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# EARLY TRENDS IN A NEWLY DEVELOPING VARIETY OF ENGLISH[1]

David BOWIE
University of Alaska Anchorage
david.bowie@uaa.alaska.edu

**Abstract**

During the nineteenth century, English-speaking natives of Utah exhibited variation in three phonological variables (among others): the *cot-caught* merger, the *cord-card* merger, and /ɑɪ/-monophthongization. Based on an analysis of audio recordings of twenty-six natives of Utah born during the nineteenth century, changes in these variables over apparent time are tracked. The analysis finds a trend toward completion of the two mergers and increased /ɑɪ/-monophthongization. This is contrasted with the current situation, in which the *cot-caught* merger has progressed to a state of completion in perception and very small differences in production, the *cord-card* merger is being abandoned, and /ɑɪ/-monophthongization exists only at a very low level. Possible reasons for this include a movement toward regional rather than local norms resulting from greater contact between varieties in the Intermountain West during the twentieth century.

**Key words**
new dialect formation, dialect contact, regional norms, Utah

[1] I would like to thank those who have assisted in the development of this study along the way, particularly Melody Bowdon, Bill Eggington, Ellen Henneman, Wendy Morkel, and Jennifer Nieves, without whom this project would not have been possible.

**PRIMERAS TENDENCIAS EN EL DESARROLLO DE UNA NUEVA VARIEDAD DEL INGLÉS**

**Resumen**

Durante el siglo XIX, los hablantes nativos del inglés en Utah mostraron variación en tres variables fonológicas (entre otras): las homofonías (*cot-caught* merger y *cord-card* merger) y la monoptongación de /ɑɪ/. A partir de un análisis de grabaciones de audio de veintiséis nativos de Utah nacidos a lo largo del siglo XIX, se ha llevado a cabo el seguimiento de los cambios en estas variables en tiempo aparente. El análisis muestra una tendencia hacia la compleción de los procesos de homofonía y un incremento en la monoptongación de /ɑɪ/. Este comportamiento se ha contrastado con la situación actual, en la cual la homofonía *cot-caught* ha progresado hacia su terminación con relación a la percepción y hacia una diferenciación muy reducida con relación a la producción, la homofonía *cord-card* está siendo abandonada, y la monoptongación /ɑɪ/ sólo existe en un nivel muy reducido. Las posibles razones que pueden explicar estos hechos suponen una tendencia hacia el habla regional más que hacia el habla de los NORM locales a causa del mayor contacto entre las variedades del oeste de la región Intermountain durante el siglo XX.

**Palabras clave**

formación de un nuevo dialecto, contacto dialectal, hablantes NORM regionales, Utah

## 1. Introduction

Field reports of new dialect formation have emerged as an important set of data for linguistics, providing vital input into studies of language change. In most cases, these studies have either dealt with new cities that fall within a preexisting dialect region, such as King of Prussia, Pennsylvania (Payne 1976) or Milton Keynes, England (Kerswill & Williams 2000), or with existing language centers that face massive immigration, as with urbanized areas in Texas (Thomas 1997). There is, however, another possible situation for the formation of a new dialect: speakers of a language settling an area that lies outside any previously existing dialect region of that language. This is, of course, a common occurrence historically, but in most cases in the English-speaking world linguistic settlement occurred far enough in the past that no recorded speech is or even could be available to give direct evidence for linguistic patterns among the earliest natives of the area. In a few cases, however, such settlement has

occurred recently enough that audio recordings of representatives of the first generations of native-born speakers of English as a recently settled language exist; one of these is Utah.[2] While some research has been conducted on Utah English[3] (for a few recent examples, see Bowie 2008; Baker & Bowie 2009; Reeves 2009), no work has been conducted specifically on the nineteenth-century development of Utah English with the exception of Di Paolo's (1993) work on the existence and development of propredicate *do* and Bowie's (2003) on the *card-cord* merger. The study outlined here focuses directly on the historical development of Utah English by looking at the changes in three phonetic variables during the first half-century following Utah's initial English-speaking settlement in the mid-nineteenth century.

## 2. Utah

The first permanent surviving English-speaking settlement of what is now Utah began in 1847 with the founding of Great Salt Lake City (now Salt Lake City), quite distant from any other English-speaking regions. Massive immigration resulted in a rapid population climb much the same as that found in the early settlement of other parts of the western United States. Along with migration from other parts of the United States, many of the early arrivals to Utah came from outside the United States, with the historical peak of foreign-born residents occurring in 1870, at 35.4% of the population. (Population figures are shown graphically in Figure 1.) This situation led, of course, to a great deal of dialect contact and mixture. Unlike most of the United States West, however, Utah was settled primarily by families, and so at the same time as this massive immigration was occurring, children were being born and acquiring the early stages of what would eventually become Utah English.

[2] Another notable case is New Zealand, where research using recorded speech from the first generations of English speakers has been conducted by Britain (2001), Maclagan and Gordon (2000), Trudgill, Maclagan, and Lewis (2003), and others.

[3] "Utah English" is used throughout this paper even though it certainly is the case that Utah's obviously artificial boundaries do not coincide with linguistic boundaries. However, "Utah English" has frequently been used in the literature as shorthand for the varieties of English spoken in Utah, particularly along the urbanized areas along the Wasatch Front (see Bowie 2008; Di Paolo 1992; Faber & Di Paolo 1995; Lillie 1998, among many others). In addition, because this paper deals with the development of what would eventually become the varieties of English spoken in Utah while they were forming in a relatively concentrated area in northern Utah, referring to Utah English as a more or less unitary phenomenon actually does make sense for the purposes of the current discussion.

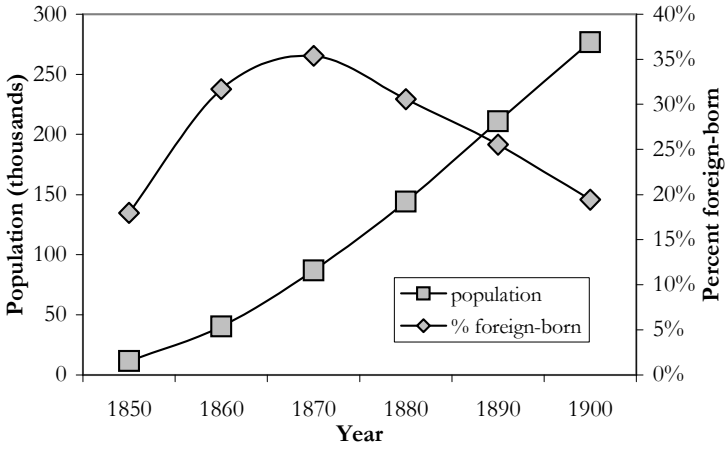


Figure 1. Population of Utah and percentage foreign-born population, 1850-1900

## 3. Variables

This paper reports on a study of the development of three items found to be in variation in Utah English during the first half century of permanent English-speaking settlement in the Utah Territory (1847 to 1896). Two of these variables are widely recognized mergers in present-day Utah English: the *cot-caught* merger and the *card-cord* merger. The third is an item found in early Utah English that has since nearly disappeared from the variety: /ɑɪ/-monophthongization.

The *cot-caught* merger is widespread across much of North America, including Utah, and it is so complete in most of the western United States that in descriptions of local varieties it is generally mentioned only in passing if at all. However, in the Salt Lake Valley of Utah the merger is now actually in a state of near-merger, with small but fairly consistent production differences (Di Paolo 1992), and in the nineteenth century the merger was clearly variable, as shown later in this paper. The *card-cord* merger in Utah was first reported by Pardoe in 1935, but already existed among nineteenth-century Utahns. Since at least the 1960s, this merger has been recognized by Utahns as a regional stereotype, and it has been in decline through most of the twentieth century (Helquist 1970; Lillie 1998). Finally, the monophthongization of /ɑɪ/ can be found variably in the speech of nineteenth-century Utahns, but is now found only at relatively

low levels in Utah English, most strongly in the speech of older speakers (Morkel 2003).

## 4. Data and analysis

Since Utah English developed after English spelling was largely standardized and widespread formal education was instituted in Utah directly following English-speaking settlement, written sources such as letters cannot be used to trace the early development of Utah English.[4] However, while audio recordings of Utahns born in the nineteenth century are, as one might expect, relatively uncommon, such recordings do exist for a number of individuals representing one particular segment of the population: upper-class white males. The Church of Jesus Christ of Latter-day Saints (LDS Church), headquartered in Salt Lake City, began airing radio broadcasts of parts of its general conferences in 1924, and recordings of most of these survive. These meetings are held twice a year, and they involve individuals in leadership positions in the LDS Church addressing the members of the church generally; at the time that the recordings used in this study were made, speaking slots at these conferences were limited to men. This sort of data of course does not give results for casual speech, and it does not allow us insight into gender or class differences in the speech of the time, but it remains invaluable as the best direct insight we can have into the form of early Utah English.

Recordings of broadcasts of the LDS Church's general conferences from April and October of 1936, 1938, and 1939 were analyzed for this study; these years were chosen because speakers born in the nineteenth century spoke then, and earlier years' recordings were either unavailable or the sound quality was too poor for them to be useful. The recordings of the twenty-six speakers in those conferences who were born in what would eventually become Utah between 1847 and 1896 (that is, during the first half century of permanent English-speaking settlement)[5] were analyzed with respect to

[4] Texts written in the Deseret Alphabet, a semi-phonetic script used for a time in Utah, were considered as a source for data, but no Deseret Alphabet texts written by natives of Utah rather than immigrants from elsewhere appear to have survived.

[5] The oldest speaker was born in 1853 and the youngest in 1893. There was one exception to the requirement that the speakers studied were all born in Utah: Albert E. Bowen, who was born in Henderson Creek, Idaho. He was included because this area immediately borders Utah and was settled from there, with no geographical barriers standing between the community and Utah.

the three linguistic variables mentioned earlier. The speakers analyzed are listed in Table 1; all but two of the speakers were from Lillie's (1998) 'Northern Utah' dialect region, which is to be expected, given the historical (and continuing) concentration of Utah's population in that area.

| **Name of speaker** | **Year of birth** | **Name of speaker** | **Year of birth** |
|---|---|---|---|
| J. Golden Kimball | 1853 | Samuel O. Bennion | 1874 |
| Rulon S. Wells | 1854 | Levi Edgar Young | 1874 |
| Heber J. Grant | 1856 | Albert E. Bowen | 1875 |
| Rudger Clawson | 1857 | John H. Taylor | 1875 |
| George F. Richards | 1861 | Joseph Fielding Smith | 1876 |
| Reed Smoot | 1862 | Sylvester Q. Cannon | 1877 |
| Bryant S. Hinckley | 1867 | Rufus K. Hardy | 1878 |
| Joseph F. Merrill | 1868 | Stephen L. Richards | 1879 |
| Richard R. Lyman | 1870 | David A. Smith | 1879 |
| George Albert Smith | 1870 | Antoine R. Ivins | 1881 |
| J. Reuben Clark, Jr. | 1871 | Marvin O. Ashton | 1883 |
| Melvin J. Ballard | 1873 | LeGrand Richard | 1886 |
| David O. McKay | 1873 | Joseph L. Wirthlin | 1893 |

Table 1. Speakers recorded, by year of birth

For the analysis of the *cot-caught* merger, all words uttered by the speakers that, in varieties without the merger, contain /ɔ/ were analyzed (except for pre-rhotic tokens); all words containing /ɔɹ/ were collected for analysis of the *card-cord* merger; and all words containing the diphthong /ɑɪ/ were selected for analysis of /ɑɪ/-monophthongization. Auditory impressionistic analysis was used to determine whether the tokens were merged (for the *cot-caught* and *card-cord* mergers) or monophthongized (for /ɑɪ/-monophthongization). A sample of the tokens was checked for reliability using spectrographic analysis, and more were checked against the impressions of other researchers.

All tokens, whatever the variable, were coded for preceding and following sound, preceding and following syllabicity, syllable stress, preceding and following morphological boundaries, grammatical category, and age of the speaker. Tokens were

also coded for style; since the data came from religious addresses, style was broken down three ways in case fixed texts were treated differently by the speakers: a regular public speaking style, quotations from the LDS Church canon of scripture, and any other quotations. In addition, the historical word class of each word was tracked, following the methodology of the *Atlas of North American English* (Labov, Ash, & Boberg 2006).[6] Finally, in response to potential quirks related to such phenomena as lexical frequency, certain individual lexical items were tracked. For the *card-cord* merger, these were the words *Mormon*, *Lord*, and *authority* (along with related forms such as *Mormonism* and *authorities*); for the *cot-caught* merger, *god*, *not*, and *because* (including related forms of *god*); and for /ɑɪ/-monophthongization, *I* (and contractions containing *I*).

The total number of tokens collected for analysis for each of the variables under study was 2,968 for the *cot-caught* merger;[7] 2,944 for the *card-cord* merger; and 7,288 for /ɑɪ/-monophthongization. All tokens were then subjected to VARBRUL analysis. Because the factor groups of preceding and following sound are not completely independent of, respectively, preceding and following syllabicity (for example, a following pause or vowel can only be accompanied by a following syllable break), VARBRUL analysis was not able to deal with them at the same time (see Sankoff 1988). As a result, alternate runs were conducted with each conflicting group left out.

This paper does not offer a complete discussion of all of the results of the VARBRUL analysis, but rather mentions highlights of the results, focusing on changes in the variables over apparent time. The *cot-caught* merger is discussed first, then the *card-cord* merger, and finally /ɑɪ/-monophthongization. Complete VARBRUL weights for all of the significant factor groups are given for reference in Appendix I for [ɔ]~[ɑɹ], Appendix II for [ɔɹ]~[ɑɹ], and Appendix III for /ɑɪ/-monophthongization.

[6] So, for example, tokens analyzed for the *card-cord* merger were coded according to whether they occurred in words such as *horrible* (where the pronunciation historically varies between *h*[ɔɹ]*ible* and *h*[ɑɹ]*ible*), *warn* (historically only *w*[ɔɹ]*n*), or *pork* (historically either *p*[ɔɹ]*k* or *p*[oɹ]*k*). (For more information on this system, the reader is referred to Labov, Yaeger, & Steiner 1972.)

[7] Tokens of *on* were not included in the analysis because they pattern separately from other words subject to the *cot-caught* merger in some regions. The total listed does not include any instances of *on*.

## 5. The *cot-caught* merger

Overall, the speakers in the sample produced an [ɑ] in words subject to the merger of /ɔ/ into [ɑ] 59.97% of the time. This measure alone suggests that the *cot-caught* merger was well in progress among the original English-speaking settlers and natives of Utah. VARBRUL analysis shows phonetic, morphological, and grammatical conditioning of the merger, as can be seen in Appendix I. Two particular items, however, should be highlighted here.

First, the historical sound class of the word made a difference, as shown by the VARBRUL weights given graphically in Figure 2. Although the difference between the two word classes is not overwhelming, words that historically show variation between [ɔ] and [ɑ] favored the production of [ɑ], while words that could historically only contain [ɔ] disfavored the production of [ɑ]. This is perhaps only what one might expect, but it leads to an interesting possibility about the formation of a new dialect and the dialect leveling processes that go on in such situations. Since the children learning (and forming) the local dialect would have been more likely to hear [ɑ] around them in the words that historically alternated between the two vowels' different varieties, it makes sense that they would be more likely to favor the production of [ɑ] in those words. Given that, as will be seen later, the *card-cord* merger appears to have been undergoing a similar process at the same time, it may be possible to develop this into a general principle underlying the way new dialects form.

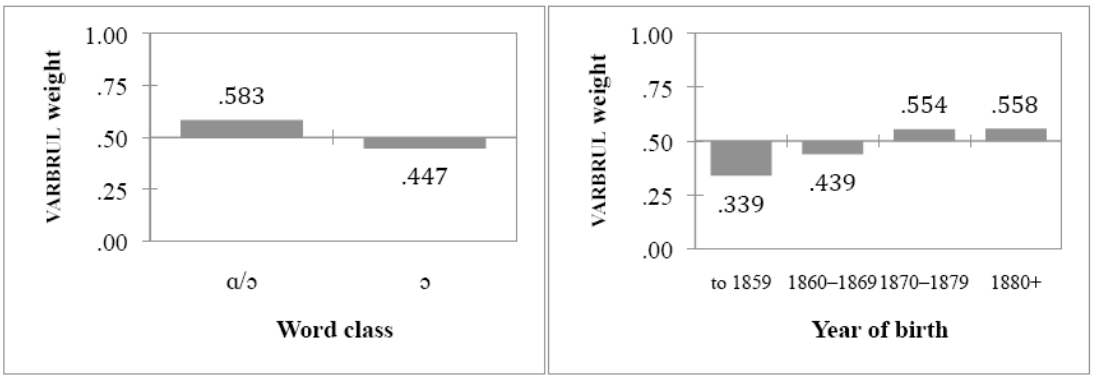


Figure 2. [ɔ]~[ɑ] VARBRUL weights by historical sound class and year of birth

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The second item of note from the VARBRUL analysis of the *cot-caught* merger relates to the ages of the speakers — the results for this factor group show a trend toward merger as apparent time continued, as seen in Figure 2. (In percentage terms, those in the oldest age group — those born before 1859 — produced [ɑ] 47.57% of the time, much less than younger speakers). There was a bit of a plateau among the youngest two age groups, with VARBRUL weights very close together at .554 and .558. This may simply be a slowing of the progression of the merger to the point that a century later it existed in a state of near-merger, rather than progressing to completion even by then (Di Paolo 1992).

These two results can be fruitfully contrasted with the situation for the *card-cord* merger, immediately following.

## 6. The *card-cord* merger[8]

The merger of [ɔɹ] into [ɑɹ] occurred at a lower rate than the *cot-caught* merger among nineteenth-century Utahns: Only 15.01% of all tokens were produced as [ɑɹ] by the speakers in the sample. Over the medium term, however, the *card-cord* merger proved no less robust — Helquist (1970) reported that the merger was nearly complete in the Salt Lake Valley by the 1930s, though he documents the beginning of the merger's reversal by mid-century, as confirmed later by Lillie (1998). Like the *cot-caught* merger, the *card-cord* merger was affected by phonetic and grammatical factors, though morphological conditioning was found to be insignificant. Historical sound class and the age of the speakers will also be discussed here for this variable, and a few interesting contrasts with the *cot-caught* merger will be pointed out.

First, the historical sound class of the words potentially containing [ɔɹ] had a large effect, shown graphically in Figure 3. To summarize, those words that show historical variation between [ɔɹ] and [ɑɹ] favored the production of [ɑɹ] extremely strongly, while those words that historically contained only [ɔɹ] still favored [ɑɹ], but not nearly as strongly. This parallels the situation for historical sound classes of words in the *cot-*

[8] For a more in-depth discussion of the *card-cord* merger in early Utah English, the reader is referred to Bowie (2003).

*caught* merger, in which those words containing a sound that could alternatively have been produced as the merged form historically favored the merged form more strongly. The case for the *card-cord* merger is more complicated, however, because there is a third sound class for words in the sample: words that historically vary between [ɔɹ] and [oɹ]. This sound class very strongly disfavored the merger into [ɑɹ].[9] It is unclear exactly why this is the case, as the speakers generally produced words in this sound class with an [ɔɹ], not an [oɹ], and so one would expect that they would have acted just like the class of words that was historically produced only with an [ɔɹ]. It may be, however, that the speakers were surrounded by a number of individuals from other regions who produced words in the [ɔɹ]/[oɹ] class with [oɹ] (at least variably), and so those were treated differently by the natives of Utah in the sample.

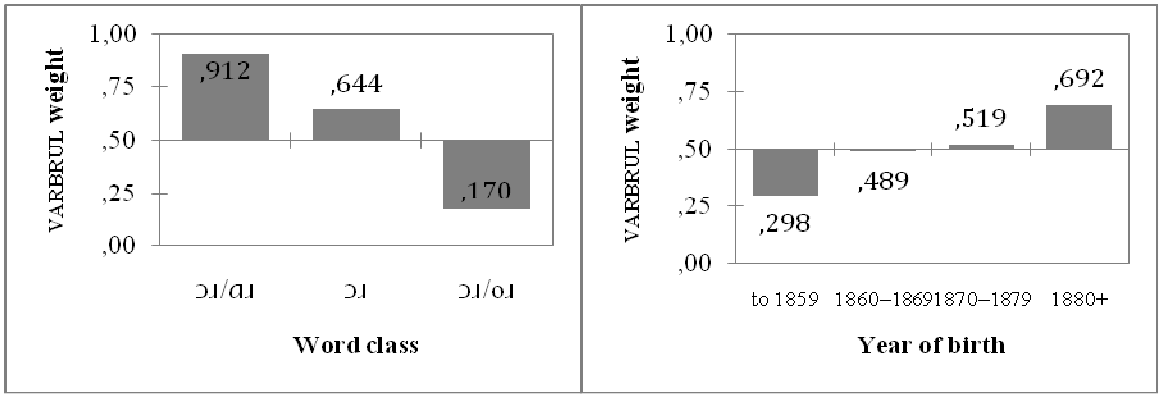


Figure 3. [ɔɹ]~[ɑɹ] VARBRUL weights by historical sound class and year of birth

The age of the speakers in the sample shows a trend similar to that seen for the *cot-caught* merger: a trend toward favoring merger as apparent time progresses, which is shown graphically in Figure 3. Note that the trend toward merger over apparent time appears a bit sharper than that of the *cot-caught* merger. This may be caused in part by the fact that the *card-cord* merger started out at a lower rate, allowing it to progress more steeply from there, but the difference is still striking. Also, as already mentioned, the *cot-caught* merger had not progressed to completion even by the 1990s (Di Paolo 1992) while the *card-cord* merger had progressed nearly to completion by the 1930s

[9] The difference between the historical sound classes of [ɔɹ]/[ɑɹ] versus only [ɔɹ] still holds up when the class [ɔɹ]/[oɹ] is excluded from the analysis.

(Helquist 1970), so the nineteenth-century difference between the two mergers over apparent time may have been an early sign of that twentieth-century dissimilarity.

## 7. The monophthongization of /ɑɪ/

The monophthongization of /ɑɪ/[10] is generally not considered a part of Utah English (or, in fact, of any variety of North American English outside of the southeastern United States). This is not entirely unwarranted—the feature exists only at very low levels in Utah English. In addition, it appears to well on its way toward disappearing entirely (except possibly in the word *I* and contractions containing *I*) (Morkel 2003). In the nineteenth century sample reported here, however, /ɑɪ/-monophthongization was found at a rate of 15.94%, comparable to the rate at which tokens expected to be [ɔɪ] were merged with [ɑɪ].

A VARBRUL analysis of the variable finds that /ɑɪ/-monophthongization was phonetically conditioned in nineteenth-century Utah English, with no significant morphological or grammatical conditioning. In addition, the historical word class did not have a significant effect, unlike the *cot-caught* or *card-cord* mergers — that is, all instances of /ɑɪ/, whether they historically alternated between monophthongs and diphthongs or could only have been diphthongal, were equally subject to monophthongization. What did have an effect, however, was a particular lexical item, which is of note because individual lexical items did not have a significant effect for either the *cot-caught* or *card-cord* mergers. The lexical item that had an effect was the word *I* (including contractions containing *I*), which favored monophthongization somewhat in comparison to other words (a graphical representation of this result is shown in Figure 4). This accounts for a large amount of the monophthongization found in the data (in the sample, *I* and words containing *I* made up 23.24% of this variable's tokens), and is most likely a frequency effect.

[10] When referring to monophthongized /ɑɪ/ here, exactly that is what is meant — complete monophthongs. Tokens with weakened glides were considered diphthongs for the analysis here.

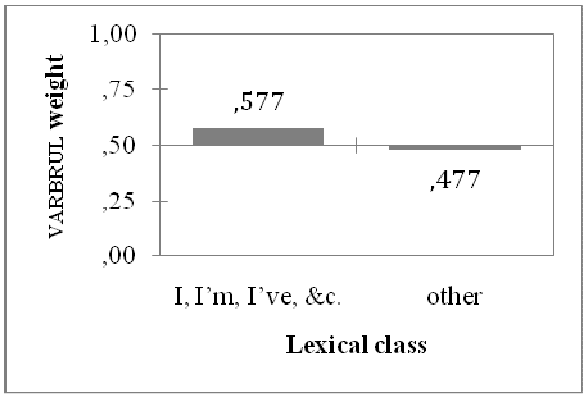


Figure 4. /aɪ/ VARBRUL weights for *I* (and words containing *I*) versus other words

Another difference between /aɪ/-monophthongization and the other variables studied is that style had a significant effect on the production of /aɪ/ as a monophthong or a diphthong: In regular speech, the speakers favored monophthongization slightly, but when quoting another source, they disfavored monophthongization; this is shown in Figure 5. Though there is no way to be entirely certain of the reasons for this, it seems reasonable to suppose that this is related in some way to an increased degree of formality involved in dealing with fixed texts. This effect may be amplified because most of the quotations that were offered came either from religious leaders or canonized scripture, which would be particularly important given the religious context of the addresses analyzed here. However, further investigation would be necessary to determine why that would have had an effect on this variable but not the others analyzed.

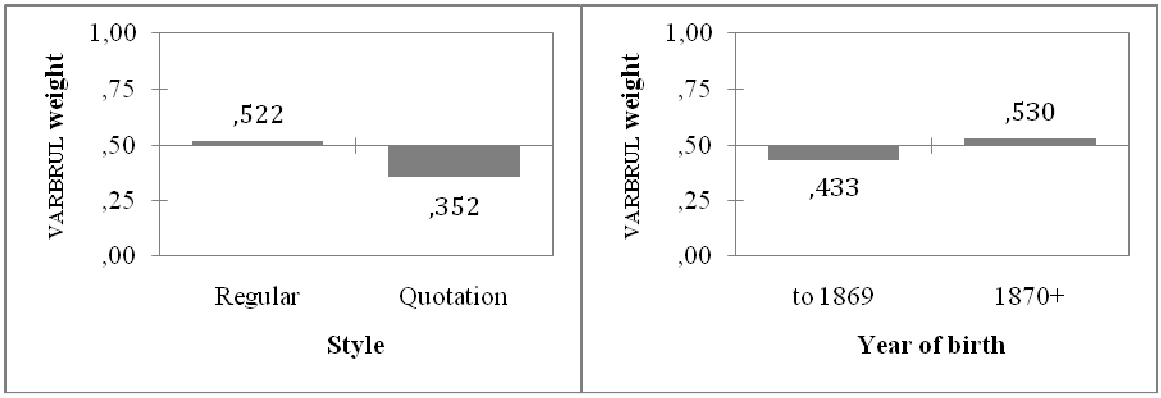


Figure 5. /aɪ/ VARBRUL weights by style and year of birth

More similar to the other two variables studied, on the other hand, is the apparent time effect that shows a trend toward increasing /ɑɪ/-monophthongization through the nineteenth century.[11] The graph showing this in Figure 5 is somewhat different from the parallel graphs for the other variables studied, as the best fit was achieved by breaking the individuals in the sample into two age groups rather than four, but the overall effect is, yet again, one of a (slight, but significant) trend toward favoring the monophthongal form.

Of course, as has already been pointed out, this trend toward monophthongization of /ɑɪ/ has not continued into present-day Utah English. This clearly parallels the progression of the *card-cord* merger, with a nineteenth and early twentieth century increase in occurrence only to be followed by a steep decline through the rest of the twentieth century. Roughly similar trends in /ɑɪ/-monophthongization have also been found in other speech communities as widely divergent from Utah as urban Texas (Thomas 1997) and Southern Maryland (Bowie 2001), where /ɑɪ/-monophthongization declined as a regional feature under pressure from dialects that did not exhibit the feature. The oddity here, then, is why Utah appears to have been patterning with Southern norms when the few previous reports that have speculated about Utah English's roots have connected Utah English with Northern dialect regions (Carr 1966; Pardoe 1935).[12]

## 8. Conclusions and discussion

The most obvious conclusion to draw from all this is that Utah English was changing in many important ways as the local variety was forming during the nineteenth century; among these changes were trends toward completing the *cot-caught* and *card-*

[11] This trend is actually a bit more complicated than described here, because raising of /ɑɪ/ also occurred in this speech community, with raising and monophthongization in competition (Morkel and Bowie 2002). Even taking that complication into account, however, monophthongization increased over apparent time as outlined here, and so this paper does not deal with the problems presented by raising.

[12] This sort of general description of the origins of Utah English should not be confused with Di Paolo's (1993) work that traces a particular feature of Utah English, propredicate *do*, to England. In the case of propredicate *do*, the feature appears to have been imported into Utah English after Utah English had gone through at least much of its formative stages.

*cord* mergers, along with a trend toward increased /ɑɪ/-monophthongization. There are a few broader points that can be drawn from this study, however.

One of the most intriguing results of this line of research is that there is a possible link between Utah English and Southern varieties of English, which needs to be looked at carefully. As mentioned above, the trends in /ɑɪ/-monophthongization that Utah experienced during the nineteenth and twentieth centuries parallel the changes at least some parts of the South have gone through. This is puzzling at first glance, since other reports have traced Utah English to Northern dialect regions. One of these reports (Pardoe 1935), however, bases this conclusion largely on a very small selection of lexical items. The other (Carr 1966) is a more thorough study that also bases its conclusions on lexical variables, rather than phonetic variables like those discussed in this paper.

Given that difference, the demographic history of Utah becomes interesting, particularly in light of Mufwene's (1996) findings stressing the importance of looking at the first effective settlement of a language in any particular place. Utah's first effective English-speaking settlement involved individuals from a wide variety of places in the United States and Europe. A large proportion of the early English-speaking settlers of the territory came from New England, New York, and Upper Canada (i.e., southern Ontario), but wherever they came from, very many of them had spent some years in western Missouri and west-central Illinois,[13] both in Labov, Ash, and Boberg's (2006) 'southeastern region,' before traveling to Utah. In particular, many of the youngest settlers had been born and experienced their early linguistic conditioning there (see Blake 1974; Di Paolo 1993; Ricks 1964; Wahlquist 1978 on the demographics of the early settlement of Utah). Something in the dynamic of this mix — older settlers largely from the North, younger settlers largely from the Southeast — may be what has led to an apparent mix of Southern and Northern features.

In any event, the development of Utah English after it was set on its developmental course by its early settlers occurred in relative isolation. This is important, because (as noted at the beginning of this paper) this is a type of dialect

[13] According to conversations with some of those who conducted the Nauvoo Oral History Project (Dahl & Norton 2003), the patterns of /ɑɪ/-monophthongization and *card-cord* merger present among natives of Nauvoo, Illinois (in west-central Illinois) born near the beginning of the twentieth century are similar to those described here in nineteenth-century natives of Utah.

formation that has not been looked at as much as others. As a result, we have another check against such models of dialect formation and change as those produced by Trudgill (1986), Chambers (1992), and Kerswill and Williams (2000). For example, Kerswill and Williams's (2000: 84) second principle reads 'Marked regional forms are disfavored.' We see this in Utah English — the *card-cord* merger was highly stigmatized by at least the 1960s. During the nineteenth and early twentieth centuries Utah was still relatively isolated from surrounding areas in the Intermountain West, but as the twentieth century progressed contact between regions in the Rocky Mountains — significantly, between Utah and surrounding areas that do not exhibit the merger — increased. This increased contact appears to have led to the recognition of the feature as a highly localized regionalism, and as Bowie (2001) has noted, a speech community's recognition that a linguistic feature is a regionalism can be enough to reverse a trend.

The progress of the *cot-caught* merger and /ɑɪ/-monophthongization follow this, as well. The monophthongization of /ɑɪ/ was also increasing through the nineteenth century, but is now disappearing (except possibly in the word *I*), bringing Utah in line with the more general Intermountain West region. On the other hand, the trend through the nineteenth century was toward completion of the *cot-caught* merger, and that trend continues even now. However, unlike the *card-cord* merger and /ɑɪ/-monophthongization, the *cot-caught* merger is also exhibited by other speech communities in the Intermountain West, and there was therefore no pressure on Utah English from surrounding varieties to move away from this particular feature. (In fact, if there was a supraregional effect, the wider regional norm may have increased pressure toward the merger.)

Of course, even though there does seem to be strong pressure for speech communities to abandon local norms for more widespread regional ones, it does not follow that regional norms are absolutely deterministic. Sometimes, for example, a local norm is accepted by the surrounding region (as with, say, a number of changes in English that originated in London and spread from there), and some localities remain more or less resistant to wider regional norms even when local features are stigmatized (New York City is a classic example). It is clear, however, that there is a point at which a feature is recognized by a speech community as 'marked regional' (to use Kerswill and Williams's wording again) and becomes ripe for abandonment. The exact point,

however, at which such a recognition occurs and the exact conditions that cause a community to abandon or retain local norms remain somewhat unclear.[14] In any event, though, it appears that in the case of Utah English the recognition of the trend toward some features (the *card-cord* merger and, at least to some extent, monophthongal /ɑɪ/) as locally restricted regionalisms led to their abandonment, while other local features (in this study, the *cot-caught* merger) also existed in the wider region and thus were not abandoned.[15] In short, wider regional norms and speakers' knowledge about them had an effect on the development of Utah English in the twentieth century.

Finally, it should be emphasized that this study is just one more datapoint in a line of research that, hopefully, will eventually lead to a comprehensive, testable, predictive theory of language change. The movement toward developing such a theoretical framework has begun, but we as sociolinguists still have a long way to go. The line of research presented here, though, provides a test case different from most other test cases that have been researched to this point, and points to the importance of considering regional norms as we develop a theoretical framework that reflects the reality of the process of linguistic change.

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[14] For some variables, though, at least some of these conditions have likely been identified already. For example, Cook (1969) and Lillie (1998) both identified urbanness as one of the factors influencing adoption or abandonment of the *card-cord* merger.

[15] This has clear parallels to Labov's (1994; 2001) description of local features that become stereotypes, and speakers' treatment of them.

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## Appendix I. VARBRUL weights for [ɔ]~[ɑ]

| | | |
|---|---|---|
| Following sound | voiceless obstruent | .547 |
| | voiced obstruent | .517 |
| | sonorant | .420 |
| | vowel | .414 |
| | pause | .308 |
| Word class | ɑ or ɔ | .583 |
| | ɔ only | .447 |
| Speaker's year of birth | to 1859 | .339 |
| | 1860–1869 | .439 |
| | 1870–1879 | .554 |
| | 1880+ | .558 |
| Following morphology | no boundary | .520 |
| | boundary | .253 |
| Grammatical category | conjunction | .824 |
| | adverb | .643 |
| | non-subject noun | .500 |
| | verb | .496 |
| | subject noun | .472 |
| | adjective | .456 |
| | preposition | .440 |
| Preceding morphology | no boundary | .538 |
| | boundary | .439 |
| Preceding sound | vowel | .547 |
| | sonorant | .518 |
| | voiced obstruent | .517 |
| | voiceless obstruent | .465 |
| | pause | .409 |

**Appendix II. VARBRUL weights for [ɔɹ]~[ɑɹ]**

| | | | | | |
|---|---|---|---|---|---|
| Word class | ɔɹ or ɑɹ | .912 | Speaker's year of birth | to 1859 | .298 |
| | ɔɹ only | .644 | | 1860–1869 | .489 |
| | ɹo or ɔɹ | .170 | | 1870–1879 | .519 |
| Preceding sound | glide | .821 | | 1880+ | .692 |
| | voiceless obstruent | .513 | Grammatical category | subject noun | .637 |
| | pause | .450 | | non-subject noun | .592 |
| | liquid | .425 | | modifier | .488 |
| | voiced obstruent | .406 | | verb | .480 |
| | nasal | .358 | | preposition | .258 |
| | vowel | .351 | | conjunction | .240 |
| | | | Syllable stress | primary | .534 |
| | | | | non-primary | .374 |

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## Appendix III. VARBRUL weights for /ɑɪ/-monophthongization

| | | |
|---|---|---|
| Preceding sound | pause | .605 |
| | vowel | .539 |
| | voiceless obstruent | .527 |
| | nasal | .526 |
| | voiced obstruent | .519 |
| | glide | .408 |
| | liquid | .396 |
| Following sound | glide | .675 |
| | liquid | .621 |
| | voiced obstruent | .568 |
| | nasal | .465 |
| | voiceless obstruent | .464 |
| | vowel | .384 |
| | pause | .364 |
| Syllable stress | non-primary | .591 |
| | primary | .448 |
| Style | regular | .522 |
| | quotation | .352 |
| Speaker's year of birth | to 1869 | .433 |
| | 1870+ | .530 |
| Lexical distribution | *I* (including contractions) | .577 |
| | other | .477 |