Real-Time Changes in the Vowel System of Central Texas English

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The dialect popularly referred to as the "Texas Twang" is stereotypically defined by the monophthongization of /ai/, so that a word such as *price* is pronounced as [pras]. This feature, common among speakers of traditional Texas English (TE), has recently begun to give way to the diphthongal, Standard American English (SAE) pronunciation—[prais]—among speakers in Central Texas. This change is one of 11 discussed by Bailey et al (1991) in *The Focus of Linguistic Innovation in Texas.* Other changes include an increase in the merger of /ɑ/ and /ɔ/ and a decrease in the use the intrusive /r/ in which *wash* is pronounced as [warʃ].

Underwood (1988) also investigates the monophthongization of /ai/ as part of his Texas English Project, which he "designed expressly to test [Le Page's] Theory of Acts of Identity with phonological variation within a single language" (p. 407-8); specifically, "why some native Texans talk with a 'Texas accent' and others do not, and why some some [sic] accents of Texans are deemed to be 'stronger' than others" (p. 408). In discussing his decision to focus on /ai/, Underwood cites "a number of serious linguistic investigators [who] have attested that the monophthongal /ai/ is a pervasive and salient pronunciation feature in the Lone Star State" (p. 411), the most recent of which is Labov (1972).

While Underwood examined the correlation between a person's Texas accent and his or her sense of identity as a Texan, this study evaluates the changes in Texas English over time by comparing Underwood's recordings to others collected in 2010. It is hypothesized that an increase in the diphthongal realization of /ai/ is moving into Texas as a result of the growing influence of the West Coast variety of American English.

1. Data

This study draws on data from a corpus of 30 speakers, all of who resided in Central Texas from the ages of 6 to 18. Eckert (2000) discusses the importance of adolescence on language variation in depth, citing the works of Romaine (1984), Biondi (1975), and Labov (1989) to show that strong evidence of stylistic variation exists as early as age six (p. 12). The region designated as Central Texas, shown below in (Figure 1), is consistent with that used by Underwood, which was originally established by Meinig (1969).

Texas Linguistics Forum 54:72-78
Proceedings of the Nineteenth Annual Symposium About Language and Society – Austin
April 15-17, 2011

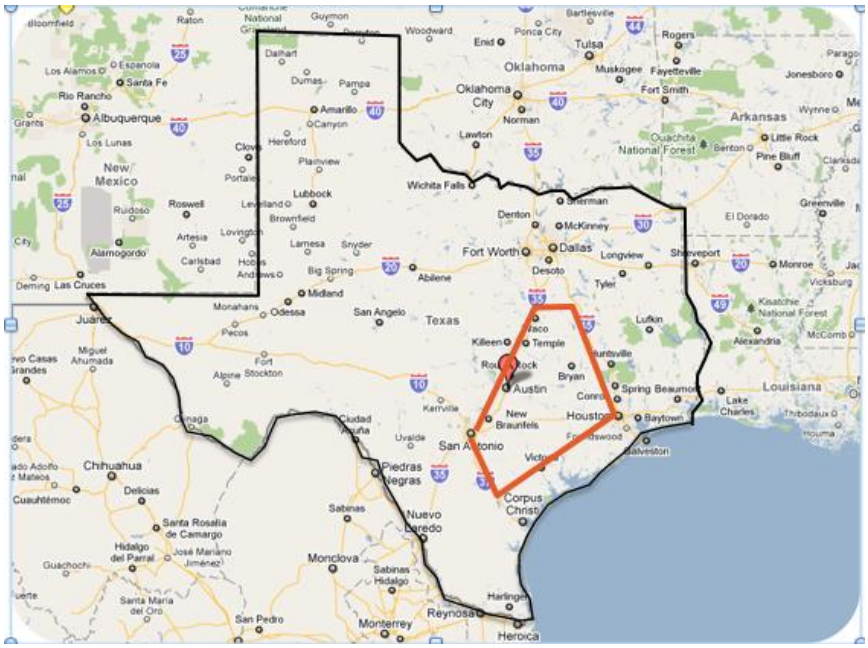

Figure 1: Map of Texas; Central Texas outlined in orange (Bigham, 2010)

The data used in this study is comprised of two different sets. The first set, the Underwood Data, was collected over a period of several years during the early 1980s. The second set, the Hinrichs Data, was collected in the spring of 2010. University of Texas students enrolled in the "American English" class collected both data sets, which follow the same basic format. Each student interviewed and collected the following information from multiple speakers: a personal interview, the recitation of a standardized passage and the recitation of a word list. The standardized passage is the story of a fictional Texan's life and features 62 instances of /ai/ in a variety of phonetic contexts. The earlier data set has proved invaluable in allowing for a real-time comparison. When used in conjunction with apparent-time comparison, the changes in /ai/ can be tracked over a time span of approximately 60 years.

Speakers from the two data sets were divided into three age groups: younger (twenties to early thirties), older (forties to early fifties) and even older (late fifties through seventies). The latter two groups were taken from the Underwood data, which, given the scope of the original project, is much larger than the Hinrichs data. Ten speakers were then taken from each age group, five males and five females.

2. Methodology

For each of the 30 speakers used, twelve instances of /ai/ were coded to provide a total of 360 tokens. Each token was given a realization score based on the extent to which it was monophthongized or diphthongized by the speaker. If pronounced with a full diphthong (or standard realization) the token was given score of 1, while a score of 3 indicated a completely monophthongal realization. A score of 2 resulted from a slightly Southern-sounding but not fully monophthongal realization. Image 2 and Image 3 each show a single token as seen when viewed in PRAAT (software that facilitates acoustic analysis). The bottommost red line represents the F1 formant, which correlates with the

high-low dimension of speech production. The line directly above it represents the F2 formant, which correlates with the front-back dimension. In Figure 2 the divergence of the two lines is very apparent, representing a fully diphthongal realization of /ai/. In Figure 3 the lines run parallel, representing a monophthongal realization.

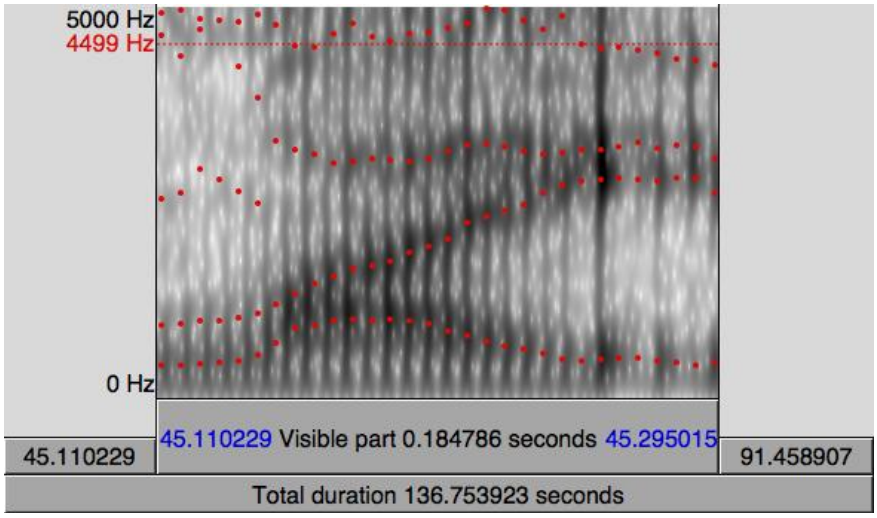

Figure 2: Diphthongal realization of /ai/; given score of 1

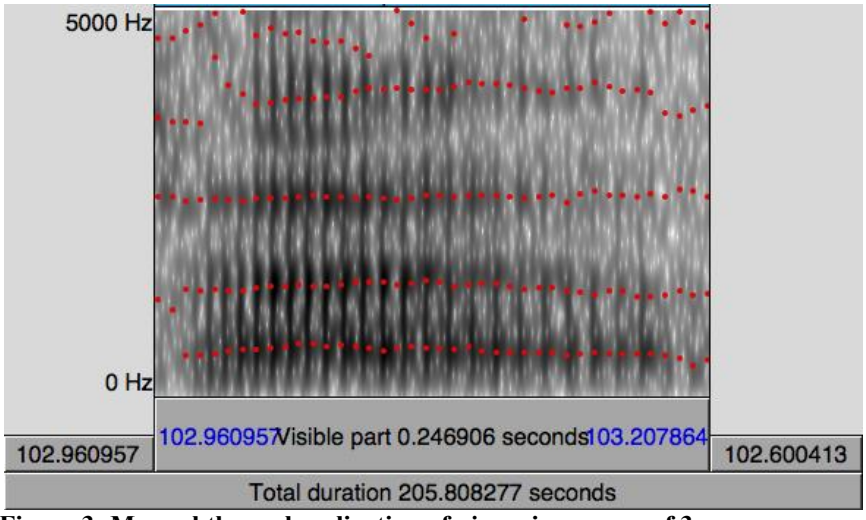

Figure 3: Monophthongal realization of *vine*; given score of 3

Each speaker's data was also coded for a number of independent factors including: gender, age, current residence, residence from the ages of 6-18, highest level of education completed, occupation, ethnicity and the phonetic environment of each token. In terms of ethnicity, the majority of the speakers were Anglo, Hispanic or African American. At this stage, only data from Anglo speakers will be presented. Future work will incorporate data from Hispanic and African American speakers. Due to the size of the sample only univariate analysis was used, and each of the distributions shown meets the chi-square test.

3. Results

When broken down by occupation, as in (Figure 4) below, the results show that students have the highest incidence of diphthongal realization, at 85%, followed by pink-collar workers (secretaries) at 61%, white-collar workers at 57%, blue-collar workers at 37%, and homemakers at 33%. While white-collar workers may be expected to have a higher rate of diphthongal or standard realization than their pink-collar secretaries, this is not the case. This finding echoes that of Labov's (1966) New York City department store study. By comparing the speech patterns of clerks to those of the stores' patrons, he found that the staff of the upscale stores tended to overcompensate their language to match the speech that they associated with the wealthy patrons. Similarly, the pink-collar Texans tend to accommodate their language to those of their higher ups, the white-collar workers. The high percentage of diphthongal realizations by students is to be expected as a result of the students' immersion in college and university culture, which tend to use a more standard speech style.

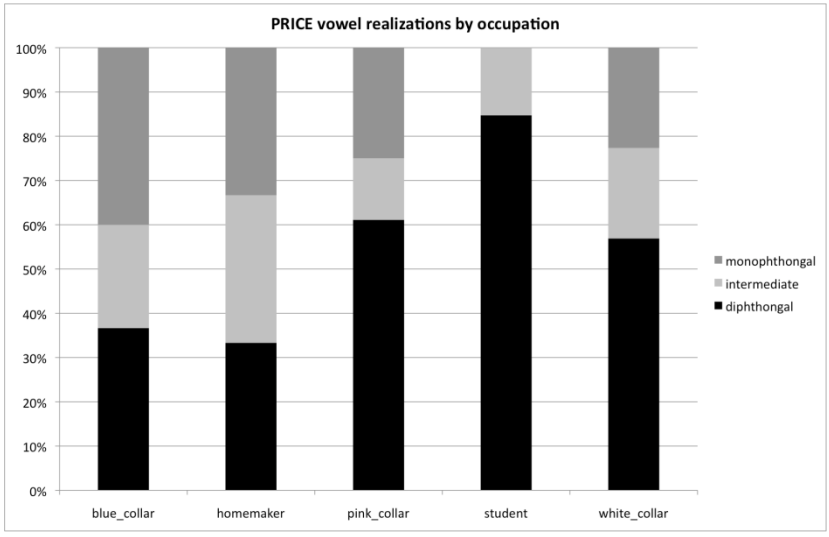

Figure 4: Results by occupation

When broken down by gender, in (Figure 5) below, the results show that females, at 71%, clearly have a higher rate of diphthongal realization than males, at 47%. This is also to be expected, as females tend to be leaders of language change (Wolfram & Schilling-Estes, 2006). In addition, there is a correlation between this finding and the occupational results; men tend to have more vernacular speech, and the majority of blue-collar workers are men.

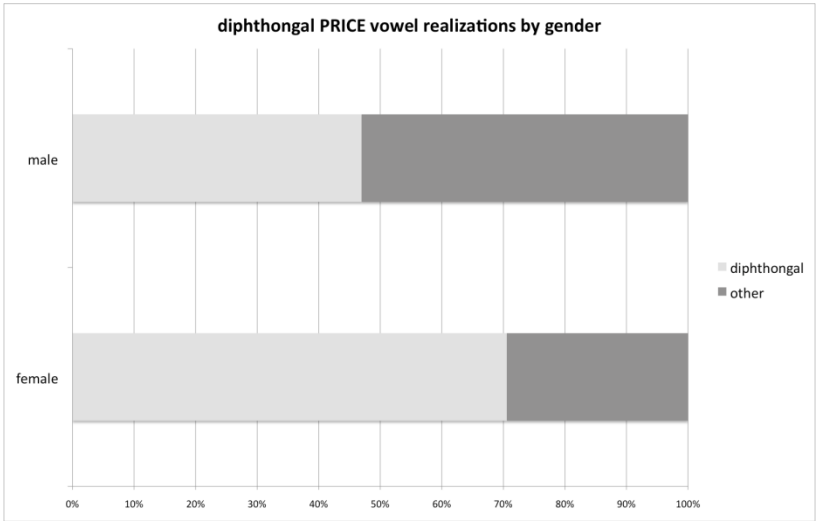

Figure 5: Results by gender

Finally, when broken down by age group in (Figure 6), it is apparent that younger speakers have zero instances of monophthongal realization of /ai/, although 11% of them do have intermediate realizations, with the remaining 89% producing diphthongal realizations. These rates stand in stark contrast to those of the "even older" group, only 36% of who have diphthongal realizations. In accordance with the pattern of change, the "older" group's use of diphthongal realization falls between the "younger" and "even older" groups at 51%. The fact that the "younger" speakers have zero monophthongal realizations is particularly interesting. While they are expected to be at the forefront of an innovative language change, the lack of any monophthongization of /ai/ suggests that the change actually started earlier, potentially with the youngest members of the "older" group, and has advanced to the point where the older variant is nonexistent among the youngest speakers.

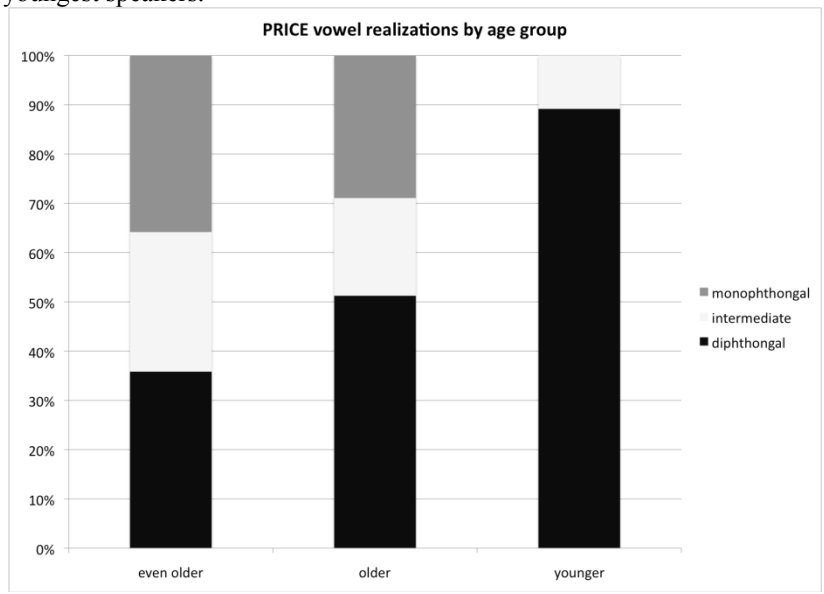

Figure 6: Results by age group

4. Conclusion

The findings speak to a strong orientation of young, urban Texans towards a more standard realization of /ai/, while at the same time showing remarkable stability in the linguistic constraints underlying phonetic variation in Texas (see also Bailey et al. 1991). What is seen here is a typical pattern of a conservative dialect feature being displaced over a time span of about 60 years (if real- and apparent-time are combined). The monophthongization of /ai/ has essentially left the speech of Central Texas entirely. None of the "younger" speakers, who range from ages 21-30, have monophthongal realizations of /ai/. Instead, 89% of them have diphthongal realizations. The current changes in the Central Texas vowel system are being led by young female speakers—of the 11% of "younger" speakers who had intermediate realizations, 92% were males—and are prestige-driven, as evidenced by the rate of the pink-collar workers' diphthongal realization and its correlation with Labov's accommodation study. While there is insufficient evidence to support the hypothesis that the change is the result of a West Coast shift, it does appear that a more standardized, less stigmatized variety of English has influenced Texas English.

Future work on this data will include an analysis of ethnicity as a major factor in the standardization of /ai/. At this stage only Anglo speakers have been used, but Hispanic and African American speakers will also be incorporated. This dimension is expected to yield particularly rich results, as the social and ethnic structure of Central Texas, especially in Austin, has changed dramatically over the last several decades. Analysis of the effect of phonetic environment on a speaker's realization of /ai/ will be done as well. Preliminary investigation suggests that the voiceless obstruent [t] may lend itself to a higher rate of monophthongal realization than others. However, other factors such as the parts of speech and context must also be considered. Finally, the interview portion of the recordings will be used to examine the influence of context and the potential influence of the interviewer's speech. A question to consider is whether the speakers are accommodating to a more formal style of speech in the interview context with less diphthongal realizations.

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