18. The South

This chapter deals with the phonological structure and geography of the South. The discussion will begin with a broad consideration of the entire area known as the Southern States, ranging from North Carolina in the east to Texas in the west, and from the Ohio River in the north to the southern tip of Florida in the south. The definition of the South as a dialect region, first advanced in Chapter 11, will be developed in Section 18.3.

18.1. Earlier studies of the South

Kurath (1949) defined the south of the eastern United States on the basis of such regional vocabulary items as *lightwood* 'kindling', *low* 'sound made by a cow', *light bread* 'white bread'. He drew a major boundary around a Southern region ranging from northern Virginia to Georgia, subdivided into five areas: (1) the Delmarva peninsula; (2) the Virginia Piedmont; (3) northeastern North Carolina; (4) the Cape Fear and Peedee Valleys; and (5) the rest of South Carolina with the eastern edge of Georgia (see Map 1.1). The western boundary of this Southern region is the Appalachian mountains. Beyond the Appalachian foothills, the mountainous parts of West Virginia, Kentucky, and Tennessee and the regions further west are assigned to the Midland, not the South.

There is much support for this definition of a Midland region. Chapter 21 will map several grammatical features that are distributed across a Midland area that corresponds closely to the Kurath definition. However, the phonological evidence to be presented in this chapter will show that the southern portion of Kurath's Midland belongs to – indeed is central to – the modern Southern dialect region. The large Southern region that emerges from this re-definition appears to be undergoing a regional unification driven by the Southern Shift. Its phonological organization is reinforced by the socially recognized unity reported in studies of perceptual dialectology (Preston and Howe 1987).

Among the various dialects of North America, Southern-States English is the most widely recognized as a regional dialect by the general public. In fact, the South appears to be an exception to the general observation (Chapter 1) that Americans pay very little attention to regional dialects and show little ability to recognize them. Most Northerners can produce some kind of imitation of a Southern accent and will do so when the occasion demands. In many states, communities can be ordered on a North–South continuum, and people stigmatize the dialect of people to the south of them as "Southern". Mental maps of American dialects always include a Southern area, and college students show an ability to identify at least four degrees of "Southernness" on a north–south dimension running from Michigan to Alabama (Preston 1988, 1993, 1996; Preston and Howe 1987). Social awareness of New York City or Boston local speech does not rise to the generality or salience of the Southern speech pattern. All accounts of American dialects include a description of Southern phonological features, usually in the form of an unordered list (Krapp 1925; McDavid 1958; C.-J. Bailey 1980; Kurath and McDavid 1961; Bailey and Melo 1990; Bailey 1997; Wolfram and Christian 1975). The following is a restatement of the most general processes categorized as "Southern" in this literature, using the phonological framework

of ANAE (Chapter 2). The ANAE records will show that many of these features are not limited to the Southern region, though they are characteristics of Southern phonology. Furthermore, many of the traditional distinctions have been rapidly eroded since the LAMSAS data was gathered, and have almost disappeared from the Telsur landscape (Chapter 8). The linguistic changes listed below are described as deviations from the initial position of Figure 2.2, although the South may have been differentiated from other regions from the outset.

A. Word-final consonants

(1) Vocalization of /r/ in syllable-final position, in *car*, *card*, *beer*, *board* (in the coastal South).
(2) Use of apical rather than velar nasal in unstressed *-ing* in *working*, *morning*, *nothing*, *something*

B. Southern glides

(3) Upgliding /æy/ for initial /æ/ before sibilants and nasals in *brass*, *ashes*, *aunt*, *bang*.
(4) Front glide /y/ in /yuw/ after coronal onsets in *dew*, *tune*, *Tuesday*.

C. Parallel fronting of back vowels:

(5) Fronted /uw/ and /u/ in *too*, *boots*, *put*.
(6) Fronted /ow/ in *go*, *road*, *boat*.
(7) Fronted /æw/ for initial /aw/ in *out*, *mountain*.

D. The Back Upglide Shift

(8) Fronted /æw/ for initial /aw/ in *out*, *mountain*.
(9) Upgliding /aw/ for initial /oh/ in *caught*, *law*, *off*.

E. The Southern Shift

(10) Monophthongal /ay/ before voiced segments and word-finally in *high*, *side*, *wise*, *time*.
(11) Lowering of the nucleus of /ey/ along the nonperipheral track in *day*, *made*, *chase*.
(12) The fronting, raising and ingliding of initial short vowels /i/, /e/, /æ/ in *sit*, *set*, *sat*.
(13) Breaking of front long nuclei into two nuclei with intervening glide (Southern drawl)
(14) Monophthongal /oy/.

F. Conditioned mergers and oppositions

(15) Merger of /i/ and /e/ before nasals in *pin* and *pen*, *him* and *hem*.
(16) Distinction of /ohr/ and /ɔhr/ in *horse* and *hoarse*, *fork* and *pork*.
(17) Distinction of /hw/ and /w/ in *which* and *witch*, *whale* and *wail*

(18)   Merger of /uw/ and /u/ before /l/ in *fool* and *full*, *pool* and *pull*.
(19)   Merger of /iy/ and /i/ before /l/ in *feel* and *fill*, *heel* and *hill*.
(20)   Merger of /ey/ and /e/ before /l/ in *fail* and *fell*, *sail* and *sell*.
(21)   Distinction of /erV/ and /ærV/ in *merry* and *marry*, *berry* and *Barry*.

G. Status of the low back merger

(22)   Distincton of /o/ and /oh/ in *hock* and *hawk*, *Don* and *dawn*.

Chapter 7 showed that (1) the vocalization of (r) characteristic of all eastern sea-board cities except Philadelphia and Baltimore, is now retained in Boston, Providence, and New York City, but not in the South (Map 7.1). The sociolinguistic literature shows that (2) (ing) variation is general to the English-speaking world, though Houston (1985) finds that /in/ occurs with a much higher frequency in the South than elsewhere. Item (3) /æy/ has almost disappeared throughout North America. Item (4) /yuw/ was once common in Eastern New England and the South according to Map 163 of PEAS; today it has almost vanished (Map 8.3).

The general fronting in group C (5–7) includes the forward movement of /uw/, which is now common throughout North America (Chapter 12). In the PEAS record of the 1940s (Map 17), centralization of postcoronal /Tuw/ appears throughout the South, except for central and western North Carolina. The fronting of /ow/ (6) receives very little mention as a Southern feature in the literature cited in PEAS. Map 20 of PEAS does show centralization of final /ow/ in eastern North Carolina, but fronting appears more consistently in Philadelphia and western Pennsylvania.

Of the various conditional mergers only (15) /in/ ~ /en/ is distinctly Southern in its distribution, but as this chapter will show, it has spread beyond the Southern region. The distinctions represented by items (16) and (17) were never unique to the South: PEAS Maps 44, and pp. 175–176 show that these two distinctions opposed the North and the South to the Midland. Chapter 8 of this volume indicated that the contrasts are now almost gone in both areas. The mergers before /l/ are discussed in Chapter 9: though some are concentrated in the South, none are unique to the South. The distinction before intervocalic /r/ (21) is found in much of the Midland and North outside of the South. Although the low back merger (22) has been reported to be making headway in some areas of the South (Feagin 1993), the South remains as one of the three regions that resist this merger (Chapter 9).

It therefore appears that the two chain shifts listed under D and E remain as the defining characteristics of Southern States English. As in Chapter 14, we define a dialect by the dynamic processes that determine the overall direction of sound change, rather than by static or recessive features of traditional speech.

Much dialectological work on Southern-States English has emphasized differences among Southern dialects. The subdivisions of the South in Map 2 of PEAS are inherited from the lexically defined boundaries of Kurath (1949). The PEAS discussion of regional phonology in the South does not make use of these subdivisions, but substitutes a discussion of three regions – the Upper South, the Lower South and the South Midland (pp. 18–22) – on the basis of the syllabi of cultured informants. The Upper South is essentially the Virginia Piedmont region, centered on Richmond, and its most distinguishing feature is the centralization of /ay/ and /aw/ before voiceless consonants (Maps 27, 29). The Lower South is divided into the Low country, centered on Charleston, Savannah, and Columbia, and the Up country further inland. The most distinctive regional features in the Low country are tense monophthongal forms of /ey/ and /ow/, often ingliding.

The South Midland area is discussed in PEAS on the basis of four cultivated speakers, in Farmington and Charleston, West Virginia, Lexington, Virginia, and

Asheville, North Carolina, forming an area that overlaps the "Southern Core" to be identified in this chapter. Efforts will be made to relate the development of the unique chain shifts of the Southern region to these earlier records. The task is complicated by the conservative character of the LAMSAS transcriptions, which make it difficult to distinguish between real-time change and the reluctance of the transcribers to recognize forms they did not expect. For example, the raising and fronting of the short front nuclei /i, e, æ/ is never found in LAMSAS records. The IPA symbols for lax vowels [ɪ, ɛ, æ] are used consistently for the nuclei of these phonemes, and the only variation shown is in the presence or absence of an inglide. We might infer that this part of the Southern Shift is absent in the Low country because the inglide does not appear there in LAMSAS records, and infer that it is present in the Upcountry by the frequency of the shwa glide in those records. This is, however, an uncertain and indirect way of detecting the presence of tensed nuclei.

Other distinctive subregions of the Southern region noted in previous literature are the Outer Banks of North Carolina (Labov, Yaeger, and Steiner 1972; Wolfram 1999; Wolfram, Cheek, and Hammond 1994) and its characteristic backing and raising of /ay/; the New Orleans dialect with its striking similarities to New York City; and central Texas, identified with the merger of /ahr/ and /ohr/. Most of these local Southern dialects appear to be rapidly receding, while the more general Southern pattern, centered on the Southern Shift, seems to have expanded and consolidated in the past half-century.

The initiating process of this general Southern pattern is the deletion of the glide of /ay/ in *guy*, *high*, *wide*, *rise*, etc. Studies of the early history of Southern English (Montgomery and Melo 1990; Bailey 1997) suggest that this diphthong was all but intact in mid-nineteenth-century Southern English. However, recent recordings made by Poplack in Brazil of the descendants of Confederate soldiers show substantial evidence of glide deletion in their speech (Poplack, Labov, and Baranowski 2004). Acoustic analysis showed seven clear monophthongs out of 20 tokens for one 60-year-old man, including one before voiceless stops; his brother showed three monophthongs out of 24 tokens. This suggests that glide deletion began in some areas of the South as early as the first half of the nineteenth century.

The two chain shifts labeled D and E are the only elements in the list that are unique to the Southern region, if we define the South to include the Appalachian region which was assigned to the Midland by Kurath. In fact, it is within the Appalachian region that we have located the *Inland South* in Chapter 11, where the most advanced exponents of the Southern Shift are found. The cities of the coast, on the other hand, often remain increasingly peripheral to this new Southern phonology.

This chapter will first examine the geographic distribution of four traditional features of Southern English which were shared with a number of Northern dialects, and as Chapter 8 showed, are in the last stages of retreat. The geographic and phonological definition of the South will then be presented on the basis of the chain shift processes that are unique to the South.

18.2. Relics of older Southern phonology

Kurath's definition of the South on the basis of regional vocabulary (1949) was reinforced by Kurath and McDavid's treatment of pronunciation in the eastern United States (1961). Among the general phonological features that distinguished the Southern area were three phonological features which were not present in the neighboring Midland areas (but also found in the North): the distinction between /hw/ and /w/ in *whale* and *wail*, etc., the distinction between /ohr/ and /ɔhr/ in

horse and *hoarse*, *mourning* and *morning*, *for* and *four*, *pork* and *fork*; and the retention of the /j/ glide in the /iw/ class of *tune*, *new*, *suit*, etc. (items 4, 16, and 17 above). Chapter 8 reported the decline of these distinctions throughout North America: they have all but disappeared today.

Map 18.1 shows all of the Telsur speakers who maintain one or more of these distinctions in the production of the minimal pair tests. The dark purple symbols are the speakers who maintain all three distinctions. Red, green and blue symbols represent the cases where two of the three are distinct, and light pink, grey and blue are speakers who keep only one such pair distinct. The purple isogloss surrounds all the communities in which at least one speaker maintains one distinction.

These vanishing distinctions are clearly concentrated in the South. The purple isogloss covers most of the South as defined in Chapter 11 by glide deletion before obstruents, with the exception of a dozen points along the northern sector, in which no trace of the relic distinctions appear. Outside of the South we see only a few widely scattered points. A small concentration of light blue points appears in Maine, reflecting the distinction of *whale* and *wail*.

Within the South there is no clear concentration of any one type of symbol. In general, the most conservative areas are to be found in the eastern part of the region. The six speakers who maintain all three distinctions, though widely separated, are all in the Southeast. The ages of these most conservative speakers are shown in red numbers; all but one are over 60.

Table 18.1 shows the rate of disappearance of these relic features by the mean ages of those who make none, one, two or all three of the distinctions. It includes data from 100 Southern speakers who provided information on all three variables.

Table 18.1. Mean age by number of distinctions made for three relic variables by 100 Southern subjects

Number of distinctions	Number of subjects	Mean age
None	49	31
One	12	37
Two	33	47
Three	6	67

The relative rates of disappearance of the three distinctions can be seen in the number for each who report 'same' in both perception or production, and those who report 'different' in both, as shown in Table 18.2.

Table 18.2. Numbers of Southern speakers who are consistently the same or different in perception and production for three relic variables

Opposition	Same	Different
/ohr ~ ɔhr/	80	7
/iw ~ uw/	70	16
/hw ~ w/	62	23

This view of the geography of relic features points to the South as the most conservative region in North America. The South is also marked by many vigorously maintained phonological features. The maps to follow will show a consolidation and geographic expansion of major features of Southern phonology. But the apparent time data will also suggest a slight decline of the most characteristic features of Southern phonology among younger speakers in most urban areas.

18.3. The Southern Shift

This section will define the Southern region by the active rotation of vowels termed the Southern Shift. The original view of the Southern Shift presented a combination of three common vowel shift patterns (Labov, Yaeger, and Steiner 1972; Labov 1994). The most widely attested chain shift in the languages of the world is the movement of back vowels upward along the back diagonal. Since this has not been identified as specifically Southern, it was not listed among the Southern chain shifts, but it does occur in the form of the Back Chain Shift before /r/, discussed in the last chapter as a Mid-Atlantic feature. In the South, it is found only in the vowel subsystem before syllable-final /r/, as shown in Figure 18.1.
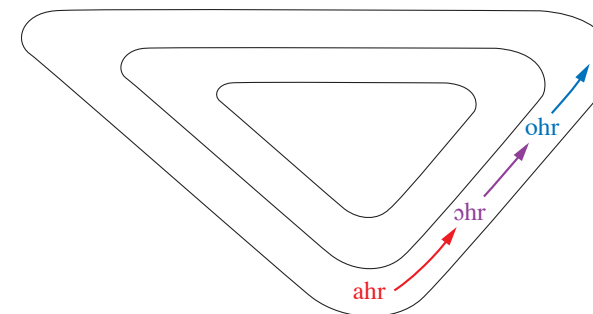

Figure 18.1. Back chain shift before /r/

In the Mid-Atlantic dialects, merged /ɔhr/ and /ohr/ advance to high position, producing a further merger with /uhr/. In the South, this does not happen. /owr/ develops a strong upglide but the nucleus remains in upper mid position. As seen in the last section, /owr/ and /ohr/ are now merged for some 80 percent of the Southern speakers. The merged vowel remains distinct from lower mid-back /ahr/ by means of a contrast of height, but also by breaking in the mid vowels – a back upglide followed by an inglide – which is not heard in /ahr/.

A second pattern that was incorporated in the earlier view of the Southern Shift was the fronting of back upgliding vowels which was found in Chapter 12 to be a general characteristic of Midland and Southern phonology (Figure 18.2). For many Southern speakers, /uw/ reaches a position in the high–front quadrant, directly behind /iy/. Chapter 12 showed that this is not specific to the South, but is a process that is affecting to one extent or another almost all North American dialects. Though the average values for the fronting of /ow/ are maximal in the South, the fronting of /aw/ reaches its most advanced form in areas of the Midland, and the pattern of Figure 18.2 appears in much the same form throughout the Midland and the South.
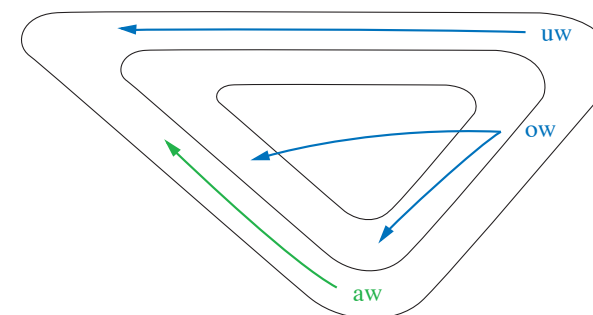
Figure 18.2. Parallel fronting of back upgliding vowels
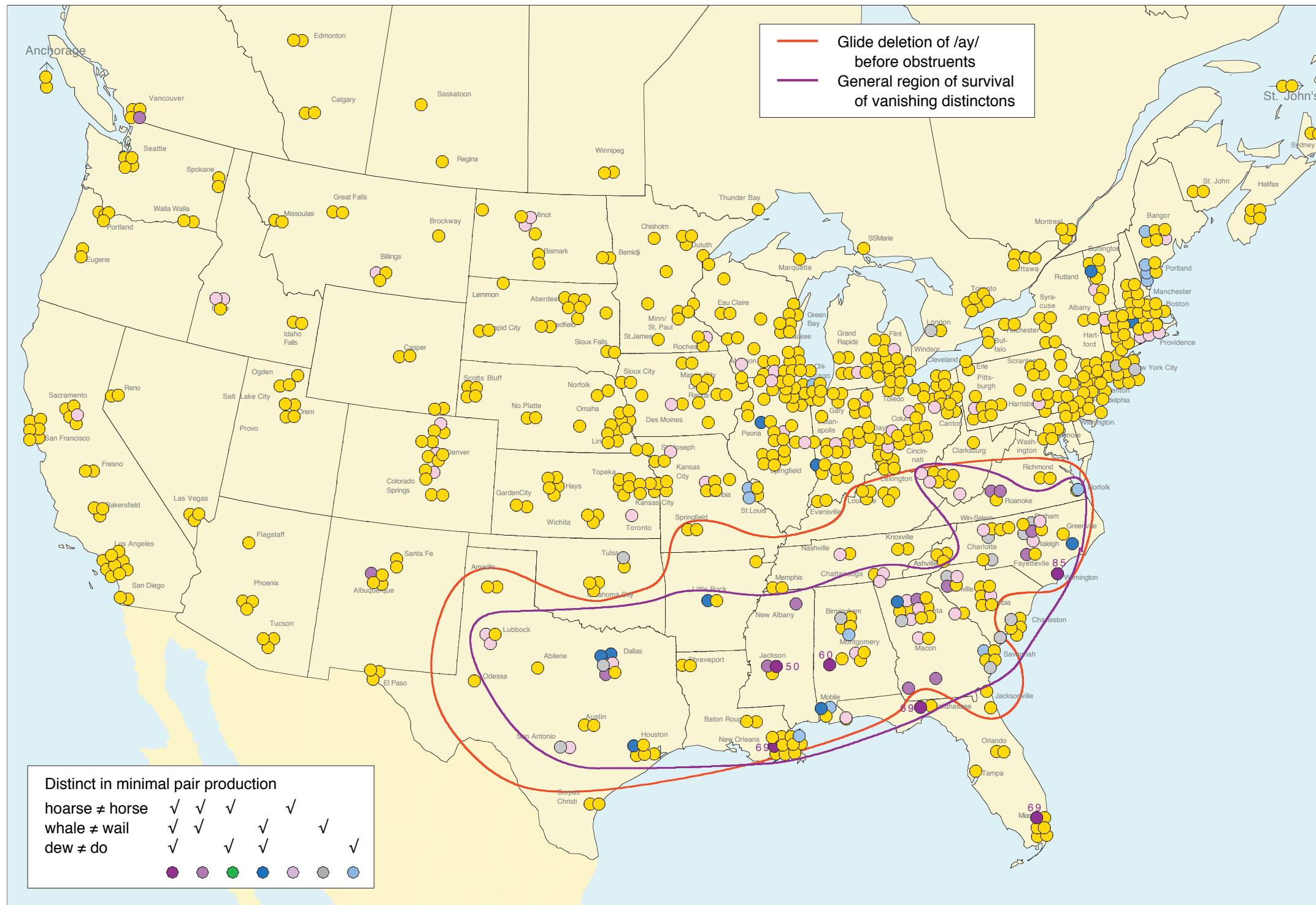
Map 18.1. Relics of older Southern phonology

The South is the most conservative area of North America in regard to the retention of phonemic distinctions which are undergoing extinction. The purple isogloss encloses the area of scattered remnants of the distinction between /ohr/ and /ɔhr/ in *four* and *for*, *mourning* and *morning*; between /w/ and /hw/ in *witch* and *which*, *wail* and *whale*; between /iw/ and /uw/ in *dew* and *do*, *tune* and (*car*)*toon*.

The pattern that is specific to the South is the Southern Shift as first shown in Figure 11.4, and in greater detail in Figure 18.3.[1] It is a chain shift pattern that can apply only to systems that have several front upgliding vowels as realizations of the long vowel system, together with several short front vowels.[2]

The triggering event is a change in the front upgliding diphthong /ay/. In most of the languages and dialects affected by this process, the nucleus of /ay/ moves back and upward along the peripheral path as route 1 in Figure 18.3. This is the path followed in most southern British dialects, Australia, New Zealand, and South Africa (Labov, Yaeger, and Steiner 1972, Trudgill 2004).

For the great majority of Southern-States speakers, /ay/ follows route 2 in Figure 18.3. Glide deletion is effectively a movement of /ay/ out of the system of upgliding vowels into the subsystem of long and ingliding vowels; that is, /ay/ becomes /ah/. This is followed by the centralization and downward shift of the nucleus of /ey/ along the nonperipheral front path, developing a low central, nonperipheral nucleus. Thus when *buy* is realized as [ba:], *bay* will be realized in the most advanced forms as [baᶦ]. This nucleus is usually non-peripheral but in the most advanced cases it has a low peripheral nucleus identical with that of *buy* in dialects not affected by the Southern Shift. In a consequent movement, the nucleus of /iy/ follows a parallel shift from high front to mid-front nonperipheral position.
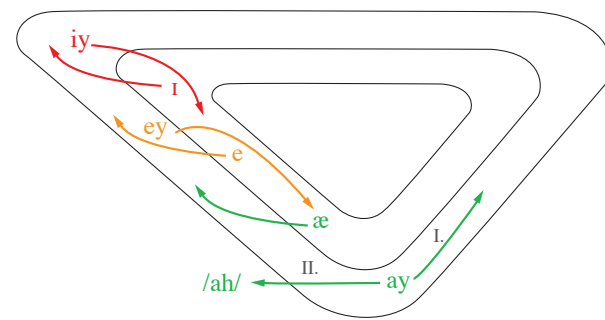

Figure 18.3. The Southern Shift

The Southern Shift also involves a complementary movement of the short front vowels in the opposite direction: /i/ and /e/ shift to the peripheral track and rise until their mean position may be higher than the nuclei of /iy/ and /ey/ in Northern dialects. These peripheral short vowels develop prominent inglides in the American South. In the most advanced forms, *sit* will be heard as equivalent to *see it* in Northern and Midland dialects, and *set* as equivalent to *say it*. The low short vowel /æ/ follows a parallel path, similar to that observed in the Northern Cities Shift. In the South, the fronting of /æ/ can be as extreme as in the North, but the nucleus does not rise as high since it is aligned in a series behind /e/. For many Southern speakers, lengthened /æ/ is broken – the nucleus descends to low front position and is followed by a high front glide and an ingliding second nucleus, the configuration that constitutes the Southern drawl (Chapter 14).

Stage 1 of the Sousthern Shift: glide deletion

Map 18.2 is a thematic map in which the size of the red circles is proportional to the percent glide deletion in *side*, *time*, *guy*, etc. The vowel class mapped here as /ay/ includes only the vowels before voiced consonants and in word-final position (special case of /ay/ before voiceless segments (ay0) is displayed in Map 11.5). The large red circles are heavily concentrated in the Southern States, with a scattering of small red circles in Pennsylvania, Delaware, Maryland, Ohio, Illinois,

18.2

and Kansas. Within the central areas of the Southern States only Atlanta and Austin stand out as exceptions with little or no glide deletion.

Map 18.2 clearly shows that the majority of speakers throughout the Southern States maintain a high degree of glide deletion. Diphthongal /ay/ is found along the eastern seaboard of the Southern States, where several cities appear to be peripheral to the South as here defined. One Norfolk speaker has glide deletion only before /l/ in *miles*. None of the three speakers in Charleston show any trace of this feature.

One subject from Savannah and those from Jacksonville have more than 20 percent glide deletion but none of the other seacoast cities show the high rates found in the central areas of the South. The only speaker located on the eastern seaboard with a high rate of glide deletion is in Wilmington, NC. The Telsur subjects from Atlanta, the largest city in the eastern half of the South, show almost none. This absence of Southern features is typical of that metropolis, the result of massive immigration from outside of the South.

The region of glide deletion has a Southern limit. It is absent in the Telsur subjects in the rest of Florida. The Tallahassee speaker has only 7 percent, which is a single occurrence in *time*. Glide deletion is also minimal in Corpus Christi in Southern Texas. New Orleans and Houston show only a small percentage. The western boundary of the Southern region is clear: it includes Lubbock and Odessa in Texas but not El Paso. The northern limit includes Amarillo but not Oklahoma; it includes Arkansas and southern Missouri and otherwise follows the Ohio River.

The red isogloss of Map 18.3, the AYM line, defines the South as a linguistic region. It was initially constructed as the outer limit of communities where more than 20 percent of /ay/ tokens are monophthongs. This minimum rate of 20 percent, which is a useful criterion for several other Southern features, coincides with a qualitative criterion: whether glide deletion takes place before obstruents or not. Map 18.2 (and 11.3) showed that a number of communities north of the red isogloss display a low percentage of /ay/ glide deletion – in all but three cases, less than 20 percent. In every case, this low percentage of glide deletion took place only before resonants – liquids and nasals – in *fire*, *mile*, *time*, etc.

18.3

Map 18.3 displays the structure of glide deletion in the South in more detail than previous maps including both voiced and voiceless environments. The strongest development of this process is found in the Inland South and the Texas South (as first defined by Map 11.6). This is shown in Map 18.3 by the dark brown symbols, which indicate a high level of glide deletion in all environments, including voiced and voiceless. The predominant Southern pattern is not this across-the-board level of glide deletion, but rather the situation indicated by the orange circles. For these speakers, there is a major difference between voiced and voiceless environments, so that a majority of /ay/ tokens show glide deletion before voiced obstruents, but only a small minority before voiceless obstruents. Such differentiation is not uniform in most communities, since it is a sociolinguistic variable; glide deletion before voiceless obstruents is generally considered to be an uneducated or lower class variant, stigmatized by the stereotyped use of /ah/ in "nahs whaht rahss" (Feagin 1994).

A number of light red symbols in Map 18.3 are all located on the periphery of the Southern region as defined by the AYM line. For these speakers, the difference between voiced and voiceless environments is moderate since their overall level of glide deletion is low.

18.4

Map 18.4 compares the present distribution of glide deletion with the data published in PEAS in 1961 for the Eastern United States, preceding the Telsur data by about 50 years. The dark red isogloss shows the regions in which PEAS records monophthongal /ay/ in *nine* in Map 26: an Upper South area in Virginia

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1   This was referred to as "Pattern 4" in earlier accounts (LYS 1972)
2   A configuration that is characteristic of West Germanic languages (Kim and Labov 2002).
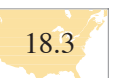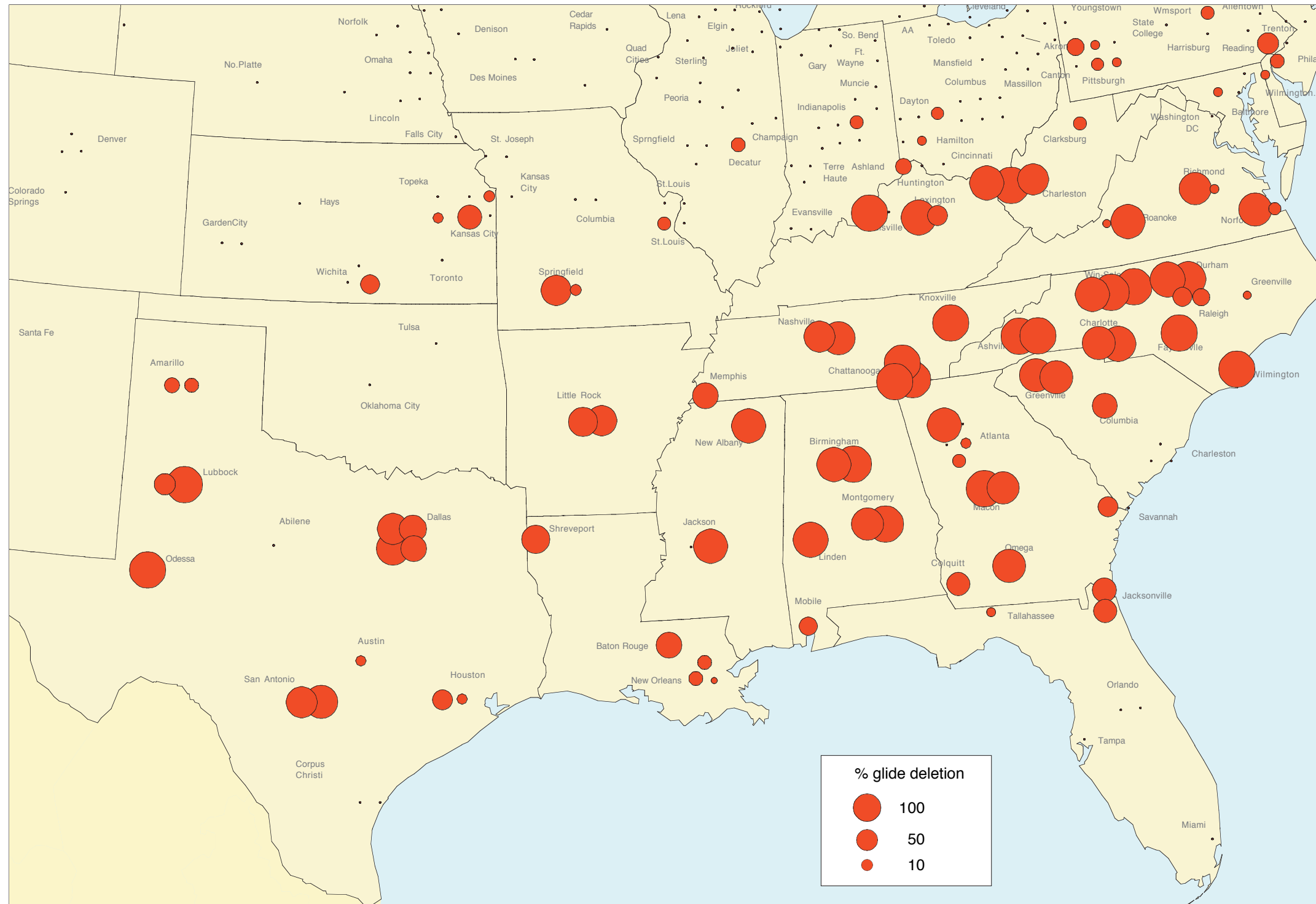
Map 18.2. Percent glide deletion of /ay/

This thematic map shows the percent glide deletion of /ay/ before voiced consonants and in final position, by the size of each red circle. The highest percentages are found in the interior of the Southern States, with a concentration in the eastern Appalachain area and in central Texas. Small circles in the peripheral coastal areas, and in the Midland areas on the northern edge of the area, indicate speakers who show glide deletion only rarely, and usually before resonants, as in *mile*, *iron*, *time*, etc.
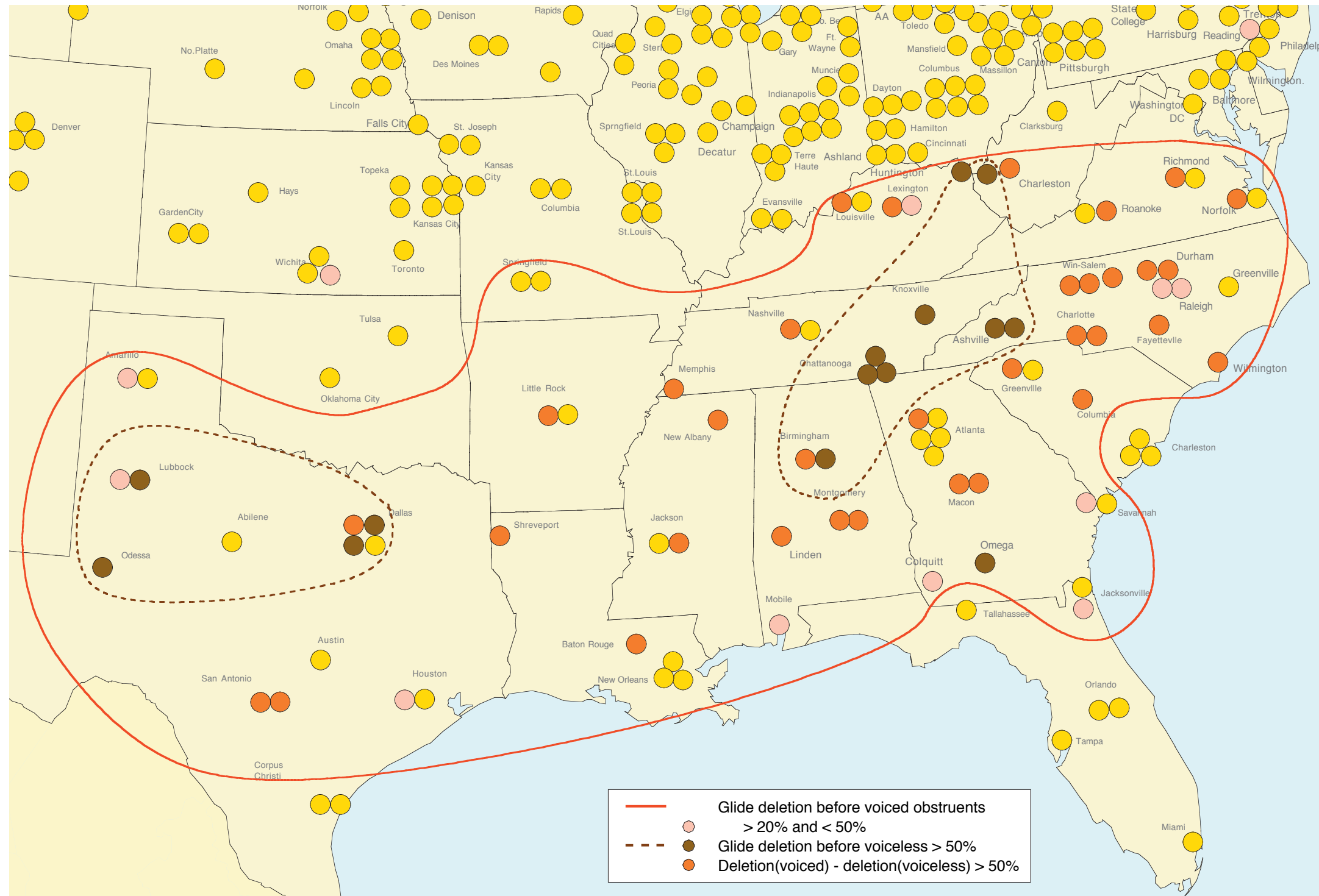
Map 18.3. The South defined by glide deletion of /ay/ before voiced and voiceless consonants.

The outer limits of the South were defined in Chapter 11 by the criterion of any degree of glide deletion of /ay/ before voiced obstruents in *wide*, *rise*, *five*, etc. This map provides more information about the frequency of deletion before voiced and voiceless consonants. The process is carried furthest by the speakers represented with brown circles, who delete the glide of /ay/ most of the time in all environments. These are concentrated in the Inland South and in central Texas. The orange circles are the speakers who show glide deletion most of the time before voiced consonants, and much less often before voiceless. The light orange symbols indicate speakers who show deletion less than half the time.
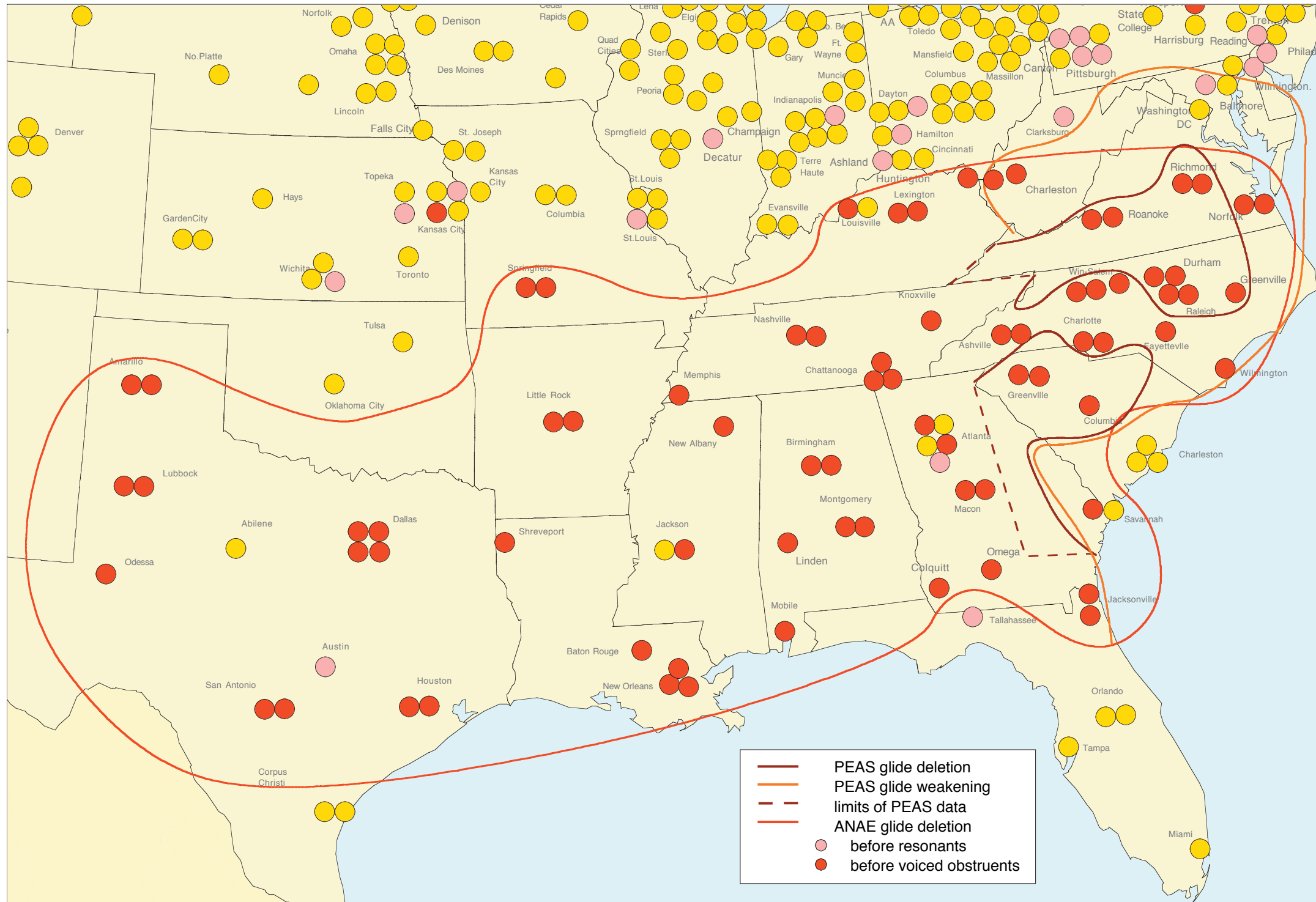
Map 18.4. The geographic diffusion of /ay/ glide deletion in the southeastern U.S.

Glide deletion in /ay/ seems to have spread quite widely since the Linguistic Atlas data of the eastern U.S. was gathered in mid-twentieth century. The dark red isogloss shows where glide deletion was recorded then, and the orange isogloss the extent of "glide weakening". The red circles show that glide deletion is now found throughout this area, except for the city of Charleston.

and upper North Carolina, and a Lower South area in Piedmont South Carolina and eastern Georgia. As noted above, glide deletion before resonants outruns glide deletion before obstruents, and is now found in areas of Maryland, Pennsylvania and Ohio (light red circles) where it does not appear in PEAS. The PEAS maps do not deal with glide deletion before obstruents, which must have been even more restricted than the case of *nine* shown in Map 18.4.

The orange isogloss indicates the surrounding area where PEAS recorded weakened or shortened glides, of the form [aᵉ] instead of [aᶦ]. This area includes all of the South in the eastern U.S. except for coastal South Carolina and adjoining Georgia.

The red circles in Map 18.4 indicate (as in Map 11.3) the Telsur speakers who show some instances (from 20 to 100 percent) of clearly monophthongal /ay/ before voiced obstruents. Charleston is still excluded, and one of the two Savannah speakers. Otherwise, the area of the South shows glide deletion throughout, with the exception of the largest city, Atlanta. Glide deletion has spread to all the interior areas of North Carolina, and diffused eastward towards the Atlantic Coast. From recent work done on the Outer Banks by Wolfram and his associates, we know that the diphthongal raised /ay/ → /oy/ that is the hallmark of that relic area is still maintained, but some diffusion of glide deletion from the predominant mainland pattern is evident (Wolfram, Schilling-Estes, and Craig 1994). It seems clear that glide deletion is extending to small town and eastern rural areas as well as the urbanized areas shown here.

It is important to note here that the ANAE view of this process is focused on the Telsur sample of urbanized areas outside of the AYM line. We may expect to find more widespread glide deletion in rural and small-town areas. Nevertheless, the consistency of the pattern displayed in the main Southern States areas contrasts sharply with the comparative absence of glide deletion in the peripheral areas.

Stage 2 of the Southern Shift: reversal of /ey/ and /e/

Map 18.5 examines the second stage of the Southern Shift in greater detail than Map 11.4. It considers four possible relations of /ey/ to /e/. In Q[uadrant] 1, the most conservative situation, /e/ is lower and backer than /ey/. In Q2, /e/ has moved to a fronter position, but is still lower. Q3 shows the converse situation: /e/ is higher but still backer than /ey/. The full development of Stage 2 is Q4, where /e/ has reversed its original relation to /ey/, being both higher and fronter. Of the two intermediate stages, there are eight cases of Q3 within the South, and only four of Q2. The general theory, that peripheral nuclei raise and non-peripheral fall, predicts that Q2 would be more common.

The temporal sequence of Stage 1 and 2 is reflected in the geographic pattern, shown in Map 18.5. The isogloss delineating the territory of Stage 2 is entirely contained within that delineating Stage 1, showing that Stage 2 speakers – those who have reversed the positions of /e/ and /ey/ – are a proper subset of Stage 1 speakers – those who have deleted the glide of /ay/. Stage 2 is not found in western Kentucky or Tennessee, southeast Texas, the eastern coastal portion of the South, or northern Virginia. In the southeastern area of the South, Atlanta, Savannah, Macon, and Jacksonville are not included. Thus the areas that formerly had the greatest concentration of wealth and influence in public life, and were the seat of the earlier *r*-less dialect (McDavid 1964) are those that participate the least in the Southern Shift.

The /e/ ~ /ey/ isogloss includes 36 of the 61 speakers within the /ay/ isogloss. Within it are found only four exceptions, and outside it only one speaker shows the reversal of /e/ and /ey/. This geographic configuration confirms other evidence that the two stages form a chain shift, in which Stage 2 is triggered by Stage 1. The logic of the chain shift is particularly compelling since the two stages are

different kinds of phonetic processes, and cannot be covered by a single rule or constraint: that is, Stage 2 is not a generalization of Stage 1, but a consequence of the removal of the /ay/ from the subsystem of front upgliding vowels.

Stage 3 of the Southern Shift: reversal of /i/ and /iy/

Map 18.6 displays the data for /i/ and /iy/ that correspond to the data on /e/ and /ey/ in Map 18.5. The same four relations between the short vowel and the front upgliding vowel are displayed. The third stage covers a much smaller area than the second stage, and is nested within in it. Only eleven speakers show the relative reversal of /i/ and /iy/. The /i/ ~ /iy/ isogloss encloses an oval area along the Appalachian chain and down to include a large part of Alabama. This area, the *Inland South*, will assume increasing importance in the geography of the Southern region as the discussion proceeds.

While Stage 2 cannot be viewed as a generalization of Stage 1, this Stage 3 can be viewed as a generalization of Stage 2, extending a change in the mid vowels to an analogous change in the high vowels. However, the path of the transition is different for the two stages. The main intermediate step in Stage 2 in the eastern area of the South is Q3, with /ey/ lower but fronter than /e/ – in other words, change of height first. But the main intermediate step in Stage 3 is Q2, where /iy/ is backer but remains higher than /i/ – exchange of peripherality first, then exchange of height.

The Southern Shift in superposition

The mechanism of the Southern Shift can be viewed most directly in the superposed view of all Telsur speakers provided by a mean Plotnik diagram. Figure 18.4 shows the normalized means of the four front upgliding vowels /iy/, /ey/,
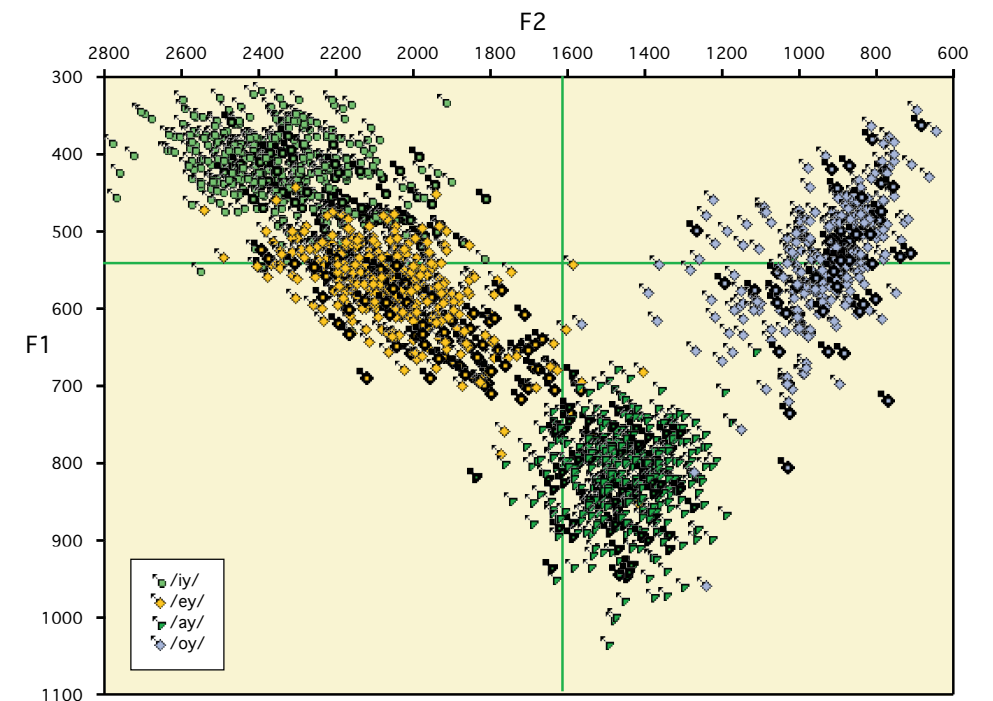
Figure 18.4. Superposition of /iy, ey, ay, oy/ normalized means for 402 Telsur speakers. /iy/ and /ey/ means for speakers in the South (including Inland South and Texas South) are highlighted. /ay/ values do not include vowels before voiceless segments
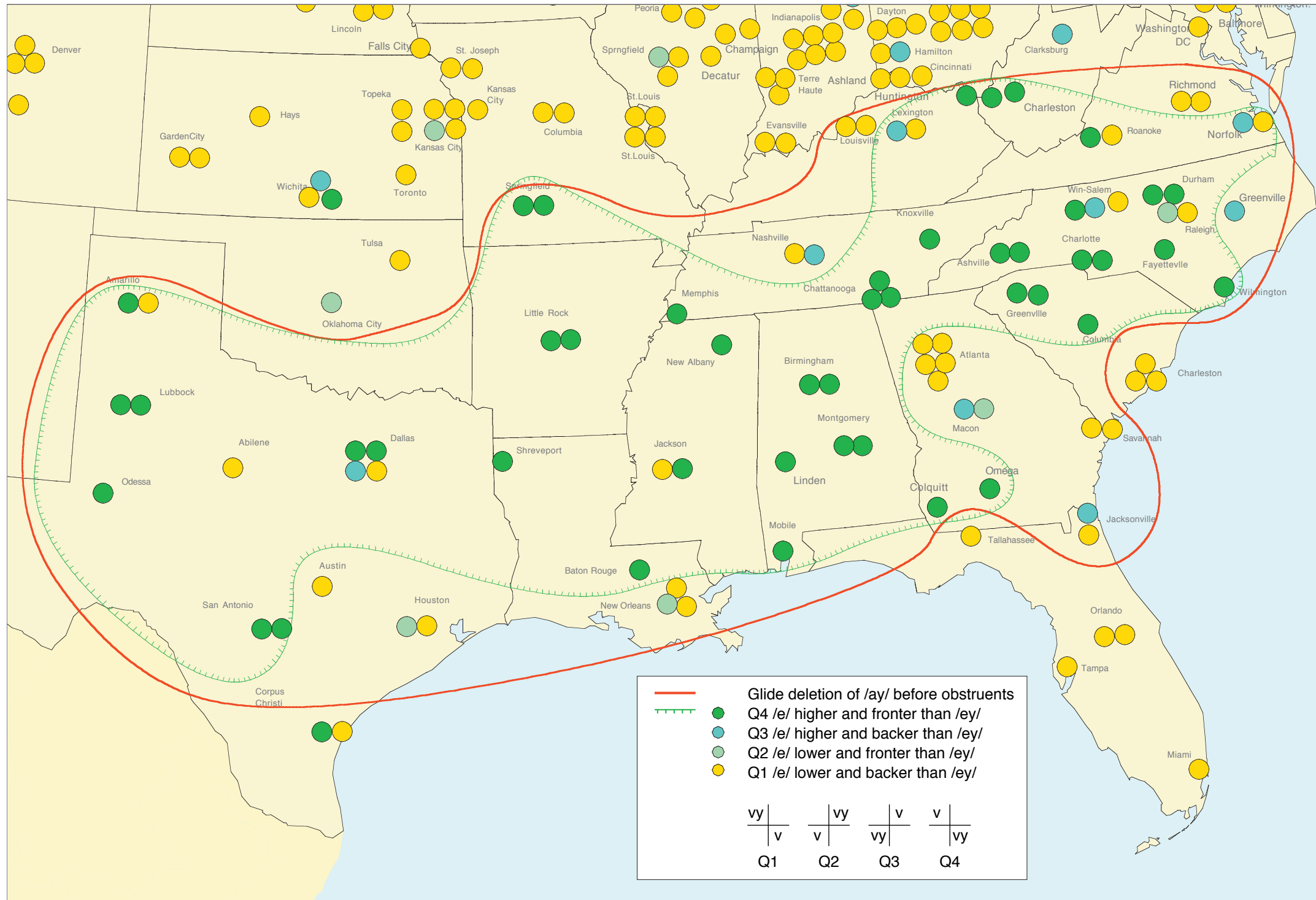
Map 18.5. The second stage of the Southern Shift

The second stage of the Southern Shift involves the reversal of the relative positions of /ey/ in *bait* and /e/ in *bet*, so that the nucleus of /ey/ is lower and more central than the nucleus of /e/, which becomes higher and fronter. This has happened in the vowel systems of all the speakers shown with green circles. Stage 2 covers most of the South as defined by the red isogloss, but there are some marginal areas which are not affected. The most common intermediate stage is shown with light blue circles, where /e/ has moved up and /ey/ has moved down, but /ey/ is not fully centralized.
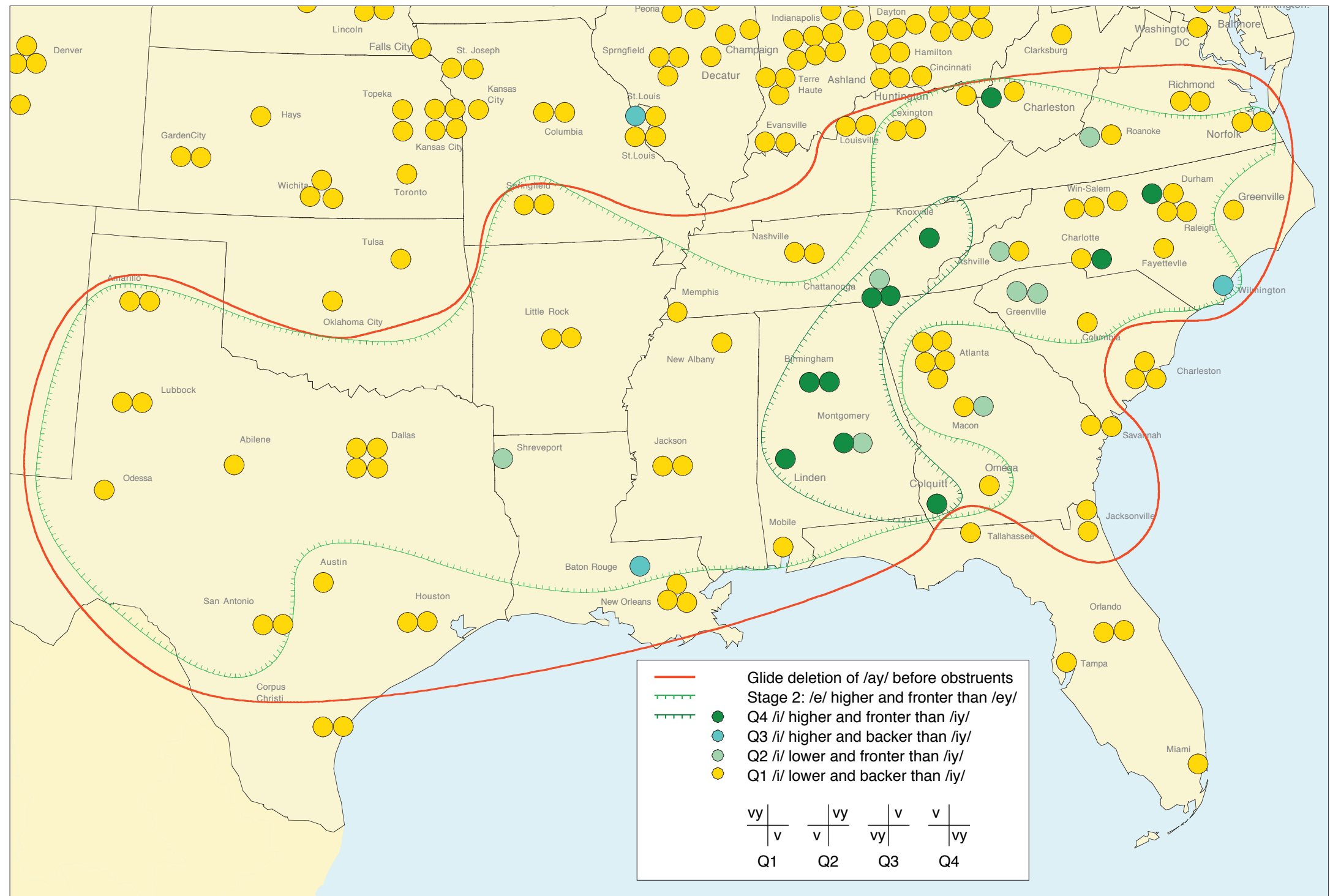
Map 18.6. The third stage of the Southern Shift

Stage 3 of the Southern Shift extends the process of Stage 2 to the high vowels /iy/ and /i/, so that /i/ becomes higher and fronter than /iy/. It is limited to a comparatively small area outlined by the dark green isogloss and the dark green symbols: the Appalachian area of Knoxville and Chattanooga, but extending southward to cover most of Alabama. The light green symbols show an intermediate stage where /i/ has become fronter than /iy/ but is not yet higher. The western section of the South is not yet affected by this expansion of the Southern Shift.

/ay/, and /oy/ for 439 subjects. The symbols for speakers from the South are high-lighted. No /ay/ tokens are highlighted, so that any highlighted symbols in the /ay/ area represent /ey/ means of Southern speakers. The figure thus displays the effects of Stage 2. It is evident that (a) the /ey/ tokens of most Southern speakers are considerably lower and backer than the main distribution of /ey/, and (b) a number of the Southern /ey/ means fall squarely within the general area occupied by /ay/. This does not of course imply merger since the Southern /ay/ is removed from the subsystem of front upgliding vowels.

As shown in Map 18.6, the number of speakers with Stage 3 completed is limited, so that only a small number of /iy/ mean values for individuals overlap with the /ey/ distribution. The most visible cases, less peripheral than the /ey/ tokens, are labeled: Linden (Georgia) and Birmingham (Alabama), both from the Inland South.

Another view of the Southern Shift is provided by Figure 18.5, which shows the mean values for 21 dialects as defined in Chapter 11, and adds /i/ to the display. Five dialects in the southern states show a marked lowering and centralization of /ey/, with the Inland South leading. Among the high vowels, the Inland South is the only dialect which shows a distinct lowering and centralization of /iy/, in line with the findings of Map 18.6. The IS mean for /iy/ is embedded in the upper range of the /ey/ tokens, lower than the IS mean for /i/.
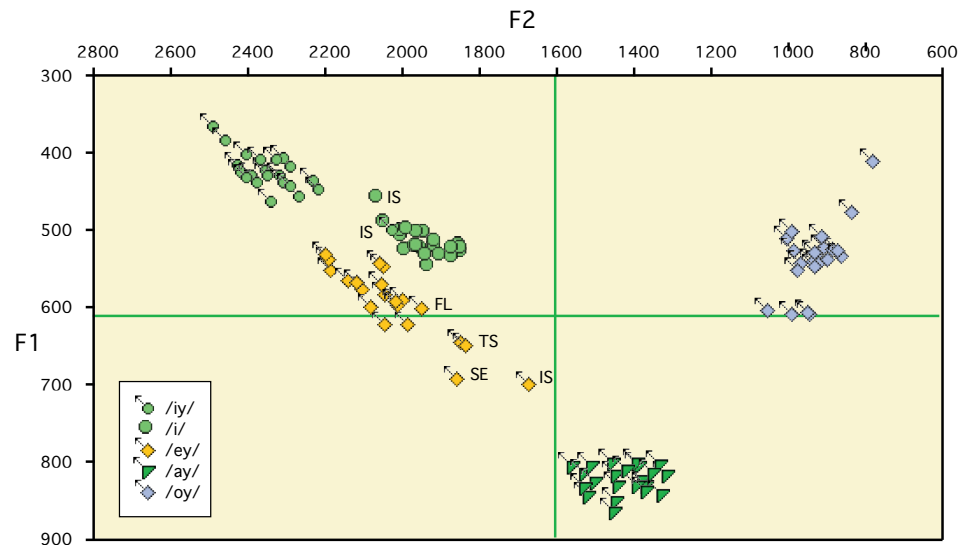
Figure 18.5. Means of Vy vowels for 21 dialects. IS = Inland South; TS = Texas South; S = South; SE = Southeast. FL = Florida

Glide deletion of /oy/

18.7

Among the Southern features listed in the introduction was the glide deletion of /oy/. The /oy/ class is the least frequent among the North American English phonemes, in spontaneous speech or in the Telsur interviews. A total of 743 tokens were measured. Of these, only 28 showed glide deletion. All but one were from speakers in the South, and 23 were before /l/, in *oil*, *boil*, *spoil*, *toilet* (or after /l/, in *employment*). The only other environment in which glide deletion was noted was before /s/: *moisture* (2), *oyster* (2), and *voice*.

Figure 18.1 did not indicate that /oy/ is involved in the Southern Shift directly, but it seems likely that it is linked to /ay/ as a simple generalization of glide deletion. The glide deletion of /oy/ is not as salient a feature of the South as the glide deletion of /ay/, but it is well recognized by Southerners. The study of cross-dia-

lectal comprehension by Labov and Ash (1997) obtained data on comprehension of a monophthongal token of *spoiled* [spɔːld] spoken by a young woman from Birmingham. Subjects in Chicago, Philadelphia, and Birmingham all heard this token as an isolated word, in a phrase, and in a sentence. It was the only item that all Birmingham subjects (high school and college) recognized perfectly in the isolated word context. Thirty to 40 percent of subjects from Chicago and Philadelphia failed to recognize this word.

Glide deletion of /oy/ before /l/ actually forms part of the Back Upglide Chain Shift and adds another element to the chain shift in that environment. This third link applies primarily to contexts before /l/:

| *foil* | → | *fall* | → | *foul* | → | [fe:ol] |
| /foyl/ | → | /fohl/ | → | /fawl/ | → | /fæwl/ |

The social distribution of the Southern Shift

The Southern Shift is reasonably stable, and is strongly represented in the speech of many younger Telsur speakers. It is not in the terminal stages of disappearance like the features displayed in Map 18.1. However, regression analyses of the social factors involved show that the Southern Shift differs considerably in its social distribution from the Northern Cities Shift as described in Chapter 14. The measures of the Southern Shift to follow apply to the 83 Telsur speakers within the AYM isogloss: representatives of the Inland South, Texas South, and the South dialect as a whole, but not the marginal speakers who show no glide deletion of /ay/.

Since Stage 2 of the Southern Shift is defined by the relative position of the means of /e/ and /ey/, the analysis of social factors is necessarily based on mean values of the 83 Southern speakers rather than their individual speech tokens as units. The treatment of the Southern Shift is confined to the first two stages, since the reversal of /i/ and /iy/ does not involve enough speakers. The regression analyses of the social factors considered the age, population of the speech community, occupational index, education, and gender of each speaker. Of these five, the first two were significantly correlated with both stages of the Southern Shift, while the last three were not.[3]

In Table 18.3, Stage 1 is measured by the percent glide deletion of /ay/ before obstruents and finally. Stage 2 is measured as the sum of two differences: F2(e) – F2(ey) and F1(ey) – F1(e). Given the reversal of the relative positions of /e/ and /ey/ in Stage 2, both differences will be positive if Stage 2 is complete. This holds for 58 percent of the speakers in the South, but for only 1.6 percent in the rest of North America. In Figure 18.6 this measure of Stage 2 appears as a bimodal distribution, with the Southern speakers showing a positive mode at 250 and the balance of the continent a negative mode of –450.

Both age coefficients in Table 18.3 are positive, indicating that older speakers have more advanced forms of the Southern Shift than younger speakers. These are sizeable effects. The age range among the Southern speakers is from 14 to 74, or 60 years. The age coefficient of 12.8 for /ay/ indicates that for each successive generation of 25 years the percent of glide deletion falls by 12.8. For each younger generation, the Stage 2 measure falls by 137.5 Hertz.

The effects of city size are negative for both measures, indicating that the smaller the city, the more advanced the shift. It is not significant for /ay/ glide deletion, but it does reach significance for the Stage 2 measure. This effect is independent of the effect of two large cities, Atlanta and Dallas–Forth Worth. It holds

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3   The size of the SMSA, or standard metropolitan statistical area, was also significantly correlated with all variables, but in a weaker relation than the size of the city itself.
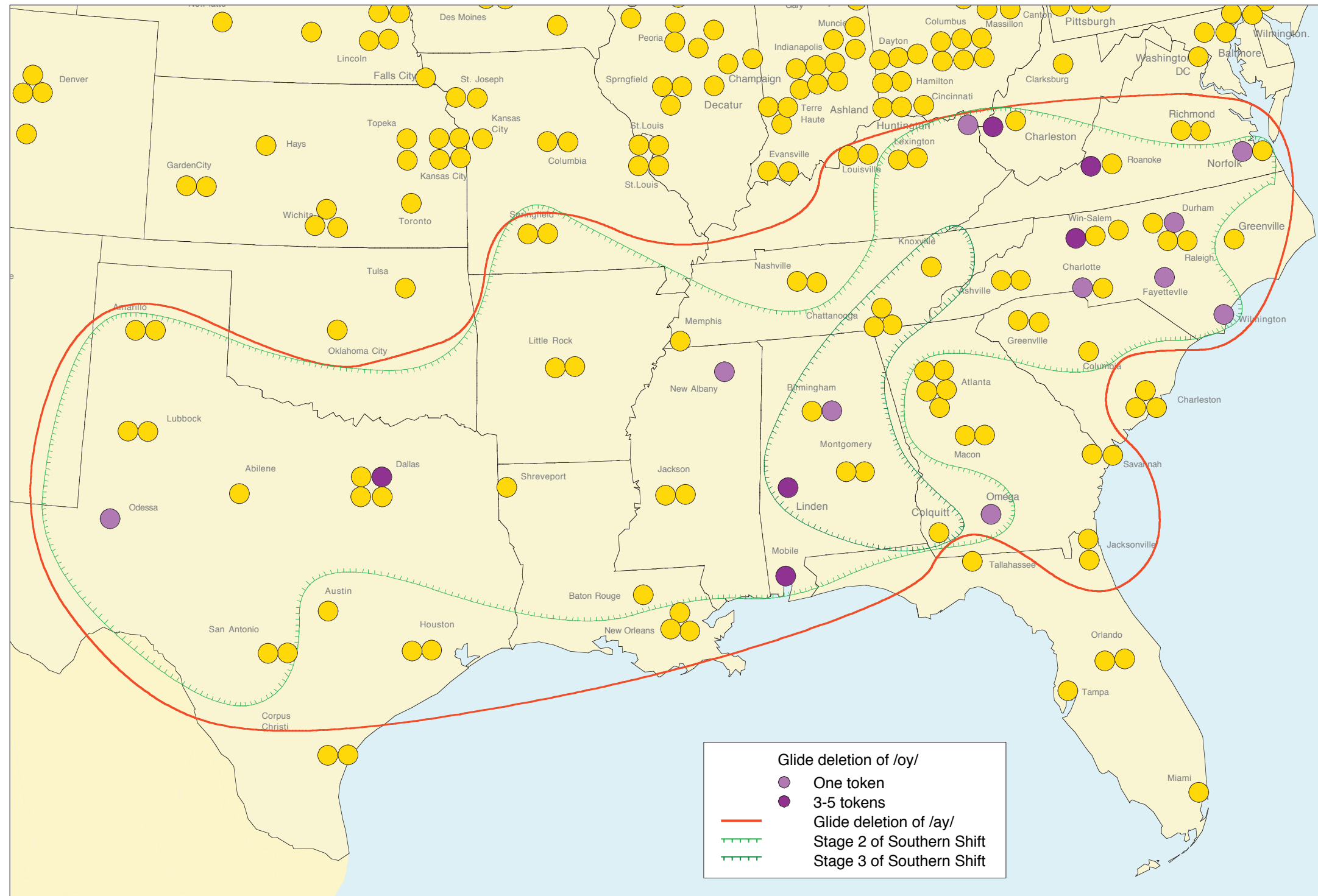
Map 18.7. Glide deletion of /oy/

Glide deletion of /oy/ is much less widespread than for /ay/. Though it is more common in the eastern section of the South, it is not concentrated in any one geographic area. The dark purple circles indicate the speakers who show more than one example of /oy/ glide deletion. It is most frequent before /l/.
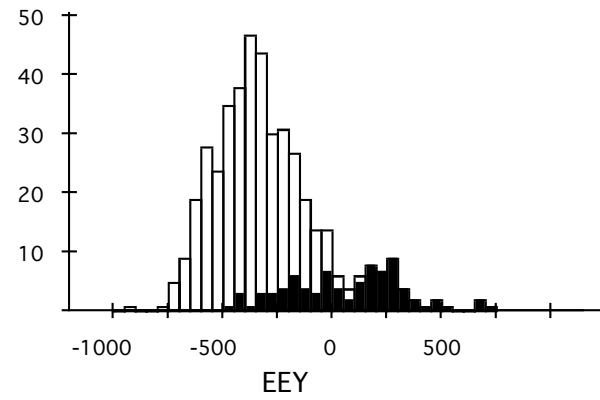
Figure 18.6. Distribution of the Stage 2 measure, F2(e) – F2(ey) + F1(ey)-F1(e). Solid bars show speakers from the South, within the AYM isogloss

equally well for cities smaller than 1,000,000 and larger than 50,000. In sum, these figures show the two main stages of the Southern Shift are most advanced among older speakers living in smaller cities. In the perspective of apparent time, the Southern Shift is slowly receding, in contrast with the steady advance of the Northern Cities Shift and other sound changes in progress studied in Chapters 12, 14, and 15.

Table 18.3. Regression coefficients for the first two stages of the Southern Shift [N=83]. Stage 2 distance: F1(e)-F1(ey) + F2(ey)

Variable	Age (* 25 yrs)	p	City size (*100,000)	p
Stage 1: % /ay/ glide deletion	12.7	.027	−2.0	.086
Stage 2: /e/ - /ey/ distance	137.5	.001	−20.0	.016

The total effect of social factors on the progress of the Southern Shift is not great: the factors found to be significant account for only about 15 percent of the variance. Even within the South, geographic factors are more influential. The geographic differentiation shown in Maps 18.3, 18.5, and 18.6 is a larger factor in the development of the Southern Shift than the social factors of Table 18.3. Table 18.4 adds the effect of membership in the Inland South, the area where the Southern Shift is most developed. The effect of this factor is considerably larger than the first two.

Table 18.4. Addition of geographic factor "Inland South" to Table 18.3

Variable	Age (* 25 yrs)	p	City size (*100,000)	p	Inland South	p
Stage 1: % /ay/ glide deletion	13.4	.01	−1.4	.214	38.0	.0006
Stage 2: /e/ - /ey/ distance	143.0	.0002	−15.0	.052	313.0	<.0001

Since the Inland South was defined as the most advanced region in the Southern Shift movements, it is not surprising to find that there is a significant effect of membership in the Inland South. Table 18.4 allows us to weigh the geographic factor against the social factors. The amount of variance accounted for by this geographic factor is larger than that of the social factors combined. In each case, the level of significance of the geographic factor is greater than that of either age or city size. However, social factors do survive in this analysis and point in the same direction.

A regression analysis for glide deletion before voiceless consonants shows large and significant effects for the two geographic areas where this feature is most concentrated: the Inland South and the Texas South. No significant correlations with gender, education or city size are found, however.

Internal conditioning of the Southern Shift

The major geographic difference between voiced and voiceless environments for glide deletion of /ay/ raises the question as to whether the Southern Shift operates on the phonemes /iy, ey, ay/ as a whole or whether specific allophones are related by chain shifting. Table 18.5 addresses this question through a regression analysis of all of the individual tokens measured for these phonemes as produced by the 83 speakers in the South, with numbers of tokens for each vowel indicated. It shows the effects according to the level of significance. The black symbols are effects that operate in the direction of the Southern Shift, while the red symbols indicate the environments that disfavor the Southern Shift (e.g. negative coefficients for F2 of /ey/ indicate a favoring of the Stage 2 centralization and therefore appear in black).

Table 18.5. Significant regression coefficients for internal factors for three elements of the Southern Shift. * p < .05; ** p < .01; *** p < .001. Black symbols favor the direction of the change; red figures disfavor the change.

	/ay/ [N=1397] % Monophthongal	/ey/ [N=2003] F1	F2	/iy/ [N=1351] F1	F2
Internal factors					
Coda					
Stop		***			
Fricative				**	
Nasal		***		***	
/r/		***	***		
Labial	***		q		
Labiodental	*	***	***	*	
Interdental				**	
Apical	*	***	***	*	
Palatal		*	***		
Voiced		*			
Onset					
Nasal		***		***	***
Labial			***	***	***
Coronal			***	***	***
Palatal		*	***	*	***
Liquid			***		***
Velar				*	
Obstruent/liquid		*	***		***
Following syllables				*	
Social factors					
Female		***			
City size (100,000)	***	***	***	***	***
Age	***		***		***
Inland South	***	***	***	***	***

The crucial question is whether higher frequencies of glide deletion for certain allophones of /ay/ lead to higher frequencies of lowering only in the correspond-

ing allophones of /ey/ and /iy/, rather than to lowering of /ey/ and /iy/ as a whole, regardless of allophonic environment. If so, the environmental coefficients for /ay/, /ey/ and /iy/ should be similar. An inspection of the table gives a negative answer. The only aspects of the following environment that significantly favor glide deletion are following labial, labiodental and apical consonants.[4] There is no resemblance between the environments that favor glide deletion and those that favor lowering and centralization of /ey/ and /iy/. In this case, the unit of chain shifting is not the allophone but the phoneme.

On the other hand, there are no disagreements among the three external factors involved. The only inconsistency is in the effect of age, which is not significant for F1 of /ey/ and /iy/. In the other three cases, age is positively correlated with the Southern Shift, registering the recession in apparent time noted in Table 18.4. These results indicate that the major phonetic development in the recession of the Southern Shift is the reversal of the original exchange of tense–lax relations in the F2 dimension.

18.4. The Back Upglide Shift

One of the most distinctive features of the Southern States vowel system, first mentioned in Chapter 2, is the presence of a back rounded upglide in the long open-*o* class, which is labeled /oh/ in the initial position of North American vowel systems. For most of North America, this /oh/ class is a member of the long and ingliding subsystem that occurs in both free and checked position. It is normally realized as a long monophthong in low back to lower mid position. In the northeastern area from Providence to Baltimore, it ranges from low to upper mid or lower high position, with an ingline that is realized with increasing frequency as it rises to upper mid position. In the South, this word-class is frequently realized as a diphthong with a back upglide, as displayed in Map 18.8. Many members of the word-class are derived from back upgliding diphthongs (*law*, *hawk*, *thought*) or syllables with lateral codas that developed unrounded back upglides when vocalized (*salt*, *talk*, *all*). The Southern glide may not then be a new development, but a continuation of an older form. If so, the back upglide would have been generalized to other members of this miscellaneous word-class that originally had no glide, derived from the lengthening of short-*o* (*lost*, *off*, *dog*). In any case, the existence of the back upglide puts into question the validity of the /oh/ notation (or any monophthongal equivalent) for Southern States phonology. Acoustic and auditory analyses of this class show that for most Southern speakers,

(1) the nuclei of /o/ and /oh/ generally coincide on the F1/F2 plane, so that the back upglide is the feature that distinguishes the two classes;
(2) when the back upglide is present, the nucleus is shifted to the front, and is often heard as unrounded.

Thus a phonetically realistic phonemic notation for the Southern form is /aw/. There is no possibility of confusion with the historical /aw/ in *house*, *out*, etc.; in the South and the Midland, this is firmly to shifted front of center. The opposition of a front /aw/ to a back /aw/ suggests a phonological shift, with the front vowel now identified as /æw/. These relations can be captured as the *Back Upglide Shift*. As indicated above, it involves /oy/ as well for allophones, primarily before /l/:

/oy/ → /oh/ → /aw/ → /æw/

In PEAS, the back upglide appears throughout the Southern States for *law*, *salt* and *dog* (Maps 22-24). One exception is the Charleston–Savannah region, extending to Columbia, where only monophthongs are shown. In the areas that show diphthongs, the back upglide is most consistent in *dog*, and least consistent

in *law*. This runs counter to the possibility that the glide is an historical continuation of the *law* class, and suggests a more recent Southern innovation.

Map 18.8 expands the view of the back upglide provided in Map 11.2 and adds information on the fronting of /aw/ to /æw/. Three levels of back upglide frequency are shown. The outer isogloss, in light purple, encloses all the communities in which any frequency of /oh/ → /aw/ is found. It includes most of the Southern region and is the only Southern isogloss that goes beyond the AYM line to include one city in Oklahoma, Tulsa, and one in northern West Virginia. Beyond this, one can observe a scattering of low frequency cases of /oh/ → /aw/ in the neighboring portions of the Midland. On the other hand, back upglides are not found in west Texas, so that the Texas South region of Amarillo, Lubbock, and Odesssa is not included. The back upglide is also absent in New Orleans, emphasizing again that this community is only marginal to the South.

The magenta isogloss surrounds all those (magenta) symbols that have at least 20 percent back upglides. It forms a compact area in which 31 of 50 speakers within the isogloss are marked in this way. An even more compact area is enclosed by the inner isogloss surrounding points that show more than 50 percent back upglides, with 15 out of 19 interior points so marked. This consistent pattern is again focused on the Inland South area identified in Maps 18.5 and 18.6, the region in which the Southern Shift is most highly developed.

The relation between the shift of /oh/ to /aw/ and fronting of initial /aw/ in *out*, *loud*, *down*, etc. to /æw/ is indicated by symbols with stars in place of circles. All speakers shown with star symbols instead of circles have a mean F2 of /aw/ greater than 1800 Hz. The black dashed isogloss outlines the areas where this is the predominant pattern. There are two areas of extreme fronting of /aw/: one covers part of the Inland South, and extends further into North Carolina; the other covers part of the Texas South, and extends northward into Arkansas and southern Missouri. A clustering of stars appears in the Kansas City area, which is outside of the South, but as noted in Chapter 12, is a strong center for the fronting of /aw/. As the light magenta symbols indicate, the back upglide is moderately represented in that area as well.

It has been pointed out that the /o/ in the South is in a lower back mid position. Table 18.6 shows that five dialects displayed rounded variants of /o/ in this position, with inglides noted by the analyst. Of these five, only the South maintains a distinction between /o/ and /oh/. The presence of such inglides in the South then suggests that from a structural viewpoint, /o/ may retain the identity of /oh/ while /oh/ is converted to /aw/.

Table 18.6. Number and percentages of inglides recorded for /o/ by region

Region	N	No. of inglides	% of inglides
W. PA	432	13	3.0
ENE	269	6	2.2
South	2,102	38	1.8
Canada	704	8	1.1
West	1,266	5	0.4
North	3,358	4	0.1
Midland	1,841	1	0.1
Mid-Atlantic	360	0	0.0
NYC	166	0	0.0

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4 As Map 18.1 showed, glide deletion is favored before resonants in the peripheral areas not included within the AYM line. A regression analysis of all North American speakers outside of the South shows that following liquids strongly favor glide deletion, along with labial codas, but within the South liquids do not have this effect.
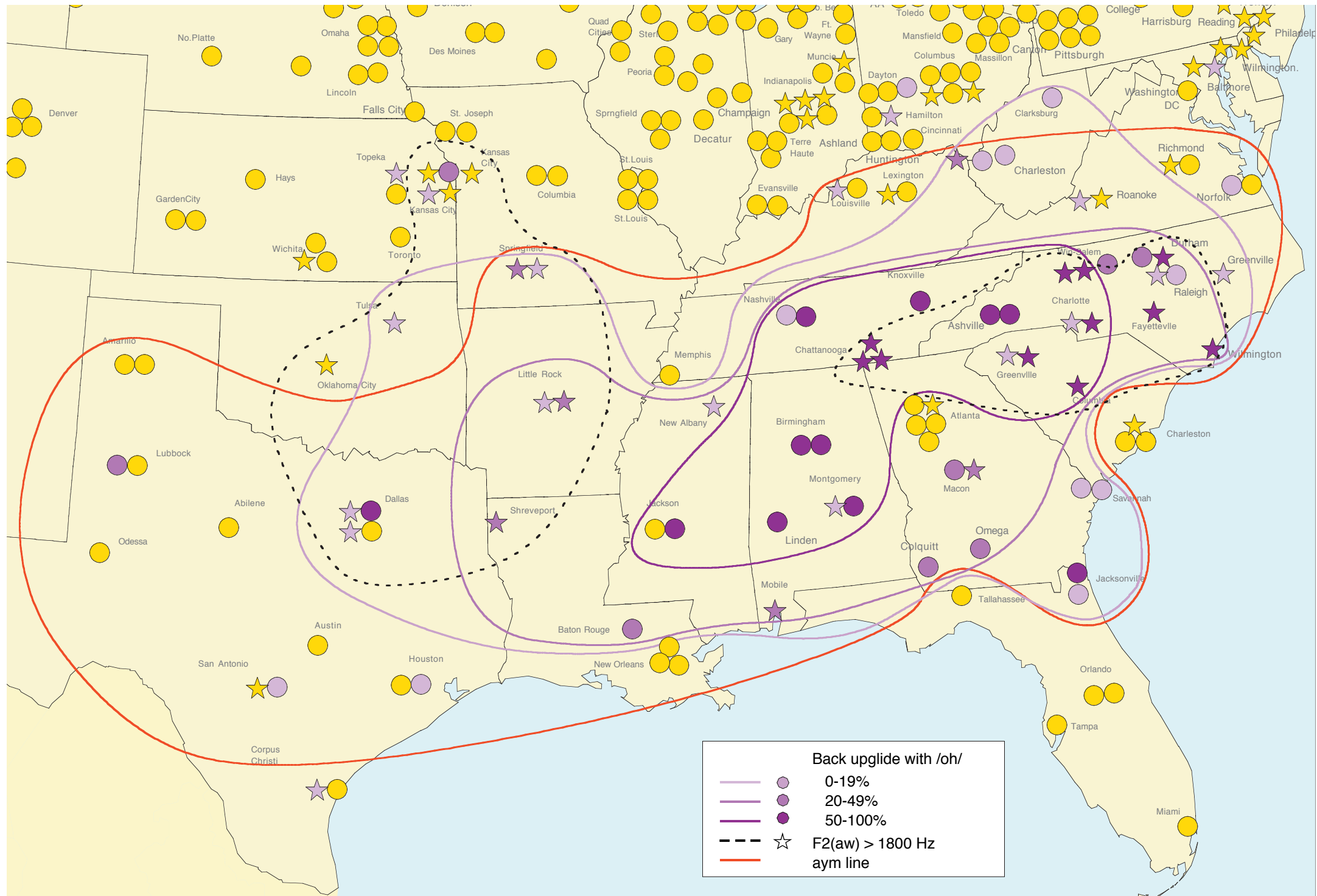
Map 18.8. The Back Upglide Chain Shift

In the South, the vowel class of *caught*, *hawk*, *dawn* is distinguished from the class of *cot*, *hock*, *Don* by the presence of a back upglide. This feature is most widespread in the eastern, interior regions of the South. It usually involves the unrounding of the nucleus, so that /oh/ becomes /aw/. At the same time, the /aw/ of initial position is strongly fronted to /æw/. Speakers indicated by stars show the most extreme fronting and raising of the class of *out*, *down*, *house*. The combination of these two changes forms the *Back Upglide Chain Shift*, concentrated most strong in the intersection of the dashed black and dark purple isoglosses.

In Chapter 11 it was noted that the nuclei of /o /and /oh/ occupy almost identical positions in the Southern States, and that it is the presence of the back upglide that differentiates the two classes. We would expect this pattern to show a complementary geographic distributon to that of the lowback merger, and it does: the /oh ~ aw/ isoglosses do not include the points in Virginia, West Virginia, and Kentucky where Chapter 9 reported an expanding merger of /o/ and /oh/. The low back merger has also been reported for young middle-class speakers from Anniston, Alabama (Feagin 1993).

18.5. Overall view of the South

Map 18.9 superimposes all of the Southern isoglosses that have been presented so far. Three of these isoglosses combine to identify the most advanced representatives of the Southern dialects: speakers with more than 50 percent monophthongization of /ay0/, those with more than 50 percent back upglides with /oh/, and those with a relative reversal of /i/ ~ /iy/ as well as /e/ ~ /ey/. These isoglosses overlap most clearly in the areas originally identified in Map 11.6, named the "Inland South" and the "Texas South". Three cities – Knoxville, Chattanooga, and Birmingham – form the central speech communities of the Inland South, but it extends to include two cities in the western Carolinas – Asheville and Greenville. The Texas South area is not marked by as many converging features, but does show the full development of glide deletion to include voiceless as well as voiced environments.

18.6. Southern Shift vowel systems

A leading exponent of the Southern Shift is Thelma M., of Birmingham, Alabama (Telsur 341). She was 31 years old when interviewed in 1995, of English–Irish background, and works as an administrative assistant in a research lab at a Birmingham hospital. Thelma is a lively, forthright and engaging speaker, a personality typical of the leaders of linguistic change (Labov 1994: Ch. 12). Figure 18.7 is a Plotnik vowel chart that provides a concrete exemplification of the Southern Shift of Figure 18.3. Vowels before nasals are not shown for the short front vowels, since /i/ and /e/ are merged before nasals and not used in mean calculations.

In Figure 18.7, Stage 1 of the Southern Shift is represented by the highlighted /ay/ tokens, which are all monophthongal. All /ay/ are before voiced codas and final are monophthongal, and most of those before voiceless codas. Diphthongal tokens of *night*, *pipe*, and *quite* are further back than the main distribution, in contrast with the monophthongal *night* which is slightly fronted along with the main distribution.

Stage 2 is well represented with the mean of /e/ much higher and fronter than the mean of /ey/. One outlier of /i/ in *guess* overlaps with the /i/ distribution; more typical are peripheral *eggs* and *edge*. The mean value of /ey/ is back of center and considerably lower. The downward shift of /ey/ is most notable in *shame*, *same*, *age*, and *maintenance*, which overlap the /ay/ distribution. It is clear that this extreme lowering is favored by following nasals, quite the reverse of the effect on raising and fronting of short vowels. The nonperipheral position of /ey/ is indicated by its relation to the means of /æ/ and /aw/.

Stage 3 of the Southern Shift is also well developed. /i/ is in high front peripheral position. The highest vowels show the merger of /iy/ and /i/ before /l/ in *ill*, *grill*, *Mobile*, *heel*, and *peel*. Otherwise, the high front peripheral vowels are all the short /i/ of initial position: the leading tokens are *is* and *kids*. In contrast, the /iy/ distribution is much lower and more central. Vowels in word final position – *see*, *me*, *three* – are the most extreme, almost mid-central.
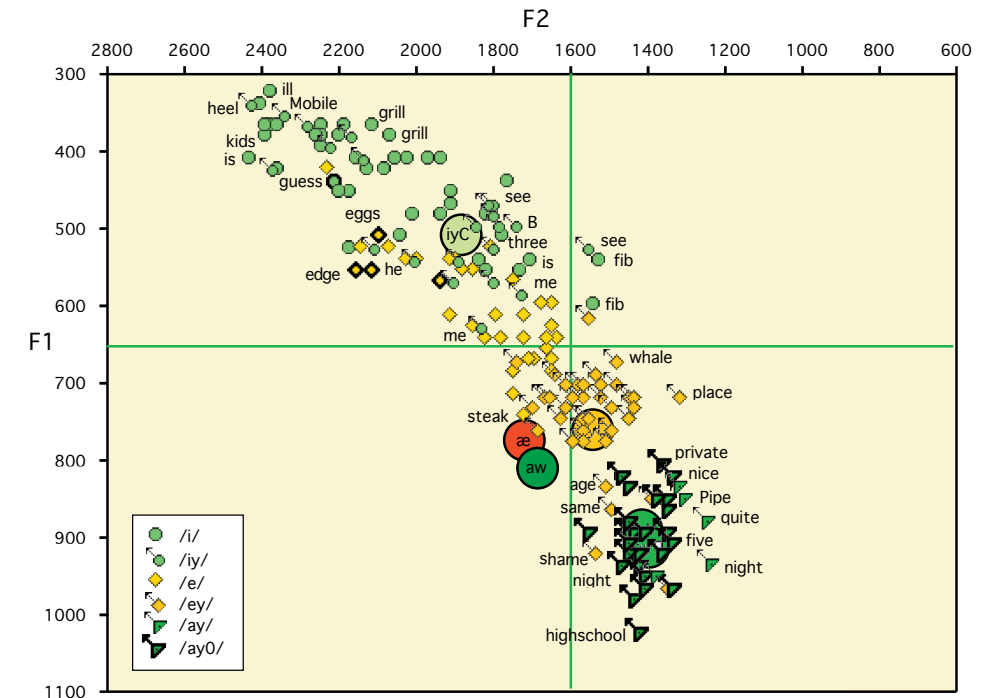
Figure 18.7. The Southern Shift in the system of Thelma M., 31 [1995], Birmingham, TS 341. Short front vowels before nasals not shown. Highlighted /ay/ tokens are monophthongs.

The fronting of back upgliding vowels in the South

Chapter 12 showed that the fronting of /uw/ was general to most of North America, and that the fronting of /ow/ was strongly entrenched in the Midland region (including Pittsburgh and the Mid-Atlantic States) as well as the South. Figure 18.8 shows the pattern of fronting of /uw/ and /ow/ that is characteristic of the South, as exemplified in the vowel system of the same speaker, Thelma M. of Birmingham.

Although the two most strongly fronted vowels are members of the /iw/ class, *Tuesday* and *shoes*, the means of /iw/, /Tuw/, and /Kuw/ are not far apart. The differential between vowels after coronal consonants and others is not evident here; words like *Hoover* are well front of center.

A number of glide target measurements are displayed in Figure 18.8. It is evident that the glide has fronted as well as the nucleus. Only one word, *dew*, shows a glide much backer than the nucleus; in most other cases, the glide is entirely a matter of closure of height alone, with no front–back component. As a result of such glide fronting, the /uw/ of Birmingham speakers will be heard as /iy/ in many cases. Thus in the CDC experiments, judges from Chicago or Philadelphia frequently transcribed *bouffed* as *beefed* (Labov and Ash 1977).

The fronting of /ow/ is quite marked, but even the most extreme tokens are not shifted to front of center. In this respect, the South is generally not as advanced as Midland cities like Columbus, Pittsburgh, or Philadelphia (Figure 12.11). As usual, vowels with velar and nasal onsets (*go*, *know*) are the most advanced.

Most striking in the Southern pattern is the generalization of fronting to vowels before /l/. In Figure 18.8, the vowels in *fool* and one vowel in *school* are clearly undergoing fronting, a phenomenon that is found only in the South (see Figure 12.7). This applies equally to /ow/ before /l/, where the distance between the main distribution and vowels before /l/ is small.

Inland South

Texas South

——	glide deletion of /ay/
——	glide deletion of /ay0/ > 0%
——	glide deletion of /ay0/ > 50%
——	back upglide of /oh/ > 20%
——	back upglide of /oh/ > 50%
⊤⊤⊤	reversal of /ey/ and /i/
⊤⊤⊤	reversal of /iy/ and /i/
– – –	Inland South & Texas South
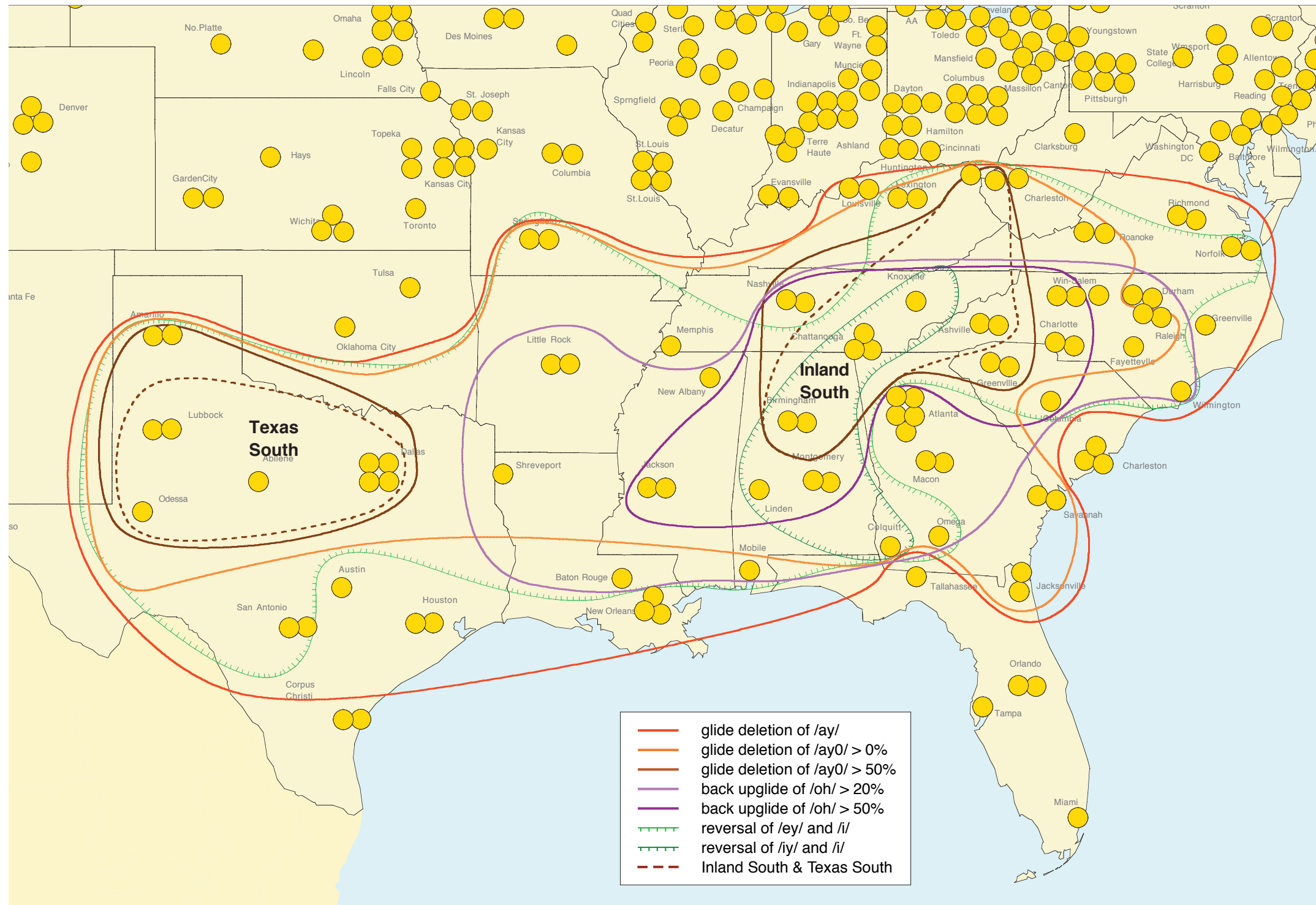
Map 18.9. Overview of the South

This map brings together all of the features of the Southern vowel system, super-imposing the isoglosses from previous maps. It is evident here that the heaviest concentration of Southern features in the eastern section of the South is found in the Inland South, located in the Appalachian area, and in central Texas in the western part.
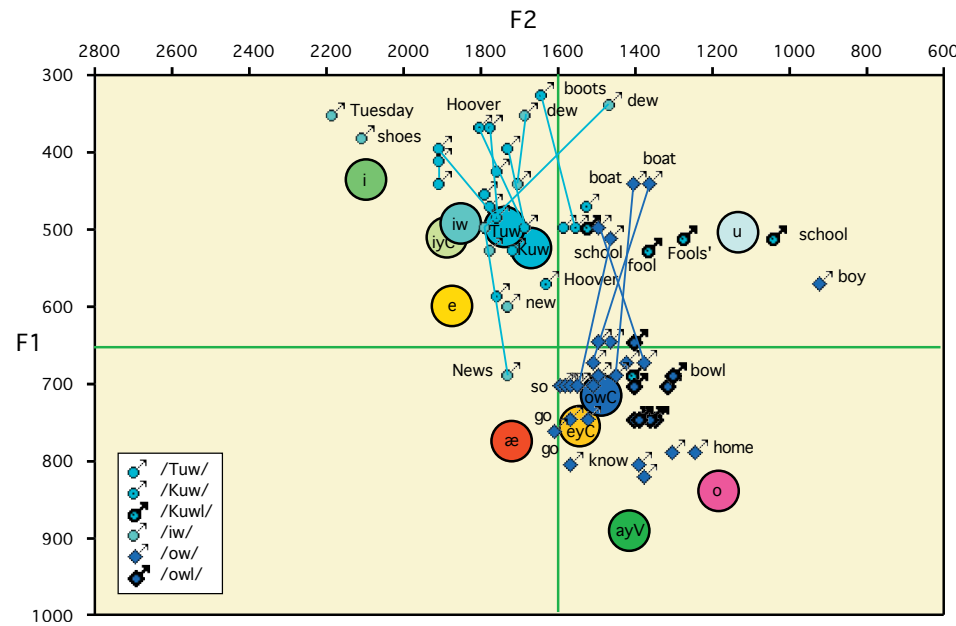
Figure 18.8. The fronting of back upgliding vowels in the system of Thelma M., 31 [1995], Birmingham, TS 341. Highlighted vowels are before /l/.

The back upglide chain shift in the South

Figure 18.9 displays the vowels involved in the Back Upglide Shift. In mid-back position are four tokens of /oy/, two before /l/. The highlighted token, *spoil*, has undergone glide deletion so that it is now a member of the long and ingliding series, best represented as /oh/. However, it is at a considerable distance from the initial position of the /oh/ class, in low-back position, so that the immediate consequences for chain shifting are not present.

A majority of the magenta /oh/ tokens are highlighted, indicating the presence of a back upglide. These are concentrated in the low central region. This group includes *fawn*, *dawn*, *all*, and the originally short-*o* word *dog*, which reinforces the inference that the back upglide is not the remnant of an historical diphthong or vocalized /l/, but a later development (Map 18.7). The nucleus that precedes this glide is frequently unrounded, so that /aw/ is a plausible representation for this phoneme. On the other hand, vowels that do not show a back upglide, not highlighted in Figure 18.9, are normally rounded, and the nucleus is further back on the F1/F2 plane. In Figure 18.9, /aw/ has shifted front of center, with tokens before nasals in mid front position.

Figure 18.10 shows that the phonetic development of Southern /æw/ is comparable to that of /æ/, in that both vowels frequently exhibit Southern breaking, or drawling. (See the discussion of drawled short-*a* in Chapter 13; spectrogram for *past* in Figure 13.14 and trajectories for all short-*a* in Figure 13.15.) Here the nuclei are shown as green symbols, the end points of the medial glide [j] as black symbols, and the final end-points of the trajectories in white. Trajectories for *downtown₂* and *town* are connected with dashed lines. In contrast, *out₃* shows a simple back upglide, moving from low front to a mid back glide target. This development of /æw/ is not parallel to the fronting of /uw/, since the endpoint of the glide shows no tendency toward fronting.

Figure 18.11 is the vowel system of a second exemplar of the Southern Shift: Lucy C., of Chattanooga. She was 35 years old when interviewed in 1996, and a second-grade teacher. Her background is similar to that of Thelma M. in many respects, but differs in having experienced early contact with African-Americans.
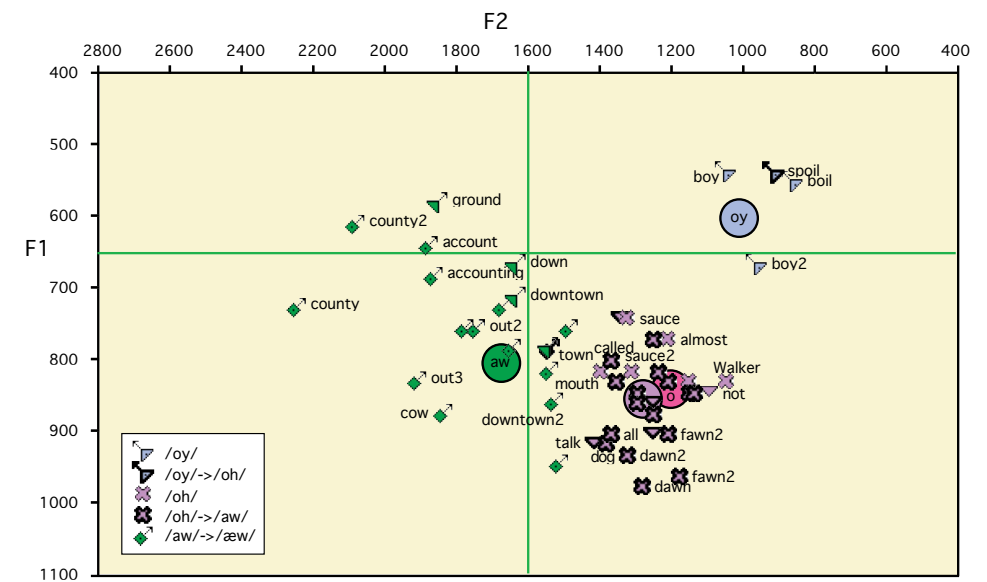
Figure 18.9. Back upglide shift in the vowel system of Thelma M., 31 [1995], Birmingham, TS 341
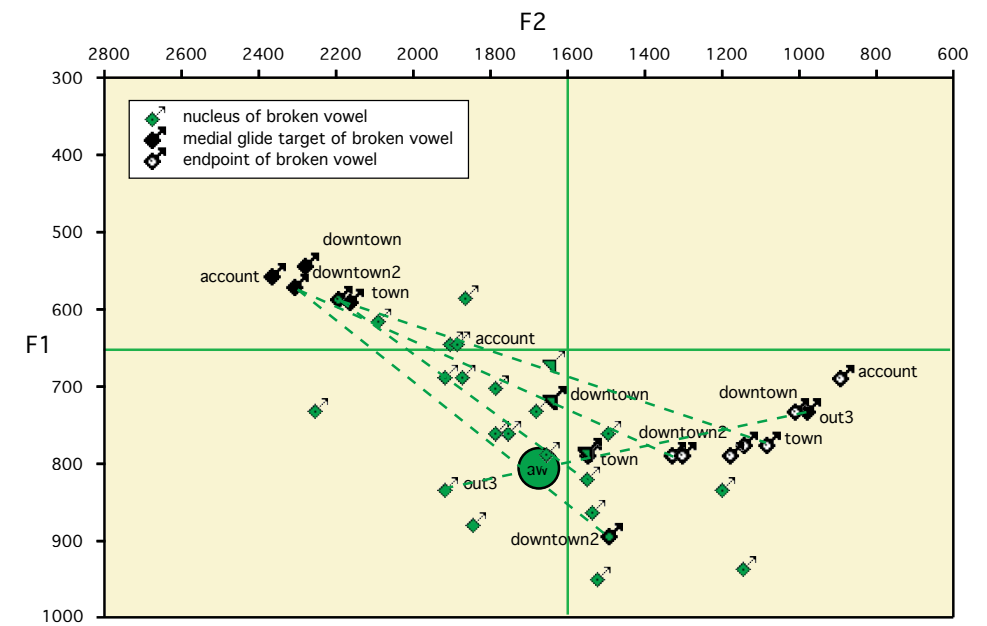
Figure 18.10. Nuclei, medial and final glides of /æw/ in vowel system of Thelma M., 31 [1995], Birmingham, TS 341

While Thelma M. attended a high school that was 95 percent white; Lucy C'.s high school was 90 percent black. However, she is no less typical of the advanced speakers of the Southern Shift:

Stage 1: glide deletion is general before voiced segments, and almost as high before voiceless segments: ten out of twelve vowels before voiceless consonants are monophthongs.

Stage 2: the relative positions of /e/ and /ey/ are strongly reversed. The most extreme tokens of /ey/ are close to /ay/, as in *say*, *day*, *bacon* while the most advanced tokens of /e/ are in upper high position and are broken, with inglides following the nuclei, as in *wed* and *death*.

Stage 3: /i/ and /iy/ are also reversed, though in a less extreme fashion. Some tokens of /iy/ remain in upper high position as with *east*, *evil*, while others are lowered to mid-central position, *see*, *street*. Again, the high front position is occupied by the merger of /i/ and /iy/ before /l/: *pill*, *heel*, *hill*.
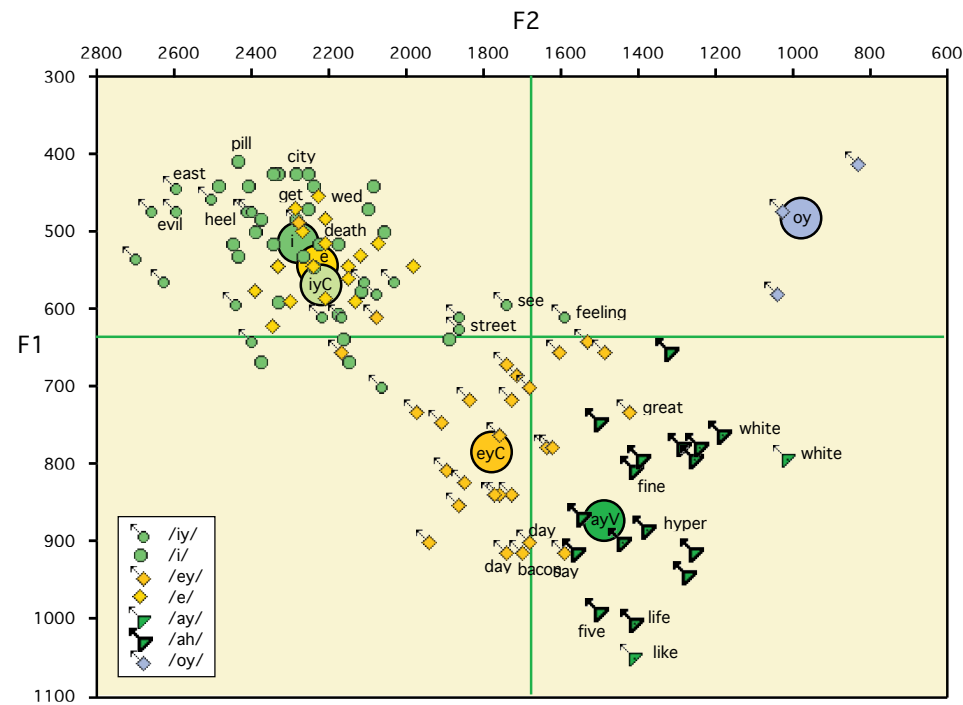
Figure 18.11. The Southern Shift in the vowel system of Lucy C., 34 [1996], Chattanooga TN, TS 612. Highlighted /ay/ tokens are monophthongs.

18.7. The Charleston dialect

One of the most distinctive Southern dialects is that of the city of Charleston, South Carolina. The traditional city dialect is described in the dissertation of O'Cain (1972) and in syllabi 135, 136 of PEAS. In the PEAS maps, the Charleston dialect appears to cover a region at least 50 miles in diameter, extending southward along the Atlantic coast to include the city of Beaufort.[5] The major features of this dialect were diametrically opposed to the Southern Shift as described in this chapter, and differ in many other respects from the main body of Southern dialects. As displayed in the PEAS syllabi 135–137, and discussed by O'Cain, the Charleston dialect

- has no glide deletion of /ay/;
- has tense nuclei for /ey/ and /ow/. The /ey/ nucleus is an upper mid tense [e] followed by an inglide. This is paralleled by the realization of /ow/ as [o´]. These ingliding vowels are similar to those heard in the Gullah dialect of the Sea Islands surrounding Beaufort;
- has no back upglide with /oh/;[6]
- has a palatal upglide in the mid-central vowel in words with historical final /r/ (*thirty*, *sermon*), as in traditional New York City and New Orleans dialects;
- shows a merger of /ihr/ and /ehr/ in *cheer* and *chair*, etc.;[7]
- shows Canadian raising of both /ay/ and /aw/.

Figure 18.12 shows one of the three Telsur speakers from Charleston, with a vowel system characteristic of all three. The most marked feature of the dialect, tense (and ingliding) /ey/ and /ow/, has disappeared. The nucleus of /ey/ is lax (mean 1995 Hz), not far from the lax /e/ (mean 1922 Hz), and it is followed by a front upglide. Instead of an upper mid-back ingliding /ow/, there is a strongly fronted /ow/.[8] The wide distance between the main distribution of /ow/ and the tokens of /ow/ before /l/, highlighted on Figure 18.10, shows the extent of the change, since in the traditional Charleston dialect, these would be quite close.

The mid-central rhotic vowel in *her*, *bird*, etc. shows no trace of a palatal upglide in the Charleston speakers of the 1990s. There is moreover no trace of the merger of /ihr/ and /ehr/ In Figure 18.12, /ihr/ is in high front position, next to /iw/, while /ehr/ is in mid-central position.

The modern Charleston dialect is not markedly Southern in character.[9] Its affinities with the Midland dialect are apparent in several areas of the vowel system. There is no trace of Southern breaking with /æ/ or /aw/. Instead, Charleston /æ/ shows the nasal system, in which all short-*a* tokens before nasals are raised, but no others (Chapter 13). The strong fronting of /uw/ is characteristic of the South, and especially the absence of a strong differentiation of vowels after coronals and after non-coronals. Yet similar fronting is also found in many Midland cities, like Columbus. And unlike the South in general, Charleston shows no tendency towards fronting of /uw/ and /ow/ before /l/: as Figure 18.10 shows, all vowels before /l/ are firmly in back peripheral position.
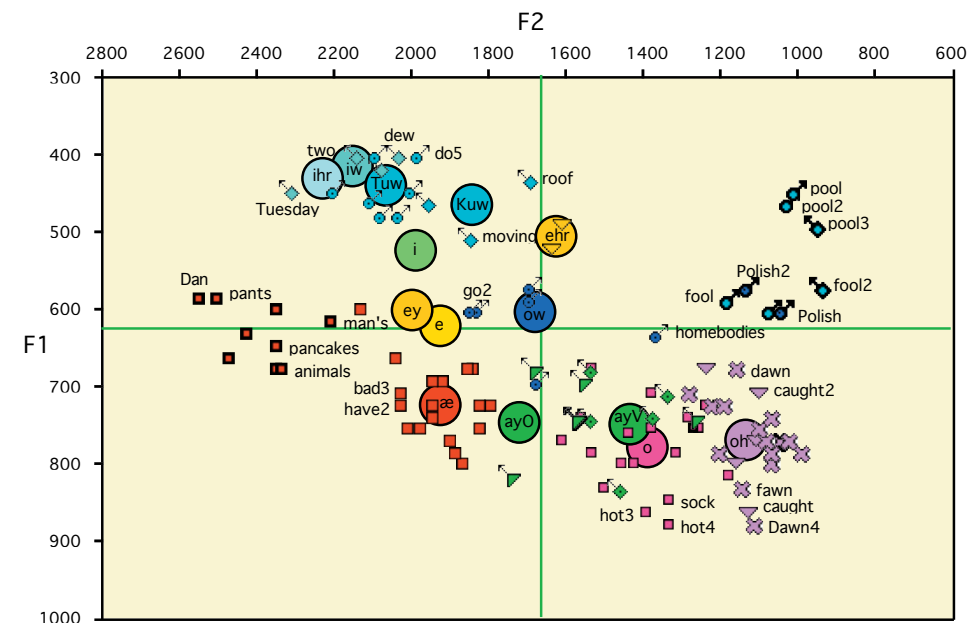
Figure 18.12. Vowel system of Peggy C., 40 [1996], Charleston, TS 500. Highlighted /æ/ are before nasals. Highlighted /ow/ and /uw/ are before /l/

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5   Syllabus 137 of PEAS for Beaufort is quite similar to 136 and 137 for Charlston. A former sheriff of Beaufort, William McTeer, was interviewed by Labov in 1965. The analysis of his speech by Baranowski (2005) shows all of the features of the traditional Charleston dialect described by O'Cain.
6   One of the PEAS educated speakers has one upglide, with *dog*.
7   This is characteristic of one of the two educated speakers in the PEAS syllabi, and the Beaufort speaker as well.
8   The mean would be well front of center, if it were not influenced by the outlier *homebodies*. As noted in Chapter 12, *home* is a lexical exception to the fronting of /ow/ in almost all dialects.
9   Baranowski reports (2003) that modern Charlestonians frequently say that they are not usually identified as Southerners by their accent, though they feel that Charleston is culturally Southern.

A sociolinguistic study of 90 Charleston speakers has recently been carried out by Baranowski (2005). He has found the traditional Charleston dialect intact among a small number of upper class speakers, but the non-Southern pattern similar to that of Figure 18.12 for the great majority of Charlestonians. Baranowski confirmed the view provided by the three Telsur speakers of Charleston as a leading exponent of the Southeastern pattern similar to Midland developments in Columbus and other cities on the margins of the South.

18.8. The City of New Orleans dialect

The New Orleans dialect has been shown to be marginal to the South in many respects, and marked by several features that are distinctively northern. It is most noted for the palatal upglide with mid-central vowels [əɪ], resembling to the traditional (and stigmatized) New York City vowel in *third*, *first*, *sermon* which is commonly associated with the stereotype "toity-toid". The same phonetic form is found in Charleston, Savannah, throughout South Carolina, and eastern Georgia (PEAS, Map 25). But as this section will show, the New Orleans parallels to the New York City dialect go considerably beyond this.

The relation between the New York City and New Orleans speech patterns is the product of a long and intimate history of contact. Berger (1968) cites two historians to document this history. Of economic relations, Foner writes:

> In the ante-bellum period, roughly between 1820 and 1860, financial, commercial and social relations between the city and the South were at fever pitch: New York banks underwrote the plantation economy, cotton was shipped routinely from New Orleans, Charleston, Savannah and Mobile to be trans-shipped to England, and Southern planters regularly combined business with pleasure in the Big Apple of the 1800s. ". . . down to the outbreak of the Civil War, New York dominated every single phase of the cotton trade from plantation to market." (Foner 1941)

It appears that the ties between New York and New Orleans went beyond normal business relations. Many descriptions of commercial and social relations between New Orleans and New York are found in the five-volume history of The Older Merchants of New York City by John Scoville (1885). The community of Sephardic Jewishbankers was particularly prominent in these exchanges. Korn's history of The Early Jews of New Orleans deals with social and business relations from 1718 to 1812. References to New York City are found on 55 pages, more than any other city.

There is some indication that New Orleans is being drawn into the southern orbit. Map 11.3, which defined the South on the basis of glide deletion before obstruents, included New Orleans within the South, although Map 11.2 had shown only a small percentage of glide deletion. One New Orleans speaker had a single case of glide deletion in *five*, and a second a single case of glide deletion in *side*, so that red symbols appear for both in Map 11.3, and the city is consequently included within the red AYM isogloss. In all succeeding maps of Southern features, New Orleans lies outside the defining isoglosses: in Maps 11.2 and 18.3 there is no glide deletion before voiceless obstruents; in Maps 11.4, 18.5, and 18.6, there is no evidence of Stage 2 or 3 of the Southern Shift; in Map 18.7, no glide deletion of /oy/; in Maps 11.2 and 18.8, no back upglide with /oh/. The overview of Map 18.9 shows only one isogloss including New Orleans, the original AYM line.

Figure 18.13 displays the front upgliding vowels of the youngest of the three New Orleans speakers. Only one token shows glide deletion – before the resonant /l/ in *miles*. The absence of the Southern Shift is evident in the peripheral placement of /iy/ and /ey/, and the great gap between /ey/ and /ay/. The one vowel that approaches the /ay/ distribution is in *places*, conditioned by an initial obstruent/liquid cluster.
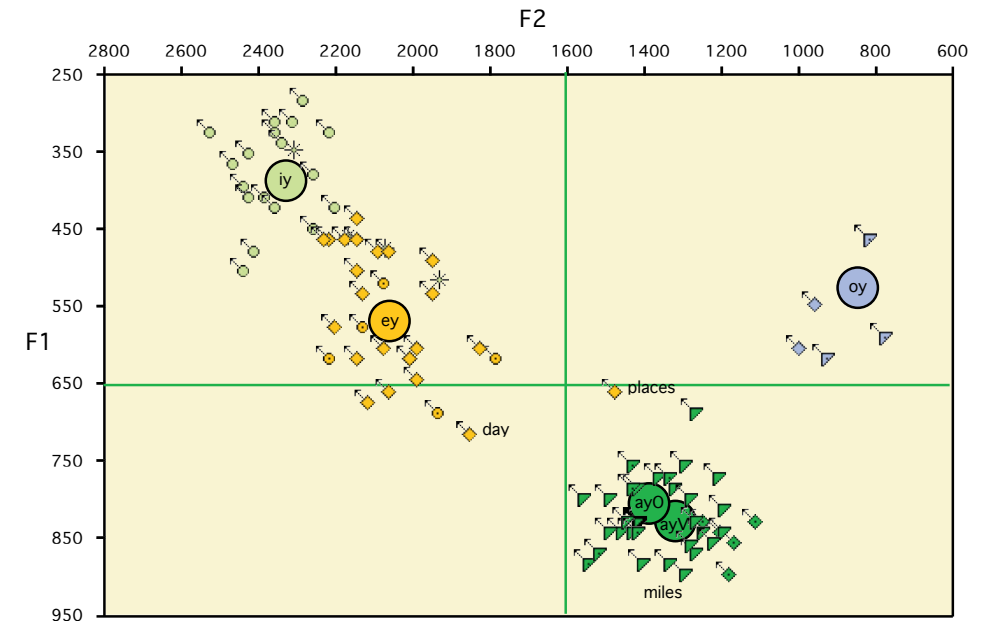
Figure 18.13. Front upgliding vowels of Edith G., 38 [1996], New Orleans LA, TS 608
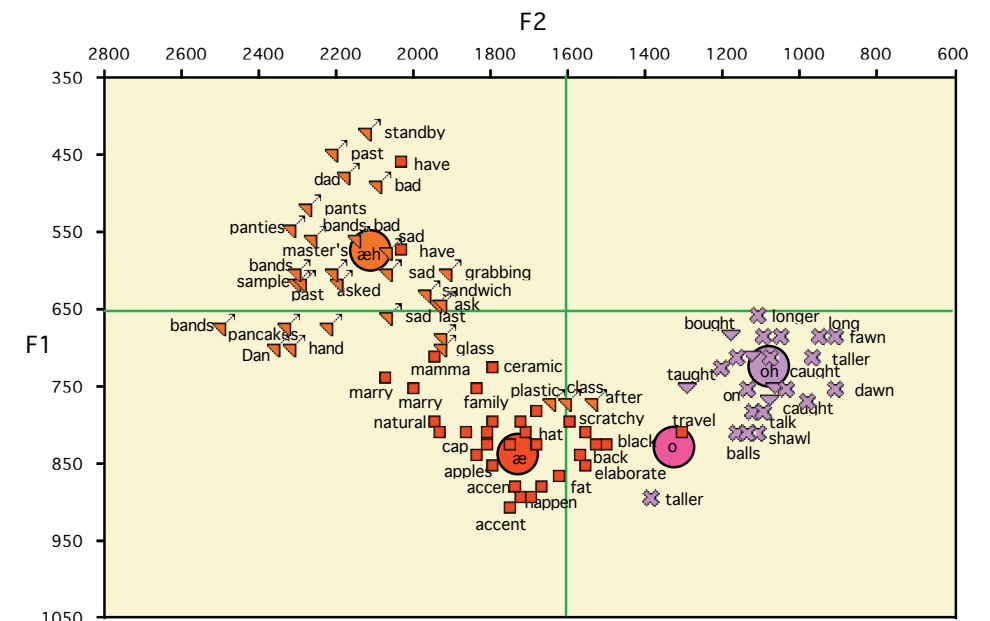
Figure 18.14.   Long and ingliding vowels of Edith G., 38 [1996], New Orleans LA, TS 608

Figure 18.14 shows the long and ingliding vowels of the same speaker, showing a close resemblance to the New York City pattern. The short-*a* class is divided into two groups, following the definitions of the NYC /æh/ class in Figure 13.2, 13.3, and to 17.3, in which the tensed /æh/ class includes front nasals, voiced stops, and voiceless fricatives in closed syllables, but excludes function words. There is almost a complete separation of the orange triangles, representing the /æh/ class, and the red squares, representing the lax /æ/ class. As in New York, vowels in open syllables are always lax (*mammal*, *ceramic*, *family*), unless the syllable is closed by an inflectional boundary, as in *grabbing*. Three orange symbols are at the upper edge of the lax distribution (*plastic*, *class*, *after*); these are accounted for by the normal influence of segmental environment. Among the tense vowels are found two red squares, both tokens of *have*. These are also New

Orleans deviations from the New York pattern, where auxiliaries are always lax. The other two New Orleans speakers analyzed acoustically show the same New York City tense–lax pattern, with the same specific minor deviations from it.

This extraordinary coincidence of the New York and New Orleans short-*a* patterns reinforces the coincidence of the palatalized mid-central vowel and raised position of /oh/. New York and New Orleans are further identified by the relatively high position of /oh/. In Figure 18.14, /oh/ is in lower-mid position, as opposed to the low-back position found in most other Southern dialects. The auditory impression is clearly that of a Mid-Atlantic type of ingliding /oh/. Unlike other Southern dialects, New Orleans /o/ and /oh/ have distinct nuclei: the means are separated by 110 Hz F1 and 250 Hz F2.

Labov 2005 traces the diffusion of the NYC short-*a* system to Albany, north Jersey, Cincinnati and New Orleans, and finds a similar pattern of adaptation of the segmental conditioning without the more abstract grammatical and syllabic factors.

18.9. Atlanta

Atlanta is the third largest city in the South, after Dallas and Houston, with a population close to a half million in an MSA of over four million. All of the maps of Chapters 11 and 18 show that Atlanta is an exception to the predominant linguistic pattern of the South. The dialect levels recorded in Map 11.6 assign a "1" to three of the Atlanta speakers and a "0" to two. Only two of the five show any degree of glide deletion before obstruents, and the other stages of the Southern Shift are absent. The MSA grew by more than a third in the 1990s. Much of this growth has come from the in-migration of people from outside the South, which seems the most likely explanation for the non-Southern character of modern At-

lanta. Similar effects can be seen in other fast-growing Southern urban areas, but appear to be particularly advanced in the Georgia metropolis.[10]

Figure 18.15 is the vowel system of one Atlanta speaker, a 27-year-old man with a high-school education, of mixed Spanish–English–Irish background, who works as a bagger and stockboy in a supermarket. The major features of the Southern Shift are absent: there is no glide deletion of /ay/; /iy/ is fronter and higher than /i/, and /ey/ is fronter and higher than /e/. There is no back upglide with /oh/. There are no broken vowels in the /æ/ or /aw/ class. The short-*a* class is a clear example of the default nasal system, with all vowels before nasals higher and fronter than the main body. These include vowels in open syllables, as in *Spanish*.[11]

In spite of the absence of the criterial features of the South, Figure 18.14 does show the general features of the southeastern super-region, which includes the Midland and South (Map 11.11). The merger of /iw/ and /Tuw/ occurs in a strongly fronted position (>2200 Hz), and the non-coronal class /Kuw/ is well front of center. On the other hand, there is no trace of fronting of /uw/ or /ow/ before /l/, and in this respect Atlanta again resembles the Midland. The merger of /i/ and /e/ before /n/ (Map 9.5), is evident in the close approximation of two pairs of *pin* and *pen*. This too is typical of the Southeastern super-region.

Finally, one can note the firm merger of /ohr/ and /ɔhr/, with /ahr/ shifted up to lower mid position. This configuration of back vowels before /r/ is again typical of the Southeastern region.

18.10. Settlement history of the Inland South

Chapter 14 showed that the geographic configuration of the Northern Cities Shift reflected the settlement history of the Inland North. Figure 14.24, based on Kniffen and Glassie's studies of the distribution of log cabin housing styles, traced the same sharp discontinuity between the North and the Midland that we find in the opposing development of vowel systems.

The area of the South in which the Southern Shift is most developed is defined as the Inland South in Map 18.9, an Appalachian region extending across eastern Tennessee, western North Carolina and Northern Alabama. Figure 14.24 showed that this region was populated by a settlement stream originating in the largely Scots-Irish areas of the Delaware Valley, moving southward along the valleys between the Appalachian mountain ranges. It is most often identified by cultural geographers as the Upland South. Figure 18.16 shows the distribution of the techniques of log-cabin construction that were studied by Kniffen and Glassie, and later traced in greater detail in Jordan-Bychkov 2003. Half-dovetail log-notching is perhaps the most effective way of securing corner joint stability in building log cabins, as opposed to saddle-notching, V-notch or square notch. It is a modification of the Pennsylvanian full-dovetail with the double advantage of being easier to construct and allowing better drain-off in wet weather. It was not used in the Northern area, where log cabin construction was primarily for temporary dwellings prior to the construction of frame houses. Figure 18.16 shows that the heaviest concentration of half-dovetail log notching was in the Inland South.

Figure 18.15. Vowel system of Malcolm C., 27 [1999], Atlanta. TS 711. Bold red squares are /æ/ before nasals; bold blue figures are vowels before /l/

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10 The 2000 Census reports growth of 1,152,248 people in metro Atlanta, or 38.9%, from 2,959,950 in 1990 to 4,112,198 in 2000. This is actually the 2nd highest rate of growth among the largest U.S. metro areas, after Phoenix (45%), and higher than Dallas (29%) or Houston (25%). The largest city of the South, Dallas, also shows considerable variation as the result of immigration from other areas. Thomas (1997) reports that glide deletion of /ay/ is much weakened in large Texas cities.

11 One non-nasal word, *dad*, shows a relatively tense nucleus with an inglide.

Secondary concentrations of Upland South settlement are the product of further migration to the Ozarks and to east Texas, as seen in the figure. Map 18.9 indicated that the strongest development of Southern States phonology is found somewhat to the west of this area, extending from Dallas to Lubbock and Odessa. The particular feature most characteristic of that area is however the completion of Stage 1 of the Southern Shift, with full glide deletion before voiceless consonants, and not Stage 3 of the Shift, which is confined to the Inland South.

The ANAE studies of Southern States phonology are based upon the speech of urbanized areas, while this settlement history traces the material culture of the rural population. Table 18.5 shows that all three stages of the Southern Shift are disfavored by city size, in sharp opposition to the Northern Cities Shift. We are therefore studying the widespread distribution of a phonological pattern that originated in rural settlements of the Irish and Scots-Irish migrants. In fact, Jordan-Bychkov defines the Upland South as that contiguous region in which persons of German, French, Spanish, or African ancestry do NOT constitute majorities or pluralities. This differentiates it from the coastal South, where Africans frequently formed such pluralities; from Louisiana, where the French population did so; from the rest of Texas, where Hispanic and German populations are large; and from the (North) Midland, in which German ancestry predominates.

The maps in this chapter document the fact that this originally poor and rural population is the originating center of the widespread Southern Shift, which has expanded to influence all but the marginal coastal areas of the South. The rapid replacement of *r*-less by *r*-full pronunciation (Chapter 7) also shows a re-modeling of coastal Southern phonology to a pattern originally identified with the less affluent Piedmont and mountainous areas (McDavid 1964). It has been suggested that this expansion of Inland South influence is the result of the growth of economic power in the Inland South, and the relative decline of coastal cities, but an investigation of these factors is beyond the scope of this Atlas.

Figure 18.16. Distribution of half-dovetail log notching in the South (from Kniffen and Glassie 1966, Fig. 28)