

8. Nearly completed mergers

This chapter deals with distinctions once general in North American English phonological systems, but which are now rapidly disappearing. For most regions of the continent, these distinctions are no longer recognized; they are found only in a few conservative relic areas. They represent the logical extension of the general principle that mergers expand at the expense of distinctions.

The distinction preserved in spelling between *which* and *witch*, *whale* and *wail*, is a direct inheritance of the stable OE distinction between /hw/ and /w/. The *hw*-spelling was reversed to *wh*- in the thirteenth century, but there is no reason to believe that the articulation of the voiceless bilabial glide underwent any change at that time. According to Jespersen (1949), the first observer to report a weakening of /hw/ was Jones, who wrote in 1791, “*what, when, etc., sounded wat, wen, etc. by some*”. But Minkova (2004) traces the merger to the thirteenth century, using evidence from alliteration in late Old English poetry, variable spellings in the *Middle English Dictionary* (Kurath et al. 1952–2001), and the *Linguistic Atlas of Late Medieval English* (McIntosh et al. 1986). It remains unclear how the distinction was later restored so consistently in the educated speech of the sixteenth and seventeenth centuries (MacMahon 1998), only to disappear completely in the same London dialect that underwent the vocalization of post-vocalic /r/ (Chapter 7). From that point forward, the merger of /hw/ and /w/ was embedded in Received Pronunciation as London influence spread throughout southern England, though the distinction was maintained vigorously in Northumberland and Scotland.

The contrast between /hw/ and /w/ was generally preserved in the early formation of American dialects. The areas where the merger was prevalent in PEAS are generally centered around the eastern cities that looked to London as a cultural center. The blue isogloss on Map 8.1 shows the areas where PEAS registered the loss of the distinction, drawn from Map 174 of PEAS with data on three /hw/ words: *wheel*, *whinny*, *whip*. There are four discontinuous areas where the loss of /h/ was the rule in the 1930s and 1940s: (1) a portion of Maine around the city of Portland; (2) the city of Boston; (3) a mid-Atlantic region that includes New York City, the Hudson Valley, eastern Pennsylvania, Philadelphia, Wilmington, Baltimore, and the Delmarva peninsula; and (4) a narrow strip along the southeast coast including Charleston and Savannah. The rest of the eastern United States maintained the opposition.

The symbols of Map 8.1 show the state of the distinction for the minimal pair *whale* ~ *wail* for the ANAE respondents.¹ The great majority treat this pair as ‘the same’ in both production and distinction (yellow circles, N = 511). A small number are ‘the same’ in production or perception but not both (green circles, N = 20). For another small number, these pairs were not ‘the same’, but were ‘close’ in either production or perception (orange circles, N = 15). A somewhat larger group retained the distinction firmly in both production and perception (red circles, N = 67).

Map 8.1 shows that the status of the /hw/ ~ /w/ distinction in North America has been reversed in the past half-century. In the middle of the twentieth century, only a few coastal areas showed the merger. At the end of the century, only a few areas show the distinction.

In the areas shown to be merged in PEAS, we now find only yellow circles, linking the present study reliably with the 1961 report. The distinction has largely

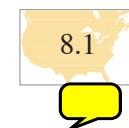
disappeared in the North. Only the cities of Rutland, Vermont and Providence, Rhode Island show a preponderance of speakers who retain any trace of the distinction. The South, however, shows a fairly sizeable area with a relatively high frequency of retention. The red oriented isogloss is the outer limit of all those speakers who did not have *whale* and *wail* the same in both perception and production. This is not the full South as defined in Chapters 11 and 18, but a southeastern portion along with an extended belt of inland cities reaching to central Texas. As noted above, the majority are not the transitional or marginal cases; the red circles predominate, except in Atlanta. The homogeneity of this area (with respect to any trace of the distinction) is reasonably high, at .60, but consistency is extremely low, at .19. This reflects the fact that there are a large number of speakers who retain the distinction, scattered through the North and the West, who do not form any consistent geographic pattern. In the West, only two cities show a majority of red circles: Boise, Idaho and Minot, North Dakota. One can assume that scattered remnants of the distinction are to be found with speakers elsewhere, but from all indications it will soon be extinct outside of the South.

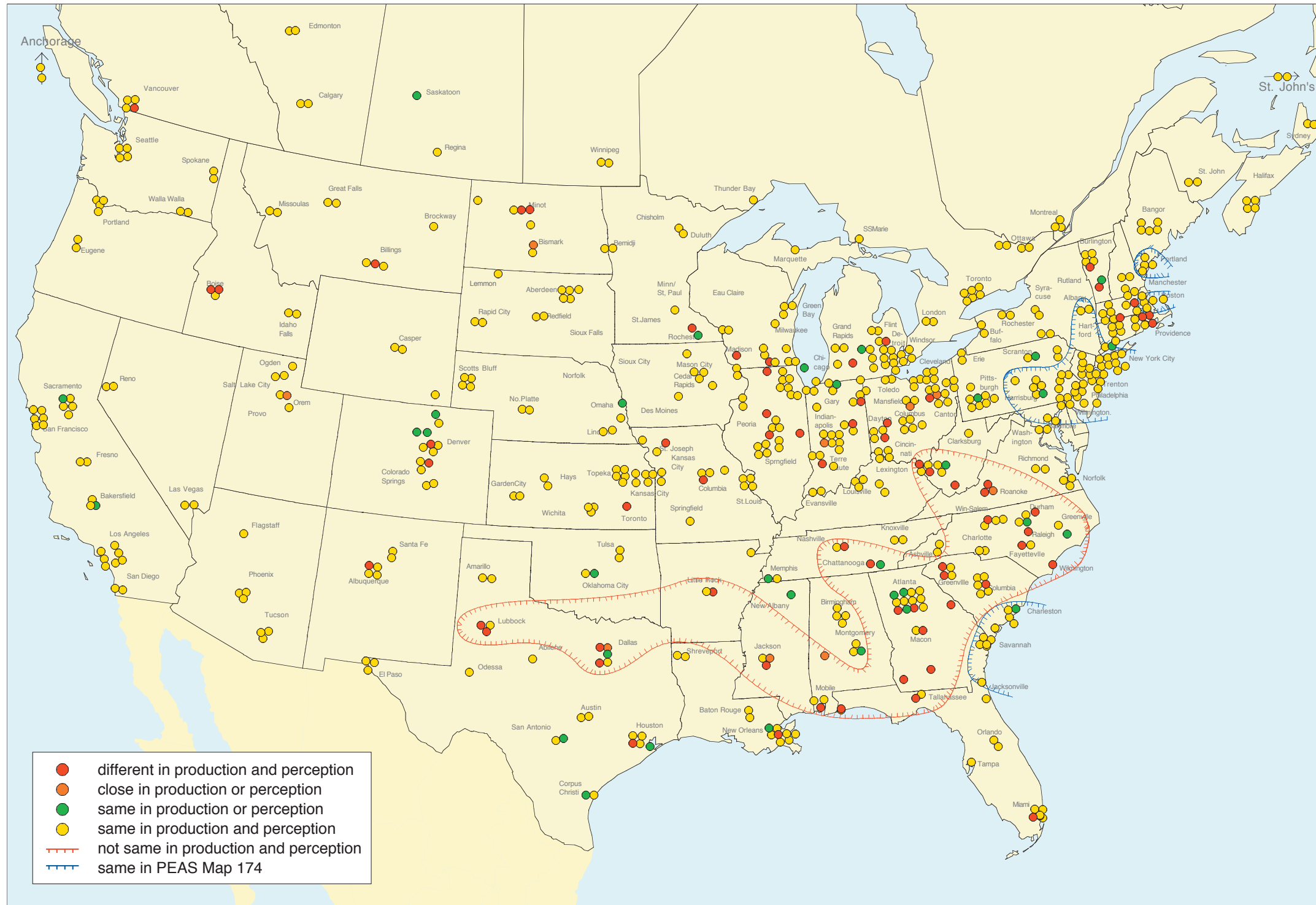
Middle English long open *o* before /r/ was originally [ɔ]; in the course of the Great Vowel Shift it followed the upward path to [o:]. It was then identified by most orthoepists with the long high close [o:] in *no, nose, etc.*; but as Jespersen notes (1949: 13.351), it never developed the back upglide of the main /ow/ group. This vowel appeared in *hoarse, fort, mourning, four, ore, oar, etc.* It was opposed to the reflexes of short open *o* before /r/ in *horse, fork, for, morning, or, etc.*, which had a shorter, lower vowel that remained [ɔ]. This distinction was preserved in conservative forms of Received Pronunciation in Britain well into the twentieth century, but has been lost in the current speech of southern England.

In the United States, the distinction was originally as consistent as the /hw/ ~ /w/ distinction. The distribution was complicated by the shift of a number of short-*o* words with initial labials into the long *o* category, with the result that spelling is no longer a guide to the phoneme classes. We will refer to the two classes as /ohr/ and /ɔhr/. Kenyon and Knott (1953) list all words in the /ohr/ class with both [o] and [ɔ], while words in the current /ɔhr/ class are listed only with [ɔ]. Thus we have:

/ohr/	/ɔhr/
hoarse	horse
four, fore	for, forty
shore	short
mourning	morning
oar, ore	or
lore	lord
port	storm
porch	fork
sports	sorts

¹ The query on this distinction was not pursued in most areas of the North and West, so data for this variable is shown for only 306 of the 762 subjects.



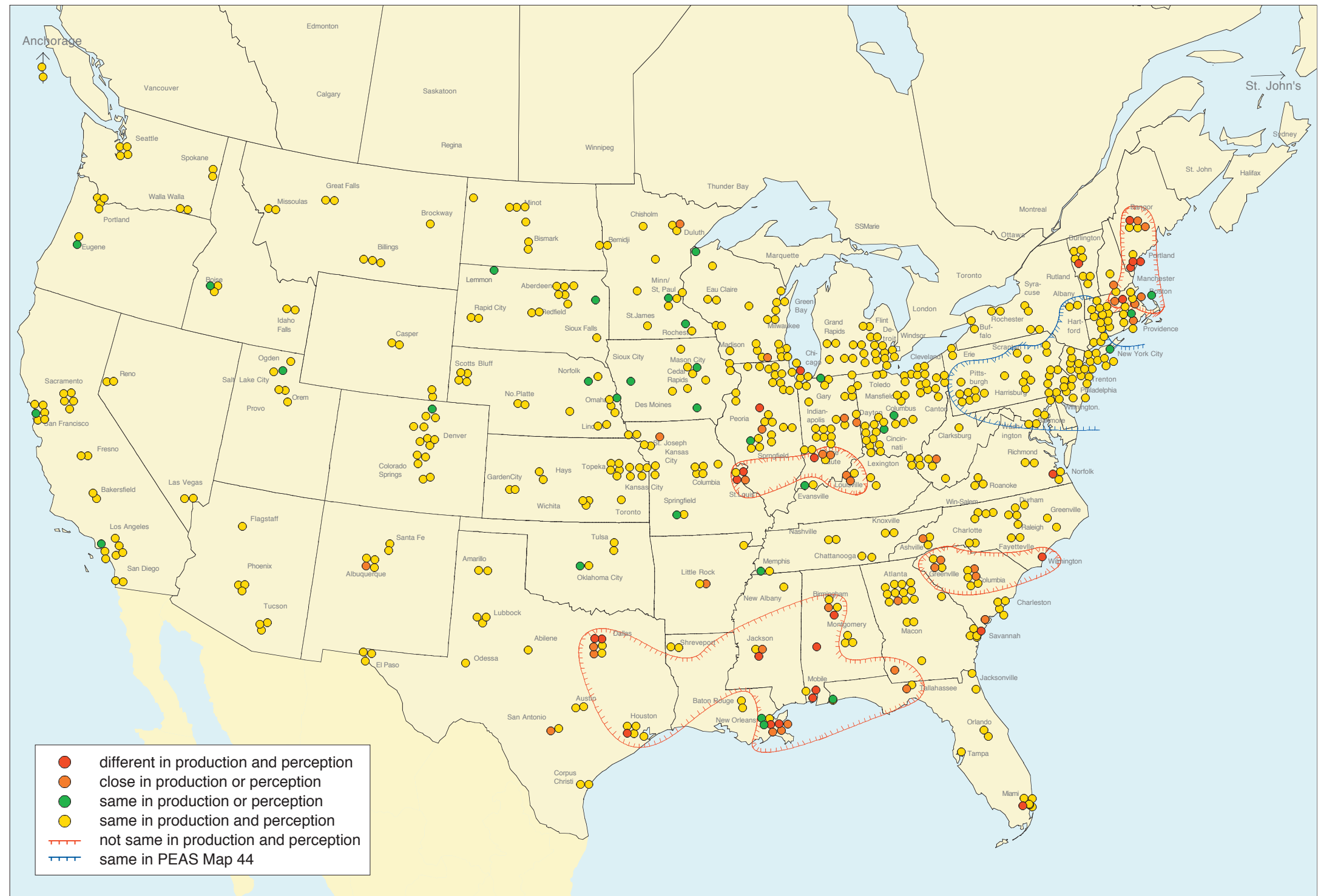


Map 8.1. The merger of /wh/ and /w/

In the middle of the twentieth century, the distinction between /wh/ and /w/ in *whale* vs. *wail*, *which* vs. *witch*, etc. was maintained by most American speakers, with the exception of southern Maine; Boston; the Mid-Atlantic area, including

Hudson Valley; and the Savannah–Charleston coastal region. In the ANAE data, the distinction is made only by a scattering of speakers throughout the Southern states.





Map 8.2. The merger of /ohr/ and /ɔhr/

In the middle of the twentieth century, the distinction between /ohr/ and /ɔhr/ in *four* vs. *for*, *hoarse* vs. *horse*, etc. was maintained by most American speakers, with the exception of the Midland area, centered around Philadelphia, the Mid-

Atlantic area, New York, and the Hudson Valley. In the ANAE data, this distinction is made only by a scattering of speakers in Eastern New England, southern Illinois and Indiana, and the Gulf States.

Map 44 of PEAS delineates the areas where speakers pronounce *four* and *forty* with the same or different vowels. It shows that most of the Eastern Seaboard – the North and the South – maintained at that time a solid distinction. The merger prevailed only in the north Midland, an area not dissimilar from the main area where the /hw/ ~ /w/ distinction was originally merged. The area of merger in PEAS is shown by the oriented blue isoglosses on Map 8.2. It includes New York City and the Hudson Valley, all of Pennsylvania except for the northern tier of counties, most of Maryland, and the mid-Atlantic cities of Philadelphia, Wilmington, and Baltimore.

The Telsur survey investigated two minimal pairs for the /ohr/ ~ /ɔhr/ contrast: *hoarse* ~ *horse* and *mourning* ~ *morning*. The colored symbols on Map 8.2 show the state of this distinction among Telsur subjects.² The great majority of speakers show merger in both production and perception (yellow circles, N = 520). Only a handful show a clear distinction in both production and perception (red circles, N = 26). While about the same number show a complete merger as for /hw/ ~ /w/, the number who show a clear distinction in both perception and production is much smaller (26 as against 67 for /wh/ ~ /w/). A greater number are rated by the analyst as ‘close’ in production (orange circles, N = 41). The difference between the two variables clearly reflects the phonetic differences involved. The devoicing of /w/ is perceived as an all-or-none effect, while the two back vowels are located in a continuous phonological space and all degrees of separation or overlap are possible. It follows that in the course of the merger, both speakers and analysts will perceive more cases of an approximation (‘close’). Nevertheless, it seems clear from Map 8.2 that the merger of /ohr/ and /ɔhr/ is proceeding at a rapid rate.

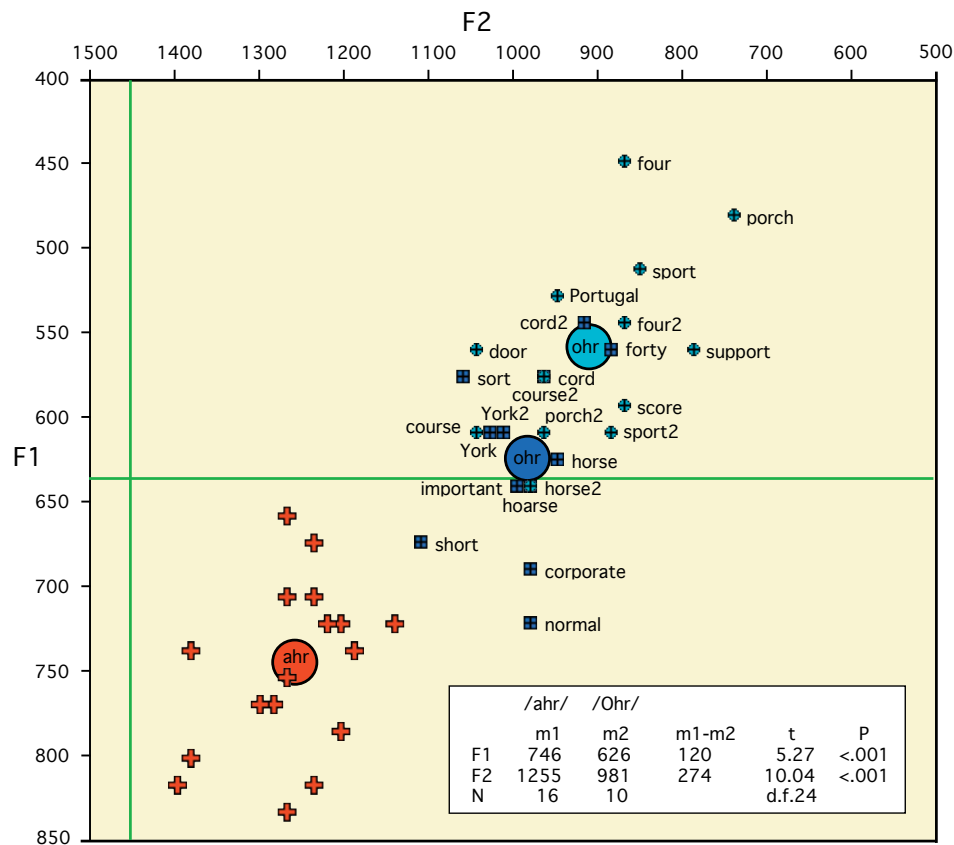


Figure 8.1. Back vowels before /t/ in the vowel system of Alex S., 42, Providence RI, TS 474. Double scale. /ɔhr/ labeled as /Ohr/

Again, a close correspondence is shown with the PEAS records: there are only merged speakers (yellow circles) within the blue isoglosses indicating a merger in the earlier study. As the general principles of merger predict, there are no reversals but only expansion of the merger. The red oriented isoglosses delimit those areas where a majority register less than complete merger. More consistent survivals appear in northeastern New England than in Map 8.1, but the areas of the South that retain traces of the distinction are much more restricted.

The small South Midland area on Map 8.2 includes St. Louis. This reflects the retention of the traditional merger of /ahr/ and /ɔhr/ in St. Louis, where *are* and *or* merge in sharp contrast with *ore*; *far* and *for* are identified in low back position as against upper-mid back *four*. In Dallas, four of the six subjects showed evidence of the /ohr/ ~ /ɔhr/ distinction. (See the discussion of the /ahr/ ~ /ɔhr/ merger below.)

The evidence from the 439 Telsur subjects whose data was analyzed acoustically reinforces the view that the distinction of /ohr/ and /ɔhr/ is rapidly disappearing. Acoustic plots of the speakers represented by red circles in Map 8.2 do not usually show a clear separation of the two categories. Figure 8.1 is a view of the vowel system of a speaker from Providence (expanded to double scale) that reflects the earlier state of the opposition. The highest and backest vowels in the array are /ohr/: *porch*, *four*, *sport*, *Portugal*. In lower mid position are the /ɔhr/ words *short*, *corporate*, *normal*, *horse*, *important*, *York*. Between the two means, in the area of overlap, we find a mixture. The table shows that the two mean values are significantly distinct, particularly in the F1 dimension. Yet such statistical separation is not the mark of a healthy phonemic opposition. There is no overlap at all between /ahr/ and /ɔhr/ in the system of this Providence speaker.

The merger of /ahr/ and /ɔhr/

Labov, Yaeger, and Steiner (1972) deal with the relations of /ahr/, /ɔhr/, and /ohr/ in the Southwestern United States, where the normal situation is for the second and third in the series to be merged. Indeed, Map 8.2 shows a solid array of yellow circles in the West, where /ohr/ and /ɔhr/ have uniformly fallen together. In central Texas, it is not uncommon to find speakers with the first two phonemes merged, so that *are* and *or* are homonyms in low central position, remote from upper mid back *ore*.³ The merger of /ahr/ and /ɔhr/ is widely reported for the Salt Lake City dialect, where it is represented as a reversal in popular stereotypes with the fixed phrase, ‘Put the harse in the born’. In both Texas and Utah, the merger takes place in low position, but the traditional dialect of St. Louis features a merger of /ahr/ and /ɔhr/.

This distinction was investigated in the Telsur survey with minimal pair *card* ~ *cord*. If this pair was ‘close’ or ‘the same’, the subject was asked about the minimal pair *barn* and *born*.⁴ Of all 762 Telsur subjects, only 29 showed any deviation from the norm that /ahr/ and /ɔhr/ are different in both production and perception. These speakers are scattered about the United States with no particular concentration in the North, South or West, except for one city, St. Louis. Here three of the four Telsur subjects showed evidence of the /ahr/ ~ /ɔhr/ merger. Only the youngest distinguished them clearly.

2 Several of the regional Telsur forms omitted this contrast from their queries, so data is available for only 645 of the 762 subjects. No data is shown for Canada, where the distinction has never been recorded.

3 In the trajectory from the Southwest to central Texas, LYS found that speakers in Sonoma, Texas were the only ones to show the three back vowels before /t/ distinct.

4 These pairs were not used in the Canadian Telsur procedures.

5 *Mourning* is much lower, but slightly backer than the other vowels. It may have joined the /ahr/ ~ /ɔhr/ category for this speaker.

Age	Judged	Pronounced	
Judy H.	57	same	same
Martin H.	58	same	close
Joyce H.	53	close	close
Rose M.	38	different	different

Figure 8.2 shows an expanded view of the three vowels in the system for Judy H. The /ahr/ and /ohr/ distributions are clearly merged in mid back position, with identical means and an even admixture of the two categories in a globular dispersion. The /ohr/ vowels are higher and backer, with F1 200 Hz lower and F2 300 Hz lower. The main /ohr/ group with *hoarse* and *four* is tightly clustered about the mean. The *four* of *forty-four* is widely separated from the vowel of *fortunately*, *forties*, and *forty*, which are intermixed with *part*, *car* and *dark*.⁵ It appears that the clear separation of /ohr/ and /ohr/ in current North American English occurs only when /ohr/ is merged with /ahr/. This pattern may still be found in many speakers in Utah and Texas, as in St. Louis, even though the small Telsur sample did not select them.

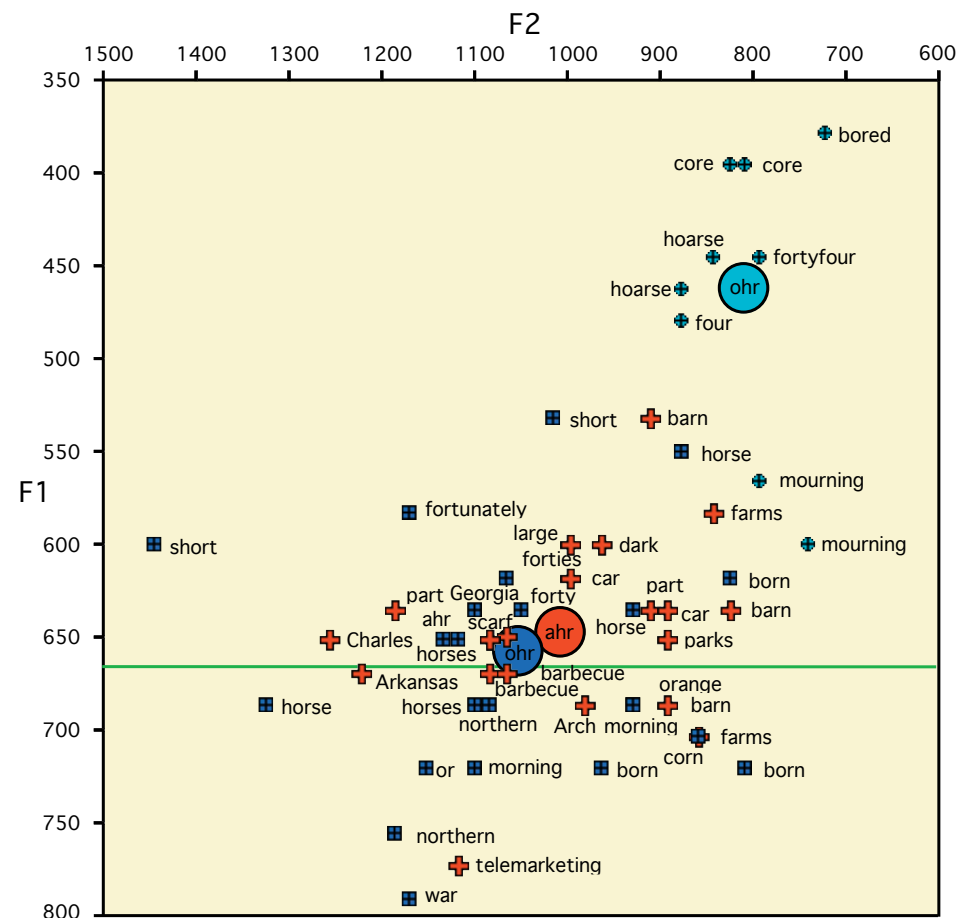


Figure 8.2. Back vowels before /r/ in the vowel system of Judy H., 57, St. Louis MO, TS 109. Double scale. /ohr/ labeled as /Ohr/

The word class labeled /iw/ in the initial position of ANAE is the reflex of Middle English /iu/, which was derived from a large variety of sources (Jespersen 1949: 3.8).

- (1) OE **iw** as in *Tiwesdæg* ‘Tuesday’
- (2) OE **e:ow** as in *e:ow*, ‘you’
- (3) French **iu** as in *riule* ‘rule’
- (4) French unstressed **e+u** as in *seur* ‘sure’
- (5) French **u** as in *rude*
- (6) French **ui** as in *fruit*
- (7) French **iv** as in OF *sivre* → M.E. *sewe* ‘sue’

In modern English, these seven were joined by an eighth, which was distinct in Middle English

- (8) OE **e:a** as in *de:aw* ‘dew’

Although some scholars believe that this vowel was once equivalent to French front rounded [ü], Jespersen argues that it was consistently a rising diphthong /ju/, which in terms of our notation is /juw/. The /j/ glide was generally maintained after labials and velars (except in Norfolk and a few other sites in England). In North America, the glide has been variable after apicals. In many cities, it became a marker of refined speech and varied according to the preceding context: the probability of a /y/ glide is greatest after /t/ in *tune*, etc. and least after /l/ and /r/ in *lewd* and *rude* (where it is also frequently deleted in British English).

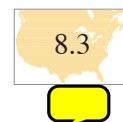
The status of vowels after palatal consonants is not always clear. The co-articulatory effect of initial palatals with /uw/ as in *choose* may be strong enough to eliminate the difference between this /uw/ and /iw/ after palatals in *juice*, *chew*, etc.

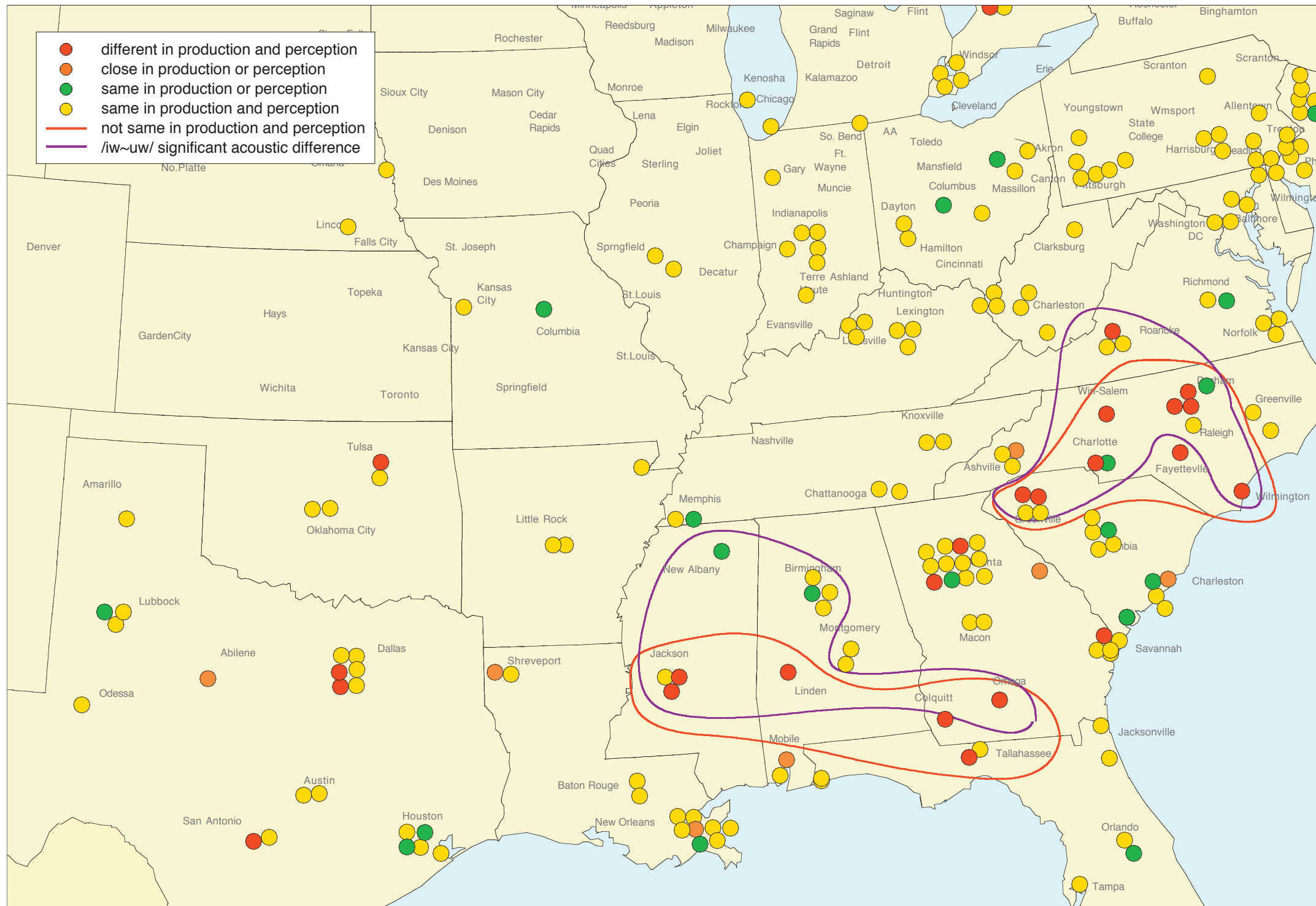
Map 33 of PEAS shows the diphthong /iu/ after labials (in *music*) as well as after apicals (in *dues* and *tube*), but only in New England. Map 164 of PEAS focuses on the word *new*. It shows consistent /u/ (ANAE /uw/) in the Midland, an alternation of /u/ and /iu/ in the North, and consistent /ju/ in the South. Map 165 of PEAS is a similar display for *Tuesday*, which differs primarily in showing a palatal affricate in the South, alternating with /tju/.

The situation has changed radically in the half-century since the LAMSAS data were gathered. First, the initial /j/ glide has disappeared: the Telsur interviews show no trace of it in the North or the South. Secondly, almost all North American dialects have undergone massive fronting of the nucleus of /uw/, especially after coronals; this is the topic of Chapter 12. In the areas where the fronting of /uw/ is most advanced – Philadelphia, Pittsburgh, and the Inland South – the nucleus of /uw/ is in non-peripheral front position. Although this phoneme still belongs to the historical word class /uw/, its nucleus is often unrounded and there would seem to be little room for a distinction between /iw/ in *dew*, *tune* and /uw/ in *do*, *too*. Nevertheless, we find the distinction is sometimes maintained even when all /uw/ vowels are fronted.

Figure 8.3 shows a consistent distinction between /iw/ and /uw/ in the vowel system of Lillian S., 58, of Colquitt Georgia. The /iw/ class represented by *Tuesday* and *dew* is concentrated at an F2 of 2400 Hz, while the large group of /uw/ words after coronals – *do*, *two shoe* – is focused around an F2 of 2000 Hz. In this extremely advanced system, even the /uw/ words after non-coronals – *group*, *roof*, *food*, *movement* – are front of the 1550 Hz center of the normalized system. More striking still is the extension of moderate fronting to vowels before /l/, an environment that resists fronting in other regions of North America; one token of *school* has reached the center of the vowel space.

⁶ This query was not pursued in most areas of the West and Midwest, so that data is shown for only 398 of the 762 subjects.





Map 8.3. The merger of /iw/ and /uw/

This contrast of *dew* vs. *do*, *lute* vs. *loot*, etc. was once maintained after coronal consonants by speakers who had lost the /y/ glide in *dew*, *new*, *tune*, etc. It is disappearing rapidly. It is found today only in a minority of speakers in the South, concentrated in central North Carolina and the lower Gulf States.

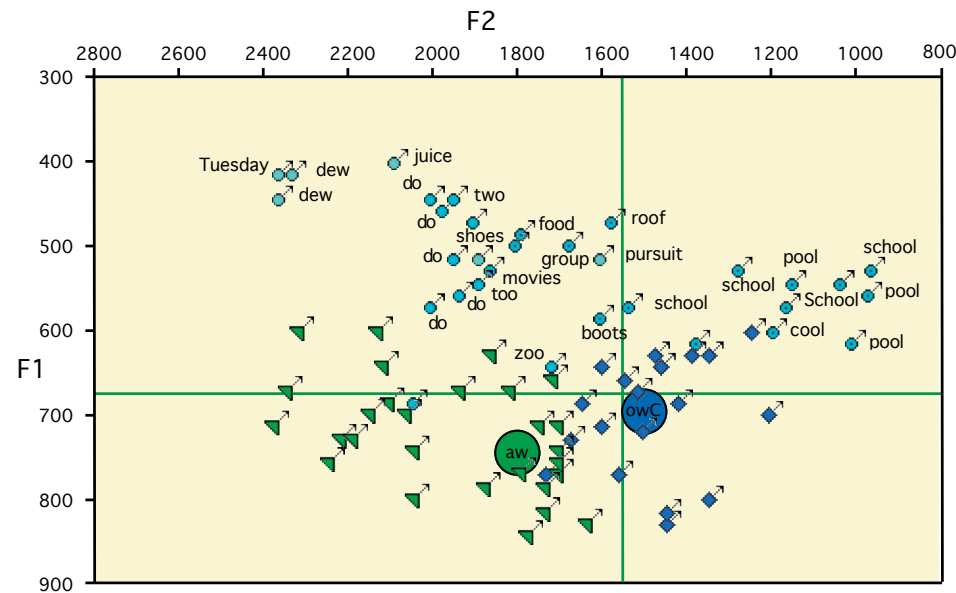


Figure 8.3. Back upgliding vowels of Lillian S., 58, Colquitt GA

The Telsur survey inquired into the status of the contrast between /iw/ and /uw/ through the minimal pair *dew* ~ *do*. Although there were a few scattered subjects in the North who showed an acoustic distinction between the two word classes, acknowledgment of a distinction in the minimal pair test was basically confined to the South. Map 8.3 shows the various degrees of recognition of the contrast in the Southern region, using the same categories as in Maps 8.1 and 8.2. The red circles represent speakers who showed the contrast in both production and perception (N = 30); the orange circles are speakers for whom the contrast is judged ‘close’ in perception and/or production (N = 9); and the green circles indicate those for whom the contrast was missing in either production or perception but not both (N = 24). The predominant pattern is complete merger in production and perception (N = 226).

There are only two areas in the South where the contrast still predominates, and in both it is the concentration of speakers with a firm contrast (red circles) that delineates the geographic pattern. One area is in central North Carolina, and the other is in the Gulf States – southern Georgia, Alabama, Mississippi. There is a scattering of points in central Texas, but they are not coherent enough to outline a geographic area.

The purple isoglosses in Map 8.3 are superimposed from the study of the acoustic patterns of 439 Telsur subjects who constitute the main data base for Chapters 11 to 20. They outline areas where the F2 distinction between /iw/ and /uw/ is strong enough to be evaluated statistically at $p < .05$. The purple isogloss is the area where half or more of the speakers in a community display this type of difference. There is a high degree of coincidence with the red isogloss in North Carolina.

The distinction between /iw/ and /uw/ is maintained primarily in North Carolina, but it is still represented to a lesser degree in the lower Gulf states. The earlier opposition of /juw/ and /uw/ after coronals has disappeared. We do not know the extent to which this was transformed into a contrast between /iw/ and /uw/ when the /j/ glide disappeared, as indicated in the Kenyon and Knott notation of /iu/ for *dew*, *tune*, etc. However, the /iw/ ~ /uw/ opposition is not maintained by the great majority of North American speakers.

The vowel classes involved in Map 8.4 are presented in Figure 2.5, showing the initial position for vowels before intervocalic /r/. As is pointed out in that

chapter, the contrast between long and short high and mid vowels is still maintained in initial position, so that the vowel of *Mary* is associated with the /ey/ of *mate*, the vowel of *merry* with the /e/ of *met* and the vowel of *marry* with /æ/ of *mat*.

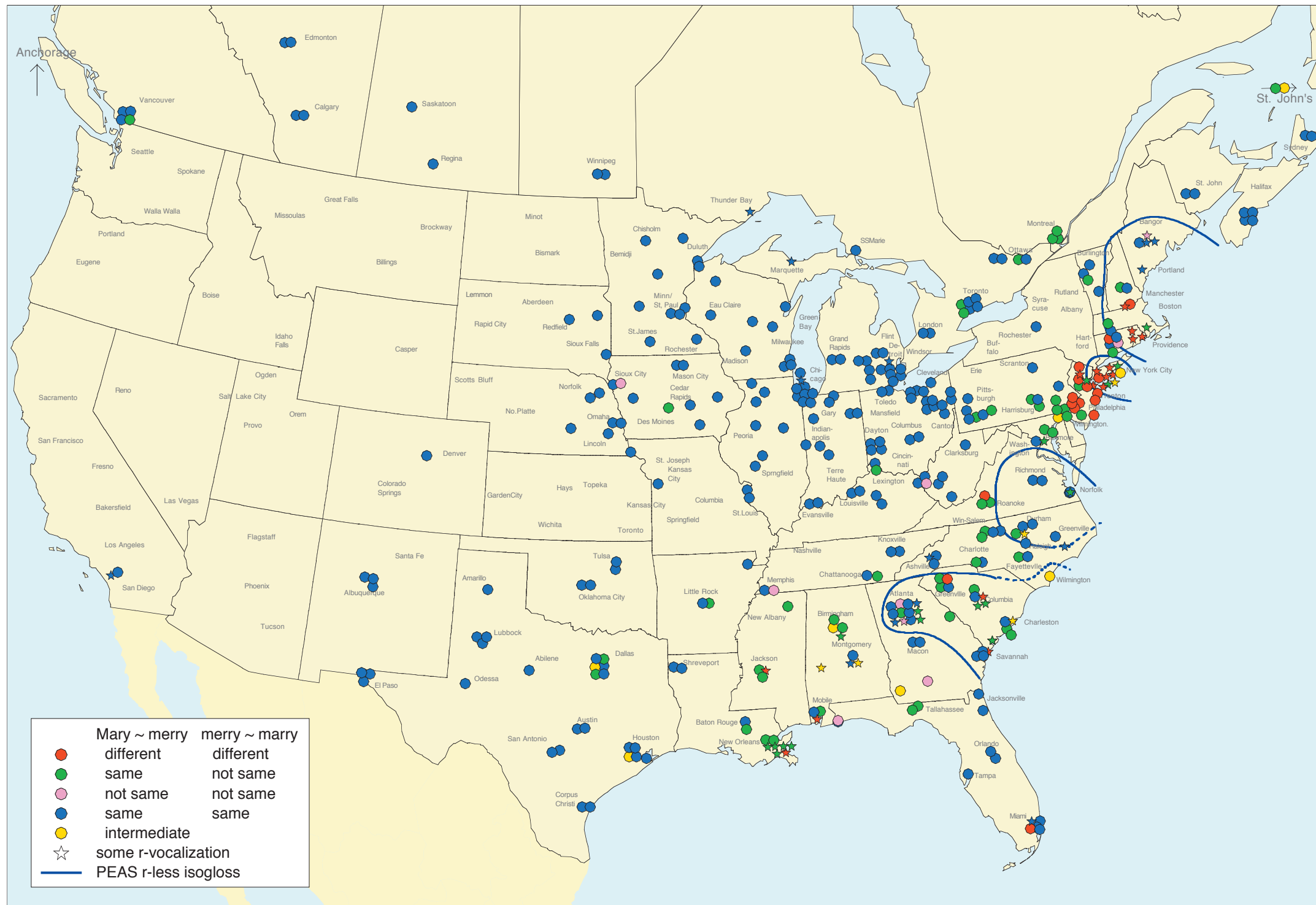
Maps 49 to 51 of PEAS show that in the mid-twentieth century, a very large part of the Eastern United States maintained a difference between *Mary*, *cherry*, and *marry*. The vowel of *marry* appears as /æ/ in most of the eastern United States, except for western New England (and a few points in southern Maine and New Hampshire, western New York, and West Virginia). The vowel of *Mary* maintains its upper mid quality in most of the North and the South, with the Midland and eastern New York State showing a short vowel. In the intervening period, the two mergers have progressed almost as far as the three preceding cases.

Map 8.4 presents the data differently from the previous three maps, since two oppositions are involved, looking at production rather than perception.⁶ The great majority of symbols are blue circles, indicating the merger of both pairs. The red circles represent the speakers who have both distinctions firmly in place. They are concentrated in two areas: southeastern New England and a Mid-Atlantic region including New York and Philadelphia, but not the rest of the Mid-Atlantic area to the south. A third major type is shown by the green symbols: *Mary* merged with *merry*, but *marry* is distinct. In the South, one can observe a wide distribution of these green symbols, they also characterize Montreal in Canada. The rest of the continent is dominated by a uniform distribution of blue symbols, representing speakers with both mergers.

The belt of red symbols in the Philadelphia area is the result of a slightly more complex phenomenon than we find in the rest of North America. While /ey/, /e/, and /æ/ are distinct before intervocalic /r/, /e/ is not independent of /ʌ/ in that position. Philadelphia shows a centralization of /e/ before intervocalic /r/ in words such as *very*, *terrible*, *Merion* as well as *merry* and *ferry*. The vowels of *ferry* and *furry*, *merry* and *Murray* are distinct for about one third of Philadelphia speakers, totally merged for another third, and in a state of near-merger for the remainder. In the near-merger condition, speakers produce a consistent, statistically significant difference between the two classes, sometimes with no overlap, but they label the two as ‘the same’ in minimal pair tests and fail to discriminate them in commutation tests (Labov, Karan, and Miller 1991).

The merger of the low and mid-front vowels before intervocalic /r/ is not an isolated phenomenon. The tense and lax high front vowels are also widely merged among younger speakers in pairs like *nearer* and *mirror*, *spear it* and *spirit*. It seems clear that the erosion of contrast before intervocalic /r/ continues the trend towards *r*-constriction discussed in Chapter 7. In *r*-less dialects, intervocalic /r/ normally forms the onset of the second syllable, while in *r*-ful dialects it is ambisyllabic and exerts a strong influence on the preceding vowel. Map 8.4 shows speakers with some degree of *r*-lessness as stars. It is evident that there are very few star symbols that are blue; that is, vocalization of coda /r/ is associated with retention of the contrast before intervocalic /r/.





Map 8.4. The merger of /ey, e, æ/ before intervocalic /r/

The great majority of North Americans pronounce *Mary*, *merry*, and *marry* as the same. A contrast of all three is maintained in the Mid-Atlantic states. *Merry* and *marry* are kept apart by a fair number of speakers in New England and the South as well as in Montreal, Quebec.