

# Sounding Appalachian: Rising Pitch Accents in Appalachian English

Recent research on pitch and intonation has shown that the phonetic realization and frequency of pitch accents can be regionally marked and socially meaningful (Grabe et al., 2000; Atterer and Ladd, 2004; Grabe, 2004; Kügler, 2004; Ladd et al., 2009; Clopper and Smiljanic, 2011). In a seminal study of intonation patterns in Appalachian English (AE), Greene (2006) observed a more frequent occurrence of L+H\* pitch accents in AE than in Mainstream American English and in other Southern English varieties. Based on her findings, Greene suggested that L+H\* pitch accents might perform a unique function in AE. The current study takes up these observations with a focus on two aspects of AE intonation — the relative frequency of occurrence of rising pitch accents and their phonetic realization. Furthermore, it explores the role of rootedness — defined here as one’s orientation to place — in the observed patterns of variation.

The data for this study were drawn from the speech of 25 AE speakers (12 males, 13 females) from a small rural town in northeast Tennessee. The data were collected through sociolinguistic interviews, followed by completion of a Rootedness Metric, a psychometric survey designed to quantify the degree of orientation to place for each participant. To consider the extent to which the observed intonational patterns were characteristic of AE, this cohort was also compared to a non-Appalachian cohort of 8 speakers (4 males, 4 females) from the Lower South.

An approximately 5-minute section from the sociolinguistic interview speech (100 pitch accents per speaker) was labeled following the ToBI conventions (Beckman et al., 2005), and the frequencies of the pitch accents were totaled. Further, the pitch accent onset (PA-On), the length of the interval between vowel onset and the highest  $F_0$  of a stressed syllable, was measured for the L+H\* rising pitch accents. Logistic mixed effects models were built to examine the frequency of occurrence of the pitch accents and linear mixed effects models were built to examine the variation in length of PA-On. Results indicate that AE speakers have a significantly greater occurrence of L+H\* pitch accents ( $p < .001$ ), and that the PA-On is significantly earlier in the syllable ( $p < .005$ ) compared to speakers of other Southern varieties. And within the AE cohort, both older and more rooted speakers have significantly more frequent L+H\* occurrence ( $p < .001$ ), while males ( $p < .01$ ) and more rooted speakers ( $p < .004$ ) have significantly earlier peak alignment.

These results suggest that intonation is a salient feature of Appalachian speech, differentiating closely related varieties as well as varying degrees of orientation to place within the Appalachian community. Such findings emphasize the need for more research investigating the role that intonation plays in the construction of local, place-based identities as well as more regionally defined varieties.

## References

- Atterer, M. and Ladd, D. R. (2004). On the phonetics and phonology of 'segmental anchoring' of f0: Evidence from German. *Journal of Phonetics*, 32:177–197.
- Beckman, M. E., Hirschberg, J., and Shattuck-Hufnagel, S. (2005). The original ToBI system and the evolution of the ToBI framework. In Jun, S.-A., editor, *Prosodic Typology: The Phonology of Intonation and Phrasing*. Oxford: Oxford University Press.
- Clopper, C. and Smiljanic, R. (2011). Effects of gender and regional dialect on prosodic patterns in American English. *Journal of Phonetics*, 39:237–245.
- Grabe, E. (2004). Intonational variation in urban dialects of English spoken in the British Isles. In Gilles, P. and Peters, J., editors, *Regional Variation in Intonation*, pages 9–31. Tübingen: Max Niemeyer Verlag.
- Grabe, E., Post, B., Nolan, F., and Farrar, K. (2000). Pitch accent realization in four varieties of British English. *Journal of Phonetics*, 28:161–185.
- Greene, R. (2006). Pitch accents in Appalachian English. Unpublished Qualifying Paper. Stanford University.
- Kügler, F. (2004). The phonology and phonetics of rising pitch accents in Swabian. In Gilles, P. and Peters, J., editors, *Regional Variation in Intonation*, pages 75–98. Tübingen: Max Niemeyer Verlag.
- Ladd, D. R., Schepman, A., White, L., Quarmby, L. M., and Stackhouse, R. (2009). Structural and dialectal effects on pitch peak alignment in two varieties of British English. *Journal of Phonetics*, 37:145–161.