5

Regional Varieties of English

The regional varieties of American English have been a major focus since at least the early part of the twentieth century, when dialectologists began conducting large-scale surveys of regional dialect forms, particularly the *Linguistic Atlas of the United States and Canada* launched in 1931. Although the traditional focus on regional variation took a back seat to concerns for social and ethnic dialect diversity for several decades, there has been resurgent interest in the regional dimension of American dialects. The revitalization was buoyed by completion of the six volumes of the *Dictionary of American Regional English* (Cassidy 1985; Cassidy and Hall 1991, 1996; Hall 2002, 2012, 2014), and by the publication of *The Atlas of North American English* (Labov, Ash, and Boberg 2006). There are also a number of useful online surveys of regional dialect differences, for example the *Cambridge Online Survey of World Englishes* which offers immediate visualization of many lexical differences (http://www.tekstlab.uio.no/cambridge), the Yale University Grammatical Diversity Project, which offers views of grammatical dialect differences across North America (http://microsyntax.sites.yale.edu/), and two sources on dialect pronunciations in both US and world Englishes: the International Dialects of English Archive (IDEA), and the George Mason University Speech Accent Archive (http://accent.gmu.edu/). Activity on a number of the traditional Linguistic Atlas projects continues in digital format at the University of Georgia (http://us.english.uga.edu).

Linguists have long debated the precise place of regional dialect studies in the overall investigation of language variation, given the fact that traditional studies have concentrated on the geographical distribution of individual words as opposed to overall patterns of language organization. The focus on cartographic plotting as opposed to linguistic patterning has led some to the conclusion that regional dialect study is really a branch of geography rather than a kind of linguistic inquiry. Certainly, studies of regional language variation may be informed by models and methods from the fields of cultural and historical geography, but there is no inherent reason why the study of regional variation in language cannot mesh models from geography with the rigorous study of linguistic patterning. In fact, linguists have historically turned to regional dialect diversity in search of answers to fundamental questions about language patterning and language change. By the same token, the study of regional dialects benefits from the precise structural description of forms provided by linguistic study. A number of recent studies of language variation have neatly brought together models from these distinct vantage points in insightful and informative ways. In fact, the importance of this integrated view has become so well recognized in recent years that it has led to the founding of an entire journal dedicated to current approaches to linguistically informed dialect geography, *The Journal of Linguistic Geography*, edited by William Labov and Dennis Preston. In this chapter, we consider various methodologies for studying regional variation, as well as models that apply to the spread of linguistic forms over time and space.

5.1 Eliciting Regional Dialect Forms

The traditional approach to charting regional dialect patterns starts with the elicitation of distinguishing dialect forms from speakers representing communities within a broad geographical area. In most major projects conducted under the aegis of the *Linguistic Atlas of the United States and Canada*, targeted areas constituted major regions of the United States, such as New England, the Upper Midwest, the Gulf States, and so forth, but studies run the full gamut of regional size, including surveys of states and sub-regions within them.

Traditional questionnaires can be quite exhaustive and may take hours to administer as each possible dialect form is probed. For example, the questionnaire used for the *Dictionary of American Regional English* (*DARE*) contains over 1,800 questions in all. The actual questions used to elicit forms may vary, depending on the item. Typical elicitation frames include the following:

1 Labeling Based upon a Description of an Item
   e.g. *What do you call a small amount of food that's eaten between meals?*
   What do you call the heavy metal pan that's used to fry foods?
2 Labeling an Item Present at the Scene
   e.g. *What do you call that piece of furniture you're sitting on?*
   What time is it in this picture?
3 Completing Incomplete Phrases or Sentences
   e.g. *When your skin and eyeballs turn yellow, you're getting _____.*
   When a pond or lake becomes entirely covered with ice, you say it's _____.
4 Listing Topical Inventories of Items
   e.g. *What kinds of wild flowers do you have around here?*
   What kinds of snakes do you have around here?

The aim of elicitation is simply to get subjects to offer the most common variant they would use without biasing their choice by suggesting a variant in the elicitation frame. A fieldworker's notes may include the variant offered by the subject in response to a particular question frame, appropriate notes about reactions to forms, familiarity with alternative forms, and any other relevant observations. In figure 5.1, we have excerpts from the field notes of a leading American dialectologist, Raven I. McDavid, Jr. The interview was conducted in 1946 in Charleston, South Carolina, with a white female, age 69, who was an artist and author as well as a member of the highest social class in the community. The excerpt includes sample questions designed to elicit pronunciation, grammar, and lexical forms as contained in the fieldwork manual used by each fieldworker in the survey.

Figure 5.1 Samples from a *Linguistic Atlas* worksheet

The existence of an established dialect survey questionnaire format also provides a convenient basis for comparing dialect surveys in different communities and in the same community at different points in time. For example,, Ellen Johnson, in *Lexical Change and Variation in the Southeastern United States, 1930-1990* (1996), compares items in similar populations across a 60-year time span to show how the dialect vocabulary of the Southeastern United States has shifted over time. She shows further that various cultural and social variables such as education level, rurality, and age have remained fairly constant in their effect on the lexicon as it has changed during this period.

Exercise 1

Following are some dialect variants, including pronunciation, grammar, and vocabulary items. For each of the items, construct reasonable question frames that would enable a fieldworker to elicit the items without using the item itself in the question. Try your questions on some speakers and evaluate the relative success of your frames. What kinds of items seem the easiest to elicit, and what items the most difficult?

Pronunciation

1 The production of the vowel in *ten* and *tin*.
2 The production of the first vowel in *ferry*, *fairy*, and *furry*.
3 The production of the vowel in *caught* and *cot*.

Grammar

1 The plural form of *deer*.
2 The past tense and participle form (e.g. *has*_____) of *creep.*
3 The use of indefinite forms in a negative sentence (e.g. *He didn't go* ***anywhere/nowhere***).

Lexical

1 The use of the term *frying pan*, *skillet*, *spider*, etc.
2 The use of *ATM/bank machine/cash machine/guichet.*
3 Distinctions between different shades of purple in the color spectrum.

5.2 Mapping Regional Variants

Once the data have been collected from community representatives, the different variants for each item are plotted on a map in some fashion. In a classic example of this cartographic method, from Hans Kurath's *A Word Geography of the Eastern United States* (1949: fig. 66), the distribution of *pail* and *bucket* is charted for subjects interviewed in the 1930s and 1940s as part of the initial phase of the *Linguistic Atlas* project. In the map in figure 5.2, the larger symbols indicate that four or more subjects in a community used the variant in question.

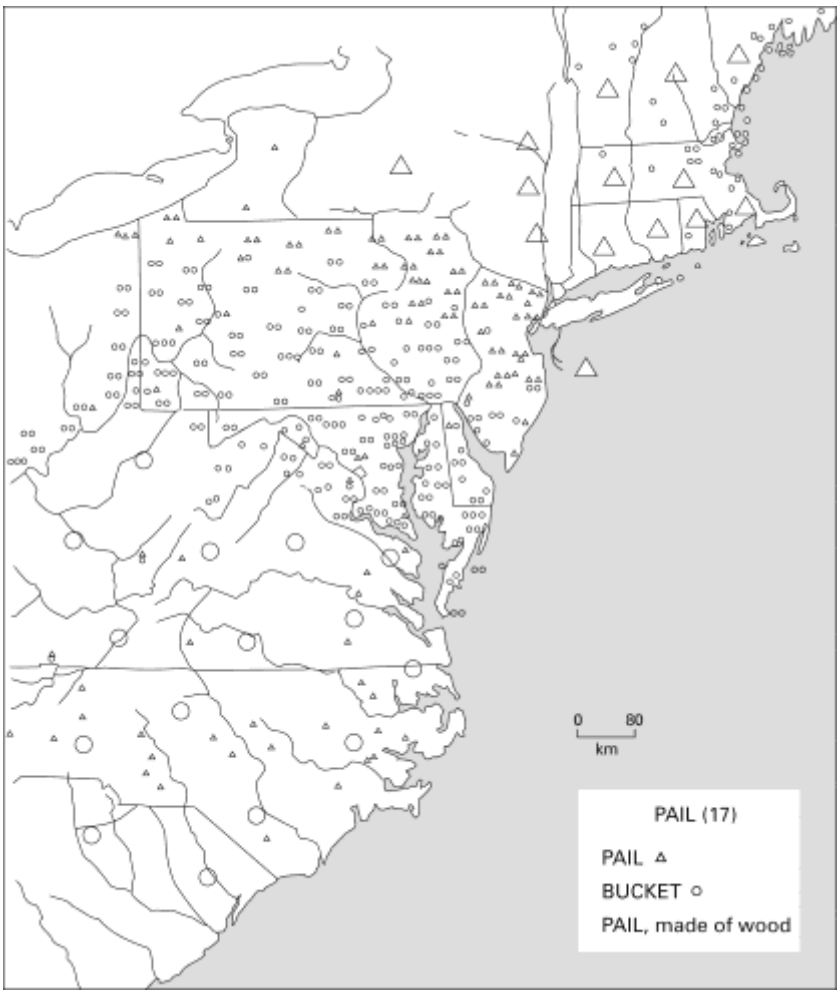

Figure 5.2 Traditional *Linguistic Atlas* map of *pail* and *bucket* in the Eastern United States (from Kurath 1949: figure 66; reprinted by permission of the University of Michigan Press)

Charting the variants for each item and community on a map was originally done by hand, a time-consuming task that required careful attention to cartographic detail. In more recent years, of course, these cartographic plots can be automatically generated using computational tools, allowing researchers to display plot data more quickly and accurately in a variety of formats. In figure 5.3, we provide a computer-generated map of the same data captured in figure 5.2. The plotting includes four degrees of probability shading for the elicitation of the *pail* variant, with the darkest squares showing the highest probability that speakers will use the term *pail* (75–100 percent) and the white squares showing the lowest probability (0–25 percent) that this term will be elicited. In current dialect mapping, probabilities are often preferred over depictions of the simple use or non-use of forms, because they more accurately reflect the tendencies when variable data are involved.

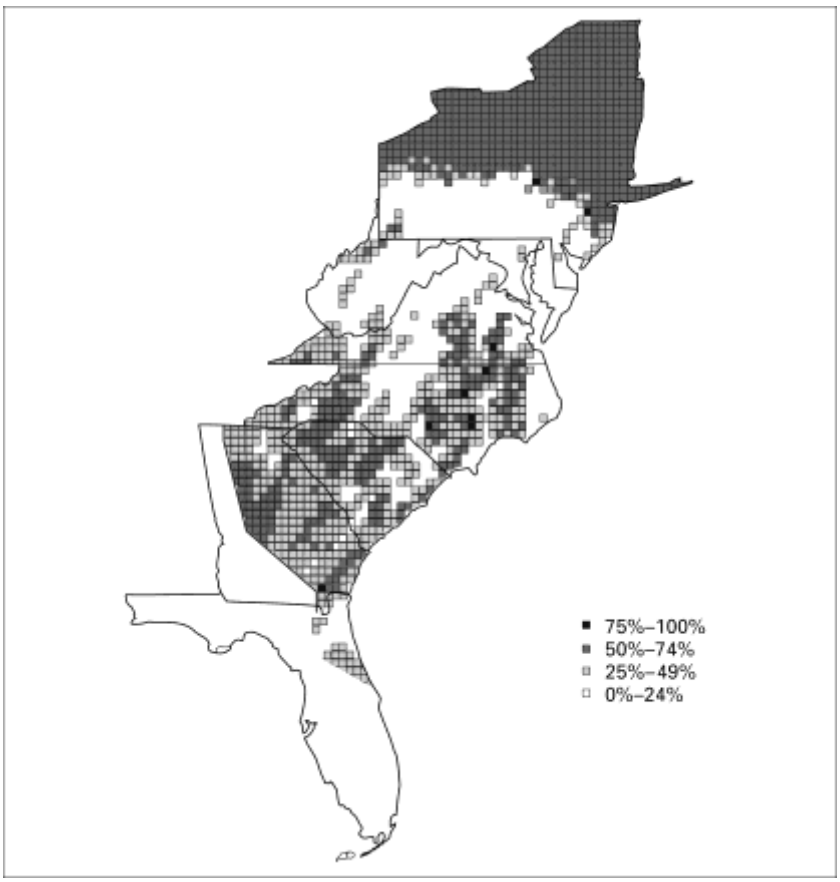

Figure 5.3 Probability map for the occurrence of *pail* (from Kretzschmar 1996: 32, figure 14. Reprinted with the permission of Cambridge University Press)

It is also possible to generate maps of particular regional dialect features from some web sites, for example the web site for the *Linguistic Atlas of the Middle and South Atlantic States* (http://hyde.park.uga.edu/lamsas/lingmaps.html). Maps of the distribution of particular grammatical features across North American can be generated from the Yale University Grammatical Diversity Project mentioned above.

Computerized cartographic methods were first used in connection with the *DARE* surveys beginning in the early 1960s. In figure 5.4 is a comparison of a computer-generated map from *DARE* and a conventional, hand-drawn map. An added wrinkle in the *DARE* map is its proportional display of states on the basis of population density, rather than geographical area. With this type of display, a state such as Texas is not nearly as large as New York, even though it is much more expansive geographically, since New York has a higher proportion of the population of the United States than Texas. By comparison with the traditional spatial map, the proportional map seems distorted, but it adds the important dimension of population distribution to the consideration of regional variation. As we shall see when we discuss dialect diffusion later in this chapter, population density can be an important factor in the regional spread of dialect variants. The development of computerized cartographic techniques certainly has gone a long way towards reducing the time-consuming and painstaking work once involved in mapping patterns of geographical distribution and has made cartographic plotting and its results readily accessible to a wide audience of researchers and students. In figure 5.5 is a HEAT MAP visualization—that is, a representation of data where different values are indicated as different colors, and differing proportions/probabilities as differing degrees of shading (similar to the probability map in figure 5.3 above). The data for the lexical variants

for a carbonated drink (*soda*, *pop*, *cola*, etc.) are based on the 2003 Harvard Dialect Survey conducted by Bert Vaux and Scott Golder; the map was generated by Joshua Katz.

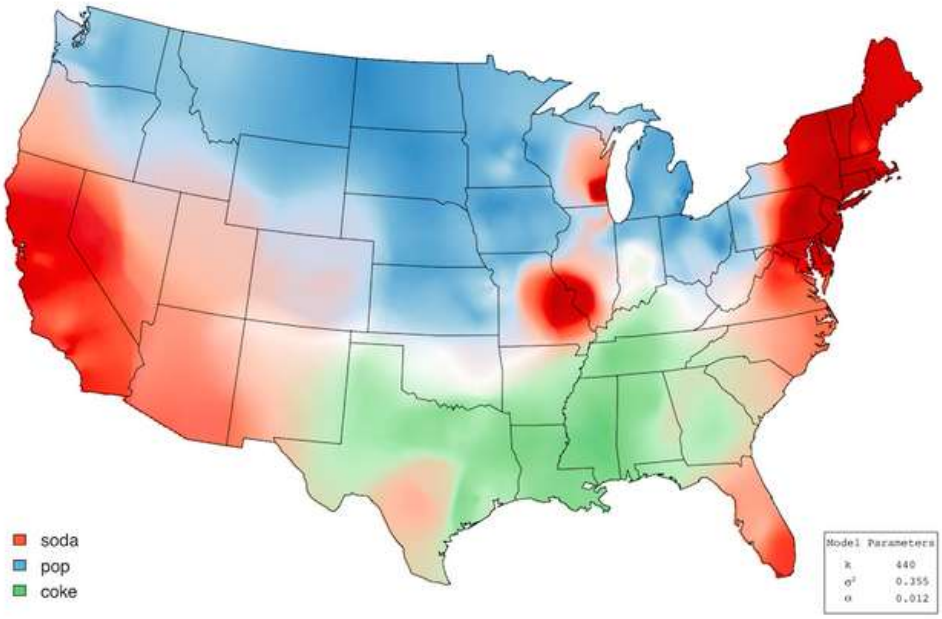

Figure 5.5 Heat map for the distribution of soda, pop, etc. (courtesy of Josh Katz; based on Vaux and Golder's 2003 Harvard Dialect Survey.

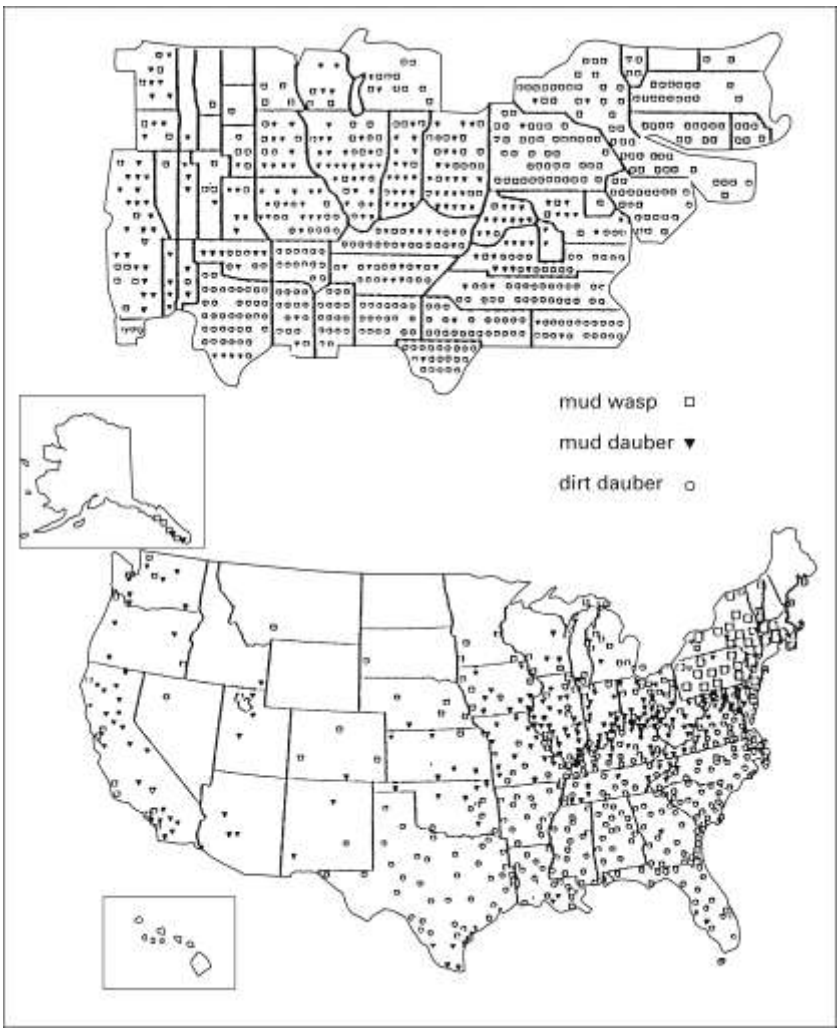

Figure 5.4 Comparison of *DARE* map and conventional map of dialect variants (from Cassidy 1985: xxix, figure 7; © 1985 by the President and Fellows of Harvard College, reprinted by permission of Harvard University Press)

As maps such as the above have become more widely available, they have traveled beyond academic circles to the general public, who understandably also has an enduring curiosity about regional dialect variation. Katz's heat maps have been featured in various national media outlets, and Vaux and Golder's survey has even found its way into hundreds of YouTube videos of people performing their answers to the Harvard Dialect Survey questions. Further evidence of the widespread interest in pinpointing regional dialect variants is evidenced in Katz's popular dialect quiz, again based on Vaux and Golder's survey, published in the *New York Times* in December 2103 (http://www.nytimes.com/interactive/2013/12/20/sunday-review/dialect-quiz-map.html)

5.3 The Distribution of Dialect Forms

For some regional items, the distribution of dialect forms shows a GROUP-EXCLUSIVE pattern in which communities in one area use one variant while those in another region use a different one. For example, in the map of *pail* and *bucket* displayed in figure 5.3, you can trace a line of demarcation that sets apart southern and northern regions of Pennsylvania: South of the line

bucket is used and north of the line *pail* is used. When the distribution shows a fairly clear-cut demarcation, a line indicating the boundaries of the different variants, an ISOGLOSS, may be drawn. Isoglosses set apart zones of usage in a very discrete way, but not all patterns of usage are as clear as that delimited for the use of *pail* and *bucket* in Pennsylvania in the 1930s and 1940s. In many cases, variants are more interspersed, making it difficult to draw a meaningful isogloss. In the South, there are pockets of usage for *pail* in Virginia, North Carolina, and Georgia. In addition, there are dialect TRANSITIONAL ZONES, where more than one variant occurs, with different speakers using different variants, or individual speakers using both. In fact, transitional zones are more typical than the abrupt pattern of distribution implied by isoglosses, especially in more densely populated areas. Boundaries between dialects may be SHARP, where a well-defined, linear boundary exists (e.g., the boundary between Windsor, Canada, and the adjacent city of Detroit, Michigan); FADING, where regional features diminish as one moves from a dialect center to outlying areas (e.g. the areas outlying Pittsburgh to the North towards Erie, PA), OVERLAPPING, where linguistic features of different dialect regions co-exist (Southern and non-Southern traits in Northern Virginia), or NULL, where intermediate areas do have not been found to use of more clearly defined adjacent areas (e.g. regions of New Jersey in between New York City and Philadelphia that do not have the complex vowel pronunciation patterns of either city. Isoglosses are certainly useful indicators of the boundaries of regional usage patterns, but they must be viewed with important qualifications. Isoglosses often represent ideal rather than real patterns of delimitation, a "convenient fiction existing in an abstract moment in time" (Carver 1987: 13).

In a microscopic view of regional variation, each boundary line between two different forms for a given item indicates a different dialect area, but this reduces the definition of regional dialect to a trivial one. When the overall responses to dialect questionnaires are considered, different isoglosses may show similar patterns of delimitation. These clusters, or BUNDLES OF ISOGLOSSES, are usually considered significant in determining regional dialect areas.

Predictably, major regional areas are typically determined by having larger bundles of isoglosses than minor dialect areas. Using this approach, the initial phase of the *Linguistic Atlas* survey of the Eastern United States ended up proposing several major regional dialects and some minor dialect areas. For example, Kurath, in his *Word Geography of the Eastern United States* (1949), presented a map of major and minor areas that became the standard representation of regional dialects along the Eastern Seaboard for almost a half century. As we discussed in chapter 4, this map delimits three major regional areas, the North, the Midland, and the South, with a number of subregional dialects for each major area. This map is reprinted as figure 5.6.

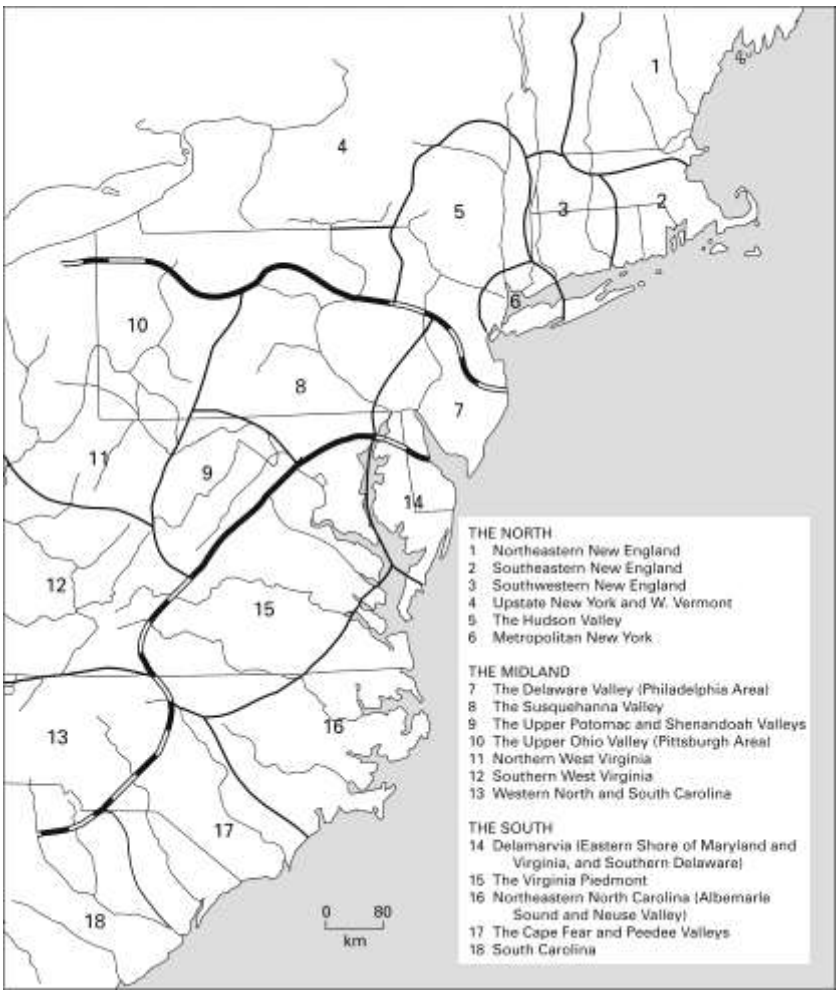

Figure 5.6 Dialect areas of the Eastern United States, based on *Linguistic Atlas* isoglosses (from Kurath 1949: figure 3; reprinted by permission of the University of Michigan Press)

A number of measures have been proposed for determining the relative significance of isogloss bundles. In Carver's *American Regional Dialects: A Word Geography* (1987), which is based primarily upon lexical data (800 lexical items with regional distribution) taken from the files of *DARE*, the notion of ISOGLOSSAL LAYERING is used to determine major and minor regional varieties. The term LAYER, taken from physical geography, is used to refer to a unique set of areal features, but the importance of this concept lies in the fact that it is used to capture overlap and divergence in regional dialects by examining levels of layering rather than independent sets of isogloss bundles. The most concentrated regional dialect area, where the greatest number of regionally specific features are present, is the PRIMARY DIALECT AREA. In SECONDARY and TERTIARY dialect areas, there are progressively fewer of these dialect features. For example, the core of the Northeast American English dialect has 20 to 24 words from Carver's inventory of regional lexical items, whereas secondary layers have only 15 to 19, and so forth. While this approach does not eliminate some of the basic problems with isoglosses we have pointed out, it captures the hierarchical nature of overlap and divergence in regional varieties. As an example of layering, Carver's (1987) analysis of the extension of the Northern dialect area into the Northwestern United States is given in figure 5.7. The areas labeled as primary represent the core areas of the westward extension of Northern and Inland Northern dialect features, whereas the secondary, tertiary, and quarternary areas of the North, Inland North, and Upper North represent less concentrated layers of these extensions.

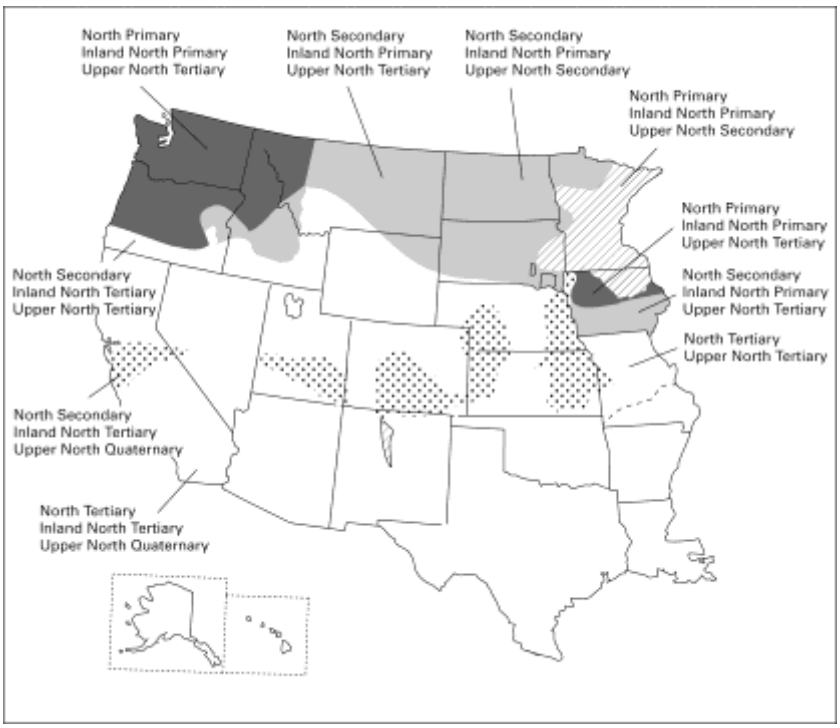

Figure 5.7 An example of dialect layering in the Northwestern United States (from Carver 1987: 214; reprinted by permission of the University of Michigan Press)

Layering can also be represented hierarchically. For example, Carver's Western dialect layers can be presented in the form of a hierarchical tree, as in figure 5.8.

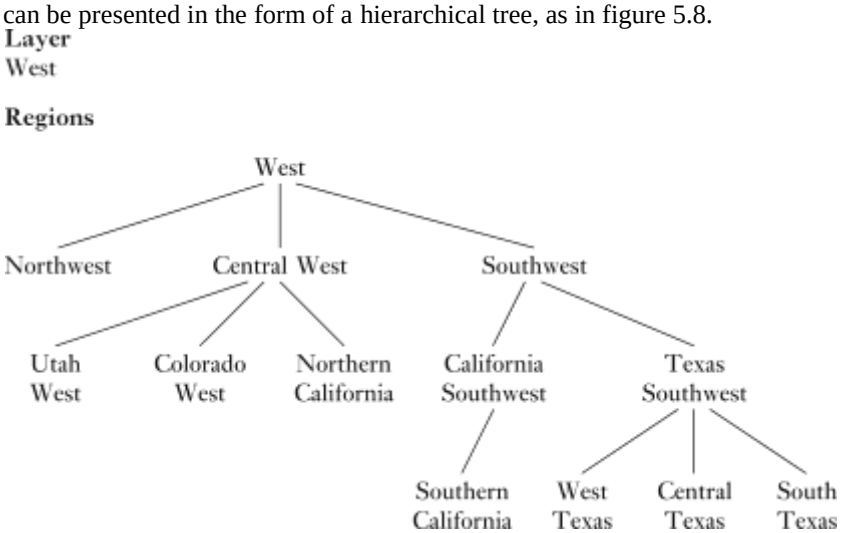

Figure 5.8 An example of dialect layering in the West, represented hierarchically (from Carver 1987: 243; reprinted by permission of the University of Michigan Press)

The fact that lexical variation is so often used as a primary basis for regional dialects has been a major source of contention among students of language variation. Some linguists have maintained that lexical differences are among the most superficial types of linguistic structure, and therefore among the least reliable indicators of dialect areas. However, it should be noted that Carver's lexical boundaries correlate well with boundaries arrived at independently in cultural geography, including areas delimited by such features as architectural styles, religion, political ideology, and a number of other culturally significant variables. Thus, lexical items,

regardless of their linguistic status, serve as indicators of more broadly based cultural and historical foundations upon which regional dialects rest, and they should not be dismissed as insignificant.

As noted in chapter 4, in the late 1990s William Labov, Sharon Ash, and Charles Boberg conducted a comprehensive survey of vowel variation in the United States and Canada using a telephone survey (TELSUR), resulting in the landmark publication, the *Atlas of North American English* (ANAE) (2006). The publication includes an interactive web site allowing one to explore the various dialect regions and their characteristics and the regional distribution of particular features, as well as to listen to samples of vowel differences and to conversational speech in each dialect region and community surveyed. At least two speakers from all English-speaking cities in the United States and Canada with a population of more than 50,000 people were included in the survey, and all of the vowels for 439 speakers were subjected to detailed acoustic analysis.

The contrasts between Labov, Ash, and Boberg's ANAE survey and the earlier Linguistic Atlas of the United States and Canada (LAUSC) extend beyond linguistic level (i.e. lexical vs. phonological) and technical sophistication of cartographic plotting. The LAUSC was driven by an interest in historical dialect features and regions, whereas the ANAE is centered on language change taking place in present-day communities. For LAUSC, ideal interviewees were older, rural men with little geographic mobility who preserved older ways of speaking, whereas ideal participants for ANAE were young women, since this population group tends to be at the forefront of language. The summary map of the major regional varieties and sub-regions from Labov, et al. (2006: 141) is again presented in figure 5.9.

Figure 5.9 Summary map from the Atlas of North American English (from Labov, Ash, and Boberg 2006)

Though radically different in research design and sampling technique, many phonological variables in Labov, et al. (2006) show patterns of regional variation that parallel those shown for lexical items. As with lexical variables, phonological features show regional layering. We may, for example, expect to find a core Southern or core Northern area, where the highest concentration of specific phonological features is found, and secondary and tertiary zones surrounding these primary areas.

As we mentioned in chapters 3 and 4, investigations of vowel systems conducted in the past several decades have revealed that there are several major systematic changes currently under way in the US, delimiting major dialect areas.

One pattern of change is called the NORTHERN CITIES VOWEL SHIFT. As Labov describes this VOWEL ROTATION pattern (Labov 1994: 177–201; see also Labov, et al. 2006: 187-215), the TRAP, LOT, and THOUGHT vowels are moving forward and then upward, and the vowels of DRESS, STRUT, and KIT are moving backward and then downward. For example, the TRAP vowel is fronting and raising, leaving room for the LOT vowel in a word like *lock* to move forward, so that it sounds almost like *lack*. In turn, this movement leaves room for words in the THOUGHT class to move toward LOT, so that *caught* now sounds like what would formerly have been pronounced as *cot* (but now sounds almost like *cat*). At the same time, the DRESS vowel moves backward towards the STRUT vowel, which is then pushed backward, so that a word like *bus* might sound more like *boss*.

[INSERT ENHANCEMENT 5.1]
[INSERT ENHANCEMENT 5.2]

Diagrammatically, the shift may be represented as in figure 5.10. Recall that the vowels are arranged so that vowels produced with greater tongue height appear at the top of the chart, and those produced with greater fronting of the tongue appear on the left. For convenience, "key words" are given. The arrows indicate the direction in which the vowels are moving, based on Labov's characterization of this shift pattern.

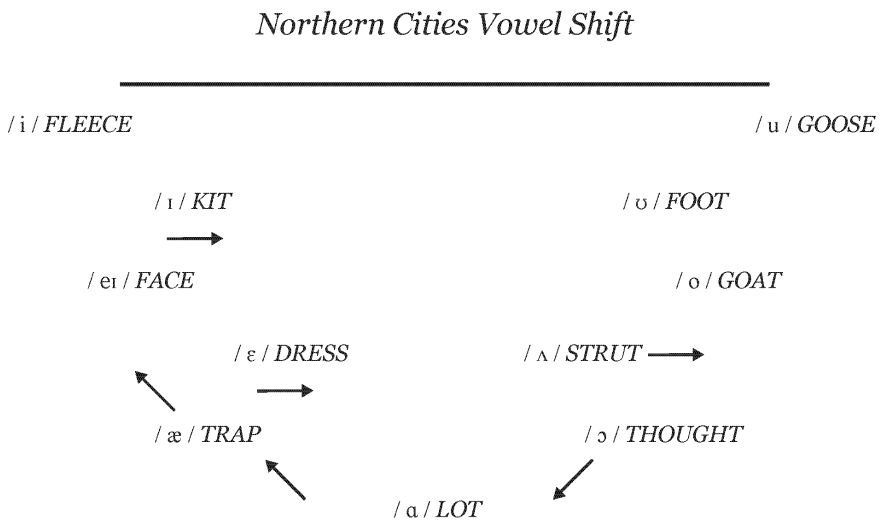

Figure 5.10 The Northern Cities Vowel Shift

Regionally, the vowel rotation pattern depicted in figure 5.10 in concentrated in the larger metropolitan areas that start in Western New England and proceeds westward into upstate New York; the extreme northern portions of Ohio, Indiana, and Illinois; Michigan; and Wisconsin. More advanced stages of this change can be found in younger speakers in the largest metropolitan areas in this Northern region, such as Buffalo, Cleveland, Detroit, and Chicago.

Exercise 2

Identify in the following list of words those items that would be involved in the Northern Cities Vowel Shift.

1	*beet*	6	*stack*
2	*step*	7	*loft*
3	*pat*	8	*top*
4	*look*	9	*cut*
5	*tip*	10	*rope*

As the Northern Cities Vowel Shift spreads across the northern portion of the US, researchers continue to track its progress, not only in geographic space but also across social

groups and age groups. In addition, not all researchers are in agreement that the pattern in figure 5.10 tells the whole story, and there may be other vowel movement patterns that are also an important part of dialect change in the Northern US (e.g. Gordon 2001, Thomas 2001). However, there is no question that sweeping pronunciation changes have been taking place in Northern metropolitan areas over the course of the past half century, and that these changes are proceeding in quite different directions from the vowel shift patterns affecting other regions such as the Southern US.

In the SOUTHERN VOWEL SHIFT, the PRICE vowel unglides and the nucleus may move slightly forward, so that a word like *time* may sound like *tom* or *tam*. The FACE vowel lowers between the DRESS and PRICE but retains a glide, so that a word like *bait* may sound something like *bite*. Concurrently, the DRESS vowel raises toward FACE and takes on a glide, so that a word like *set* sounds almost like the phrase "say it." In essence, then, DRESS changes places with FACE. In some parts of the South, the KIT vowel may change places with the FLEECE vowel as well, with FLEECE lowering toward FACE and KIT raising and taking on a glide, so that *beat* sounds like *bait* and *sit* sounds like "see it." Meanwhile, the back vowels of GOOSE and GOAT are moving forward so that they sound more like *gews* and *gewt*, respectively. The rotational patterns that characterize the Southern Vowel Shift are indicated in figure 5.11.

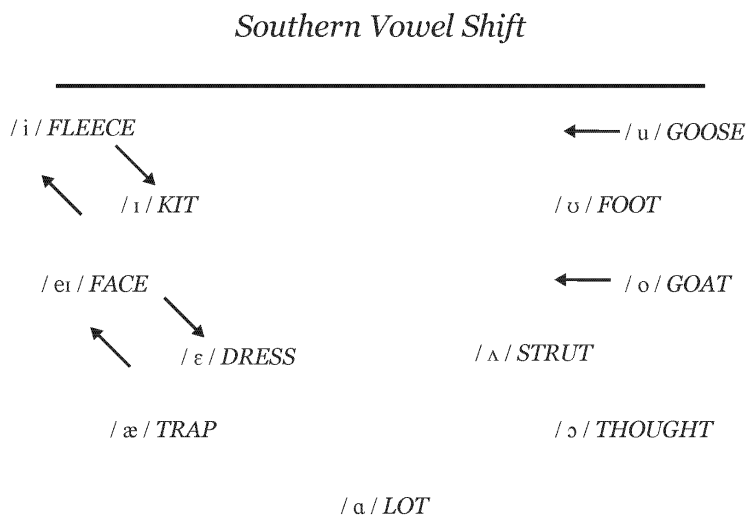

Figure 5.11 The Southern Vowel Shift

Interactive chart: Labov's Southern Vowel Shift

Exercise 3

Identify in the following list of words those vowels that would be involved in the Southern Vowel Shift. Is the vowel of the word involved in (1) the gliding of KIT and DRESS vowels (e.g. *bid*, *bed*), (2) the lowering of FLEECE and FACE vowels (e.g. *beet*, *late*), or (3) the back GOOSE and GOAT vowels moving forward (e.g. *boat*, *boot*)?

1	*lid*	6	*loop*
2	*rate*	7	*wrote*
3	*leap*	8	*bought*
4	*red*	9	*shed*
5	*keep*	10	*rid*

Because the Southern Vowel Shift and Northern Cities Vowel Shift involve very different rotation patterns, the major varieties characterized by these vowel shifts have over the years become increasingly different from one another. In fact, this differential rotation is the major reason why many dialectologists now claim that Southern and Northern speech are currently diverging rather than converging. Regionally, the Southern Vowel Shift encompasses most of the Southern region indicated on the map in figure 5.11, although the reversal of KIT and FLEECE is confined mostly to the Inland South. In addition, whereas the Southern Vowel Shift is relatively stable, it is slowly receding while the Northern Cities Vowel Shift continues to advance. Another important differences between the two shift patterns is the Southern Vowel Shift is more advanced in rural areas of the South than in metropolitan areas, the converse of what we have seen for the Northern system, in which change radiates outward from, and are most advanced in, urban areas rather than rural locations.

Exercise 4

Identify whether the vowels in the following words are involved in the Northern Cities Shift or the Southern Vowel Shift. In some cases, the same vowel may be involved in either the Northern Cities Shift or the Southern Vowel Shift, but the rotation will be in quite different directions. There are three types of answer: (1) Northern Cities Shift, (2) Southern Shift, and (3) both the Northern Cities and the Southern Shift, but rotating in different directions. In cases where the same vowel is subject to both the Northern and Southern Shift, identify the direction of the rotation for each shift. You might try producing some of these vowel differences, especially if you know someone who is a good model for the particular shift.

1	*bed*	6	*lost*
2	*cap*	7	*give*
3	*pop*	8	*leap*
4	*lock*	9	*kid*
5	*loop*	10	*said*

Although these rotational schemes represent two major shifts in American English vowels, they are not the only regional areas involved in vowel shifting. For example, Northern California is experiencing a vowel shift indicating its emergence as a distinctive dialect region. Like the Southern Vowel Shift, the back vowels are moving forward, so the GOOSE vowel becomes more like *giws* and the GOAT vowel more like *gewt.* But the front vowels are shifting in quite different directions, so that the KIT vowel is raising towards the FLEECE vowel before *ng* (as in something like "theeng" for *thing*) but lowering towards the DRESS vowel before other consonants (as in something like *dead* for *did*). Meanwhile, the DRESS vowel is lowering towards the TRAP vowel. The TRAP vowel, in turn, is shifting in two directions; it becomes a diphthong like *stee-and* for *stand* before nasals while shifting towards the LOT vowel elsewhere, as in "bock pock" for *backpack*. The NORTHERN CALIFORNIA VOWEL SHIFT is shown in figure 5.12.

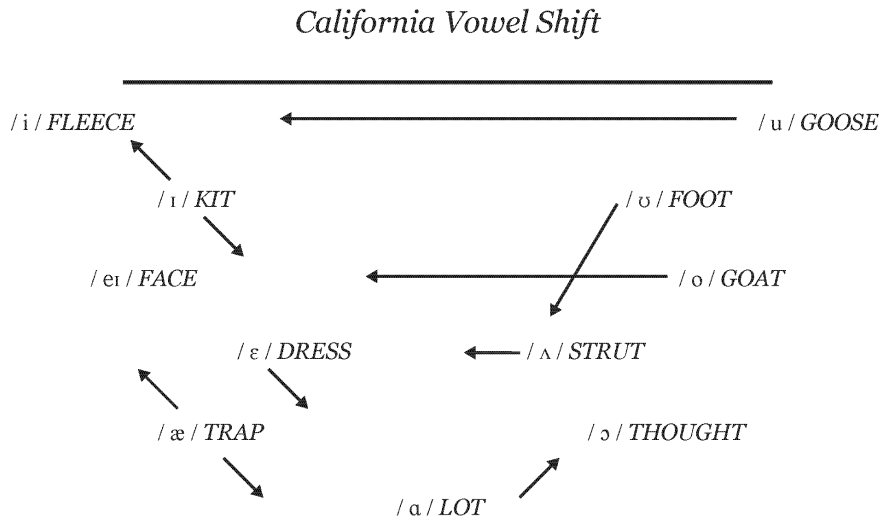

Figure 5.12 The Northern California vowel shift (adapted from Penelope Eckert's web site: http://web.stanford.edu/~eckert/vowels.html)

Interactive chart: Northern CA vowel shift
Audio map: California accents

Some parts of the Northwest such as the Seattle, Washington (Scanlon and Wassink 2010; Wassink forthcoming), and Portland, Oregon (Ward 2003), are currently undergoing vowel shifts that are associated with an emerging regional identity, but other regional dialects are defined chiefly by their lack of participation in the sweeping rotations of either the Northern Cities or Southern Vowel Shift. In these regions, the TRAP vowel, a pivotal vowel in the Northern Cities Shift, is relatively stable, and there is a merger of the low back vowel of THOUGHT and LOT, as in the same pronunciation for *caught* and *cot* or *dawn* and *Don*. The approximate area encompassed by this LOW BACK MERGER is given in figure 5.13.

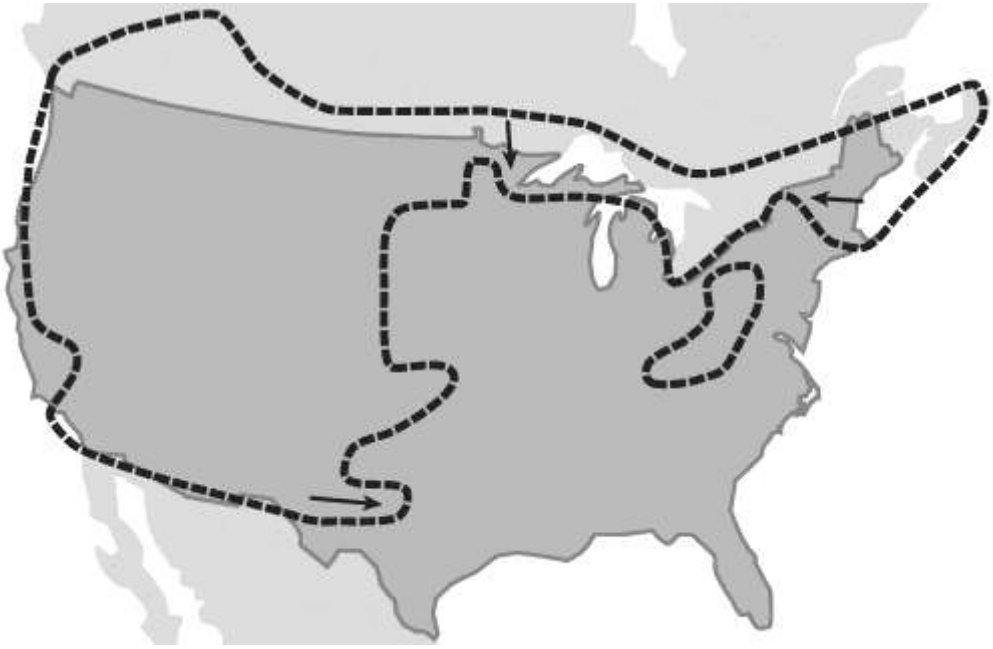

Figure 5.13 The Distribution of the *cot-caught* (LOT vowel-THOUGHT vowel) merger

It appears that the merger in figure 5.13 radiates from three centers. One is in Eastern New England, near the Boston area, which extends well to the north but not very far to the south. Another center is found in Western Pennsylvania and south through West Virginia and into Kentucky. The third area covers most of the American West, with a transitional area running through Iowa, Nebraska, Kansas, Oklahoma, and northern and western Texas. The merger is also found in northern New York State, Michigan, Wisconsin, and Minnesota, and is extensive throughout Canada.

The major dialect regions that emerge based on systematic vowel changes approximate the traditional Northern, Southern, and Midland regions as defined chiefly in terms of lexical variation, though the Midland feature of *cot-caught* merger has not seem to have reached the mid-Atlantic coast. In addition, phonologically based dialect areas encompass areas that are "exceptional" in terms of their vowel shift patterns, just as the traditional North, South, and Midland contain pockets of lexical nonconformity. Whether or not we view the dialect areas of the US in terms of vocabulary or phonology, major metropolitan areas such as New York City and Philadelphia constitute exceptions; in fact, large cities such as these can comprise their own dialect regions. Furthermore, the emergence of newer dialects in Northern California and some parts of the Pacific Northwest attest to the ongoing dynamic of regional shift.

Exercise 5

Some phonological features that help define dialect regions involve single items, such as the pronunciation of *greasy* as [grisi] in the North and [grizi] in the South or the pronunciation of *aunt* and *ant* as distinct ([ant] vs. [ænt]) or homophonous items ([ænt]). Can you think of other examples in which a particular regional pronunciation only seems to affect one word, as with *aunt/ant* and *greasy/greazy*? (Hint: Consider the way natives of a particular city or state may pronounce its name). There are some linguists who would say that pronunciation differences in *greasy/greazy* and *aunt/ant* are actually lexical rather than phonological, since they affect only one item and are not the result of general phonological processes. Do you agree?

Grammatical variation can also be represented in ways similar to the phonological and lexical distributions displayed above, although these are less commonly found in the dialect literature. In most cases, geographical studies of grammatical variables have been limited to morphological variants, such as past tense forms of irregular verbs like *dive* (*dove* or *dived*) or different prepositional uses such as *sick **to/at/on** my stomach*. Most of these cases surveyed in regional dialect studies focus on single forms in grammar rather than general rules. This is not to say that there is no geographical distribution of syntactic patterns, but simply to note that most surveys focus on individual items rather than overarching grammatical patterns.

As an example of regional distribution in syntax, consider the use of *anymore* in affirmative sentences such as *They watch mostly Netflix **anymore***. In contexts such as this one, *anymore* means something like "nowadays." This regionally based pattern departs from the more widespread regional pattern in which *anymore* can only be used with negative sentences such as *They don't go to the movies **anymore*** or in questions such as *Do they go to the movies **anymore**?* The regional distribution of positive *anymore* runs through the Midland area as traditionally defined by Kurath (1949), including the mountain South. It extends westward and northward into Missouri, Kansas, Nebraska, South Dakota, and Montana. The feature is rare in Northern and Southern dialect areas unless they have been particularly influenced by Scots-Irish English. A map of the distribution of positive *anymore* use and the use of need + past participle in *The car needs washed* or *The house needs remodeled* from Labov et al. (2006:295) is given in figure 5.14 We thus see a persistent founder effect in the regional distribution of this construction.

Figure 5.14 Distribution of positive *anymore* and *need* + past participle

While the lexical and phonological levels of dialect variation have been investigated extensively from a regional viewpoint, language use features (e.g. pragmatic features like address forms, discourse features such as discourse marker *like* and patterns of turn-taking in conversation) have not been investigated as systematically in the US by dialect geographers. It is possible, however, for regional language use differences to be plotted on a map in a way parallel to regional differences in lexical and phonological features. From such a perspective, one could potentially draw an isogloss between certain address forms associated with "Southern politeness" and forms more common in the Midland or North (e.g. the use of *ma'am* and *sir* vs. people's first names), just as readily as between regions characterized by different vowel shift patterns.

5.4 Dialect Diffusion

How do dialect features spread from one place to another? What mechanisms promote or inhibit the spread of dialect forms? Is there a general model of dialect DIFFUSION that accounts for the spread of dialect variants? These are the kinds of questions that confront dialectologists and historical linguists as they attempt to explain the spread of dialect forms in time and space.

To begin with, it is important to distinguish between DIFFUSION and TRANSMISSION. Diffusion refers to change across different communities from contact between communities whereas transmission refers to change within a speech community as children learn the dialect of the community from parents and peers. Labov (2007) notes that important linguistic consequences are associated with these different processes. In diffusion, intricate structural details are often lost, whereas in transmission from generation to generation intricate details are typically preserved and extended. Diffusion favors changes in individual lexical items, some individual vowel pronunciations, and vowel mergers; systematic chain shifts in vowels and pronunciation features with complex linguistic conditioning are sustained and expanded in transmission. However, Labov also observes that the dividing line between transmission and diffusion is not always clear-cut, since both adults and children participate in spreading

pronunciation changes. Thus, for example, the Northern Cities Vowel Shift is being transmitted as an intact system in the core of the Inland North; at the same time, as it expands outward geographically, its component features diffuse individually, but they spread nonetheless. Conversely, as features diffuse into new communities, they can then spread down through generations in a more systematic way.

The regional distribution of language features may thus be viewed as the result of language change through geographical space over time. A change is initiated at one locale at a given point in time and spreads outward from that point in progressive stages so that earlier changes reach the outlying areas later. This model of language change is referred to as the WAVE MODEL, in which a change originating at a given locale at a particular point in time spreads from that point in successive layers just as waves in water radiate out from a central point when a pebble is dropped into a pool of water.

As a hypothetical example of how the language-change process proceeds, assume that there are three linguistic innovations, or rule changes, within a language: R1, R2, and R3. We assume further that all three changes originate at the same geographical location, the FOCAL AREA for the language change. Each one starts later temporally than the other, so R1 is the earliest innovation, R2 the next, and R3 the third. This relation is given in figure 5.15.

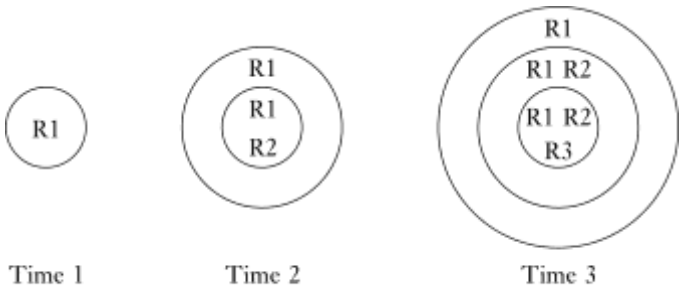

Figure 5.12 Wave model of language change in time and space
Figure 5.15 Wave model of language change in time and space

At Time 1, R1 is present at the location where the change originated but not in outlying areas. At Time 2, R1 may have spread to an outlying area while another innovation, R2, is initiated in the focal area. At this point, both R1 and R2 are present at the focal site, R1 alone is present in the immediately outlying area, and neither R1 nor R2 may have spread to an area further removed from the focal area. At Time 3, the first change, R1, has spread to the more distant area, but not the later changes, R2 and R3. In this hypothetical pattern of diffusion, we see that the successive dialect areas marked by isoglosses reflect successive stages of language change over time. The spread of dialect forms that follows such a straightforward time and distance relation is sometimes referred to as CONTAGIOUS DIFFUSION.

Although dialect diffusion is usually associated with linguistic innovations among p opulations in geographical space, a horizontal dimension, it is essential to recognize that diffusion may take place on the vertical dimension of social space as well. In fact, in most cases of diffusion, the vertical and horizontal dimensions operate in tandem. In a population with different social class groups, a change will typically be initiated within a particular social class and spread to other classes from that point, even as the change spreads in geographical space. For example, sociolinguistic researchers such as Labov (1966, 2010) have shown that much change in American English is initiated in upper working- and lower middle-class groups, as defined by various socioeconomic measures, and spreads from these groups to other classes.

In the spread of regional dialects, it is quite possible for an innovative form to skip an area which is isolated for physical or social reasons. Most often such areas are geographically distant from focal areas, but sometimes, physical barriers to communication, such as mountainous terrain or bodies of water, may block the spread of a change from a relatively nearby focal point. Prime examples of such areas historically include some of the southern mountain ranges of Appalachia and some of the islands along the Atlantic coast, such as Tangier Island, Virginia, Smith Island, Maryland, and the Sea Islands off the coast of South Carolina and Georgia. Relatively isolated communities such as these usually do not participate in all or even most of the language changes affecting surrounding dialects; however, changes do take place within these communities, though they may be of a different type or occur at a different rate than those occurring in less isolated populations. For example, changes may arise internally and so be transmitted through the generations (rather than diffused from outside), or external changes may diffuse more slowly into these areas than in areas that historically have been less difficult to access.

Social and demographic factors such as social and cultural separation may similarly play a significant role in the rate and direction of change. Thus, many working-class African Americans in Northern metropolitan areas within the United States maintain some older Southern rural dialect forms such as the production of *ask* as *aks* or the use of completive *done*, as in *Kim **done** took out the trash*, despite the fact that they are a couple of generations removed from their Southern roots. Patterns of ethnic and social segregation have, in fact, inhibited significant changes such as the Northern Cities Vowel Shift from greatly affecting urban African American communities, which may remain somewhat immune to such changes and instead maintain more of a Southern-based vernacular dialect.

As noted above, a number of qualifications need to be made with respect to the simple wave model of dialect diffusion captured in figure 5.15; in fact, this model rarely works out neatly or symmetrically. Because of various physical, social, and psychological factors, the direction of spread can take a variety of configurations. According to Everett Rogers (2003), a leading researcher for decades on the general diffusion of cultural innovation, at least five factors influence the diffusion of customs, ideas, and practices: (1) the phenomenon itself, (2) communication networks, (3) distance, (4) time, and (5) social structure. Although linguistic structures are inherently quite different from some other types of phenomena, such as technological innovations, they are subject to many of the same factors influencing diffusion in general. A full set of sociocultural and physical factors affects dialect diffusion just as it does other types of cultural innovation. Thus, a wave model of dialect diffusion which considers only distance and time in accounting for dialect diffusion is too simplistic in accounting for the facts of dialect spread.

A GRAVITY MODEL or HIERARCHICAL DIFFUSION model (Trudgill 1974, Labov 2010) often provides a better picture of dialect diffusion than a simple wave model. According to this model, which is borrowed from the physical sciences, the diffusion of innovations is a function, not only of the distance from one point to another, as with the wave model, but of the population density of areas that stand to be affected by a nearby change. Changes are most likely to begin in large, heavily populated cities which have historically been cultural centers. From there, they radiate outward, but not in a simple wave pattern. Rather, innovations first reach moderately sized cities that fall under the area of influence of some large, focal city, leaving nearby sparsely populated areas unaffected. Gradually, innovations filter down from more populous, denser areas to less densely populated areas, affecting rural areas last, even if such areas are quite close to the original focal area of the change. The spread of change is thus like skipping a stone across a pond rather than like dropping it into the pond, as with the wave model. Figure 5.16 illustrates such a model. Note that larger circle sizes indicate higher population density.

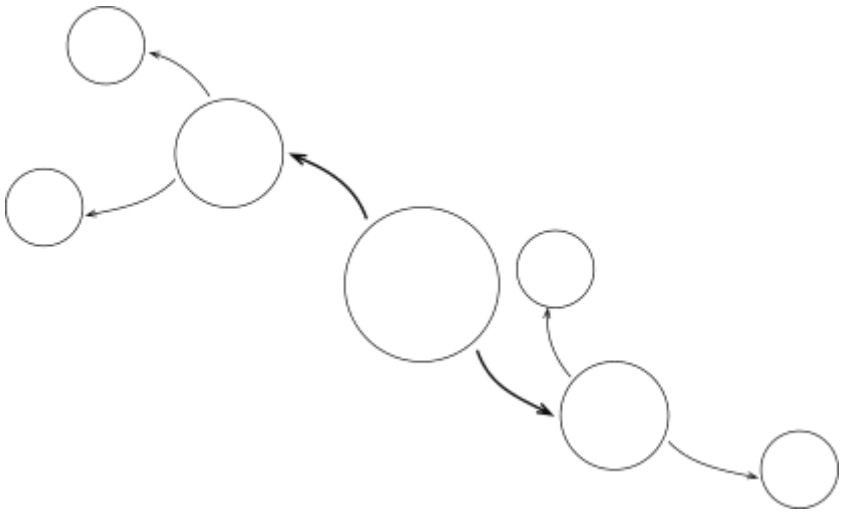

Figure 5.16 Hierarchical model of dialect diffusion

The reason linguistic and other innovations often spread in a hierarchical pattern is because of large, dense population tend to have more interpersonal contact with other densely populated areas than with smaller, more sparsely populated locales, even ones that are quite close by. Heavy contact across different population groups strongly promotes the diffusion of innovations. At the same time, distance is still a factor, and interaction diminishes as the distance between large population centers increases. This interplay between the population density of two areas and the distance that separates them parallels the effects of density and distance on gravitational pull – the amount of influence two physical bodies exert upon one another – according to the physical scientific gravity model.

A number of American dialect studies reveal patterning in which linguistic innovations "skip" from one population center to another, leaving rural areas relatively unaffected until the final stages of the change. Several features of the Northern Cities Vowel Shift spread from Chicago to outlying areas in a hierarchical pattern – for example, the raising of the TRAP vowel in words like *bag* and *bad*, so that these words sound similar to the DRESS vowel of *beg* and *bed*, and the fronting of the LOT vowel in words like *lock* and *top*, so that they sound more like *lack* and *tap*. One study (Callary 1975) showed that the extent of TRAP-vowel raising correlated neatly with community size, so that the larger the community, the greater the incidence of vowel raising. In general, the features of the Northern Cities Vowel Shift are centered in large Northern metropolitan areas. In most cases of hierarchical diffusion, the spread of innovation is from relatively large regional centers to smaller, more localized towns. When changes actually do proceed strictly from larger cities to smaller ones, skipping over intervening rural areas, so-called CASCADE DIFFUSION takes place.

The gravity model takes into account the factors of distance and communication networks as a function of population density, but it still doesn't recognize the role of other social structures and geographic factors in the spread of dialect forms. For example, a change may reach a smaller city before a slightly larger area, perhaps for topographic reasons, such as difficult terrain, or for social and demographic reasons, such as a high concentration of a certain social class in a given city. The social and demographic characteristics of a region may serve as even stronger barriers to or promoters of change than its geographic features. Changes do not spread evenly across all segments of a population, since some demographic groups are simply more resistant to or accepting of change in general, or to certain specific changes, than others. Labov's research (1966, 2001, 2010) indicates that members of "upwardly mobile" social classes, such as upper working- and lower middle-class groups are quicker to adopt innovations than members of other classes. Studies also show that women are

often among the leaders in certain kinds of language change and that younger speakers are generally quicker to adopt new speech forms than older members of a given community. Conversely, minority ethnic groups may be resistant to changes affecting majority (white) populations. Thus, it is essential to track the progress of linguistic innovations not only across different regions, but across different age, gender, socioeconomic, and ethnic groups.

In examining diffusion, it is also necessary to include a closer look at local communication networks. The results of social network studies show that, in general, populations whose social networks involve frequent, prolonged contact with the same small peer group in a number of social contexts are more resistant to linguistic innovations than are populations whose social ties are looser (Milroy 1987; Milroy and Gordon 2003; Dodsworth and Kohn 2012). In other words, speakers with dense and multiplex networks are not as quick to adopt new language features as those whose communications are spread out among many people of different social groups.

The first people to adopt changes, called INNOVATORS, are those with loose ties to many social groups but strong ties to none, since strong ties inhibit the spread of change. In order for the changes adopted by the innovators to make their way into more close-knit groups, they need to be picked up by so-called EARLY ADOPTERS – people who are central figures in tightly knit groups but who are willing enough to take risks to adopt change anyway, perhaps for reasons of prestige. Because these early adopters are well regarded in their social groups, the changes they adopt are likely to be picked up by other members of these groups, thereby diffusing through a large segment of a population.

Language change is not, however, simply a by-product of interactional patterns and demographic characteristics. As we saw in chapter 4, the social meanings attached to dialect features and community attitudes about language may have a profound effect on the spread of language change. For example, Guy Bailey and his associates (Bailey, Wikle, Tillery, and Sand 1993) have shown that, although some linguistic innovations in Oklahoma (e.g. the merger of the THOUGHT vowel and the LOT vowel in word pairs such as *hawk* and *hock*) have spread throughout Oklahoma in the expected hierarchical pattern, other features, most notably the use of the special modal *fixin' to*, as in *They're **fixin' to** go now*, displayed exactly the opposite diffusion pattern. That is, *fixin' to* initially was most heavily concentrated in the rural areas of the state. After World War II, it began to spread to larger population centers and has now reached the state's most urban areas. Bailey and his associates explain this CONTRAHIERARCHICAL pattern of diffusion by pointing to the fact that *fixin' to* is regarded as a marker of traditional Southern speech. In the face of large influxes of non-Southerners into the state, *fixin' to* has spread from the rural areas where it traditionally has been most heavily concentrated into urban areas as speakers throughout the state seek to assert their Southern identity. Forms such as the merger of the THOUGHT and LOT vowel, on the other hand, are markers of urbanization and sophistication, and so they spread outward from cities into rural areas. The social meanings attached to linguistic forms can drastically affect the process of linguistic diffusion. Linguistic markers of local identity may be of such importance over a widespread region that once-rural forms actually take root and spread, effectively reversing the usual direction of linguistic diffusion.

We have noted several overall patterns of diffusion in the preceding discussion: CONTAGIOUS DIFFUSION, in which dialect features spread in a wave-like pattern, primarily as a function of distance rather than population density; HIERARCHICAL or CASCADE DIFFUSION, in which the diffusion proceeds from larger populations down through smaller ones, bypassing intervening rural areas; and CONTRAHIERARCHICAL DIFFUSION, in which dialect forms spread from more sparsely populated rural areas to larger urban areas. And all three patterns can even affect a single area, as the result of different patterns of communication and population

movement, as well as the different types of social meanings attached to different dialect features.

5.5 Perceptual Dialectology

Our preceding discussion was based on observed patterns of production for regional dialect features. To gain a full understand of language variation and change across regional and social space, it is also important to consider people's perceptions of regional dialect variation, including of dialect regions, regional features, and the people who use them. This line of inquiry is commonly referred to as PERCEPTUAL DIALECTOLOGY. It is also sometimes called FOLK DIALECTOLOGY, since it can focus on non-linguists' "commonsense" beliefs and subjective mental images rather than linguists' trained observations and analyses. Such beliefs and mental representations are important to linguists and other social scientists, since they enable us to gain a fuller understanding of language in its social setting than do production patterns alone, including understandings and interpretations of the myriad social meanings that may attach to linguistic features and the people who use them. In addition, (socio)linguistic perceptions may play an important role in shaping language variation and change across regional and social space. Furthermore, as with linguistic geography more generally, the subfield of perceptual dialectology is getting increasingly more methodologically and technologically sophisticated and now involves state-of-the-art experimentation and complex techniques for collecting and analyzing data on speech perception.

Dennis Preston's pioneering research on perceptual dialectology in American English language variation (1989, 1996, 1999) included a number of different methods for studying how people perceive dialects, and many of these techniques have been expanded and refined over the past several decades. These methods include 1) *map-drawing* tasks in which subjects are given a blank or very simplified map and asked to draw borders identifying the locations where they believe different dialects exist; 2) *degree of difference* methods where subjects are asked to rate the similarity or difference of the regional varieties, often on a numerical scale; 3) *attitudinal scales* in which participants rate and compare language varieties in terms of an array of descriptive qualities (e.g. "correct", "pleasant", "formal", etc.); 4) *dialect identification* tasks in which subjects listen to recorded speech samples from different dialects (or perhaps computer-generated samples representing a continuum from one dialect to another) and attempt to identify the region, social group or ethnic group represented in each sample; and 5) *open-ended interviews* about language differences where participants express their thoughts about language, ranging from general discussion of language varieties and dialect differences to descriptions or demonstrations of particular dialect features.

Video: U.S. language attitudes

In the most straightforward procedure for determining people's "mental dialect maps," study participants are simply asked to draw, on a blank or minimally detailed map, lines around regional speech zones. Instructions that guide such drawings involve eliciting people's perceptions of the boundaries of Southern and Northern speech areas as well as other prominent dialect regions from the perspective of the subject. These lines can then be digitized and software can then be used to generate composite maps of various types based on drawings from a large number of respondents. In figure 5.17 we show a map of generalized speech regions in the US generated from the drawings of 147 respondents from Southeastern Michigan who were simply asked to draw dialect boundaries for the continental United States. The legend accompanying the map indicates the percentage and the number of respondents who drew the particular region indicated on the map. For example, 94 percent of the respondents drew a region identified as the South, whereas only 16 percent drew a West Coast

and an East Coast dialect region, indicating the prominence of the Southern dialect region in the minds of the respondents.

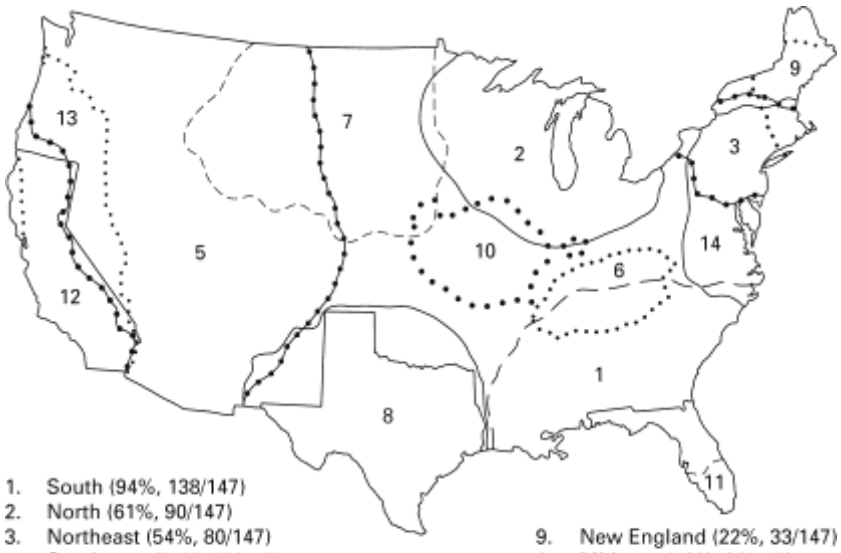

Figure 5.17 Perceptual map of American English dialects, Southeastern Michigan respondents (from Preston 2003: 242; reprinted by permission of Duke University Press)

Differences in mental maps may correlate with a range of respondent attributes such as region, age, social class, ethnicity, gender – the same social factors shown to be relevant in the patterning of variable dialect productions. For example, respondents from Southeastern Michigan and Southern Indiana draw very similar Southern dialect regions. However, there seems to be a "home region effect" that influences how each group draws their Northern and Southern Midland boundaries, with each group drawing a larger dialect boundary around their home region.

People's evaluative judgments of different regional dialects can also be elicited through instructions such as "Rank the states on a scale of 1 to 10 showing where the most correct and the most incorrect English are spoken," "Rank the states showing where the most pleasant and unpleasant English are spoken," and "Rank the states showing where English is most and least like your own variety," and so forth. For example, New York City and the South tend to be ranked as "most different" by respondents from Michigan and Indiana. New York City and the South were also ranked as "most incorrect" by these same respondents. But all is not lost; many people give high ratings to the Southern dialect on a scale of pleasantness, showing people's complicated and sometimes somewhat contradictory reactions to regional speech varieties.

Video: Northerner describes southern accent (0:00-0:59)
Video: Southerner describes northern accent (2:13-2:40)

In earlier research on the sensitivity to the North–South dimension in US English, Preston asked respondents to listen to the voices of nine speakers from locations that extended from Saginaw, Michigan, in the north to Dothan, Alabama, in the south (figure 5.18). All of the speakers were male, European American, middle-aged and middle-class, and all speech

samples were based on pronunciation features. The respondents, from southernmost Indiana and southeastern Michigan, were asked to match these voices (played in scrambled order) with their sites. The results are shown in figure 5.19. In the figures for Indiana and Michigan the voices shaded the same were not statistically different from one another in their site assignments.

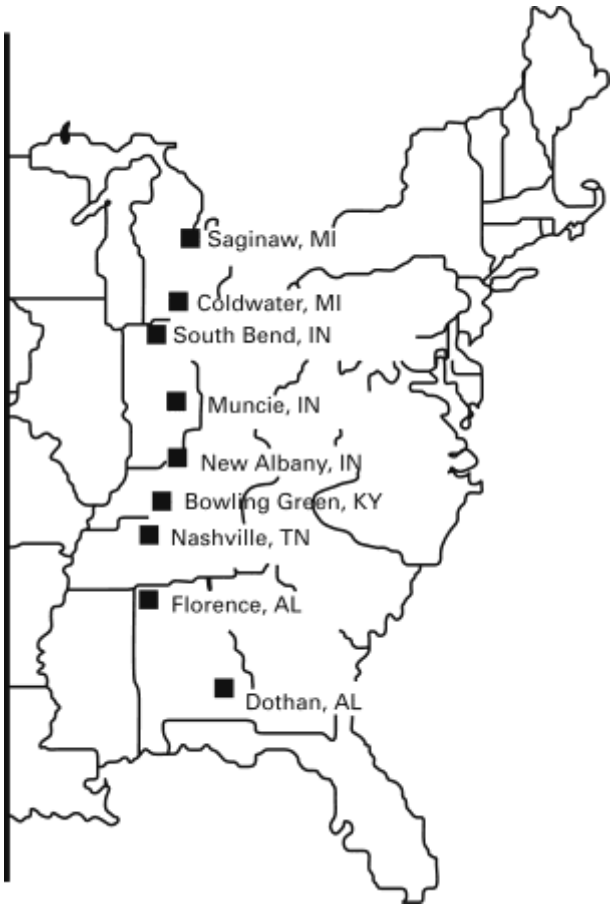

Figure 5.18 Home sites of the nine voices played in the identification task (from Preston, personal communication)

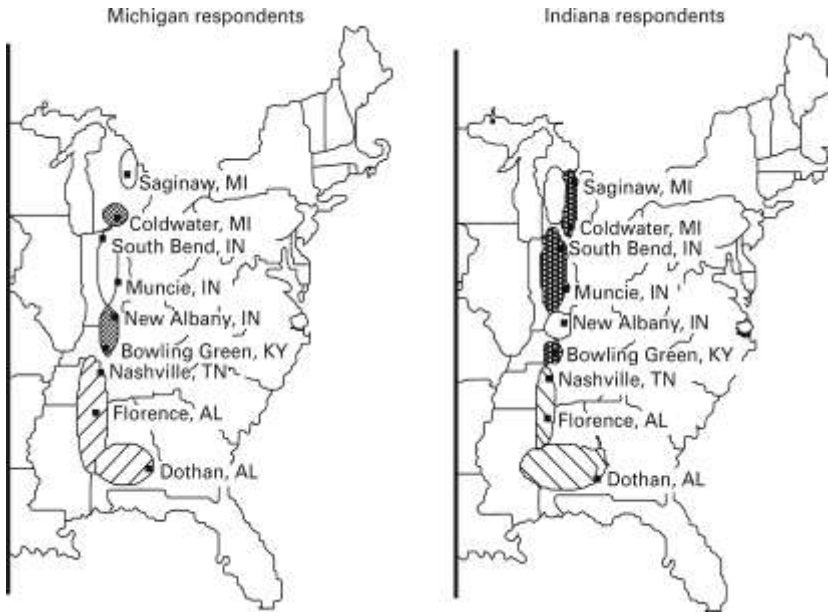

Figure 5.19 Responses of Michigan and Indiana listeners to regional voices (from Preston, personal communication)

For both groups of judges, although there are apparently three degrees of distinctiveness, perhaps a North, Midland, and South, there is confusion in the placement of voices from the northern and midland regions. Respondents from Michigan find the Coldwater, Michigan, speaker to be no different from the more southern voices of the New Albany, Indiana, and Bowling Green, Kentucky, speakers. The Indiana speakers hear their own area, New Albany, as being no different from the northernmost sites (Coldwater and Saginaw, Michigan), and they find Bowling Green, Kentucky, no different from the four northernmost sites, although distinct from their own. For both Michigan and Indiana respondents, however, as the shading in both maps shows, there is no difference in the ratings of the three southernmost voices. The distinctiveness of southern speech appears to be paramount in perception studies, and its distinctiveness appears to be related to prejudices against it, although, as noted above, southerners often find their speech pleasant if not correct.

Listener reactions may also focus on specific dialect features, such as particular vowel pronunciations. In one experiment (Wolfram, Hazen, and Schilling-Estes 1999), listeners reacted to the production of the THOUGHT vowel of *caught* or *bought* as produced by speakers from four different regions: (1) New York City, where the vowel is relatively high and followed by a schwa-like glide, as in something like *cuaht*; Eastern New England, where the THOUGHT vowel is merged with the LOT vowel; (3) rural Southern North Carolina Piedmont, where it is pronounced with a glide that makes it sound more like the MOUTH vowel; and (4) the Outer Banks of North Carolina where the vowel is unglided and raised, sounding much like the traditional British production. Listeners were asked to rate the productions of the four speakers from the most to the least Southern-sounding on a four-point scale, and from the most to the least Northern-sounding. Predictably, the rural Southern Piedmont production was rated by far as the most Southern and the least Northern, but the Outer Banks production was rated as among the least Southern productions. In fact, some listeners noted that the Outer Banks production sounded British rather than American, a finding confirmed by a group of native speakers of British English who also rated Outer Banks speakers as non-American.

Computer software now allows for various kinds of experimental manipulations of speech, including speech synthesis. It is possible to alter just the production of a particular vowel

while keeping the rest of the utterance constant so that the specific contribution of a vowel production to listeners' reaction can be teased out. In addition, a continuum of vowel values can be synthesized to identify listeners' precise acoustic boundaries for the regional, ethnic, or social classification of a vowel. For example, listeners might be asked to classify productions ranging from the LOT vowel to the TRAP vowel in a phrase such as *Did you say "socks" or "sacks"?* to determine whether they are perceptual participants in the Northern Cities vowel shift, in which *top* is pronounced more like *tap* than in other US dialects (Plichta, Preston, and Rakerd 2006). Experimentation of this type has advanced our understanding of the role of vowel production in listeners' judgments of regionality as well as its intersection with social factors, including speaker ethnicity, gender, status, and so forth. For example, perception tests indicate that the fronting of the GOAT vowel so that it sounds more like *gewt* is strongly associated with European American speech in the American South and that African Americans who use this feature are regularly identified as being European American rather than African American (Thomas 2005; Torbert 2010). In contrast, the fronting of the GOOSE vowel sounds more like *giws* is not as strongly associated with European American ethnicity, and African Americans with this feature tend to be identified correctly as African Americans. This indicates that the fronted productions of these two vowels, both common in many Southern-based speech varieties, have quite different ethnic associations. Perceptual studies hold great promise for sorting out the effects of subtle nuances of vowel production on listeners, and for determining the relative saliency of different phonetic factors in marking regional and social identity, as well as other types of social meanings, for example pleasantness, correctness, coolness, or cooperativeness.

5.6 Region and Place

Region is more than physical location; it also has social meaning as it grounds people's identities in localized communities. Physical space and phenomenological place may interact in various ways to construct a notion of a "homeland community." People make spaces but spaces, at the same time, provide the opportunity for the construction of identity and a sense of place. A sense of place belonging, or "Heimat" is a key component of social organization and human existence (Rohkrämer and Schultz 2009) that includes language. Linguist Barbara Johnstone notes, "sociolinguists have typically thought of place in physical terms, as the location of speakers of varieties in space, on the globe or on a map…we need to conceptualize place not just as a demographic fact, but as an ideological construct, created through human interaction." (Johnstone 2013:33). As one Lumbee Indian from Robeson County put it, "When you hear the [Lumbee] dialect, no matter where you are, you know it's somebody from home." In relating his dialect to "home," the Lumbee was referring not so much to physical location or region *per se*, though that was part of it, but to local cultural "place."

The use of regional dialect features in the city of Pittsburgh, in Southwestern Pennsylvania, is an ideal example of how dialect can be used in the construction of local identity (Johnstone 2013). Many people living in the Pittsburgh area think that there is a distinctive dialect spoken in the region, which they refer to as "Pittsburghese." This construct is an important reference point in talking about Pittsburgh and its residents and in distinguishing Pittsburghers from others. Not only is the dialect a common topic of conversation, but Pittsburghese has become a commercial commodity, and is showcased on T-shirts, postcards, and other souvenir items—even talking dolls. Typical features associated with Pittsburghese are lexical items such as *gumband* "rubber band", *nebby* "nosy", *slippy* "slippery", and *redd up* "clean up." Pronunciation features include the pronunciation of the MOUTH vowel in words like *downtown* with the TRAP vowel, so that *downtown* sounds like *dahntahn*; the merger of certain vowels before *l*, so that a word like *steal* sounds like *still* (and the local football team, the Pittsburgh Steelers, is called the Pittsburgh *Stillers*); and the merger of the THOUGHT and LOT vowels in *cot* and *caught*. Grammatical features include the

use of *yinz* (or *you'ns*) for the second person plural pronoun; the use of an *-ed* verb with *need*, as in *the shirt needs ironed*; and the use of *whenever* to mean *when*, as in *Whenever he finally died he was 90*. With the possible exception of the pronunciation of *downtown* and the use of *gumband* for "rubber band", none of these is unique to Pittsburgh. For example, *redd up* is used from central Pennsylvania well into midland Ohio, *yinz* and *whenever* for *when* are used in various regions of Appalachia (Smoky Mountains), and the merger of the vowels in *cot* and *caught* is common throughout much of the Western United States. Notwithstanding their actual geographical distribution, items like *dahntahn*, *Stillers*, and *yinz* have been appropriated as localisms and signify people's pride in being residents of Pittsburgh, and in the working-class or "blue-collar" character of the community. Over the last several decades, Pittsburghese has become as much a part of local (primarily white) identity as any other physical landmark or cultural artifact. And it is probably no coincidence that Pittsburgh embraced this sociolinguistic identity as its economic center shifted from the steel industry ("The Steel City") to an economy based on services, medicine, corporate headquarters and high technology over the last half-century. When non-linguistic distinctiveness is in danger of being lost, linguistic distinctiveness can step in and help preserve a unique sense of cultural identity.

Our discussion indicates that the distribution of dialect features in physical space may be quite different from the role that they play in people's construction of cultural place. As the study of regional dialect variation moves forward, researchers must consider not only how regional features are distributed geographically, but how these features become reference points for charting social and regional identities, including how they figure in the construction of "linguistic homeland."

5.7 Further Reading

American Speech. A publication of the American Dialect Society. Tuscaloosa: University of Alabama Press. Articles on various dimensions of regional variation are regularly published in this quarterly journal. Readers may refer to periodically published indices for studies of particular structures and regions.

Bailey, Guy, Tom Wikle, Jan Tillery, and Lori Sand (1993) Some patterns of linguistic diffusion. *Language Variation and Change* 5: 359–90. This article uses data from the Survey of Oklahoma Dialects to demonstrate that linguistic innovations are diffusing throughout Oklahoma in a variety of patterns, including hierarchical, contrahierarchical, and contagious. A number of illustrative maps are included.

Campbell-Kibler, Kathryn (2010) Sociolinguistics and perception. *Language and Linguistics Compass* 4.6: 377-389; Drager, Katie (2010) Sociophonetic variation in speaker perception. *Language and Linguistics Compass* 4: 473-480. These articles provide comprehensive yet accessible overviews of a range of types of studies of speaker perception, including a focused account of sociophonetic studies of nuanced pronunciation details.

Johnstone, Barbara (2013) *Speaking Pittsburghese: The Story of a Dialect*. New York: Oxford University Press. Johnstone's landmark work on space and place shows how a set of pronunciation, grammar, and lexical features has been shaped over the course of history into one of the most resonant symbols of local identity in the United States today.

Labov, William, Sharon Ash, and Charles Boberg (2006) *The Atlas of North American English*. New York/Berlin: Mouton de Gruyter. This work presents the results of the most comprehensive and current survey of the regional varieties of American English, as delimited by phonological systems. Interactive CD-ROMs with extensive sound files help illustrate many of the features discussed in the book. There is also an extensive accompanying web site that allows one to explore the various dialect regions and their characteristics and the regional distribution of particular features, as well as listen to samples of vowel differences and of

conversational speech in each dialect region and community surveyed: http://www.atlas.mouton-content.com/

Preston, Dennis R. (1996) Where the worst English is spoken. In Edgar W. Schneider (ed.), *Focus on American English*. Amsterdam/Philadelphia: John Benjamins. This article discusses the rationale for and provides a guide to the procedures used in perceptual dialectology, with a focus on people's mental pictures of regional dialect boundaries and their evaluative judgments of regional varieties.

Thomas, Erik R. 2011. *Sociophonetics: An Introduction*. New York: Palgrave Macmillan. Chapter 3 of this text discusses both the perceptual processes of the human auditory system as well as the technical details of how to design and conduct socio-perceptual research studies. This helpful discussion is most useful for a student with a background in linguistics.

Web sites

http://www.atlas.mouton-content.com/ (accessed July, 2014). This is the web site of Labov, Ash, and Boberg's (2006) *Atlas of North American English*. The site enables users to explore dialect variation in the US by feature, feature system (e.g. Northern Cities Shift, Southern Shift), dialect area, and project participant. Users may view a multiple of maps and listen to speakers from across the US and Canada.

http://www.ling.upenn.edu/phono_atlas/home.html (accessed July, 2014) This site provides a "behind the scenes" look at telephone survey project (TELSUR) on which the *Atlas of North American English* is based.

http://us.english.uga.edu (accessed July, 2014). This site provides reports on regional dialect variation based on data from various projects associated with the *Linguistic Atlas of the United States and Canada*. Included are numerous maps generated with state-of-the-art cartographic plotting software. The site also provides a useful comparison of current and older methods of analysis in lexical dialect geography.

http://www.tekstlab.uio.no/cambridge_survey (accessed July 2014) The Cambridge Online Survey of World Englishes provides results of ongoing and previous regional dialect surveys conducted by Bert Vaux and his colleagues. Included are results of Vaux and Golder's (2003) Harvard Dialect Survey, as well as Vaux and Jøhndal's ongoing Cambridge Survey and Survey of English in the British Isles. Engaging maps showing the regional distribution of each lexical, phonological, and grammatical feature surveyed can be easily generated. The site is administered by Bert Vaux and Marius L. Jøhndal. Heat maps and dialect quizzes based on these data have appeared in a number of media outlets.

http://www.daredictionary.com (accessed July 2014). The online version of the Dictionary of American Regional English is an invaluable resource for immediate access to the six-volume hard copy of this project that took a half-century to compile—and remains ongoing. It is available by subscription, including university library subscription.