23. The findings of the Atlas of North American English: An overview

How successful is the ANAE sampling method?

Chapter 1 reviewed the history of American dialectology, and considered the problem that only a small fraction of the phonology of North American English has been mapped systematically since the initial achievement of LANE in the 1930s. The solution proposed was a telephone survey of urbanized areas. ANAE was initiated with a pilot project in 1992. The main data collection began in 1994, and 80 percent of the 800 interviews were carried out in the following five years, The method therefore produced an overall view of the phonology of the continent in a short enough period of time so that all regions studied can be considered contemporaneous.

The success of the method of selecting subjects, described in Chapter 5, can be assessed informally by viewing the geographical regions first displayed without analysis in Chapter 10 and then analytically in Chapter 11. These maps show large areas of consistent response, often with sharp boundaries between them. A more precise assessment is achieved by the measures of homogeneity and consistency of the geographic boundaries constructed. The major isoglosses that define the Inland North, the South, and Canada, based on the sound changes in progress in those regions, show high values on these measures (Appendix 1 to Chapter 11). Among the most striking cases are the boundaries that separate the fronting of /ʌ/ in the Midland from the backing of /ʌ/ in the North (Map 11.14) and the outer definition of the South by the glide deletion of /ay/ (Map 11.3). In general, the uniformity of structural patterns across large areas testifies to the success of the method.

Given the well-known mobility of the North American population, such uniformity of results testifies to the robustness of the linguistic measures used. The maps of this Atlas are focused not upon sociolinguistic variation within the community, but rather upon the different structural bases for that variation. In one sense, Telsur represents each community with only a few speakers. But most geographic areas are represented by a much larger group, of 30 to 80 speakers. Within that group, our regression analyses permit us to chart social variation by age, gender, and education. These results also testify to the speed with which new dialects are formed and the rapidity with which the children of mobile parents are absorbed into the local community (Payne 1996; Kerswill and Williams 1994).

There are also limitations to the findings of the Atlas which are inherent in the Telsur method. In examining the dialect regions defined by ANAE, it must be born in mind that the position of any given city near an isogloss is open to further study. Definitive membership in a given dialect region can be assigned for cities in central areas and for those border regions where many isoglosses separate cities on either side (e.g. Map 14.11). The exact definition of transition zones between most dialect areas, and the dialect membership of individual communities within those zones must be left for future studies with a more detailed focus on particular regions. The best that ANAE can do in this connection is to identify those regions that are promising sites for local research. Secondly, the ANAE regions are defined by the major urbanized areas, not the smaller towns between them. It cannot be assumed that these small towns and rural areas are always weaker versions of the phonological systems of the larger cities, as the cascade model would predict (Trudgill 1974; Callary 1975). More detailed studies of the Mid-Atlantic States indicate that the intervening areas between big cities are following an entirely different pattern (Ash 2002; Ch. 17).

The definition of dialects on the basis of sound changes in progress

American dialects were originally defined by locating the coincidence of regional vocabulary boundaries (Kurath 1949). In approaching the phonologies of North American dialects, ANAE looked for the most systematic definition: the manner in which sound changes entail, encourage or inhibit other sound changes. The analysis starts with the phonemic status of the low vowels /æ/ and /o/, and relates these to the major chain shifts in progress (Maps 11.1 and 11.2). Thus the low back merger of /o/ and /oh/ triggers the Canadian Shift (Map 15.4) and the Pittsburgh Shift (Figure 19.6). On the other hand, the Northern Cities Shift and the Southern Back Upglide Shift act to preclude the low back merger. These systematic relations reinforce the discreteness of dialect boundaries and lead to the steady development of neighboring regions in different, sometimes opposite directions.

The structural definition of dialects also has limitations. The West (Chapter 20) is not a well-defined area compared to other regions; internally it shows much variation; its isogloss has low homogeneity (.56) and moderately low consistency (.62). There are also areas that fall between major dialect areas, with properties so mixed that they are best categorized as "transitional" (Map 11.13). Though the Inland North is well defined by the Northern Cities Shift (Map 14.6–14.9), there are many possible alternate definitions of the North. The relative fronting of /ay/ and /aw/ provides one definition, and resistance to the fronting of /ow/ another. The outer limit of the North was established by combining resistance to the low back merger, to the splitting of short *a* and to the fronting of /ow/. This definition of the North is motivated primarily by its status as the region in which the NCS was generated. Other considerations would lead to a North that extended much further westward, including the North Central States for some features, or as far as the Pacific Northwest.

The major new findings of ANAE

The dialect regions established in Chapter 11 generally agree with those of lexical dialect geography, a fact that reflects the enduring influence of the original regional patterns of the the settlement of English-speaking of North America. One of the few points of divergence concerns the status of the South Midland region, which Kurath placed in the Midland. The ANAE data show that, at least in phonological terms, this region belongs with the South – one of the possibilities that Kurath himself considered. The major chain shifts that play central roles in ANAE classifications have been identified in the decades following Kurath's original analysis. The Northern Cities Shift and the Southern Shift were described as early as 1972 (LYS). The Canadian Shift was first identified by Clarke et al. in 1995. The elements of the Southern Back Upglide Shift have been known to

dents of Southern phonology for more than half a century, though their recognition as a chain shift is new to ANAE. Only the Pittsburgh Chain Shift is a new phenomenon, described in ANAE for the first time.

The first recognition of these chain shifts was the product of exploratory studies of a few cities, and there was no way to estimate how widespread and general these processes were. From a phonological point of view, North America was a generally dark landscape, relieved by a few illuminated areas. With the completion of ANAE, the number of cities that we can compare has been multiplied by a factor of a hundred. Though many areas between these cities still remain dark, the overall effect is a general illumination of North American phonology. We now know that the NCS has swept over a vast region of 88,000 square miles, inhabited by a population of 34,000,000. We know that glide deletion before voiced obstruents is dominant over the entire South, and that the second stage of the Southern Shift covers almost all of that area, but that glide deletion before voiceless obstruents and the third stage of the Shift are concentrated in narrow areas at the core of the Southern States. We know that the U.S. is sharply divided into a Northern area with relatively back nuclei of /ow/ and /aw/, a Southeastern superregion with relatively front nuclei for these vowels, and the West with a mixed situation. We know that the Mid-Atlantic cities are remarkably similar, sharply differentiated from New York City with which they share a split short-*a* system. We have discovered that the Canadian Shift distinguishes Canada along most of its border with the United States, and particularly in Southern Ontario where the populations across the border are the largest.

One important result of ANAE is the confirmation of the earlier finding of sociolinguistic studies that change in progress is continuing, a result that has aroused a great deal of interest in the general public. Given the uniform exposure of speakers everywhere to the broadcast standard of the mass media, it is difficult for most people to believe that sound change in many communities is continuing at a rapid rate. On a larger scale ANAE finds that the diversity of regional dialects in North America is not diminishing, but is increasing over time. ANAE also finds that divergence is not omnipresent. While Chapters 14 and 15 show new and vigorous changes in the North and Canada, Chapter 18 shows that the Southern Shift is receding in apparent time. A number of local dialects, spoken in medium-sized cities, are giving way to regional patterns: Charleston, Savannah, New Orleans, Cincinnati, St. Louis (Chapters 18, 19). Increasing diversity in North America is a regional phenomenon, not a local one.

ANAE introduces a number of new discoveries dealing with sound changes that exhibit a continental scope. Though the continent is split in regard to the fronting of /ow/, it is unified in the fronting of /uw/ after coronals (Map 12.1). The study of the various patterns of short-*a* tensing, a major topic of sociolinguistic research in the Mid-Atlantic states, is here extended to the continent as a whole (Chapter 13). Though most of the patterns have been identified before – the nasal system, the general raising in the Inland North, the split short-*a* system of the Mid-Atlantic States, Southern breaking – the overall distribution is seen for the first time. Chapter 13 develops the entirely new phenomenon of "Northern breaking", in which the vowel develops two distinct steady states of equal duration. Even more remarkable is the discovery of two different patterns of phonetic conditioning dividing the continent, in which the relative conditioning effects of following /d/ and /g/ are sharply reversed (Map 13.5).

Directions of change in progress

Since the ANAE strategy depended upon completing the investigation in the shortest possible span of time, it could not in principle generate data on change in real time. The irregular history of American dialectology has produced only a few opportunities for real-time comparison.[1] Apparent time distributions therefore provide the main data base for estimating how active the various chain shifts and mergers are, and in what direction they may be moving.[2] The various regression coefficients for age found throughout Chapters 7–20 depend upon the representation of age levels generated by the sampling method. Tables 4.1 and 4.2 and Figures 4.2 and 4.3 show that the sample includes speakers from adolescents to octogenarians in all major regions and for both genders. These tables reflect the Telsur emphasis on women from 20 to 40 years of age as the leaders of linguistic change, but they also show the comparability of age distributions across genders and regions.

Following the principle that mergers advance at the expense of distinctions, it is not surprising to find in Table 9.3 that there is an overall advantage for younger speakers in the progress of the low back merger. The more detailed view of regions shows no such change in apparent time in those regions with a structural basis for resistance to the low back merger, but it does appear in those with a history of merger: the West and Eastern New England (in Canada, the merger is apparently complete). The newest trend can be observed in the South, where a strong age differential indicates an advance of the merger in apparent time. The Midland, where the low back merger is generally in a transitional state, also shows a steady advance towards merger among younger speakers.

The chain shifts studied in ANAE generally show a strong advance in apparent time. For the NCS, significant age coefficients are found for all five of the sound shifts involved (Chapter 14). For the Canadian shift, this holds for the lowering and backing of /e/ and the backing of /æ/ (Table 15.1). But as noted above, the Southern Shift is receding in the Telsur data, and is also opposed to the NCS and Canadian Shift in its relation to city size. While the Inland North and Canadian communities show an advancing urban pattern, the South shows a solidification and generalization of its basic pattern, along with a slow retreat led by the largest cities. (Table 18.3).

Though the Telsur sample focused on locality rather than social parameters, the natural variation in the larger regions is sufficient to yield some insights on how change proceeds. The strongest correlations were found with age, gender and city size. As previous studies have shown, women are in advance for those linguistic variables that show strong movement in apparent time. This was particularly evident in the widespread fronting of the back upgliding vowels, and for three of the four elements of the Northern Cities Shift. There was no significant gender factor in the Southern Shift, which is receding in apparent time, but the special status of women re-emerged in the more rapid reversal of fronting before /l/, where women led the retreat.

Unexpected findings and unsolved problems

The general view among American dialect geographers was that dialect boundaries based on lexical selection have been generated by more or less arbitrary variables, and that the true picture would be a series of continua if all data were

1 The most useful of these stems from the exploratory sociolinguistic interviews in Chicago in the late 1960s, which plainly indicate an earlier stage of the NCS where /e/ had undergone only lowering, not backing.

2 See Bailey et al. (1991) for a comparison of real and apparent time which indicates the reliability of apparent time as a measure of linguistic change in progress. Since most real time studies show some change in the adult population, it appears that most apparent time data understates the extent and rapidity of change (Boberg 2004; Sankoff 2005).

used in an unbiased manner (see Chapter 1). A different view emerges from the phonological materials used by ANAE to define North American dialects. When one isogloss is superimposed upon another to which it is structurally related, we generally obtain either a tight bundle or a concentrically nested series. The two major dialect divisions that emerge are the North/Midland boundary and the Midland/South boundary.[3] The North/Midland boundary is the most remarkable, since it falls very close to the North/Midland lexical boundary that reflects a settlement history dating back to the mid nineteenth century. We have good reason to believe that the Northern Cities Shift is a creation of the twentieth century. It is not immediately evident why the many sound changes of the NCS stop abruptly at the North/Midland boundary. There are structural considerations, in that vowels on either side of the boundary are moving in opposite directions under the control of unidirectional principles (Map 14.8). However, these do not fully explain why the North/Midland boundary remains so firmly in place, and further explorations into the communicative patterns and cultural geography of the area are called for.

The ordering of the five steps of the NCS has been accepted for some time. However, the various maps of Chapter 14 show that the eastern and western boundaries of these processes are not sharply delimited like the north–south boundaries. In particular, the back variants of /ʌ/ extend further to the east and west than other elements of the shift. This may reflect an earlier initiation of this backing movement, which is now considered the most recent change. In a similar way, the east–west relations of the raising of /æ/ and the fronting of /o/ raise questions about their relative priorities in real time. This is not unrelated to another unsolved puzzle, the relations of /e/ and /ʌ/. The recordings made in Chicago in 1968 show no backing of /e/, but later recordings show a progressive backing in which the most retracted forms of /e/ overlap with /ʌ/. Push chains of this type are not easily accommodated to the mechanism of probability matching that is advanced to account for the more normal pull chains and hole-filling patterns (Labov 2001: 586–587).

The expectation of a progressive advancement of merger is fulfilled by the westward and southward expansion of the low back merger in western Pennsylvania. Reports of the steady expansion of the merger in Texas also conform to this pattern (Bailey et al. 1991). However, the eastern boundary of the low back merger in the West has not shifted further east as might have been expected, but is actually further west than the boundary shown in the 1966 survey of long distance telephone operators, particularly in eastern Nebraska, eastern South Dakota, and Minnesota (Map 9.4). On the other hand, the low back merger seems to be expanding in a different manner in the Midland, where the majority of the speakers show a close approximation of /o/ and /oh/ but not yet a merger.

Prominent among the unsolved problems created by ANAE results is the differentiation of conditioning factors in the raising of short-*a* (Map 14.5). In general, the phonetic conditioning of such continent-wide processes is uniform across the continent. The dialect geography of short-*a* systems, and in particular the reversal of the relative influence of voiced apicals and velars on the raising of /æ/, is therefore unexpected and demands a further accounting.

3 The Canada/US boundary is extremely sharp in some sections, as in the boundary shared with the Inland North, but less well defined in others, as in the West or the Atlantic region.