal realizations.

With respect to intonation, specifically rising pitch accents, the results here show that more rooted speakers have more L+H* pitch accents, consistent with previous findings (Greene 2006). I have further shown that rootedness (in interaction with other social factors) also impacts the peak alignment, with more rooted speakers having an earlier peak.

Additional research incorporating rootedness (and other identity measures) is needed for other varieties of American English. Understanding that each speaker is an individual, with individual identities and attachments, is crucial. Finding ways to quantify aspects of these identities will permit a more rigorous and scientific investigation. Using both more individualized identity measures and traditional factors in conjunction will allow for a deeper understanding of language variation.

About the Author

Paul E. Reed is assistant professor of phonology/speech science at the University of Alabama. His dissertation, "Sounding Appalachian: Monophthongization, Rising Pitch Accents, and Rootedness," analyzed the impact of local identity on speakers in Northeast Tennessee.

Notes

1. For a scholarly rebuttal to the language preservation belief, see Montgomery (2006).

2. These citations focus not solely on Appalachia but, rather, on dialectal regions of the United States and/or North America. However, their raw material, when taken as a collective whole, shows the quantitative and qualitative distinctiveness of some aspects of AE.

3. From an interview with a white female in her seventies (see section 2 on general methodology for a description of the interviews).

4. Each of these negative remarks came from numerous participants during their interviews.

5. From an interview with a white male in his sixties, and an interview with a white male in his thirties, respectively.

6. For the updated and expanded methodology, see Reed (2016).

7. From an interview with a white female in her thirties.

8. Several speakers from the present study used all of these terms to describe what sets local speech apart.

9. The ! stands for a downstepped pitch accent. Downstepping occurs when several successive pitch accents of the same type occur. Each sequential pitch accent may be slightly lower than the preceding one, thus "downstepped."

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