14 Patterns of Variation including Change

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In their third postulate for a theory of language change, Weinreich, Labov and Herzog state: "Not all variability and heterogeneity in language structure involves change, but all change involves variability and heterogeneity" (1968: 188). In this chapter, I demonstrate some of the empirical ramifications of this postulate based on three and a half decades of variationist research. I show that the most salient cases of language variation make partly predictable patterns when plotted against their social correlates. Language change, as the postulate implies, is one type of linguistic variation, with particular social properties.

The demonstration depends upon case studies in terms of social class (section 1), sex and gender (section 2), and age (section 3). For age, the primary social correlate of linguistic change, I distinguish age-grading (section 4) from actual change (section 5), and then I deconstruct a change-in-progress in terms of regional discontinuities (section 6), social gradations (section 7), and, finally, sociocultural motives (section 8).

As illustrations, I have tried to select case studies that are prototypical, that is, as close to "pure" examples as I can find. As befits an empirical discipline, these cases are rooted in times and places, specifically in Detroit (Shuy 1969), Glasgow (Macaulay 1977), and central Canada (Chambers 1998b), but I have tried to emphasize their general properties as far as possible, seeking the broader implications that underlie the cases.

1 Variation and Social Class

The essential function of linguistic variables is to mark group membership. Age is one of the three overriding social categories in modern industrialized societies, along with social class and sex, and it is the social attribute that is the primary correlate of language change, as we shall see. Correlations of linguistic

variants with the social class and the sex of speakers are not prototypically associated with language change, though members of one class or one sex may be leaders of the age cohort in the vanguard of the change. Needless to say, sex, class, and age are inextricable elements of individual identity (as Mendoza-Denton discusses in her chapter below), but certain linguistic variants have social value as expressions of one or another attribute, as we will see.

In every community that has been studied so far, sociolinguists have found that phonological variables tend to be distributed throughout the population, regardless of class, but graded so that the higher classes use particular variants infrequently and under more constrained circumstances, usually in casual settings with intimate participants. Grammatical variables are much more likely to be absolute markers of class membership. Syntactic features like multiple negation (as in section 2 below) and morphological variants like *ain't* occur in virtually all English working-class speech varieties but rarely in middle-class speech. They thus tend to be categorical distinguishers rather than graded ones.

A prototypical instance of a diffusely distributed phonological variable is glottal stop [ʔ] as a variant of /t/ in post-tonic position in Scotland and Northern England, in words like *butter*, *batting*, *Betty*, *forty*, *fitting* and *football* (Milroy et al. 1994). Macaulay notes that in Glasgow the glottal stop is "the most openly stigmatised feature" (1977: 47) and the one "most frequently singled out by teachers as characteristic of a Glasgow accent" (1977: 45). Ironically, the fact that it is the most characteristic feature does not stop people from complaining about it, that is, making it the most stigmatized feature.

Figure 14.1, based on Macaulay's work (1977: 47, table 16), provides empirical support for the teachers' impression of the glottal stop as characteristic of the Glasgow accent by showing that it occurs in the speech of all social classes, including the Middle Middle Class (MMC). Figure 14.1 also shows that it is stable, as indicated by the level lines from the adults to the 15-year-olds in each of the classes. Its use, in plain terms, is neither declining nor increasing in the speech of the young people as compared to their elders but staying about the same.

The gap between the MMC and the two working-class groups, the Upper Working Class (UWC) and the Lower Working Class (LWC), is enormous, about 70 percentage points. Clearly, what differentiates WC speech from MC speech in Glasgow is not the presence or absence of the glottal stop variant but its frequency. There is also a gap between the two WC groups, though a much less dramatic one at about 10 percent. The social classes arrange themselves hierarchically with the frequency of glottal stop variants decreasing up the social scale.

Membership in the Glasgow speech community entails using the glottal stop variant sometimes, regardless of social status, but there is clearly much more to it than that. It also entails a speaker's tacit knowledge of the frequency that is appropriate to one's social status, and this awareness serves both as a regulator of one's own usage and as an evaluator of the usage of others.

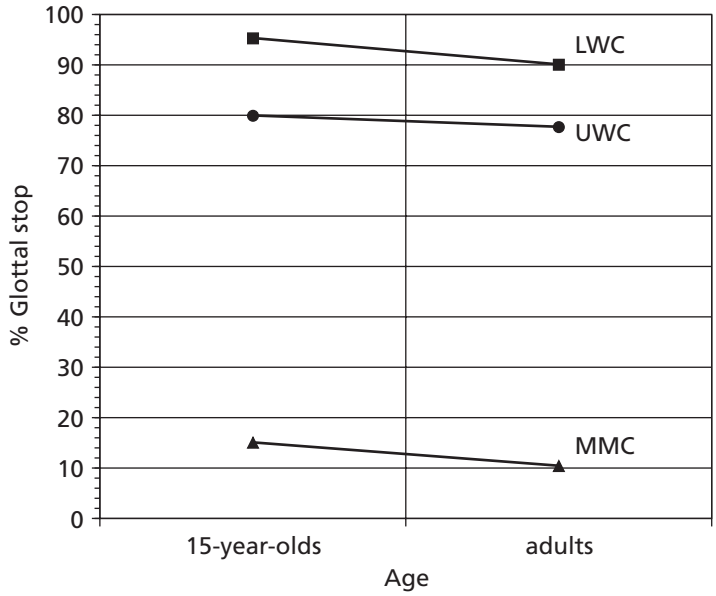

Figure 14.1 Percentage of the glottal stop variant for post-tonic /t/ in adults and 15-year-olds in three social classes in Glasgow

Source: Based on Macaulay (1977: table 16, 47)

Despite the use of the glottal stop across the social spectrum, Glaswegians of all classes share the opinion that the glottal stop is "unattractive" (Macaulay 1977: 112). The fact that it is heard very frequently in working-class speech does not imply approbation: middle-class and working-class subjects are in agreement about its social evaluation. Labov (1972) found a similar situation in New York, leading him to conclude that "the speech community is not defined by any marked agreement in the use of language elements, so much as by participation in a set of shared norms; these norms may be observed in overt types of evaluative behavior, and by the uniformity of abstract patterns of variation which are invariant in respect to certain levels of usage" (1972: 120–1). Put plainly, membership in the speech community is not defined by the simple notion that people speak the same, but by the more abstract notion that they evaluate communal linguistic variation similarly. Groups and individuals reflect the communal norms in complex ways, with subtly different mixes of concord and conflict (Rickford 1986), and the communal evaluation of norms shifts too, making participants "agents in the continual construction and reproduction of the [sociolinguistic] system" (Eckert 2000: 43; also see Patrick below). Membership is determined by consensus about community norms but not by conformity in their use, thus allowing people the latitude to express their diversity within communities.

2 Variation and Sex (and Gender)

Within the class norms, sociolinguistic research has discovered that women use fewer stigmatized and nonstandard variants than do men of the same social group in the same circumstances (as summarized by Eckert 1989, Chambers 1992, 1995a: 102–45). Consequently, speech communities are marked by consistent and, as we shall see, partly predictable linguistic correlations with sex.

An early illustration of what sociolinguists now recognize as a prototypical female/male difference arose in research on inner-city Detroit African-American vernacular. Shuy (1969) investigated, among other features, class-based patterns in the social distribution of sentences with multiple negation:

Standard (single) negation	*Multiple negation*
It isn't anybody's business.	It ain't nobody's business.
Nobody tells us anything.	Nobody don't tell us nothing.

Multiple negation is a grammatical feature, and as such we expect it to be sharply stratified in its social distribution. Figure 14.2 shows that the stratification increases from left to right, down the social hierarchy from Upper Middle Class (UMC) to Lower Working Class (LWC). In many other communities,

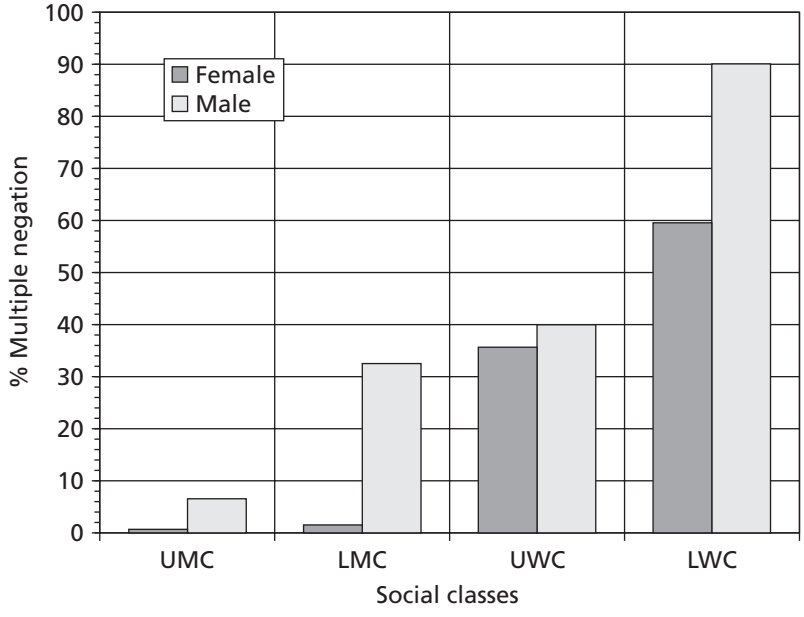

Figure 14.2 Multiple negation by African-American women and men in four social classes in inner-city Detroit

Source: Shuy (1969)

multiple negation is virtually nonexistent in MC dialects, but the communal norms in inner-city Detroit shift the threshold into higher social strata.

Not only is there a systematic class-based pattern in figure 14.2, but there is an equally systematic sex-based pattern as well. In each social class, the men score higher than the women. In the highest class (UMC), the men are the only ones who use multiple negations, and in the other MC group the women score very low (under 2 percent). So, in fact, the women's speech in this respect follows the typical pattern for white MC speech in many communities. The pattern of female/male differentiation carries over into the WC groups as well, though the norms are much higher and females as well as males show dramatic increases. Nevertheless, the pattern holds, with women using significantly fewer multiple negatives than the men in their social class – the men, that is, who are their husbands, brothers, and neighbors.

Wolfram (1969), in a broader study of the same Detroit community, found consistent sex-correlations on three other syntactic variables and four phonological variables, leading him to conclude: "Within each social class it is observed that females generally approximate the standard English norm more than males do" (1969: 215). This result has proven so robust in so many sociocultural settings as to lead sociolinguists to the general conclusion that "women . . . are more sensitive than men to the prestige pattern" (Labov 1972: 243) and that "females are clearly more concerned with the pressure exerted by local norms and asserting their status within the . . . social structure" (Romaine 1978: 156). Holmes (1997: 135) says, "language is an important means by which women assert their authority and position, a form of symbolic capital for women."

Other things being equal, it is the expected result in all comparable situations. For instance, the sociolinguistic setting for Glasgow glottal stop, discussed in the previous section, appears to share certain essential properties of Detroit multiple negation: both are class-based variables, sharply stratified, with the nonstandard variant stigmatized. We should therefore expect to discover that Glasgow glottal stop is sex-correlated within the class divisions. There is also, of course, an important difference in that the Glasgow variable is phonological, not grammatical, and should as a result be distributed more diffusely. But the overriding expectation will be to find that the females in each class score lower than the males.

Figure 14.3 bears out that expectation. The figure is complicated by the need to represent two age groups in each social class, which are then partitioned further into females and males. The Glasgow class stratification observed in figure 14.1 above is here decompressed, so to speak, into its male and female constituents, but it is no less visible in the squat bars for MMC contrasted to the towers for both UWC and LWC.

Within the class stratification, there is also sex stratification. The adult women and men, indicated by the left-hand bars in each social class, exhibit the expected relation exactly as did the adult women and men in inner-city Detroit, with the women in each social class scoring lower than the males. The 15-year-olds in all social classes show the sex-correlation but show it less obviously,

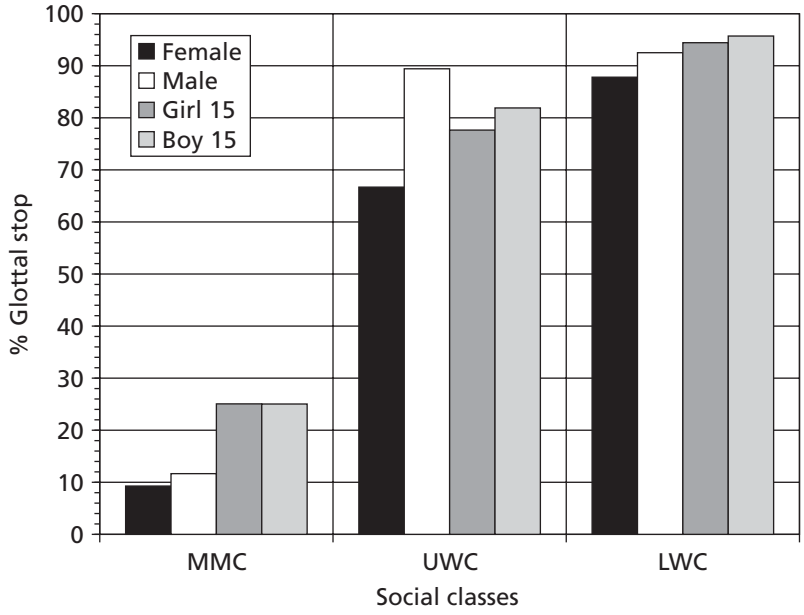

Figure 14.3 Glottal stops by male and female adults and 15-year-olds in three social classes in Glasgow

Source: Macaulay (1977: table 16, 47)

with nearly equal scores for girls and boys in two of the three classes (24.8 to 25 in MMC, 94.1 to 95.6 in LWC), suggesting that adult patterns are still emerging in the mid-teens, but the pattern is discernible because in all three classes the trend in the figures runs exactly as expected.

The female–male discrepancy with respect to nonstandard variants is so firmly established after decades of confirmation that it can serve as a sociolinguistic lemma, in the sense of an empirical expectation that stimulates further investigation into situations that fail to meet it. It is used this way, in effect, by Milroy et al. (1994), for unraveling a phonologically complex pattern of glottal substitution for post-tonic /t/ in northern England, where they ultimately discover that the female–male patterns are mitigated by the fact that females, when they use nonstandard variants, tend to use different ones from the males.

Why the female–male discrepancy exists has been subject to continual investigation and considerable speculation (see, e.g., Trudgill 1972, Deuchar 1988, Eckert 1989, Chambers 1992, Holmes 1997, Gordon and Heath 1998). One plausible explanation comes from the assignment of gender roles, the sociocultural division of labor for males and females. In many working-class enclaves, women tend to be more mobile than men, working outside the community in interactive positions as clerks, tellers, or office cleaners, and women rather than men tend to speak for the family in meetings with teachers, principals, landlords, and bank managers. It is in these communities where the female–male

discrepancy is greatest. However, gender role differences can hardly be the whole explanation because the female sociolinguistic advantage also occurs in societies in which there is no clear distinction in gender mobility, as in the middle classes in virtually all modern, industrialized Western societies. Explanations as to why women characteristically use fewer nonstandard variants and a wider range of styles than men of the same social class in the same circumstances remains a challenge (as discussed more fully by Cheshire below).

3 Age and Variation: Change

Language variation can mark stable class differences or stable sex differences in communities, as we have seen in the previous sections, but it can also indicate instability and change. When it marks change, the primary social correlate is age, and the change reveals itself prototypically in a pattern whereby some minor variant in the speech of the oldest generation occurs with greater frequency in the middle generation and with still greater frequency in the youngest generation. If the incoming variant truly represents a linguistic change, as opposed to an ephemeral innovation as for some slang expressions or an age-graded change (section 4 below), it will be marked by increasing frequency down the age scale.

The sociolinguistic representation of linguistic change thus takes the same essential form as representations of class and sex markers, with age instead of class or sex as the independent variable. In the variationist paradigm, linguistic change thus falls out naturally as one particular kind of sociolinguistic variation. Weinreich et al. (1968), in the same article that set out the postulates for change, also claimed that "a model of language which accommodates the facts of variable usage and its social and stylistic determinants not only leads to more adequate descriptions of linguistic competence, but also naturally yields a theory of language change that bypasses the fruitless paradoxes with which historical linguistics has been struggling for half a century" (1968: 99). Their foresight has now been realized in numerous studies and is being refined continuously.

Before the advent of sociolinguistics, observations of linguistic change were traditionally made at two (or more) discrete points on a time line. Structural linguists like Bloomfield and Hockett maintained that that was the only way changes could be observed because apprehending them while they were in progress was theoretically impossible (Bloomfield 1933: 347, Hockett 1958: 444; discussed critically in Labov 1972: 21–3, 1994: 44–5, Chambers 1995a: 185–7). The structuralist position underlies Hoenigswald's assertion that "any historical statement contains, avowedly or otherwise, at least two synchronic statements – one for each of two or more stages" (1960: 3n). That is, the apprehension of change could only be made by comparing two historical moments in the history of the language.

The structuralist position was presumably a carry-over from nineteenth-century philology, which relied on textual evidence. The philologists assumed texts to be static. As we shall see immediately below, they were not actually static because they were not invariant, but the axiom of categoricity required that they be viewed as if they were. (On the axiom of categoricity, see Chambers 1995a: 26–30.) Thus Hoenigswald (1960: 1–2) said, "even if [the speaker] did not say such-and-such at a given time, he could have done so. So long as that is true, the investigator looks upon an idiolect (the corpus of utterances by one speaker) as something static."

Textual material is necessarily fixed but not necessarily static. A simple example (which also serves to introduce variable (wh), which I discuss in sections 5–7) comes from the two texts below, both translations of lines from the Aeneid, Book V, made some 375 years apart. The lines express Aeneas's reaction when his father's ghost appears momentarily and then abruptly disappears. In the Scottish translation by Gavin Douglas, ca. 1515, Aeneas cries out (V, xii, ll. 140–2 [1957: 232]):

> Quhidder bradis thou now sa fast, without abaid?
> Quhidder hastis thou swa? Quhom fleys thou? . . .
> Quhat is the let I may the(e) nocht embrace?

The same passage translated into English verse by Charles Bowen (V, ll. 743–4 [1889: 255]) goes:

> "Whither away?" Æneas replies; "why hurrying so?
> Whom dost dread? What bids thee avoid my loving embrace?"

The most obvious linguistic contrast in the two passages lies in the cognate question-words *quhidder*: *whither*, *quhom*: *whom*, and *quhat*: *what*; elsewhere Douglas also writes *quhy* (I, pro, l. 361) for the word Bowen writes as *why*.

We can infer that these spelling differences encode a phonetic difference, and from other sources we know what the phonetic values are. For most present-day readers, *whither*, *what* and *why* are pronounced with a voiced labiodental approximant [w]; for Bowen and his Oxbridge contemporaries as well as for some present-day readers, they are pronounced [hw] or [ʍ], that is, preaspirated or voiceless; for Gavin Douglas (1457–1522) and his Scottish contemporaries and for the English in the early Middle Ages, they were pronounced [x^w], as a labialized voiceless velar fricative. So Douglas writes <quh> for [x^w] where Bowen writes <wh> for [hw]. Douglas's usage preserves the sound in the Germanic language that was the ancestor of English. Before that, in Proto-Indo-European, the ancestor of Germanic, the cognate forms of these words were pronounced *kw, a labialized voiceless velar stop, which became Germanic [x^w] by Grimm's Law. This historical sequence, still in progress (as we will see in section 5 below), represents a three-millennium lenition, a weakening from stop to fricative to approximant, and from voiceless to voiced, that I believe to be the oldest traceable sound change (Chambers 1998a):

*kw LENITION: PIE *kw > Germanic, Old English, Scots [x^{w}] > Middle English, modern Scots [hw] > modern English [w]

The historical record for these stages can be recovered from philological sources.

What has become apparent with the sociolinguistic apprehension of sound change is that every step in that history has involved variation and that the variation is discernible even in literary sources. For instance, Douglas normally wrote *quhen*, as we saw, but once he wrote *when* (X, xiii, l. 116: "That he may, when the son schynys aganen . . ." [1839 reprint of Cambridge MS, "presumably the author's personal copy" (Coldwell 1964: 106)]). This spelling variant suggests that even in Douglas's time Scots pronunciations were beginning to weaken from [x^{w}] to [hw]. The first published edition of Douglas's text tacitly substituted several lenited forms – *whare* (= "where") for *quhare* twice, *what* for *quhat* twice, and *when* for *quhen* once (Coldwell 1964: Glossary). This edition was published in London in 1553, 31 years after Douglas's death, and these variant forms were almost certainly introduced into the text by English editors or perhaps by English typesetters, but the fact that the text retains most of Douglas's *quh-* spellings might suggest that the [x^{w}] pronunciations had enough currency even in the south of England to preclude wholesale editorial or scribal transliteration.

Today, in the contemporary stages of this long drawn-out sound change, the phonemic contrast between preaspirated /hw/ and plain voiced /w/ survives in Scotland, Ireland, and Northumberland, the northernmost county of England, and in places settled by Scots and their descendants, including Ulster and the southeastern United States. In some places outside these areas, the [hw] variant has been eliminated, but in many communities it survives as variable (wh), heard in upper-class speech or the most careful middle-class styles or occasionally further down the social hierarchy as a kind of relic feature. In all these settings with the possible exception of Scotland, /hw/ is recessive in the sense that it occurs less frequently in the speech of young people than old (Chambers 1998a).

Canada is one of the places where /hw/ has been fairly persistent. Nevertheless, the [hw]-pronunciations have been in decline there for many years, as shown by surveys carried out at different times. Table 14.1 summarizes the results of three such surveys by indicating the percentage of subjects with

Table 14.1 Percentage of Canadians with [w] not [hw] in words like *which* and *whine* in two age groups surveyed about one decade apart

	Older	Younger	Source
ca. 1970	61	67	Scargill and Warkentyne 1972: 71
ca. 1980	63	90	DeWolf 1992: 107
ca. 1990	70	91	Chambers 1998: 25–26

/w/ where the traditional or conservative accent had /hw/, that is, the subjects who pronounce *which* the same as *witch* and *whine* the same as *wine*.

As in most independent surveys, the three surveys represented in table 14.1 are not perfectly comparable, taking in slightly different age groups and different, though partially overlapping, regions. In spite of these disparities, table 14.1 gives a coherent picture of change, with the numbers showing an increase from old to young in each row, and from decade to decade in each column.

The 1970 younger people in table 14.1 would have been about 40 by 1990, old enough that they might have qualified as older subjects for the 1990 survey. The 1970 score for younger people (67 percent) matches fairly closely the score of the 1990 older people (70 percent). By extrapolating across the time interval we might infer that the speech patterns set in late adolescence by the 1970 subjects were maintained in their adult years in 1990. In spite of the fact that this linguistic variable (wh) continued to change in the speech of people who came after them (younger people in 1980, for instance, at 90 percent), the 1970 adolescents evidently did not keep on changing but instead stuck with the variable pattern of their formative years. This rudimentary observation lies at the core of the apparent-time hypothesis, the theoretical construct that underlies many of the breakthroughs in sociolinguistics and contemporary historical linguistics (as discussed by Bailey above). "Apparent time" assumes that people of different ages preserve the speech patterns of their formative years. Speech differences between people of different ages therefore reflect differences in the way people spoke in those years.

Apparent time is the antonym of "real time." In table 14.1, the three surveys were undertaken at real-time intervals of ten years. The results summarized there cover 20 years from the first survey (1970) to the last (1990). Apparent time, in so far as it accurately reflects real time, obviates the need for waiting 20 years (or whatever duration) to gather data. Instead, researchers can interview subjects whose ages differ by 20 years and compare the results. Besides eliminating the waiting interval, apparent-time surveys also permit data-collection in identical settings and circumstances, thereby eliminating the comparability problems that we noticed for table 14.1.

4 Age-grading

That apparent time reflects real time is a hypothesis, not an axiom or a theorem. One sociolinguistic situation that does not conform to the apparent-time hypothesis is age-grading, whereby members of a speech community alter their speech at some juncture in their lives in such a way as to bring it into conformity with adult norms. This retrenchment, so to speak, undoes what might appear, under ordinary circumstances, to be an incipient linguistic change. In the best-documented cases of age-grading (Chambers 1995: 188–93), the linguistic retrenchment occurs in adolescence and has the status of a coming-of-age ritual.

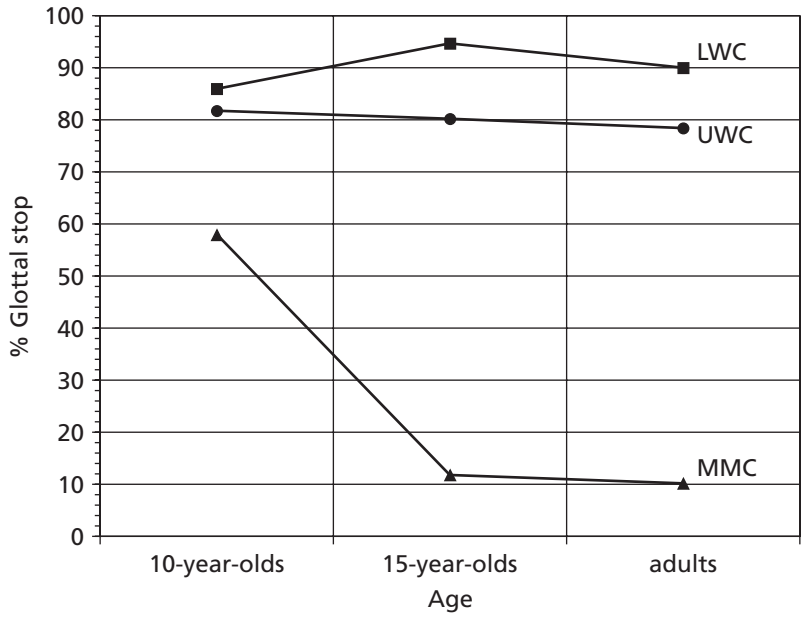

Figure 14.4 Percentage of the glottal stop variant for post-tonic /t/ in adults, 15-year-olds, and 10-year-olds in three social classes in Glasgow
Source: Macaulay (1977: table 16)

One such situation occurs in Glasgow and involves the glottal stop variant which is, as we saw in figure 14.1 above, a stable class marker. Figure 14.4 repeats figure 14.1, but adds another age group, 10-year-olds, to each of the social classes. In the two working-class groups, there is nothing exceptional about the 10-year-olds: they use the glottal stop variant with very similar frequencies to their older siblings and their parents. Their behavior simply reinforces the previous conclusions about the stability of glottal stop in Glasgow and its role in class-marking.

The same is definitely not true for the 10-year-olds in the MMC. They use the glottal variant much more frequently than others in their class and, in fact, show a frequency closer to the WC. Other things being equal, it would not be unreasonable to infer that the 10-year-olds might be leading a change in the direction of the WC norm. But we know that other things are not equal in this situation. For one thing, we know that this variable is stable in the community and, for another thing, we know that it is highly stigmatized. From this perspective, we can see that the sharp downturn from the MC 10-year-olds to the 15-year-olds constitutes a rapid accommodation to the MC norm.

What appears to be happening is that around puberty the MC youngsters begin to curtail their use of the WC marker in their speech, presumably in response to adult pressures. Ideally, we need real-time evidence to corroborate

this inference, and we can only presume that real-time evidence would reveal the pattern of "correction" repeating itself in successive cohorts of 10- and 15-year-olds. Until the real-time evidence can be gathered, the weight of evidence from the apparent-time data allows reasonable confidence for this inference on its own.

5 Change in Progress

Unlike age-grading, change in progress shows incremental increases in the use of a particular variant in the speech of younger people. Figure 14.5 illustrates a well-behaved change in progress. It shows a steady rise for the age groups from old to young, with the octogenarians on the left, the teenagers on the right, and subjects in descending ages by decades in between. The line graph plots the use of the innovative or incoming variant as a percentage for each age group: this is variable (wh), introduced above, and the percentages record the proportions of people in each age group who have merged the phonemes /hw/ and /w/ into the latter, the voiced labiovelar approximant.

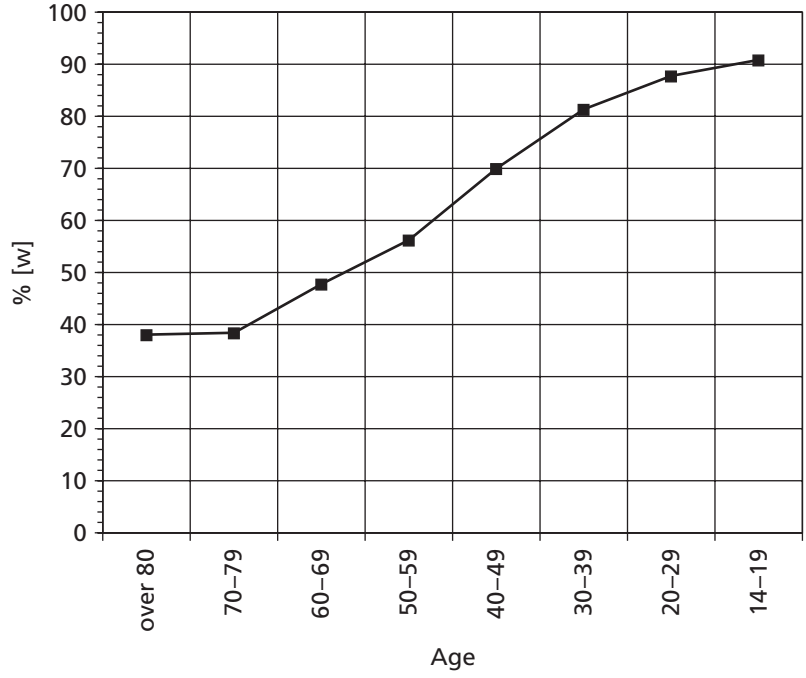

Figure 14.5 Percentage of speakers with [w] not [hw] in words like *which* and *whine* in central Canada by age

The apparent-time span in figure 14.5 happens to have caught the change as it nears completion. The youngest age groups, the teenagers and the 20-year-olds, have all but eliminated the [hw] variant (at 87.6 percent and 90.6 percent). Projecting their trajectory of change into the future suggests (literally, predicts) that none of the people born 30 years after them will use the [hw] variant. Although that projection makes sound scientific sense, we know from numerous other cases that it does not make sound – or at least compelling – linguistic sense. This is because linguistic variants that are well-entrenched in the language, as this one clearly is, tend to linger. They continue to diminish, having lost their social salience except as "quaint" relics. This tailing-off has already begun, and it is visible in figure 14.5 in the flatter trajectory for the two youngest age groups compared to the comparatively steep trajectory for the subjects two or more decades older.

The apparent-time span also captures the starting-point in stasis, with the two oldest groups almost identical (37.7 percent, 38.3 percent). If we project that state of affairs into the past (or retroject it, so to speak), we discover a time when (wh) was stable, and the [hw] variant was the more frequent. That situation was disrupted by the 60-year-olds, whose usage changed the norms of the people older than them, so that, for them, the two variants were about equal. From that point forward, in the speech of people under 60, the [hw] variant was doomed. The trajectory of the change rises steadily, taking in about 10 percent of the population every decade for five decades, bringing it to the tailing-off point in the speech of the youngsters.

Just as the tailing-off period is a recurring pattern in linguistic change, so are the initial stability and the sudden rise. Before a change takes hold, there is a gradual, almost imperceptible, rise in frequency until the new form attains some kind of critical mass. At the earliest stage, the change apparently affects too small a population to serve as a model, but at some point it becomes perceptible, though usually beneath consciousness, and spreads through the community. No one has been able to establish the point of critical mass as an absolute value, and it appears to be different for each change, subject, as are all social developments, to countless possible influences. Once that point is attained, however, the change accelerates relatively rapidly toward the tailing-off point.

The combination of these three stages – initial stasis, rapid rise, and tailing off – gives a characteristic shape in graphic representations that is known as an S-curve. The significance of the S-curve pattern for linguistic change was introduced by Wang and his associates (esp. Wang and Cheng 1970, Chen 1972) as an adjunct of lexical diffusion, a type of change in which lexical items undergo a sound change one at a time, so to speak, and extrapolated in a variationist context by Bailey (1973: 77). The S-curve has since been observed in diffusions of all kinds (Chambers and Trudgill 1998: 162–4), and is now established as a kind of template for change.

Studies of linguistic changes will not necessarily capture all three stages. Available evidence might catch the change near the beginning, when the initial

stability shows signs of being disrupted by the first tremors of change, or in the middle when the change is progressing rapidly, or near the end, when it is tailing off toward a new stable state. By accident, figure 14.5 catches all three stages of the change. That means that in the 70-odd years of apparent time covered by this survey, the change took hold, attained critical mass, and rose to near-completion. The graphic display forms an S-curve, albeit a relatively gradual one. Its gradualness is explained by the fact that in the initial stage the amount of variation was already high (roughly, 40/60 for the two variants) so that the acceleration of the change toward completion had only a short distance to go. This in turn is explained by the fact that the period of stable variability was unusually long – indeed, for variable (wh), perhaps the longest on record.

6 Deconstructing the Change

The situation graphed in figure 14.5 is based on evidence from Canadian English, and the figures come from an extensive survey called the Dialect Topography of Canada (Chambers 1994). The subjects whose responses form the S-curve live in four regions with relatively distinctive regional cultures and histories (the Golden Horseshoe, the Ottawa Valley, Montreal and Quebec City). The four regions cover about a thousand kilometers where 11.5 million Canadians live, and the number of sociolinguistic observations underlying figure 14.5 is made up of almost 5,000 tokens of *which/witch* and *whine/wine* from over 2,000 subjects representing both sexes of all ages from all walks of life. This sample is fairly large, similar to public-opinion polls and the like. The sample size actually enhances the observation of change. This follows from the general rule that group results are more revealing than the results for any individual in the group (Guy 1980). The rule holds if the phenomenon underlying those results has an empirical basis. So, by this AGGREGATE PRINCIPLE, we know that when a trend is real, every additional observation gives it greater substance, and the converse also holds: when the trend is illusory, every additional observation makes it more chaotic. The coherence of figure 14.5 shows that the change it describes, the merger of /hw/ with /w/, is affecting all four regions. The change is not regional but national, taking place in Canadian English generally.

That does not necessarily mean that the regions are progressing in exactly the same way. In fact, the regional breakdown in figure 14.6 shows that they are not. Close inspection reveals that the uneven trajectories occur mainly in two of the regions, the Ottawa Valley and Quebec City, which appear to take idiosyncratic paths in the middle part of the change. (Quebec City lacks a data-point for the over 80s because of sample size.) Where two of the regions, Montreal and the Golden Horseshoe, trace paths so similar that they are almost inextricable, the other two regions meander through the first decades and then suddenly accelerate so that the people 30 and under in all regions

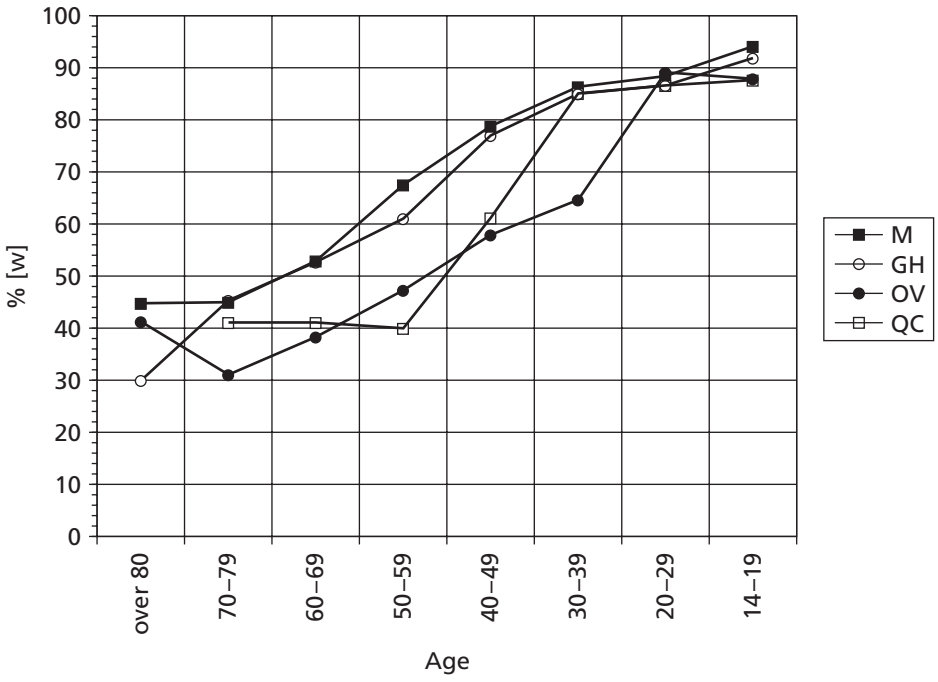

Figure 14.6 Percentage of speakers with [w] not [hw] in words like *which* and *whine* in four Canadian regions: Montreal (M), Golden Horseshoe (GH), Ottawa Valley (OV), Quebec City (QC)

end up at the same point. In Quebec City, the acceleration starts with the 40-year-olds, and in the Ottawa Valley with the 20-year-olds.

Understanding the demographics of the four regions helps to explicate the patterns. The two regions where the change is most regular, the Golden Horseshoe and Montreal, are highly urbanized and densely populated cosmopolitan centers, and the other two regions are less uniform with rural areas and towns as well as cities. Social changes of all kinds generally follow the diffusion route implied here: they take root in large urban areas and then diffuse down the urban hierarchy, from big cities to small cities and from there to towns and smaller settlements (Trudgill 1974, 1983: 52–87, Chambers and Trudgill 1998: 167–85). This pattern refutes traditional assumptions about innovations diffusing like a wave washing across a surface. A better analogy would be a pebble skipping across a pond, where the impact strikes one point and leaps to the next point, sending out ripples from each point of impact. The points of impact are the population centers.

Abrupt changes are rare. The large increases in some decades for Quebec City and the Ottawa Valley in figure 14.6, with 20 percentage points or more, are unusual because changes between contiguous age groups are normally limited (as discussed in the next section). However, the presence of the other

two urban regions in figure 14.6, where the change is progressing regularly, provides a context that explains these erratic accelerations. The young people in the Ottawa Valley and Quebec City are engaged in a catching-up process that brings them into line with their age-mates in the other two regions. They were lagging behind in terms of the standard reference points in the larger community. Instead of disrupting the accepted norms, their increases have the effect of bringing their communal norms into line with those around them.

7 Social Embedding of Variation and Change

When sociolinguists began viewing language changes in their social contexts, many of the old mysteries of historical linguistics – "the fruitless paradoxes" that Weinreich et al. (1968) deplored – simply disappeared. For instance, linguists long recognized that rates of change fluctuate, and that periods of relative stability can be followed by periods of considerable flux. In times of flux, if change is viewed from discrete points in time rather than along the whole range, it can take on the appearance of a generation gap or even a communication breakdown. This viewpoint, seeing change as a punctual phenomenon rather than continuous, was the one advocated by Bloomfield, Hoenigswald, and the other structuralists. We now recognize the apparent generation gap as an artifact of the static view.

Canadian English, which has experienced a period of fairly intensive change in the last 60 or 70 years, provides a case study. As it happens, variable (wh), the merger of /hw/ to /w/, is only one among many changes. Table 14.2

Table 14.2 Percentage of incoming variants in the speech of two age cohorts in the Golden Horseshoe, Canada

	1920	1980
[w] in *which*	29	89
[w] in *whine*	31	95
couch replaces *chesterfield*	6	85
napkin replaces (paper) *serviette*	48	85
napkin replaces (cloth) *serviette*	69	97
leisure ryhmes with "seizure" (not "pleasure")	58	99
news has [u] not [ju]	59	91
student has [u] not [ju]	43	89
dove replaces *dived*	59	90
snuck replaces *sneaked*	27	95
Average percentage	42.9	91.5

Source: Chambers (1998b)

takes a sample of these changes and compares the percentages of the incoming variants at two points 60 years apart. These changes are not necessarily the most dramatic, but they serve our purposes here by indicating the extent of the changes that have appeared fairly suddenly in this conservative branch of the English language. They also represent the major structural categories of language: *couch* and *napkin* are lexical changes, replacing the Canadianisms *chesterfield* and *serviette*; *leisure* is a pronunciation change; *which*, *whine*, *news* and *students* are phonological changes; and *dove* and *snuck* are morphological (all described in detail in Chambers 1998b). The purpose in selecting changes from several categories will become evident in the next section.

These extensive changes might suggest a sizable generation gap, especially if they are understood as representative of many more. They show that the speech norms in 1920 are very different from those in 1980. If teenagers spoke only to octogenarians, there might indeed be breakdowns in intelligibility. But such a view presupposes that change is instantaneous. The reductio ad absurdum for instantaneous change, attributed to the late James D. McCawley, imagines a Londoner who slept through the Great Vowel Shift and was bewildered the next day at being served ale when he ordered eel.

The apparent-time hypothesis makes us conscious of the fact that people in both groups in table 14.2 are contemporaries. The speech norms characteristic of people in 1920 and 1980 are mediated by the norms of people in between these groups, and one of the empirical breakthroughs of sociolinguistics, obvious though it seems in retrospect, is the discovery that the intermediate groups are truly intermediaries. Linguistic changes and variations of all kinds occur as gradations rather than discontinuous steps. This gradation is evident in figure 14.5 above, with its graphic representation of a pervasive linguistic change embedded socially as a series of relatively mild increases in contiguous age groups.

Figure 14.7 dramatizes the social embedding by plotting all the changes in table 14.2 against the continuous age scale on the abscissa. Each of the changes, of course, has its own complications. Studying the lines would show, for instance, that *napkin* is coming into use more slowly for a serviette made of paper than it is for a serviette made of cloth, among other nuances. More obviously, each of these changes has its own starting-point and ending-point. In other words, the changes are not synchronous. They are, however, contemporaneous, and after the impression of their differentness vanishes, what leaps out of the aggregated data is the striking diagonal trend that gives a kind of unity to these changes. In effect, the figure smooths out the vagaries in the individual rows of table 14.2. Those differences are represented in figure 14.7, all right, but they are overwhelmed by the larger regularities.

This provides another example of the AGGREGATE PRINCIPLE (defined in the previous section): group results for any empirically-based phenomenon are more revealing than the results for any individual in the group. In this case, the individuals are not subjects but are linguistic changes.

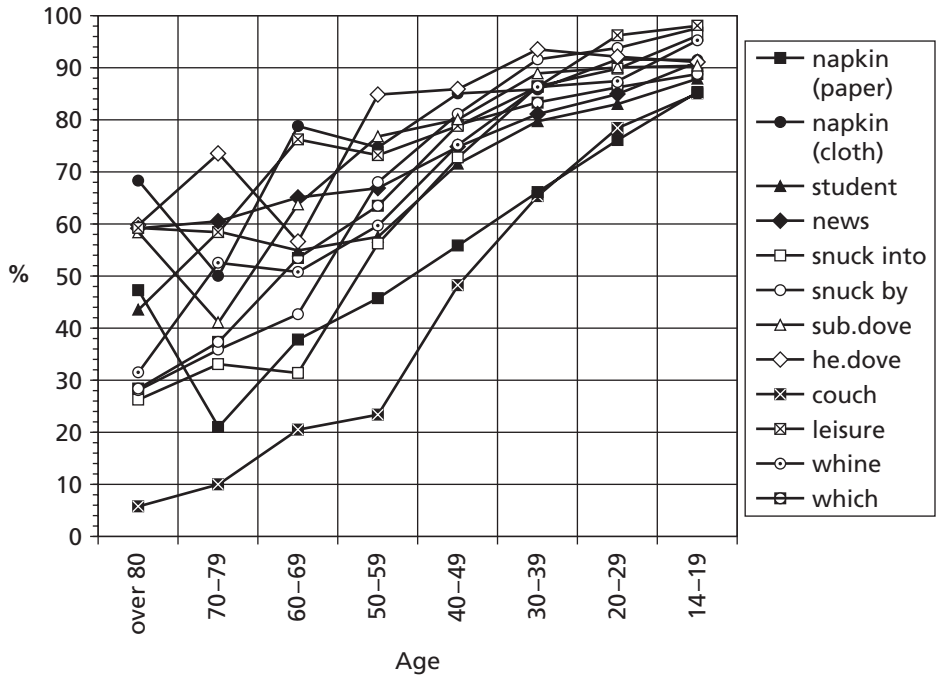

Figure 14.7 Seven changes in progress in Canadian English, illustrated by 12 variants as used by different age groups in the Golden Horseshoe

Source: Chambers (1998b: figure 9, 28)

The diagonal thrust of the changes is not linear but is roughly megaphone-shaped: broad at the left and narrowing rightward. At the broad end, the 80-year-olds have a range of about 65 percent for all the variables but at the narrow end the teenagers have a range of only 15 percent. The speech of older people is clearly more varied and less predictable than the speech of younger people, because more than one variant has fair currency in the speech of older people, but only one is used by most younger people.

Figure 14.7 demonstrates the illuminating effect of viewing sound change as a dynamic process. We recognize that the changes are taking place as an orderly progression, with small – and socially manageable – increments along the age continuum. In all societies, people are in most frequent and intimate daily contact with people in the same age cohort. Spouses, best friends, classmates, team mates, work mates, tennis opponents, bridge partners, club members and business associates tend to be within a decade or so of one another. These are the people who share reciprocal relationships, the kind that carry the most weight both socially and linguistically. The converse also holds. Relationships between people more than a decade apart in age are likely to be non-reciprocal – parents and children, teachers and students, supervisors and workers, managers and clerks. They are likely to be less influential socially – and linguistically.

Figure 14.7 shows that in speech communities people similar to one another in age speak much the same as one another, even with respect to variables that are going through fairly rapid changes. Hence the rarity of abrupt changes. Individual awareness of language change as people go about their mundane activities is mitigated by the insulating effect of these peer-group similarities. The social embedding is structured and cohesive.

8 Social Basis of Change

If we were to consider the changing variables in isolation, it might be possible to conclude that each one was undergoing change for linguistic reasons. Indeed, there is usually, perhaps inevitably, a linguistic aspect in the change. Variable (wh), the merger of /hw/ with /w/, is a case in point. The preaspirated variant [hw] is disappearing for what appear to be cogent structural-functional linguistic reasons. In the English phonemic inventory, it is the only preaspirate, and the only devoiced approximant, and it is defective distributionally because it only occurs initially. These conditions might be construed as sufficient in the sense that they determine the direction of change to be what it is, /hw/ > [w] and not vice versa. Eliminating [hw] rids the system of a highly marked and poorly integrated segment.

However, these linguistic properties have no bearing on the fact that the elimination of [hw] is imminent at this time and in this place. It has, after all, been a highly marked segment for many centuries. It became a preaspirate at the time of the Anglo-Saxon diaspora, and it has been the only preaspirate since approximately the twelfth century, when /hn-/, /hl-/ and /hr-/ dropped out (Lutz 1991: 34–5fn). It has been declining in nearly all varieties of English ever since, but its death throes are only now visible.

The linguistic conditions are sufficient, but it is the social conditions that are necessary. As we have seen, the [hw] variant of variable (wh) is not alone as it nears extinction. It is one of several changes, all of them moving in the same direction, all of them restricting the frequency of one of the variants perhaps ultimately to extinction. Linguistically, these variables have little in common, representing phonology, lexicon, pronunciation, and morphology. Historically, they have widely disparate time lines. *Couch* is replacing *chesterfield*, but *chesterfield* became established in standard Canadian English no earlier than 1900 (Chambers 1995b). *Snuck* is replacing *sneaked*, but the first attestation anywhere of *snuck* only goes back to 1887 (Creswell 1994: 146) and in Canadian English it had very little currency until the 1950s (Chambers 1998b: 22–5). Compared to (wh), these are mere fledglings, and yet all of them are moving in concert in the period covered by figure 14.7.

We can specify that time period with considerable precision by exploiting the apparent-time hypothesis. Closer inspection of figure 14.7 allows very precise inferences about the moment of concentrated change for each variable,

Table 14.3 Formative years for dialect and accent from 8–18 based on birth years

Formative years (8–18)	Birth years (from 1992 survey date)
base	before 1913 (over 80)
1920s	1913–22 (70–79)
1930s	1923–32 (60–69)
1940s	1933–42 (50–59)
1950s	1943–52 (40–49)
1960s	1953–62 (30–39)
1970s	1963–72 (20–29)
1980s	1973–78 (14–19)

determined by the decade when the greatest increase occurred in the use of the incoming variant, which coincides uncannily with the decade in which it became established in majority use. Those increases occur in the speech of 60-year-olds (*leisure*, *napkin*), or 50-year-olds (*dove*, *snuck*), or 40-year-olds (*couch*, *student*, *which*).

These are subjects who were born between 1930 and 1950. This reckoning is made simply by working back from the survey year, 1992, by the ages of respondents. The formative years for dialect and accent formation are from eight to 18, and the apparent-time hypothesis is predicated upon retention of those dialect and accent features thereafter, other things being equal. This allows closer dating, according to the commonsense calculations shown in table 14.3. For instance, a subject in her 60s (60–69) at the time of the 1992 survey was born in the decade 1923–1932, and so her formative years from eight to 18 were the 1930s.

These formative years appear on the abscissa in figure 14.8, which is a notational variant of figure 14.7. Figure 14.8 is the "first derivative" of figure 14.7, derived by calculating "the rate of change" as the increment of change from one decade to the next in an apparent-time representation like figure 14.7 (Easson 2000). For instance, the difference in the use of the variant *couch* between the 50-year-olds (at 23 percent) and the 40-year-olds (at 49 percent) is 26 (49 – 23 = 26), and the difference between the 40-year-olds and the 30-year-olds (at 65 percent) is 16; the difference is taken as an index of the rate of change (26 for the former, 16 for the latter). As an index score, it has no absolute meaning but is meaningful relative to other scores made from the same database.

Figure 14.8 calculates the rate of change as the average increment for all twelve variants in figure 14.7. It forms a bell, as if plotting normal distribution. This is accidental, but it emphasizes that the research project that gathered these results was fortuitously timed so that it captured virtually the entire

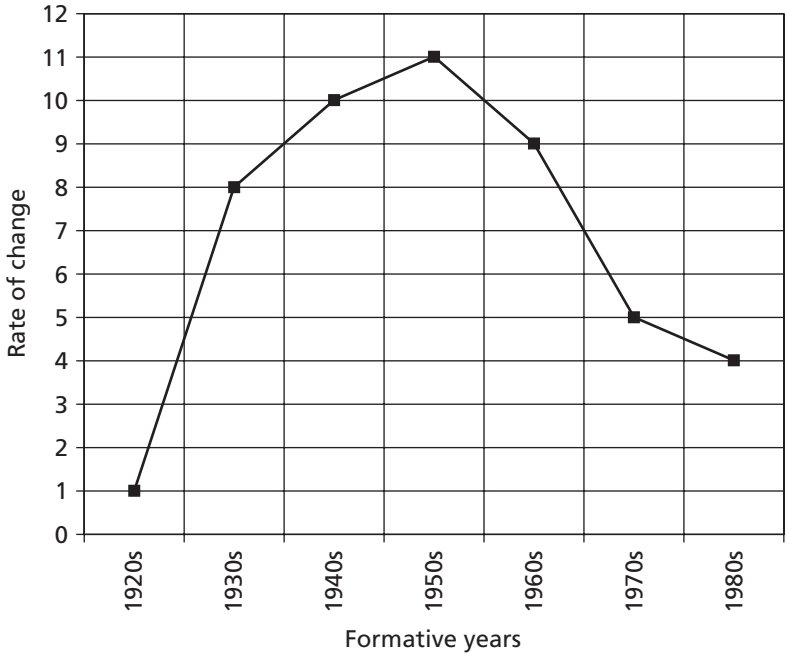

Figure 14.8 Rate of change for the seven changes in progress in the Golden Horseshoe, the first derivative of figure 14.7

Source: Easson (2000)

change cycle from inception to peak to tailing-off (as discussed in section 5 above) in the 70-year span of its apparent-time coverage.

Most important for our purposes here, the representation focuses attention on the social or (in a larger sense) sociocultural basis for the changes. The idea that these linguistically disparate variables trace remarkably similar trajectories was evident from the previous figure, but figure 14.8 makes its temporal regularity even more obvious.

The linguistic changes have sociocultural significance in the Canadian milieu. All of them follow the same pattern: in each, a British English variant diminishes and an indigenous Canadian, or more broadly North American, variant accelerates (Chambers 1998b: esp. 29–30). The chronology of these changes, with their main thrust in the 1940s and 1950s, the apex in figure 14.8, coincides with the time when British influence diminished noticeably in Canada as in other parts of the world, most palpably with the dissolution of the Empire. At the same time, multi-ethnic immigrations diluted and ultimately overwhelmed the Anglo-Celtic hegemony of Canadian ancestry (Chambers forthcoming). The changes were positively reinforced as well. In the second half of the twentieth century, the standard middle-class variety of Canadian English joined certain regional American standard dialects in a continent-wide

linguistic movement toward a developing North American standard variety (Chambers 1999). Even that may be too circumscribed: the developing standard may turn out to be not merely continental but global. Some of the features – elimination of /ju/ after coronals and /hw/ in all contexts, *dove* and *snuck* as past tenses, among those shown in table 14.2 – appear to be on the rise in standard English dialects all over the world (Chambers 2000).

Global linguistic changes like these make sense in the light of global social changes. Dialect leveling requires face-to-face interaction among peers, and for several generations interactions have multiplied with advances in geographic mobility, and peers have proliferated with burgeoning social and occupational mobility. From this perspective, the linguistic changes shown in figure 14.7 and echoed in figure 14.8 have merely kept pace with the pervasive sociocultural changes for which they have supplied the constant, and absolutely essential, accompaniment.

Presumably, it has always been so. Language is, after all, one of several sociocultural tools that make human existence possible in the first place, and that empower, enrich, and perpetuate it. Language may be the greatest of those tools and the most palpable effusion of innate human creativity, but it is only a tool nevertheless. Grammars come into being in the service of communication, and both grammar and communication must be enacted through communicative competence. We express who we are with fine nuance and no little grace, selecting linguistic variants contingent upon the setting in which we are speaking and on not only our own class, sex, age, ethnicity, style and much more, but also contingent upon all those things in the people we are speaking to. Human beings have apparently always done so, and it is safe to say they always will.

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