Oklahoma voices in the workplace: Regional dialects and their effects on employability

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Abstract

This study investigated the effects of usage of two Southern speech features, the monophthongization of /aɪ/ and the *pin-pen* merger, on employability. Additionally, overall attitudes of employers were assessed toward Southern speech, and their own dialectical patterns were analyzed. Results indicate a clear preference for speakers with diphthongal /aɪ/, correlating them to a higher degree with traits like intelligence and economic advantage. The *pin-pen* merger produced inconsistent results in regards to preference. No participants used monophthongal /aɪ/ themselves, though the *pin-pen* merger was documented in three participants. Overall attitudes revealed associations between Southern speech and reduced "efficiency" due to characterizations like "slow rate" and "drawl." Overall, it seems likely that monophthongal /aɪ/ is a particularly salient Southern speech feature which is likely to impact employer perceptions of the potential candidate and negatively affect employability. Due to the inconclusive nature of the responses to the *pin-pen* merger, it seems less likely to have an impact on employability.

I. Introduction

Southern American English is a dialect of American English that is spoken throughout the Southern United States. Historically, in particular prior to the twentieth century, many of the features now commonly associated with the dialect were absent. According to Bailey (1997), features such as the monophthongization of /aɪ/, the merging of /ɪ/ and /ɛ/ before nasals and the Southern Vowel Shift were not standard features of Southern American English until the late nineteenth or twentieth century. Now, however, these speech patterns have become synonymous with the region and most Americans' perception of Southern speech. The Southern dialect in particular has become both one of the most widely recognized and stigmatized dialects in America. Most need only think about their own assumptions concerning people who speak 'Southern' to realize how pervasive prejudice against this dialect is. Uneducated, hillbilly, broken English – these are just a few of the terms levied against speakers with Southern accents (Preston, 1999). These perceptions can negatively affect nearly every sphere of life for speakers firsthand, especially considering the fact that people are always speaking. Speakers of nonstandard dialects might find themselves significantly less able to find employment, and they may harbor a significant amount of embarrassment and insecurity about their own speech. Although languages and their dialects are always changing, and this is unavoidable, prejudice against and stereotyping of speakers not only affects them personally but may even play a role in the loss of the features which help set dialects apart and which, as a result, stand as salient and integral parts of regional American cultures. Studying these features, learning about them and then raising awareness about their stigmatization, is an important step in combating prejudice. The goal of this thesis was to investigate hypothesized biases employers might possess against Southern American accents and whether or not these biases negatively affect employment opportunity for those with Southern accent features. In doing so, two phonetic features characteristic of Southern American English were targeted, the monophthongization of the /aɪ/

phoneme, which was predicted to be the most salient, and the conditional merging of the sounds /ɪ/ and /ɛ/ wherever they occur before a nasal consonant, commonly referred to as the *pin-pen* merger.

a. The *Pin-Pen* Merger

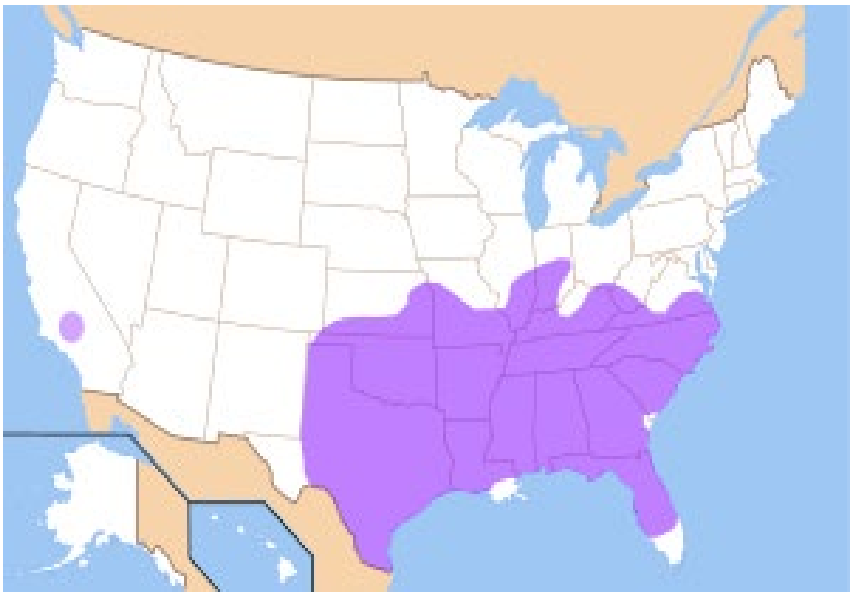

Figure 1. Map of the geographic extent of the pin-pen merger (from Labov, Ash & Boberg, 2006, 68).

The *pin-pen* merger is a conditional merger of the phonemes /ɪ/ and /ɛ/ anywhere they occur before nasals (Schneider, 1997). This is traditionally accomplished by the raising of /ɛ/ toward the vowel space occupied by /ɪ/, though merger is a relatively complex phenomenon and the exact output may be phonetically variable. For example, the merger can be accomplished by raising of /ɛ/ to an intermediate space between /ɛ/ and /ɪ/ along with an intermediate lowering of /ɪ/ to the same space, thus eliminating phonetic distinction. Because the merger is conditional, or dependent on the occurrence of a postvocalic nasal consonant, a phonetic distinction between words like *pit* /pɪt/ and *pet* /pɛt/ is preserved. Thus, unlike other mergers such as the low back merger (the loss of distinction between the mid and low back vowels /ɑ/ and /ɔ/), it does not result in the total loss of a vowel from the speaker's vowel system. This is notable because, when analyzing the speech of those who use this merger, it provides for a clear distinction between the vowel used for pre-nasal /ɛ/ and the speaker's /ɛ/ vowel in a non-nasal context. Recent research by Koops et al. (2008) has indicated that this merger is beginning to lose ground in large metropolitan areas in the South and that Houstonians associate merged vowel systems with older speakers. Additionally, the merger itself seems to be positively correlated with age. Figure 1 reveals the geographic extent of the merger.

b. Monophthongization of /aɪ/

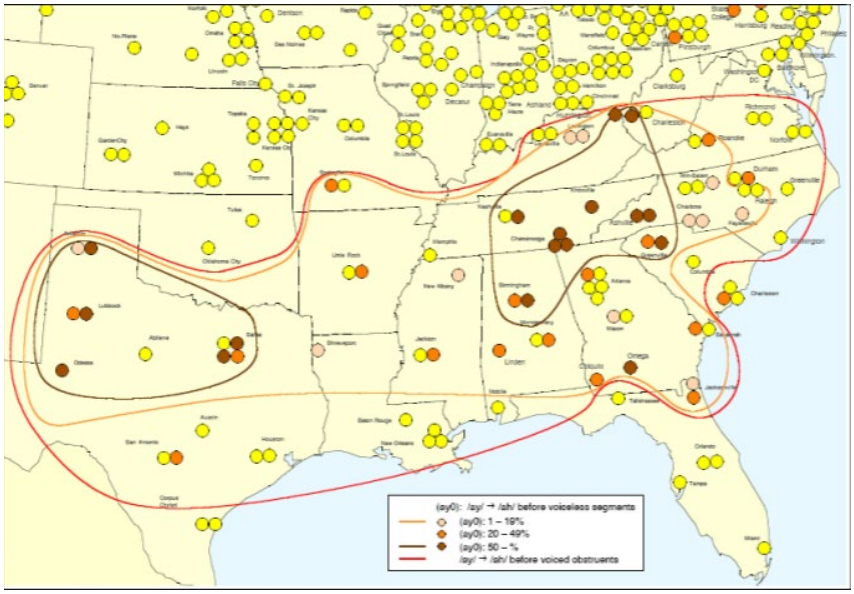

Figure 2. Map of /aɪ/ monophthongization before voiced and voiceless consonants (from Labov, Ash & Boberg, 2006, Map 11.5, 129). Dark circles indicate /aɪ/ monophthongization in voiceless environments.

The monophthongization of /aɪ/ is a deletion of the glide /ɪ/, and the usual phonetic output is something like /a:/. In some regions, glide deletion is limited to voiced and word-final environments, but in other areas it occurs regardless of the surrounding phonetic environment, even voiceless consonants. Like the *pin-pen* merger, this feature seems to be positively correlated with age. According to the Atlas of North American English (Labov et al., 2006), for each successive generation of 25 years, the percent of glide deletion falls by 12.8. The overall geographic extent of monophthongization before voiced and voiceless consonants can be seen in Figure 2.

According to the ANAE, /aɪ/-monophthongization is the triggering feature for the rest of the Southern Vowel Shift (Labov et al., 2006). This is illustrated well in Figure 3 - glide deletion causes a chain shift of the remaining vowels in the vowel space. However, monophthongization or reduction of /aɪ/ does not always correlate to the complete presence of the Southern Shift. Bakos (2013) found that none of his 12 Oklahoma respondents had a completed Southern Shift in their front vowels, despite using other Southern features like monophthongal /aɪ/. Thus, I expected monophthongal /aɪ/ to stand out as a feature in and of itself, regardless of presence of other shifted vowels.

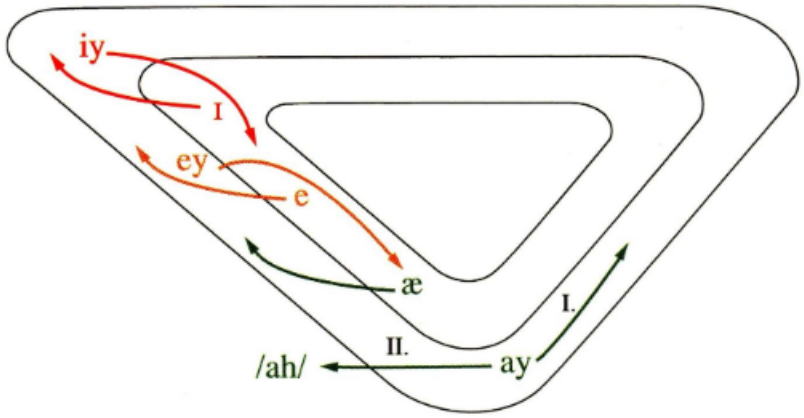

Figure 3. The Southern Shift (from Labov, Ash & Boberg, 2006:244)

c. Southern Speech in Oklahoma

Figure 4. ANAE dialect map (from Labov, Ash & Boberg,

In the 1960s, William R. Van Riper began collecting data for the Linguistic Atlas of Oklahoma. His research revealed at least two distinct dialect regions. The half of Oklahoma historically composed of Indian Territory, land annexed from Texas and land assigned by lottery tended toward Southern features, while the half of Oklahoma composed of the land historically claimed during the land runs of 1889-1893 tended toward Midland features (Van Riper, 1979). The Atlas of North American English (ANAE; Labov et al., 2006) divides Oklahoma into multiple dialect regions, as shown in Figure 4. The panhandle is a part of The West, the central-north is part of The Midland, the southern, particularly southeastern part, is a part of the South and the Oklahoma-Texas border is a part of Texas South. Classification of central-north Oklahoma as Midland was made based on these established features: a transitional *cot-caught* merger, fronting of /o/ and no /aɪ/ monophthongization. The Harvard Dialect Survey (2003) found the *cot-caught*

merger in 70.64% of participants amongst other interesting features. Overall, the Dialect Survey reported usages common to both Midwestern and Southern American English, attesting to the complex dialectical situation in the state. The *pin-pen* merger is well-attested to throughout the state (Bakos, 2013), though the ANAE classifies it as transitional in Oklahoma. Bakos (2013) found it present in all subjects but one, and even then the non-merged subject was inconsistent. He also reported diphthongal /aɪ/ as the norm among his respondents. Furthermore, the Southern Shift did not seem to be fully established in Oklahoma.

e. Perceptions of Southern Speech

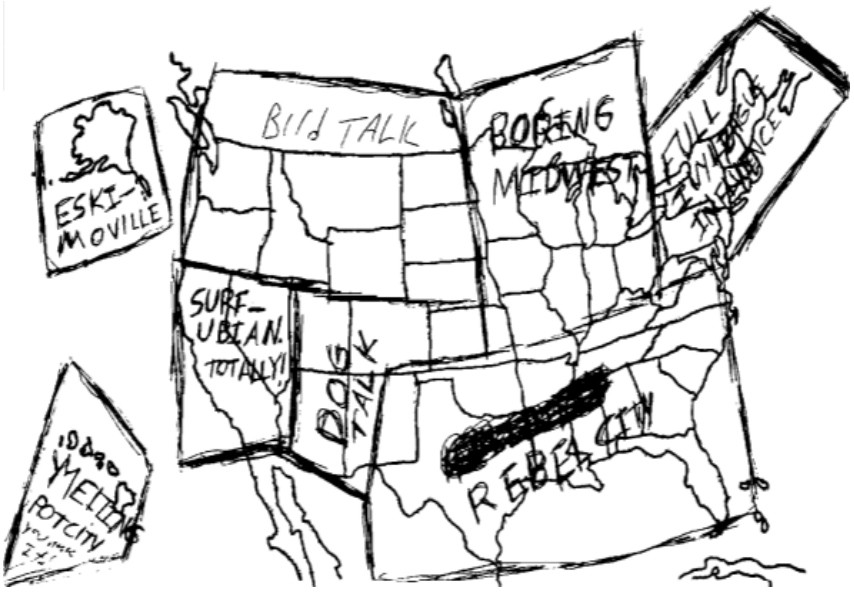

Figure 5. A hand-drawn dialect map by a Michigan respondent (from Preston, 1999, 132).

Some phonetic features, such as /aɪ/ monophthongization, were targeted because they are assumed to be more salient when it comes to classifying speech as Southern. Allbritten (2011) used online survey results to assess the most salient features of Southern speech. Allbritten looked at four features common to Southern English - /aɪ/ monophthongization, shifted /e/, broken /æ/ and velar fronting of /ɪŋ/. While the original pilot study found that monophthongization and shifted /e/ were mentioned most by those who listened to a sample speaker with these features, the online survey yielded different results - shifted /e/ and broken /æ/ contributed most to how Southern the sample speaker sounded. The next most salient feature was monophthongization and the least was velar fronting of /ɪŋ/.

Even beyond specific phonetic features, general attitudes toward Southern speech, particularly on a regional level, reveal other interesting characterizations. Preston (1999) found that the South fared the worst when Michigan respondents were asked to rate the states for "correctness." The South was most associated with terms like "drawl" and "casual" and less associated than the North with "fast", "educated", "good English", "smart" and "normal". Conversely, the South scored higher for ratings of "friendly" and "down-to-earth." Southerners rated the South as less incorrect than Northerners did but they still identified a specific region as particularly less correct - Mississippi, Louisiana and Texas.

Bailey & Tillery (1996) point out that what continues to remain perceptible as Southern in the speech of this region is no longer as strongly associated with regional terms like "mosquito hawk" and is now more exclusively tied to grammar and phonology. However, they accept that the phonetic structure of the Southern accent has changed, altering what others now expect in Southern voices. For instance, traditional features like upgliding /ɔ/ and loss of post-vocalic /r/ have been replaced with more innovative features like the *cot-caught* merger and persistent rhoticity. Particularly now, with these transitioning features, what exactly qualifies a voice as Southern or not, and thus whether or not it is to be subject to perceptions about the South, is itself a variable assessment. In a study by Plichta & Preston (2005), respondents identified voices with varying degrees of /aɪ/ monophthongization as either more Southern or more Northern, suggesting that some features may exist on a continuum, with more salient degrees of accent correlated to stronger association with a certain regional identity.

II. Methods

a. Procedures & Materials

The procedure of the interview was as follows: first, the participant was asked to read and sign two copies of the same consent form, keeping one and allowing the experimenter to keep the other. After signing both consent forms, recording commenced and an informal interview was conducted wherein the experimenter prompted conversation by drawing from a variety of previously written sample questions (Appendix A). All sessions were recorded using the Zoom H4n Handy Recorder with an Audio Technica 2021 cardioid table-top microphone. After the flow of conversation was established, the rest of the informal interview was mostly unprompted dialogue, though the experimenter made sure to get at some necessary information, such as place of birth and upbringing. Conversation was carried on for approximately fifteen minutes. The goals of this step were two-fold - the experimenter gathers vital information about the speaker's background while simultaneously collecting a natural and informal speech sample of considerable length.

Next, the participant was given headphones and asked to listen to pre-recorded sentences from five different speakers - the first speaker used monophthongal /a:/, the second used diphthongal /aɪ/, the third acted as a filler and never read sentences which contained the phonemes being manipulated, the fourth did not use the *pin-pen* merger while the fifth speaker did. The participant was played approximately eight sentences from each speaker. Additionally, these speakers were organized into two different blocks which were alternated between participants (Table 1). A different speaker was used for the filler voice in each block, making for six different voices total across the two blocks. After each speaker was heard, a new semantic differential sheet was given to the participant to allow for ranking of the speaker based on specific traits (Appendix B). Semantic differentials were entered by the participant on a pre-typed sheet by circling a tick mark along a continuous line between two opposing traits, e.g. friendly and unfriendly. Once the participant listened to all five speakers and scored them on their semantic differential sheets, a series of follow-up questions ensued based on a prompt sheet pre-typed by the experimenter (Appendix A).

Investigation into the participant's own speech patterns commenced next with the administration of four different tasks. First, the participant read a reading passage aloud (Appendix C). Second,

the participant read a word list twice, each time with different word order (Appendix D). Next, the participant read a list of minimal pairs, also twice in a different order each time (Appendix E). All three of these tasks focused on the phonetic features being targeted; they contained words with pre-nasal /ɪ/ and /ɛ/ as well as /aɪ/ before both voiced and voiceless consonants.

The interview concluded with a perception test wherein the participant listened to recordings of four words - *pin*, *pen*, *tin* and *ten*. The same test was done twice with a different speaker time. After each word was played, the participant had to identify and circle the word played from a list (Appendix F). For each word, the choices given on the identification sheet were variants of the word with /ɪ/, /ɛ/ and /æ/. For example, after listening to the word pen, the participant then identified it by circling from a list of the words *pin*, *pen* and *pan*. It should be noted that the perception test was not implemented until after the first interview, so Participant 1 was unable to take it. All participants gave informed consent and were entered into a drawing for a $100 gift card. All procedures were approved by the Oklahoma State University institutional review board.

Table 1. Ordering of voices and features within blocks

Block One	Block Two
Speaker 1 - Monophthongal /a:/	Speaker 2 - Monophthongal /a:/
Speaker 2 - Diphthongal /aɪ/	Speaker 1 - Diphthongal /aɪ/
Speaker 3 - Filler	Speaker 6 - Filler
Speaker 4 - No *pin-pen* merger	Speaker 5 - No *pin-pen* merger
Speaker 5 - *Pin-pen* merger	Speaker 4 - *Pin-pen* merger

b. Audio Stimuli

All speakers used in recording stimuli sentences were born and raised in either Oklahoma or Texas. There were a total of six speakers used across the two speaker blocks. Speakers were recorded reading the sentences from the experimenter's laptop in a professional recording booth. Speakers were coached to produce the sounds being experimented. To ensure a clear *pin-pen* distinction for the non-merged sentences, speakers were told to pronounce /ɛ/ as if it is about to occur before a non-nasal, such as in /pɛt/, and then quickly transition to the appropriate nasal consonant. The same was done for /ɪ/. To elicit /a:/, speakers were told to produce /aɪ/, lengthen it to isolate the onset phoneme and then eliminate the glide. For the *pin-pen* merged sentences, speakers were told to produce an /ɪ/ phoneme anywhere /ɪ/ or /ɛ/ occur before a nasal. All speakers produced sentences using each of these features. Beyond these tactics, much of the coaching was done by asking participants to imitate the experimenter producing the correct sounds. In total, 61 sentences were read by each speaker - a set of sentences with diphthongal /aɪ/, a set with monophthongal /a:/, a set using the *pin-pen* merger, a set preserving a *pin-pen* distinction and a set using their usual speech that only had sentences without the phonemes being targeted. Out of all the sentences recorded, the ones selected to play to participants were chosen based on which had coached features that sounded the most natural.

c. Measures

All three reading tasks (the reading passage, word list and minimal pairs) were used to measure vowel formants in Praat. F1 and F2 values were taken at fifty percent of vowel duration except for diphthongs, wherein F1 and F2 were measured at both twenty and eighty percent of vowel duration. /ɪ/ and /ɛ/ vowels were measured in all contexts, both before nasals and non-nasals. /aɪ/ was measured in all contexts as well. Finally, /ɑ/, /ɔ/ and /æ/ were measured to establish a fuller vowel space and to compare any potential monophthongal speakers' /a:/ to their other low vowels. *Pin-pen* merger was determined by visually comparing a participant's pre-nasal /ɪ/ and /ɛ/ vowels and looking for consistent distinction in F1xF2 vowel plots. Values for the participant's /ɪ/ and /ɛ/ vowels in non-nasal contexts were also used in comparison to further establish the presence of merger, though consistent distinction, regardless of whether or not those distinct values perfectly correlated to /ɪ/ and /ɛ/ in non-nasal contexts, was the final determinant. Merging of *cot* and *caught* was also determined by the presence or absence of consistent visual distinctions between /ɑ/ and /ɔ/ in vowel plots. Mergers were considered consistent if they occurred consistently in the task; if certain words preserved a phonetic distinction while others did not, the merger was considered inconsistent for that task. /aɪ/ was determined to be diphthongal if there was a clear glide toward the top of the vowel space.

Semantic differentials were scored by establishing a trait as the positive - e.g., friendliness would be the positive trait and unfriendliness the negative trait. If the participant circled the tick mark nearest to the negative trait, the speaker being scored received a 0. Each tick mark after that was an additional point. So, if the tick mark was nearest to the positive trait, the speaker received a score of four as there were a total of five tick marks.

Perception tests were scored by as correct when participants selected the word that was read by speaker.

d. Participants

Table 2 summarizes the relevant background information for each participant. This information was generally gathered during the informal interview portion of the session. All participants were recruited through personal contacts and snowball sampling.

Table 2. Participant demographics

Participant	Place of birth and upbringing	Time in Oklahoma	Gender	Age (approx.)
1	Kansas	19 years	Female	30s
2	Texas	15 years	Female	40s
3	Oklahoma	Whole life, 22 years	Male	22
4	Colorado	12 years	Male	30s
5	Connecticut	12 years	Female	30s
6	Oklahoma	Whole life, briefly lived in Colorado as an adult	Male	30s
7	Oklahoma	Whole life, minus ten years in St. Louis as an adult	Male	40s

III. Results

a. Reading Passage

Participants 1, 3 and 6 all used the *pin-pen* merger consistently throughout the reading task. Participants 2, 4, 5 and 7 all maintained a *pin-pen* distinction consistently during this task. All participants consistently used diphthongal /aɪ/ in this task. All participants except 5 consistently used the *cot-caught* merger during this task as well. Results for this task and for the word list task are summarized in Table 3.

Table 3. Production patterns for Reading Passage and Word List tasks

Speakers	*Pin-pen* merger	*Cot-caught* merger	/aɪ/
1	Yes, consistent	Yes, consistent	Diphthongal
2	No	Yes, consistent	Diphthongal
3	Yes, consistent	Yes, consistent	Diphthongal
4	No	Yes, consistent	Diphthongal
5	No	No	Diphthongal
6	Yes, consistent	Yes, consistent	Diphthongal
7	No	Yes, consistent	Diphthongal

b. Word List

Results for this task were consistent with the reading passage. That is, the *pin-pen* merger was used by participants 1, 3 and 6 consistently and not at all by participants 2, 4, five and 7. The *cot-caught* merger was used consistently by all participants except 5. Diphthongal /aɪ/ was used consistently by all participants. Results for this task are summarized in Table 3 as well.

c. Minimal Pairs

This task was the only reading task which revealed inconsistency with the previous two tasks. Participant 3 used the *pin-pen* merger consistently throughout this task like before, but participants 1 and 6, who had used the *pin-pen* merger consistently in both previous tasks, preserved a distinction in a single word pair on the first reading. For participant 1, this was the "mint-meant" word pair and, for participant 6, this was the "gym-gem" word pair. For both participants, their pre-nasal /ɪ/ remained consistent in this distinct pair, but their pre-nasal /ɛ/ had values similar to /ɛ/ in non-nasal contexts. All participants used diphthongal /aɪ/ consistently and all but participant 5 used the *cot-caught* merger consistently. Results are summarized in Table 4.

Table 4. Production patterns for Minimal Pairs task

Speakers	*Pin-pen* merger	*Cot-caught* merger	/aɪ/
1	Yes, inconsistent	Yes, consistent	Diphthongal
2	No	Yes, consistent	Diphthongal
3	Yes, consistent	Yes, consistent	Diphthongal
4	No	Yes, consistent	Diphthongal
5	No	No	Diphthongal

6	Yes, inconsistent	Yes, consistent	Diphthongal
7	No	Yes, consistent	Diphthongal

d. Semantic Differentials

Participants 2, 3, 4, 6 and 7 all gave higher mean scores to the diphthongal /aɪ/ speaker. Participant 1 gave the monophthongal and diphthongal speakers equal scores while participant 5 gave the monophthongal /a:/ speaker a slightly higher mean score. Consistent preferences like this were not seen for the non-*pin-pen* merged speaker. Below are two tables which display the mean scores for participants 1,3, 5 & 7 (Table 5), who listened to the first block of audio stimuli, and the mean scores for participants 2, 4 & 6 (Table 6), who listened to the second, corresponding block of audio stimuli. Both groups of participants rated the diphthongal speaker higher than the monophthongal speaker for almost every trait in the differentials. However, the monophthongal speaker was rated much higher for friendliness in the first group of participants. In block two, the non-*pin-pen*-merged speaker received higher average ratings than the merged speaker, but the reverse was true for block one.

Table 5. Mean Scores for Participants 1, 3, 5 & 7 (Block 1 Speakers)

	/aɪ/	/a:/	Filler	Non-merged	*Pin-pen* merged
Likeliness to hire	2.75	2.5	2	2.5	2
Positive Impression	2.75	2.5	1.75	2.25	1.75
Would fit in	3.25	2.75	2.25	2	2
Hard-working	2.25	2.5	2	1.75	2
Leader	2	2.25	1.5	1	2.75
Intelligent	3	1.75	1.75	2.25	2.75
Friendly	1.75	3.25	2.75	2.5	2
Good comm. skills	3.5	2.5	1.25	1.5	2.75
Refined	3.25	1.75	1.5	1.75	2.25
Econ. Advantaged	3	1.25	2.25	2	2.75
Urban	3.25	1	2.25	2.25	2.25
From the city	3.25	1.25	2	2.25	2.75
Mean	**2.83**	**2.10**	**1.94**	**2**	**2.3**

Table 6. Mean Scores for Participants 2, 4 & 6 (Block 2 Speakers)

	/aɪ/	/a:/	Filler	Non-merged	*Pin-pen* merged
Likeliness to hire	2.25	1.75	1.25	1.75	1
Positive Impression	2.25	1.5	1	2	1.5
Would fit in	2.5	0.75	2	2.25	1.25
Hard-working	1.75	1.25	1.5	1.75	1
Leader	2	1.25	1	1.75	1
Intelligent	2.25	1.5	2	2	1
Friendly	2.25	1.75	1	2	1.75
Good comm. skills	2.5	1.5	1.25	2	0.75
Refined	2.25	1.25	1.5	2	0.75
Econ. Advantaged	2.25	1.5	2	2	0.75
Urban	2.5	0.75	1.75	2	1.25
From the city	2.75	1	2.25	2.25	1
Mean	**2.29**	**1.65**	**1.54**	**1.98**	**1.08**

e. Follow-up Responses

A table with three particularly notable questions that most participants were asked is shown below with individual participant responses. Additionally, other notable responses are summarized at the bottom of the table.

Table 7. Responses to follow-up questions

	Did you notice anything in particular about the voices?
1	Some voices had more “twang” than others.
2	One speaker used “short /ɪ/ sound instead of /ɛ/” and another used “long/aɪ/”. Some speakers seemed more assertive and confident, regardless of pronunciation.
3	The second and last voices were most comprehensible. There was variance across speakers in terms of accent, with some being more “off-putting” than others.
4	The last speaker had less clear annunciation and it was more difficult to differentiate between words.
5	There was variance between the voices themselves and some speakers sounded more urban.
6	Some voices had more distinct accents and some sounded happier and friendlier when they spoke.
7	Some voices sounded more rural, with one having more “drawl” on her /aɪ/ sound.

Is Oklahoma Southern or Midwestern in identity?	
1	The way people speak is more Southern than Midwestern.
2	There are elements of both but Oklahoma is culturally more Southern.
3	An argument could be made for classifying Oklahoma as Midwestern, though he still considers it Southern.
4	Although he knows it "should be" Midwestern, he himself considers Oklahoma Southern.
6	Southern.

What does a typical Oklahoman sound like? Are there any specific features you notice?	
1	More "twang" and use of words like "y'all" and "gunna".
2	A "drawl" and a "flat /aɪ/" sound.
3	A "drawl" and an overall "slower" rate of speech. Also, "stretching out" vowels - produced the word "can" with a very raised vowel as an example).
4	Oklahomans sound like the last speaker (*pin-pen* merged).
5	South-Midwest blend - a mix between Scandinavian-influenced Midwest speech, which she imitated as /oː doːnʃə noː/ ("Oh don'tcha know"), and Southern speech, which she imitated as /ɜʊ ɪts taːm aːm fɪksɪn tə gɜʊ ən aː gɑt səm aːs ɪn maː kɜp/ ("Oh, it's time. I'm fixin' to go and I got some ice in my cup"). Also the monophthongal /aɪ/ sound, words like "buggy" and "sack" instead of "plastic bag".
6	Southern "drawl", though not as "deep" as other Southern states. A laziness or "mushiness" to Oklahoma speech - he said this is what he meant by drawl.
7	Not as Southern as other Southern states, but has a slower rate, sometimes "interesting" vowel sounds and "turning /aɪ/ into /aː/".

Other notable responses	
1	Stressed a distinction between good communication and accent, but her distinct use of these terms was no consistent through the interview.
2	Admitted some innate bias against some of the features she heard. There was a clear divide heard between urban and rural speakers. Believes there is a correct and incorrect way to speak, but that correct speech can still be regional (accent, she clarified, still has the tendency to fall into error). She emphasized grammar and to an extent, pronunciation, when asked to define correct speech.
3	Did not believe he sounded Oklahoman, rather from an urban center in Texas or a more Northeastern state like Michigan. He considers Oklahoma speech less efficient due to its slower rate but possibly more inviting.
4	Referenced the use of colloquialisms like "bless your heart" when discussing Oklahoma speech.
5	Admitted she has become much less biased against Oklahoma speakers after working here for some time.
6	He dismissed the idea of correct and incorrect speech but admitted a Southern accent might be a disadvantage because of associations between Southern speech and low intelligence.
7	Believed people could have correct speech but there is a correlation between heavily accented speech and what he could consider nonstandard.

f. Perception Test

All participants correctly identified every word in the perception test except participant 3. Table 8 summarizes their results. The left hand column lists each word and whether or not it was speaker 1 or speaker 2 producing the word. Across the top are the participant numbers. A correct response is recorded as correct and an incorrect response as incorrect.

Table 8. Perception test results

	Part. 1	Part. 2	Part. 3	Part. 4	Part. 5	Part. 6	Part. 7
Speaker 1 Pen	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct
Speaker 1Pin	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct
Speaker 1 Tin	Correct	Correct	Correct	Correct	Correct	Correct	Correct
Speaker 1 Ten	Correct	Correct	Correct	Correct	Correct	Correct	Correct
Speaker 2 Pen	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct
Speaker 2 Pin	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct
Speaker 2 Tin	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct
Speaker 2 Ten	Correct	Correct	Incorrect	Correct	Correct	Correct	Correct

IV. Discussion

None of the participants involved used clearly Southern speech features beyond participant 3 who used the *pin-pen* merger. Even though five of the seven participants were from Texas, Kansas or Oklahoma, all consistently used diphthongal /aɪ/. While this is not evidence that any of them consciously avoided the use of Southern speech features, it is of interest that, although many participants said correct speech could be accented, they did not use these features in their own speech.

a. Reading tasks and Perception Test

aa. *Pin-pen* Merger

Two of the *pin-pen* merged participants, 1 and 6, produced an isolated distinction in the first reading of the minimal pairs. For participant 1, this was the "mint-meant" pair while, for participant 6, it was the "gym-gem" pair. Though the reason for this cannot be absolutely ascertained, it is possible the nature of the task (pairs of words with only a phonetic difference between a single vowel) tipped off the participants that a distinction "should" be made between all pairs of words listed. This, however, does not account for the isolated nature of the distinction - pairs afterward were still merged for both speakers, and the second reading of the same pairs in a different order resulted in a merged production of the previously distinct pair. Additionally, it is possible that that the "unmerging" of the *pin-pen* pair in urban centers in Teaxs seen in research by Koops et al. (2008) is extending to affect other merged regions like Oklahoma and southern Kansas, resulting in speakers with less consistently merged vowels. Also, participant 2, who was born and raised in an urban center in Texas, did not use the merger at all, and neither did participant 7 who was born and raised in Oklahoma. This could be even more of an indication that the merger is losing ground in both Texas and Oklahoma. Furthermore, it should be noted that the two merged participants who did make an isolated distinction both identified all words correctly on the perception test, while the merged speaker who never produced a distinction incorrectly identified most of the words in the perception test. It is therefore also possible that participant 3, who never produced a distinction, is fully merged both in terms of production and perception while the other two merged speakers maintain some perceptual ability to recognize distinctions, making them more likely to produce distinctions when contextual clues indicate one should be present between two words.

ab. /aɪ/ Monophthongization

As stated earlier, no participants monophthongized or weakened /aɪ/ in any of the tasks administered. Participant 6 showed some glide weakening during the informal interview portion of the session, but for all of the measured tasks, he used fully diphthongal /aɪ/. None of the participants interviewed were beyond middle age, which is notable as the Atlas of North American English (Labov et al. 2006) found a positive correlation between increasing age and degree of /aɪ/ monophthongization, with each successive generation of 25 years reducing the percentage of glide deletion by 12.8. Bakos (2013) also found /aɪ/ monophthongization or the

Southern Shift generally to be less extensive in Oklahoma than other Southern states. However, one of the participants was from Texas, a region firmly within Southern dialect boundaries, and did not use the *pin-pen* merger or monophthongal /aɪ/. Considering this feature has been found to correlate with age, it is possible it is losing ground like the *pin-pen* merger, particularly for urban speakers.

b. Semantic Differentials

Semantic differential results contained some of the most revealing data in the study. The diphthongal speaker was only preferred for six traits, and four of them were isolated preferences by the same participant. Participant 5 preferred monophthongal /aɪ/ for the traits *urban, from the city, friendly, leader, hard-working* and *would fit in*. Otherwise, participant 7 only preferred the monophthongal speaker for *hard-working* and *friendly*. The only trait which showed consistently higher scores for the monophthongal speaker was *friendly*, with participants 1, 3, 5 and 7 all preferring the monophthongal over the diphthongal speaker. The traits *intelligent*, *good communication skills* and *refined* were all preferred by every participant except one. For the *intelligent* trait, this outlier was participant 6, who rated both monophthongal and diphthongal speakers equally. For *good communication skills*, the outlier was participant 1, who rated both speakers equally. For *refined*, the outlier was participant 4, who rated both speakers equally. This lines up very nicely with previous research by Preston (1999) and his findings which showed associations between Southern speech, higher friendliness ratings and lower intelligence ratings. For *likeliness to hire*, the diphthongal speaker was preferred by participants 2, 3 and 4, while the monophthongal speaker was never preferred and only rated equally with the diphthongal speaker by participants 1, 5, 6 and 7. Overall, there seems to be a solid preference for the diphthongal speaker for every trait except *friendly*. The *pin-pen* merged and non-merged speakers showed less distinctive scoring patterns. The non-merged speaker, however, was more highly associated with *urban, economic advantage, from the city, refined, friendly, hard-working, would fit in, positive impression* and *likeliness to hire*. It should be noted that these preferences were not nearly as distinct as the overall preference for the diphthongal speaker. As predicted, monophthongization seems to be a much more salient feature for Southern speech as the monophthongal speaker received scores associating her with traits found to be tied to Southern speech in previous research, like that done by Preston (1999). Though *likeliness to hire* did not show quite as strong of a score discrepancy between the monophthongal and diphthongal speakers, it still revealed a preference for the diphthongal speaker, indicating that this feature might be, as predicted, a hindrance during the employment process. This becomes clearer with the follow-up responses discussed below.

c. Follow-up Responses

All of the respondents who were asked to identify Oklahoma as Southern or Midwestern identified it as Southern, though some oscillated between the two terms before falling on Southern. Actually, participant 1 specifically referred to Oklahoma speech as the qualifier for its Southern identity - “the way people speak [in Oklahoma] is definitely more Southern.” When asked to describe Oklahoma speech, three traits were mentioned by multiple participants - a “drawl” (though participant 1 used the word “twang”), /aɪ/ monophthongization and

"Southernisms" like "y'all". Though no participants offered up an explanation for what constitutes a "drawl," participant 6 did say he was referring to a "laziness" or "mushiness" when explicitly asked. Participant 3 was particularly vocal about the slow rate of Oklahoma speech, and considered it less effective than Northern speech. Participant 5 provided one of the most telling descriptions of Oklahoma speech when she said it sounded like a mix between Scandinavian-influenced Midwest speech, which she imitated with the phrase "Oh don'tcha know" (produced as /oː doːnʃə noː/), and Southern speech, which she imitated with the particularly verbose phrase "Oh, it's time. I'm fixin' to go and I got some ice in my cup" (produced as /ɜʊ ɪts taːm aːm fɪksɪn tə gɜʊ ən aː gɑt səm aːs ɪn maː kɜp/). Though "Scandinavian" influences are not attested in Oklahoma speech nor are they the subject of this study, this "blend" fits well with other responses, as when participant 7 described Oklahoma speech as Southern, but not as Southern as other Southern states. Participant 5's Southern imitation included just about every feature commonly associated with Southern speech - fronted /o/, monophthongal /aɪ/ in both voiced and voiceless environments, velar fronting of /ɪŋ/ and fronting and raising of /ʌ/. Though negative descriptors like "laziness," "mushiness" and "inefficiency" were frequently mentioned in describing Oklahoma speech, most participants were not willing to admit an outright bias against Southern speech, with every participant saying that, to some extent, "correct" speech can be regional. However, participant 2 admitted innate bias to the features she heard immediately after listening to the speakers, and participant 3 specifically referred to Oklahoma speech as inefficient. Often, participants would follow up answers about correctness with conditional statements, such as in the case of participant 7. Though he said correct speech can be regional, he followed up by saying he believes there is a high correlation between "heavily accented speech and what is considered nonstandard." Overall, though participants seemed hesitant to outright condemn Southern speech as "incorrect," they still displayed a much higher preference for the diphthongal and, though less visibly, the non-*pin-pen* merged speakers in the semantic differential task.

d. Limitations

Due to time constraints, a different speaker was used to produce sets of sentences with each feature, rather than using a single speaker and extensively coaching them for all features. This introduces the possibility that other variables regarding things like overall voice quality could skew results. Further, coaching was not as extensive as it could have been, meaning that it is possible speakers used were not producing completely natural sounding features, such as when coached to produce monophthongal /a:/. The inclusion of vowels before liquids and glides in the reading tasks also made vowel measurement more difficult and, due to the phonetic effects these consonants have on neighboring vowels, measurements could have been skewed in these cases. However, even if this were the case, determinations like the presence of the *pin-pen* merger and /aɪ/ monophthongization in the participant's speech were still accurate due to the extensive amount of speech samples collected. Regardless, fewer pre-liquid or pre-glide vowels would have reduced the time spent on vowel measurement, thus leaving more time to possibly further expand the scope of the study. Finally, coaching of speakers only sought to elicit the features being studied and not to eliminate regional features already present in the speech of the speakers.

It is possible less perceptible regional features present in the speech of the speakers used could skew results as well.

e. Conclusion

In spite of the limitations mentioned, it is clear that there was a preference for the diphthongal speakers. The data shows that /aɪ/ monophthongization is a very salient feature in Southern speech, and certainly more salient than the *pin-pen* merger. Traditional associations between Southern speech and traits like low intelligence and friendliness were revealed in the scores of the monophthongal speaker. This, along with follow-up responses which described Oklahoma speech as commonly monophthongal and associated it with negative descriptors seems to confirm that it could be a detrimental feature in the hiring process. For the non-*pin-pen*-merged and merged speakers, preferences were significantly less distinct and varied trait by trait with little discernable pattern. It seems that, for many, this feature is below the level of conscious awareness and would likely not negatively impact an individual in an employment context.

References

Allbritten, R. (2011). Sounding Southern: Phonetic Features and Dialect Perceptions (Doctoral Dissertation).

Bailey, G. (1997). When did Southern American English Begin? In E.W. Schneider (Ed.), *Englishes Around the World: Studies in honour of Manfred Gorlach* (pp. 255-277). Amsterdam: John Benjamins Publishing Company.

Bailey, G. & Tillery, J. (1996). The persistence of Southern American English. *Journal of English Linguistics, 24*(4), 308-321.

Bakos, J. (2013). A Comparison of the Speech Patterns and Dialect Attitudes of Oklahoma (Doctoral Dissertation).

Koops, C., Gentry, E., & Pantos, A. (2008). The effect of perceived speaker age on the perception of pin and pen vowels in Houston, Texas. *University of Pennsylvania Working Papers in Linguistics, 14*(2).

Labov, W., Ash, S., & Boberg, C. (2006). *The atlas of North American English: Phonetics, phonology, and sound change*. Berlin: Mouton/de Gruyter.

Plichta, B. & Preston, D. R. (2005). The /ay/s have it: The perception of /ay/ as a north-south stereotype in United States English. *Acta Linguistica Hafniensia, 37*(1), 107-130.

Van Riper, W. R. (1979"). The speech of the American heartland: Oklahoma. *Journal of English Linguistics, 13*(1), 65-70.

Preston, D. R. (1996). Where the worst English is spoken. In E.W. Schneider *Focus on the USA* (pp. 297-361). Philadelphia, PA: John Benjamins North America.

Appendix A - Interview and Follow-up Prompts

Questions to spark discussion for informal interview:

What kind of work does your job entail? Do you enjoy it? If so, why?

What have been some of your favorite experiences working here? Have you worked anywhere else, and, if so, what were some of your favorite experiences there?

Do you have any hobbies outside your work? If so, what are they?

Do you get to travel a lot? If so, where have you been and what have you liked about it? How has it compared to Oklahoma?

What are some of your favorite things about living in Oklahoma? Could you ever see yourself living anywhere else?

Have you lived here your entire life? If not, where else have you lived and when? If so, do so you like it here? What is it about it that you like/dislike? What part of Oklahoma are you from?

Where are your parents from? Did they ever live anywhere else?

How long have you worked here? What made you pursue this line of work?

What high school or college did you go to? (If they went to college) What was your major and did you know you would end up in this line of work when you were pursuing your education? (if they didn't go to college) Did you always know this is what you wanted to do?

Outside of your job specifically, what does your corporation do? What values do you think are most important here? How do you identify with those values, and what values do you think are important for people here to have?

What kind of qualities do you look for in the people you hire? What makes those qualities important?

What qualities overall do you think make for a successful workplace?

Immediate follow up questions:

Did you notice anything in particular about the voices? What?

Were some of the speakers you heard better at presenting themselves than others? Why do you think some were betters and others not?

Do you know people who sound like these speakers? Do you work with people who sound like these speakers?

Do these speakers sound like Oklahomans? Or, do some of these speakers sound like Oklahomans and others not?

Do you think you speak like a typical Oklahoman? Where do you think you sound like you're from? Do you think your speech (not just style, but the way it sounds) is different in the workplace than at home?

What does a typical Oklahoman sound like? Are there any specific features you notice? Do you think Oklahomans speak correctly? If not, what is it about their speech that makes it sound incorrect?

What do you think about the importance of 'correct' English? Can correct English be regional? That is, can someone speak correctly but still have an accent that clearly indicates where they might be from?

Do you think you sound like your parents, or do you speak differently? Is there anything you notice about the way they speak compared to you?

Do you think people with less obviously regional accents do better in interviews?

Is Oklahoma 'Southern'? Is it 'Midwestern'? Do you identify as an Oklahoman?

Appendix B - Semantic Differential Form

Based on the speech sample you heard, please rate the speaker according to each criteria.

How likely are you to hire this person?

Very — Not at all

My overall impression of the speaker was…

Postitive — Negative

Speaker seems to be…

Intelligent — Unintelligent

Unfriendly — Friendly

Lazy — Hard Working

Urban — Rural

Rough — Refined

A leader — A follower

Speaker sounds like they are from…

the country — the city

Speaker's communication skills were…

Good — Bad

Speaker seems to be from a background that is economically…

Advantaged — Disadvantaged

At my company speaker would…

Fit in — Not fit in

Appendix C - Reading Passage

Reading Passage

Please read the following passage aloud.

Mike was planning to throw a party on Tuesday night and decided to check his list one more time before he went shopping. He already had plenty of stuff to drink, and he had enough plates and cups. His brother Jim was going to bring some fish he'd caught and maybe put them on the grill by the pool. Mike thought he should get some chips, pretzels and a few other snacks to start the meal. He looked around to see if he had anything sweet, but then remembered that his friend Linda was making a pie. When he looked in the cupboard, he saw that he was out of coffee. He found a pencil, wrote it down on his list, and hoped it was on sale. Then he went to the garage, got in his car, pulled out, and went to the 7-11. It looked like everything would go well.

Appendix D - Word List

Word List

Please read the following word lists aloud.

Bed
Ride
Jam
Sinned
Doll
Spy
Gym
Pawned
Kite
Caught
Boot
Send
Pined
Bid
Dial
Rod
Pond
Cot
Gem
Spa
Cat
Sand

Ride
Sinned
Gym
Pined
Bed
Spy
Caught
Jam
Dial
Gem
Bid
Cot
Spa
Kite
Doll
Send
Pawned
Rod
Sand
Cat
Boot
Pond

Appendix E - Minimal Pairs

Word Pairs

Please read the following word pairs aloud.

And	End
Bid	Bed
Bind	Bond
Gym	Gem
Spa	Spy
Dial	Doll
Meant	Mint
Far	Fire
Kite	Cot
Since	Sense
Tent	Tint
Pet	Pit
Pawn	Pan
Sinned	Send
Rod	Ride
Knit	Net
Cat	Caught
Item	Atom
Boot	Boat

Bond	Bind
Spy	Spa
Bed	Bid
Doll	Dial
Gem	Gym
Tint	Tent
Net	Knit
End	And
Caught	Cat
Mint	Meant
Cot	Kite
Sense	Since
Send	Sinned
Fire	Fair
Pan	Pawn
Atom	Item
Pit	Pet
Ride	Rod
Wrote	Root

Appendix F - Perception Test Response Form

Word Identification

Please circle which of the three words was played in each speech sample.

1.	Pin	Pen	Pan
2.	Pin	Pen	Pan
3.	Tin	Ten	Tan
4.	Tin	Ten	Tan