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**Stability and change along a dialect boundary: The low vowel mergers of
Southeastern New England**

Stability and Change Along a Dialect Boundary: The Low Vowel Mergers of Southeastern New England

Daniel Ezra Johnson*

1 Introduction

The dialects spoken in Boston, MA and Providence, RI are fairly well-known, and they differ notably (Labov *et al.* 2006) despite being less than 50 miles apart (see Figure 1). But the territory between these two state capitals has not been extensively studied since the 1930's, and even the results reported in that era proved controversial. This research explores this intermediate area, paying special attention to the low vowels. While there are no physical obstacles to communication or migration in this part of New England, a sharp dialect boundary exists, especially for speakers born early in the 20th century. By then, an original system of three low vowels had yielded to two types of two-vowel oppositions. More recently, both these systems are tending to collapse into systems with a single low vowel. It is the two-vowel phase that shows the clearest geographical boundary, a phonological phenomenon which seems to have emerged centuries after its seeds were planted in the original settlement patterns. This paper analyzes speech from interviews with senior citizens and young adults in a 40-community study area, as well as older records, to obtain a geographic and historical perspective for understanding these mergers.

1.1 Vowel Systems

The dialects under consideration differ in low vowel inventory (number of contrasts) and in lexical incidence (which word classes are merged).

The symbol /o/ represents the stressed vowel phoneme in the 'short-o' word class, usually spelled with *o*, and exemplified by *cot*, *Don*, *bother*, etc.

The symbol /oh/ represents the stressed vowel phoneme in the 'long-open-o' word class, usually spelled *au*, *aw* and exemplified by *caught*, *Dawn*, *daughter*.

The symbol /ah/ represents the stressed vowel in the 'broad-a' word class, exemplified by *father*. Many words of foreign origin, like *pasta* and *Osama*, can fall into this class. More importantly, in the variably non-rhotic dialects of eastern New England, /ah/ also includes many words like *cart*, *darn*, *farther*.

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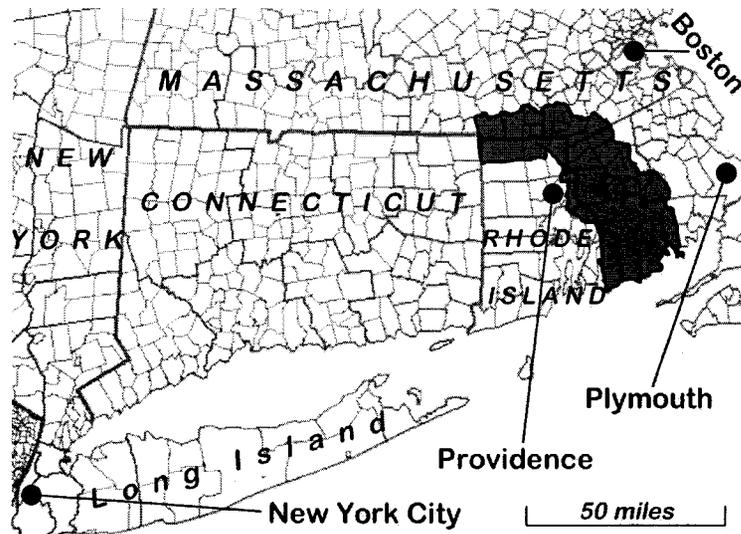


Figure 1: Southern New England; Key Cities and Study Area (shaded)

In the ‘classic’ Providence dialect, including virtually all speakers born there between 1915 and 1995, /ah/ and /o/ have merged into a single low central unrounded vowel, as in most of the United States. So *father* rhymes with *bother*, and in non-rhotic pronunciations, *cart* becomes identical with *cot*. This merged /ah = o/ is clearly distinct from /oh/, whose raised, ingliding variants lead many Rhode Islanders to be mistaken for New Yorkers when they travel.¹

In the ‘classic’ Boston dialect of (at least) the 20th century, it is /o/ and /oh/ that have merged, into a low back, variably rounded, sometimes ingliding vowel.² Merged /o = oh/ is distinct from /ah/, which is found in low central-to-front position, making “p[a]k the c[a]r in H[a]v[ə]d Y[a]d” a stereotype of the Boston accent even among those who themselves drop the *r*’s in such words.

Both dialects have reduced the original inventory of vowels from three to two, but by merging the word classes in different ways. The typical phonetic realizations of the vowels are staggered, so that tokens from any class could be misidentified, or perceived as foreign, by speakers of the other dialect.

When Bostonians produce [ɒ] in the /oh/-class word *Boston*, it is a typical realization of their merged phoneme /o = oh/. Providence hearers, who

¹The apparent fact that many people outside of New England are unfamiliar with the state of Rhode Island, and conflate it with Long Island, NY, adds to this confusion.

²This may also be called the ‘*cot-caught* merger’ or the ‘low back merger’.

example	<i>father</i>	<i>bother</i>	<i>daughter</i>
word class	/ah/	/o/	/oh/
Providence	[a]		[ɔ]
Boston	[a]	[ɒ]	

Figure 2: The 'classic' low vowel systems of Providence and Boston

themselves pronounce *Boston* with [ɔ], identify the ambiguous vowel with the 'wrong' phonemic category /ah = o/, imitating [ɒ] as [a] (Moulton 1990:129).

Likewise for *Providence*: speakers from MA who use [ɒ] in this /o/-class word are amused to hear RI [a], and 'overreact,' equating it with their own [a].

Some speakers are more sophisticated in their renditions of the neighboring dialect. A 82-year-old man from Millville, MA, told me that "In Uxbridge, J-o-h-n, they'll say J[ɒ]n. Down here, it's J[a]n. Just in seven miles."

1.2 Merger Spread or Evolution: External vs. Internal Accounts of Change

From a geographic and diachronic perspective, one might suppose that the /o/-/oh/ merger started in Boston and spread outward, and that the /ah/-/o/ merger, while perhaps not originating in Providence,³ did spread from there into adjacent areas. This conforms to Herzog's Principle that "mergers expand at the expense of distinctions" (Labov 1994:35) and to the wave or gravity model (Trudgill 1974) of changes spreading outward from population centers.

Leaving aside the details of how waves of change spread,⁴ if the merger of /ah/ and /o/ coming from Providence (or beyond) had not yet met the merger of /o/ and /oh/ coming from Boston, there would be an area that neither wave had reached, in between. This area would retain the original three-way distinction.

If the spreading waves had already met and crossed, they would have generated a zone where the three-way-merged, one-vowel system prevailed.

In fact, we find neither type of intermediate zone; the Boston two-vowel system extends to where that of Providence begins. This coincidence is suspicious under a wave account. Also, given the low back merger's ubiquity in northern New England (much farther from Boston than Rhode Island is), the putative waves would have had to travel north faster than they did south.⁵

³Since the /ah/-/o/ merger is found almost everywhere in the country, a single point of origin is unlikely; even were there one, it would almost certainly not be Providence.

⁴For one thing, do waves travel by the migration of speakers, through their long-distance contacts, or through chains of local contacts, like a giant game of 'telephone'?

⁵Gravity models, expecting changes to reach secondary population centers before

Another unlikely coincidence is that these waves should have met, or halted, along a line that is so close to an early settlement boundary. External contact, despite cities' known influence on their hinterlands,⁶ will not explain this. But communities of all sizes also follow internal pathways of change.

If a town was settled at the same time and by similar people as a nearby city, or from that city, their dialects' persistent similarity can be attributed to parallel 'innovation' (the same reactions to inherited structural pressures), rather than parallel inundation by the same waves of external influence.⁷

When a change spreads across a dialect boundary, to an area which would not have undergone it internally anyway, a diffusion account is motivated. But when dialect areas closely correspond to settlement areas, it reflects the persistence of historical patterns and the primacy of internal change.

In light of this discussion, let us outline a history of the low vowels of southeastern New England, murky from the days of the first English settlers up until the oldest direct evidence, from speakers born in the mid-19th century, then more confident from that point through to the youth of today.

2 The Past

Eastern Massachusetts and Rhode Island were settled by English colonists in the 17th century.⁸ Probably all of the first settlers had a three-way distinction, in vowel quality and/or length, between *father*, *bother*, and *daughter*, as almost all the accents of England still do today. But their phonetic realizations of these phonemes were surely not the same and would likely have overlapped. This could have triggered the first set of mergers soon after settlement, as a compromise dialect (or *koine*) formed in each colony.

This did not happen, however; the three-way phonemic distinction survived for at least another two hundred years.⁹ Evidence for this comes from

less-dense areas, have another problem: Providence is New England's 2nd-largest city.

⁶"The history of innovations in the speech of Eastern New England is in large measure the history of the influence of Boston upper-class speech..." (Kurath *et al.* 1939:11)

⁷If language changes faster in larger places (driven by the quantity or diversity of interactions), we expect the 'innovations' in and around a city to form patterns mimicking those of a gravity model, even without taking migration or contact into account.

⁸Massachusetts Bay was founded in 1630, ten years after Plymouth; they were united in 1691. Providence, founded in 1636, joined the other RI settlements in 1647.

⁹The extensive descriptions of American speech made by Noah Webster (b. 1758 in Hartford, CT) reflect a robust three-way low vowel distinction, or rather four-way: the /ae/ of *gather*, largely ignored in this paper, was more clearly relevant to earlier dialects, where we can reconstruct *g[æ]ther*, *f[æ:]ther*, *b[v]ther*, *d[v:]ghter* (Pilch 1955).

the records of the *Linguistic Atlas of New England* (Kurath 1939–43), which studied several communities in our study area and hundreds across the region.

Most *LANE* informants were born between 1850 and 1875, and their low vowel systems have actually been the topic of a lengthy controversy. Due to some poor fieldwork and some questionable editorial practices, *LANE* and its successor *PEAS* (Kurath and McDavid 1961) concluded that all of eastern New England, including Rhode Island, had the low back merger.¹⁰

For Rhode Island, the record has been set straight by Moulton (1968). But even for eastern Massachusetts, merged today, there is evidence that at that time /o/ and /oh/ were sometimes distinct. In fact, despite stating that the low back merger was general in Eastern New England, *PEAS* shows their ‘cultured’ Boston speaker (b. 1886) as having the three-way distinction (35).

Since phonographic recordings exist of many of these *LANE* informants, it is possible to bypass some of this confusion. Though the recordings themselves are of understandably poor quality, two findings are clear: many speakers have a three-way contrast between /ah/, /o/, and /oh/ (including another Boston speaker), and these speakers are scattered throughout the territory, not in a relic area as if unreached by mergers expanding from focal points.¹¹

Some confirmation of the survival of the three-vowel system can be found in the self-reports of two linguists. Grandgent, born in 1861 and whose dialect “was formed in Boston and Cambridge” (1891:199), uses three different symbols for the low vowels in a transcription of his own speech.¹² Moulton, born in Providence in 1914, describes his /ah/ and /o/ as “two low central vowels that are identical in quality and differ only in quantity” (1990:126).¹³

I also listened to recorded oral histories of speakers born mainly between 1890 and 1905, a decade or two before the oldest people alive today. Some exhibited the three-way contrast, geographically scattered among speakers with one of the two-vowel systems. All Rhode Islanders had either the three-way contrast or the ‘Providence’ two-vowel system. In most parts of southeastern MA, speakers had either the three-way contrast or the ‘Boston’ two-vowel system. But in some towns close to RI, the Providence system was found.

While the pattern of these observations does not support the hypothesis of

¹⁰Unburdened by any concept that mergers are irreversible, Kurath *et al.* (1939:3) describe the /o/-/oh/ distinction spreading into some areas, including Providence.

¹¹This complex picture is more consistent with two unpublished local studies based on *LANE*, Taft (1935) and Kilpatrick (1937), than with the much better-known *PEAS*.

¹²He realizes he may be atypical: “My *o* is almost, and my *o* is quite unrounded; I think, however, that the rounded vowels are common in eastern Massachusetts” (199).

¹³“It seemed incredible that people could pronounce *collar* and *caller* both as /'kɔ:lə/ where we distinguished them [by quality and quantity] as /'kələ/ vs. /'kɔ:lə/” (130).

two mergers spreading outward from Providence and Boston, it is not consistent with entirely internal developments either. Some towns originally settled from Massachusetts Bay (e.g. Blackstone, Millville) and some settled from Plymouth (e.g. Swansea, Westport) ended up on the 'wrong' side of the line.

I believe that phonetic differences between the phonologically identical three-vowel systems of early MA and RI deepened until the communities in each area underwent, in parallel, their respective vowel mergers. Before succumbing to these complementary changes, dialects could influence each other across the settlement boundary, shifting the destiny of some border towns. After the mergers, the resulting two-vowel areas were divided less permeably.

3 The Present

To determine the geographic distribution of the vowel systems and whether change has been occurring over time, I interviewed senior citizens and young adults in forty cities and towns (29 in Massachusetts, 11 in Rhode Island; the shaded area of Figure 1) on both sides of the linguistic boundary. These contiguous communities included small towns, suburbs, and medium-to-large cities. In each place, I collected data from at least one senior citizen and two young adults (one of each gender) who had lived there since an early age.

In many places more than two young adults were found, so the sample ended up consisting of 67 seniors aged from 58 to 97 (three-fourths of them between 70 and 90) and 112 'young adults' aged from 15 to 33.

Along with spontaneous speech gathered by asking about personal history, ten pairs of sentences, containing over 100 tokens of the low vowels, were read aloud. Each sentence pair contained a minimal pair which speakers repeated and judged 'the same' or 'different'.¹⁴

Other cards read *balk*, *bock*, *Bach*, *bark* and *r's*, *ah's*, *Oz*, *aw's*. Speakers' productions and perceptions of these supplemented the data from the pairs.

All the data from a speaker was combined in assigning a low vowel system type: three-vowel, 'Boston' two-vowel, 'Providence' two-vowel, one-vowel, or unclear. Despite a bias toward labeling a speaker 'unclear' if their system was in any doubt, there were relatively few such cases. Despite some outliers, reading 'mistakes', etc., the categorical nature of the data and the sharp boundaries it reveals reflect the power of phonemic dispersion and dialect areas.

¹⁴To contrast /o/-/oh/ I used *cot-caught*, *Don-Dawn*, *collar-caller*, & *knotty-naughty*. For /ah/-/o/ I used *balm-bomb* and *lager-logger*, which were less successful as *balm* is increasingly pronounced with /l/, *lager* often with /ae/ or /ey/, and *logger* sometimes with /oh/. For /ah/-/oh/ I used *Pa's-pause*, *Ra-raw*, and the semi-linguistic pair *Ah-Aw*.

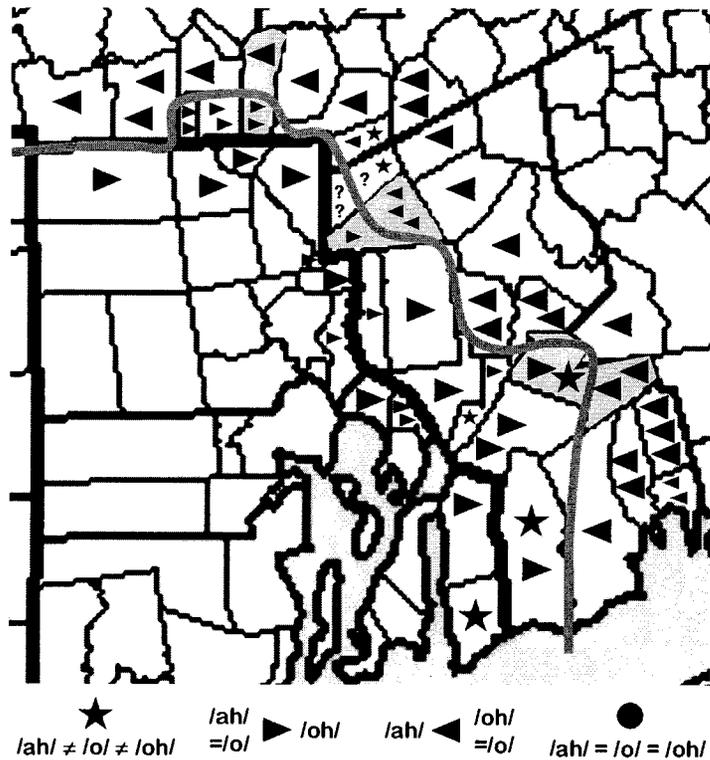


Figure 3: Low Vowel Systems of Senior Citizens (? = unclear systems)

3.1 Senior Citizens

For the 67 senior citizens, the picture is the sharpest (see Figure 3). Most of them exhibit one of the complementary 'classic' two-vowel systems; only a few retain the three-vowel system or have a pattern that is unclear.

3.1.1 Two-vowel Systems

The 26 rightward-pointing triangles in Figure 3, each standing for a speaker with a Providence-like system of two vowels where $/ah = o/ \neq /oh/$, are found in all but one of the Rhode Island communities and extend into Massachusetts in two areas. Along the northern border of Rhode Island we find (from west to east) Millville, Blackstone, and South Bellingham, Massachusetts, which for

many years have functioned almost as suburbs of Woonsocket, RI.

Along the eastern border of Rhode Island we find a larger area, where seven or eight Massachusetts communities (including the city of Fall River) pattern with Rhode Island. These places have strong ties either to Rhode Island itself or to Fall River (so do some places across the boundary, however).

The 32 leftward-pointing triangles show the limit of the Boston-like system of two vowels where /ah/ \neq /o = oh/. The location of the boundary between the two-vowel systems is not unexpected, given settlement history. Most of Massachusetts Bay (including the old Plymouth Colony) ended up merging /o/ and /oh/ while Rhode Island (like most of the U.S.) merged /ah/ and /o/.¹⁵

The correspondance is not exact, however. The towns on the east shore of Narragansett Bay, most likely through early maritime contacts, came to resemble the RI settlements across the water more than the Plymouth Colony towns they sprang from.¹⁶ Fall River, a 19th-century industrial city, also came to match RI, from its origins or later contact. It then likely brought its own influence to bear on the closest towns to it, reversing their phonological destiny.

A similar fate befell the part of Massachusetts across the state line from Woonsocket, where settlement history would lead us to expect Boston-like systems, but in fact Rhode Island patterns are found. This reversal of phonological course may be attributable to contacts between the city and the towns, and/or to the out-migration from the city that turned the towns into suburbs.

The most startling thing revealed by the seniors' data is three places where the linguistic boundary cuts through a town. These towns, shaded in grey on Figure 3, are (from west to east) Bellingham, Attleboro, and Freetown, MA.

In these towns, the section closest to RI (from Freetown to Fall River) has a fairly distinct identity now, that was more so when these seniors were growing up. Those from South Bellingham who attended high school went to Woonsocket, and some from west Freetown (Assonet) went to Fall River.

But though South Attleboro is geographically and economically closer to Pawtucket, RI, one high school has served all parts of Attleboro since the 19th century. So the boundary within the city suggests that dialect contact starting at high-school age is not enough to level a vowel system difference of this sort.

3.1.2 Other Systems

Six seniors, aged 81-93, made a three-way distinction between /ah/, /o/, and /oh/, as found in many earlier records. Their phonetic realizations were ap-

¹⁵It should be reiterated that these mergers took place centuries after the original fabric of English settlement was laid down, and with it that of English pronunciation.

¹⁶Kurath et al. (1939:13) include Bristol County, MA, in a 'Narragansett Bay Area.'

proximately [a], [ɒ], [ɔ], showing that a three-vowel system need not rely on pure length distinctions. Two of these conservative speakers were as expected: older male 'Yankees' of English descent, from out-of-the-way communities. But the others were not from remote places; two even had immigrant parents.¹⁷ Only one was from the Massachusetts side of the dialect boundary, suggesting that *cot* and *caught* merged in MA earlier than the *father-both*er vowels in RI.

Only three of the 67 seniors had unclear low vowel systems, and all three were from North Attleborough, MA. Perhaps being on Route 1 (the main road between Providence and Boston) allowed more migration from both directions to affect North Attleborough, keeping its dialect intermediate between the two types. Even so, the town's unique status is a mystery, as it separated only in 1887 from Attleboro, where seniors had either the Boston or Providence system (depending on neighborhood), and no unclear types were found.

None of the senior citizens had a system with only one low vowel phoneme. This three-way merger was found only among the young adult speakers.

3.2 Young Adults

The more complex pattern of 112 young adults is shown in Figure 4. Most speakers have one of the two-vowel systems, and the boundary between them remains essentially unchanged. A few, mainly on the Massachusetts side of the dialect boundary, have a fully-merged one-vowel system; no young adults retain the three-vowel system. And more than for the seniors, the phonological system of some young adults could not be determined from the data collected.

In the 'Rhode Island' area, including the parts of MA noted above, 48 of 61 young adults (79%) had the same 'Providence' two-vowel system as the seniors there. Four had 'Boston' two-vowel systems, one (in South Bellingham) had a one-vowel system, while eight had systems that were unclear.

Across the boundary, 32 of 47 young speakers (68%) retained the 'Boston' pattern found there two or three generations earlier. One (in Attleboro) had the 'Providence' system, four had a one-vowel system, while ten were unclear.¹⁸

In general, those young adults who show change from the seniors' pattern are not clustered geographically, but are somewhat predictable by age. Of the young adults aged 20 and over, 85% (64/75) have a two-vowel system. For those under 20, this figure falls to 59% (22/37), a significant drop ($p < 0.005$).

¹⁷I would not have expected an old-fashioned pattern from speakers who learned English entirely from their peers (and older siblings).

¹⁸In North Attleborough, which belonged on neither side of the old boundary, one young adult had a 'Boston' pattern, one had a one-vowel pattern, and two were unclear.

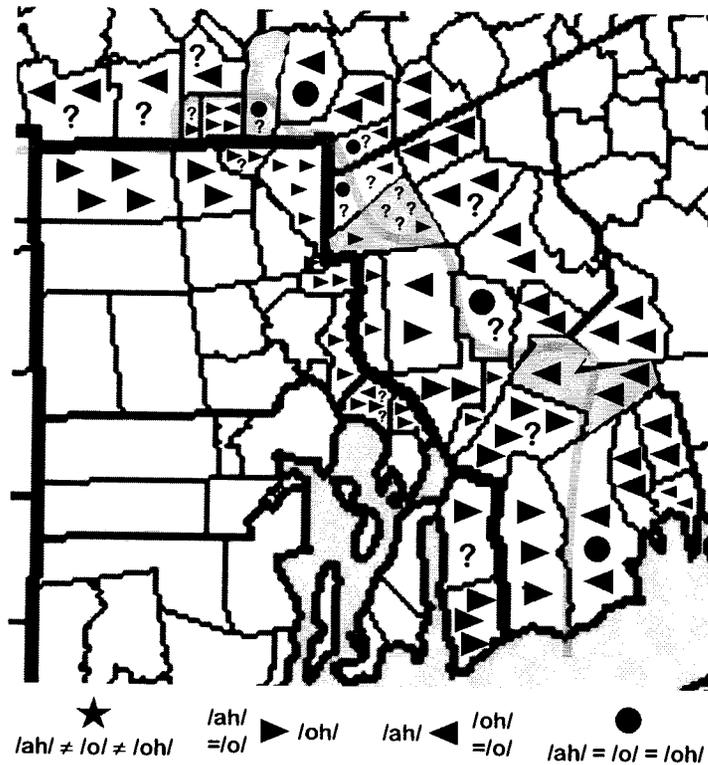


Figure 4: Low Vowel Systems of Young Adults (? = unclear systems)

Speakers' individual backgrounds also play a role. Of the six examples of fully merged young adults, three had parents who grew up on opposite sides of the boundary from each other.¹⁹ Such children might be expected to level the complementary two-vowel systems of their parents' input into one low vowel.

In the three Massachusetts towns that, for the senior citizens, were cut in half by the dialect boundary, the young adult data suggests that this situation has not always continued. The towns are becoming more homogeneous, always at the expense of the section that formerly patterned with Rhode Island. In South Bellingham, I found one one-vowel speaker and one 'unclear' one.

In South Attleboro, a 26-year-old hairstylist was interviewed, who preserved the 'Providence' two-vowel system found in older speakers from that

¹⁹Of the remaining 106 young adults, only six (6%) had parents like this ($p < 0.05$).

section of the city. Like them, she had many contacts in Pawtucket, RI, and few in 'uptown' Attleboro, despite having attended high school there.

In Assonet, the western part of Freetown, a 20-year-old waiter clearly had the 'Boston' pattern, keeping /ah/ distinct from a merged /o = oh/. Not only was this a change from the 'Providence' (or better, 'Fall River') pattern of the elderly informants from Assonet, it was in contrast to the (assumed) systems of his own parents, who grew up in Fall River and nearby Somerset.

For one two-vowel pattern to replace the other is more surprising than for unclear or one-vowel patterns to emerge along the boundary. For a community of *cot-caught* distinguishers to merge these two classes is not problematic, but for them to also fully separate out the *father* class from the *bother* class is not thought to be possible: "once a merger, always a merger" (Labov 1994:311).

The same task could be seen as the transfer of /o/-class words from being merged with /ah/ to being merged with /oh/. But to say "merged with /ah/" is to say the dialect has no underlying distinction between those classes, and a mass transfer that must proceed word-by-word is no more likely than a separation.

But as yet, we have no clear evidence of community change in any place, just a few individuals whose patterns differ from those of their grandparents.²⁰

We must analyze young speakers from potentially changing communities, explore the stability of vowel systems in families that do not move, and probe the effect on a community's vowels of migration from other dialect areas.

4 The Future

Having begun to do this, we find more evidence of community change in the formerly split towns (and others), according to preliminary results from more interviews of young adults, whole families, and a survey conducted in schools.

Even the youngest children interviewed (age 3) could produce the vowel distinctions, but those of school age were often found to completely merge vowels that their parents did not.²¹ The change must have spread quite suddenly through communities, but less quickly (if at all) between them: in South Attleboro, everyone under 20 has it; in adjacent Seekonk, everyone under 12.

Some young speakers in Massachusetts are losing the /ah/-/o/ distinction, while parts of the Rhode Island area²² are no longer distinguishing between /o/ and /oh/. If both changes were to go to completion, there would again be a

²⁰We are not even talking about their own grandparents, who usually lived somewhere else; perhaps we should say the grandparents of a minority of their neighbors.

²¹A few acquire the 'wrong' two-vowel system; most simplify to just one low vowel.

²²Young children in Cumberland, RI, also have the merger, but few do in Warwick.

uniform phonological pattern across the area: a system of one low vowel.

5 Discussion and Conclusions

The three original low vowels of southeastern New England have undergone two generations of merger. The first occurred when /o/ either remained rounded and fell in with /oh/, or unrounded and combined with /ah/. In eastern MA, this process was likely complete by 1900, while on the Rhode Island side some speakers continued to acquire three distinct vowels for another two decades.

A second generation of merger is affecting children today. Its eventual result, as far as the low vowels are concerned, will be to dissolve the dialect boundary that crystallized most prominently during the two-vowel stage. One wonders whether the same forces that caused the first generation of merger are at work a century later, or whether today's changes have different causes.

Suggesting that the first generation of change had largely internal causes, there is no wavelike geographic pattern in the 19th-century data: the first mergers had already affected some small rural places, while unmerged systems were still found even in Boston and Providence.

The early 20th-century data shows a sharpened boundary between two two-vowel areas, roughly matching settlement areas, rather than either a zone of overlap (reached by both mergers) or of 'underlap' (untouched by either).

All dialects had started with three phonemes, but early phonetic tendencies must have intensified, leading each area's places to collectively undergo 'their' phonological merger through internal, not inter-community, processes.

A different explanation applies to the second generation of merger. The internal pressure to simplify a 'crowded' three-vowel system is not likely to explain it. But despite increasing numbers of commuters and cross-dialect migrants, nor is contact between adults with 'Boston' and 'Providence' systems.

This is because the vowel systems of most adults, at least those who remain in some contact with their first dialect area, are fairly immune to change. Senior citizens who had moved almost always retained the low vowel pattern of the place they had lived in childhood. One couple from opposite sides of the line were married 55 years, without much accommodation in these vowels.²³

Even if adults did accommodate, it would not lead to dialect change of the rapid type observed in some places, unless parents' abandonment of a distinction was sudden, profound and lasting enough for their children not to acquire it. Otherwise, the merger would take root only by approximation through the

²³A 2-vowel system is probably more susceptible to change through contact with a 1-vowel system than with the other 2-vowel system (with its merger *and* distinction).

generations, which is not what we find. In Seekonk, the /o/ and /oh/ of seniors, parents, and teenage children were equally if not increasingly distinct phonetically, but younger children in the same families were completely merged.

Adults' own second dialect acquisition may have some limited effect on the initial input they give their children, but parents can affect their children's linguistic future much more dramatically by migrating to another dialect area. When families migrate with young children (or before they are born), it sets up a contrast between the initial dialect they are exposed to, the parents', and the one they are exposed to from around the age of four, that of the peer group.²⁴

If one child joins a peer group with a different vowel system, we can ask whether or not the individual will adapt to the group, and what factors promote or prevent adaptation. But the group (and by extension, the community) is unlikely to change unless joined by a critical mass of such contrasting speakers.²⁵

My hypothesis is that the second generation of merger, where /o/ and /oh/ merge in places like South Attleboro and Seekonk, is caused by a substantial number of people migrating from across the dialect boundary.²⁶ If true, demographic research will show that the same critical level of Boston-area immigration was reached in each town at the time that the merger took hold.

We could better judge this by comparing places farther away from dialect boundaries, that receive little immigration from other dialect areas. If today's children turn out to be merging *cot* and *caught* in rural southwestern RI, or rhyming *father* and *bother* in small Maine towns, we might revert to an explanation from internal factors, or, as a last resort, to one involving the mass media.

But focusing on a small, dense area along a dialect boundary, this study has shown how 350-year-old phonetic patterns developed in parallel into distinct, internally uniform phonological dialect areas. Once fully manifested, they remained stable for several generations despite being in close contact, arguing for the reality of dialect areas and against change by contagious diffusion. But among today's youngest speakers, these areas seem to be breaking down, in a way that may be explicable with careful demographic analysis.

This work has looked at the phonological patterns among three low vowel

²⁴Older children who migrate have already acquired the dialect of their first peers. This could potentially make them a more powerful influence on their new peers, were the latter not older as well, their dialect more developed and resistant to influence.

²⁵Migration is key; except in some pre-schools and some after-school activities, most children have little contact with those living in other communities, even adjacent ones.

²⁶As real estate prices have risen near Boston, people have migrated farther and farther out, beyond the historical settlement area. But signs of recent /ah/-/o/ merger on the other side of the line can less easily be attributed to migration from Rhode Island.

word classes. If other phonological and lexical differences between these dialects had no meaningful correlations with the low vowel systems, then this study would have little application beyond the subfield of vowel mergers. Clearly, not every linguistic (let alone cultural) phenomenon persists and simplifies in the same way these vowel systems have. Lexical innovations must spread quickly through contact, while patterns of vowel shift may be even more structurally predestined than those of merger. But I believe that Providence and Boston's low vowel systems are not isolable from the rest of their phonologies, and that further work will show the principles sketched here to bear more generally on the processes underlying dialect stability and change.

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