

Chapter 1

The Peripatetic History of Middle English *ē[†]

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1. Introduction

In Modern English, descendants of Middle English *ē, *ē̄, and *ε (when lengthened in open syllables) are merged in /i/. Examination of the historical sources and of modern dialects suggests that things were a bit more complicated, however. In particular, while *ē̄ (whether merged with *ε, as in Standard English, or not, as in some scattered dialects) approached *ē in the 14th century, it did not merge with *ē until the 17th century. In the interim, *ē̄ (but not *ē) approached *ǣ (or *æj), an approximation that is reflected both in contemporary prescriptive records and in scattered modern dialects. These historical developments are best understood in terms of a view of language change that is not restricted to investigating historical antecedents of prestige and standard dialects and that takes as a given that languages of the past were typologically and structurally comparable to languages of the present. Thus, for example, if near mergers are observed in present languages, the possibility of near merger cannot be excluded in discussions of past languages. A further consequent of our reexamination of *ē̄ is that additional doubt is cast on the chronological and conceptual unity of the Great English Vowel Shift.

1.1 Background

Modern sociolinguistic research in the Labovian paradigm has documented instances of near mergers. In a near merger, two sounds in a particular language or dialect are measurably and reliably different even though speakers generally behave as if the sounds do not contrast phonologically. In the near merger that we have studied the most, that of tense and lax vowels before /l/ in Utah, speakers produce the contrasting words POOL¹ and PULL with

statistically reliable acoustic differences (Di Paolo and Faber 1990; Faber and Di Paolo 1995), yet they often have substantial difficulty in correctly labeling randomly presented words as either POOL or PULL (Di Paolo and Faber 1990; Faber, Best, and Di Paolo 1993a, 1993b). That is, in circumstances that require meta-linguistic reflection, such as a perceptual identification experiment, speakers with a near merger cannot easily access the phonetic distinction that they make in their own speech (Labov, Karen, and Miller 1991; Labov 1994: 357–370, 377–418; Faber, Di Paolo, and Best, *ms.*). Similarly, near merged CHILL and DEAL are perceived to rhyme, as attested in a Salt Lake Valley advertising sign observed in the Spring of 1993: “TAKE OFF THE CHILL WITH/ A D I SWEATER DEAL.”² For the near merger of /a/ and /ɔ/ in the Intermountain West, listeners in a matched guise experiment rated speakers more favorably on factors associated with Standard English in guises that manifested the typical near merger than in guises with a complete merger or with no examples of /ɔ/ (Di Paolo 1992a). This result suggests that speakers with a near merger are sensitive to the near merged contrast under some circumstances, even though they cannot access it explicitly for linguistic purposes.

As pointed out by Harris (1985), the existence of near mergers follows from the theory of merger propounded by Trudgill and Foxcroft (1978). Trudgill and Foxcroft distinguish between merger-by-transfer and merger-by-approximation (See Figure 1.1). In merger-by-transfer (1a), lexical items move from the class defined by one phoneme to the class defined by another without a phonetically intermediate stage. In merger-by-approximation, in contrast, two phonemes gradually approach, or approximate, each other, until the regions in phonetic space occupied by the two coincide (1b). Such mergers are characterized by phonetically intermediate values. In cases of merger-by-approximation, there may well be a stage in which two phonemes are very close in phonetic space, but have not yet coalesced.

Since the concept of near merger entered sociolinguists' theoretical repertoire (Labov, Yaeger, and Steiner 1972), a substantial number of near mergers have been isolated and studied. These include FOOL/FULL in Albuquerque, NM (Labov et al. 1972) and the Salt Lake Valley (Di Paolo 1988; Di Paolo and Faber 1990; Faber and Di Paolo 1995); SAUCE/SOURCE in New York City (Labov et al. 1972); HERE/HAIR in Norwich, England (Trudgill 1974: 120–125) and possibly in Wellington, NZ (Holmes and Bell 1992); COD/CARD in eastern New England (Costa and Mattingly 1981); HOCK/HAWK in Western Pennsylvania (Labov et al. 1972) and the Intermountain West (Di Paolo 1992a, 1992b); MERRY/MURRAY in Philadelphia (Labov, Karen, and Miller 1991); CijV³-CijV in Russian (Diehm and

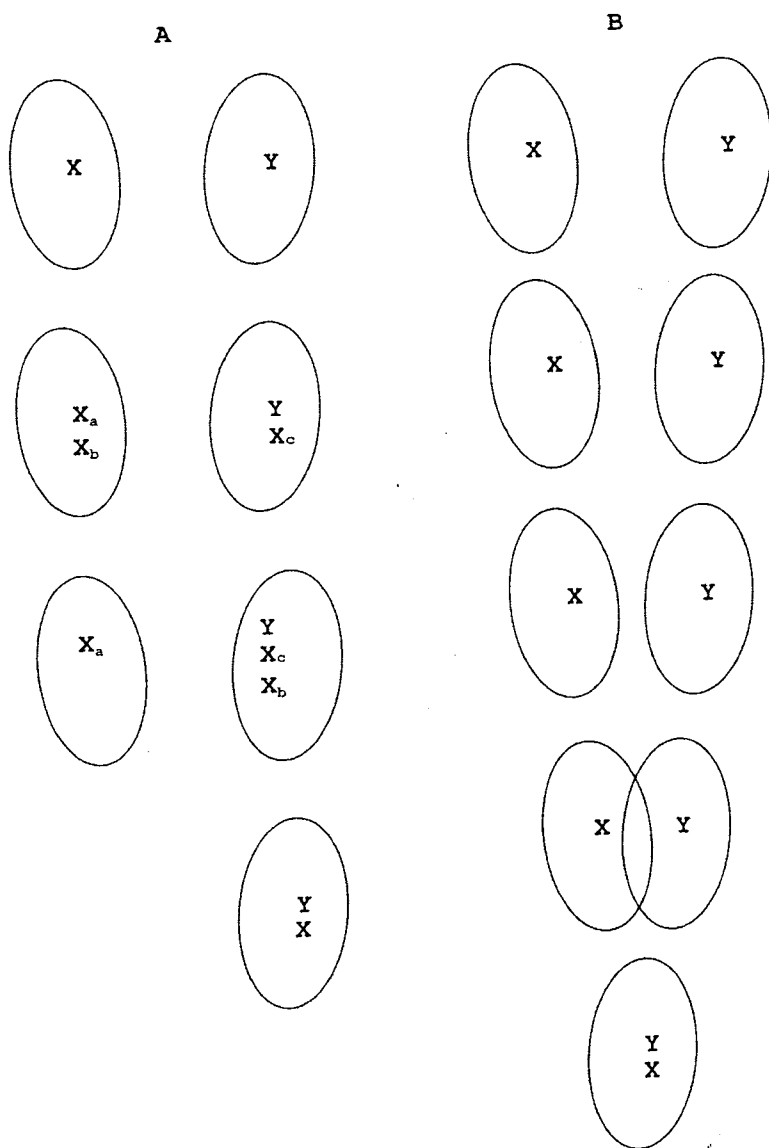


Figure 1.1 Schematic diagrams of Merger-by-Transfer (A) and Merger-by-Approximation (B) of two phonemes /X/ and /Y/. In merger-by-transfer, lexical items containing /X/ gradually come to contain /Y/ instead. In merger-by-approximation, the realizations of /X/ and /Y/ gradually approach each other in phonetic space, until they cannot be differentiated.

Johnson 1997); and, /ɛ/-/æ/ in some varieties of Swedish (Janson and Schulman 1983). And, some situations that have in the past been treated as complete merger have been reanalyzed as near mergers (Miller 1976; Nunberg 1980). Given the general uniformitarian assumption (Labov 1994: 21–45) that past stages of languages, stages that are not directly observable today, were qualitatively the same as modern, directly observable languages, it should be the case that near mergers occurred in the past as well. Clearly the methods used to diagnose near mergers—acoustic analysis and direct interrogation of speakers—are not available for past language stages. However, in languages with a written history and a metalinguistic tradition, it might be possible to discern traces of past near mergers. In fact, Labov (1975), in a paper entitled “Using the present to explain the past,” suggested that the early Modern English reflexes of Middle English *ē as in MEAT and *ā as in MATE were in fact nearly rather than fully merged. In the precursors of Standard English, the two vowels subsequently diverged, so that *ē ultimately merged with *ē as in MEET in Modern English /i/. However, the near merger is still observed in contemporary Belfast vernacular (Harris 1985: 241–248; Milroy and Harris 1980; Milroy 1992: 160).

While Labov (1975) is heavily cited by sociolinguists, this work has been virtually ignored by historical linguists, and especially by those focusing on the history of English. The more general notion of near merger is explicitly dismissed, where it is noted at all. Thus, Lass (1980: 94, n17) refers to the “uncertain empirical and theoretical status” of near mergers in his rejection of the possibility that *ē and *æj were nearly merged in the speech of John Hart.⁴ Likewise, Stockwell and Minkova (1988: 415) express skepticism about the spectrograms presented in Labov et al. (1972) as evidence of near mergers; it is unclear, however, whether they are questioning the generality of the phenomenon or Labov’s interpretation of the spectrographic evidence. In any case, the work cited in the previous paragraph suggests that near mergers are more widespread than might have been supposed based only on a close reading of Labov et al. (1972), providing the phenomenon with a more secure empirical status. In other work (Faber, Di Paolo, and Best Ms.), we address the theoretical status of near mergers, arguing that the existence of near mergers is consistent with current models of speech perception and of language acquisition. Consequently, when it comes to diachronic developments, the only appropriate basis for questioning reconstructions involving near merger is the extent to which they account for known facts. In the remainder of this paper, we will argue that, in the case of MEAT/MATE, no competing explanations have comparable coverage, and that, therefore, the near merger explanation is the most powerful one available.

2. MEAT/MATE revisited

2.1 The problem and the evidence

Because Labov's treatment of the MEAT/MATE facts has not been widely accepted, we felt that a complete re-examination of all the evidence was in order. We soon realized that it would be inappropriate to focus specifically on the MEAT/MATE developments. Instead, we found it necessary to focus more broadly on the changing place of the reflexes of Middle English *ē among the English front vowels. Rather than attempt to prove that any one development in the history of the English front vowels exemplifies near merger, we will construct a diachronic scenario in which near mergers play a role. To the extent that this scenario proves illuminating we will have provided support for near merger as a diachronic construct, supplementing the varied synchronic evidence in the literature.

Our scenario will be constructed, as much as possible, on the idealization that changes observed in Standard British English and its ancestors reflect internal developments alone. It is clearly the case that the language of invaders and migrants had an indelible influence on the face of the language; nonetheless, in many instances explicit evidence correlating a specific immigrant group with a specific feature or set of features is at best highly speculative. Milroy (1992) describes the common but inappropriate imposition of modern socially-based notions of standard, prestige, and vulgarism on speech communities of the past. To this we would add that current models relating the structured heterogeneity evident in any speech community to the socio-economic structure of that speech community are based on the class structure of modern industrialized society. The value of models of language change that find Lower Middle-Class women to be in the vanguard is clearly questionable for societies in which the social role of women is different than in modern societies, societies in which the educational opportunities available to all members, especially to women, were much more limited than today, and societies without a clearly identifiable Middle Class.⁵ When outside influences are appealed to in efforts to account for developments in Standard English, these appeals generally hide assumptions about the geographic origin of migrants to London in particular centuries, and how well integrated these migrants were in London speech communities. They also hide assumptions about what sorts of in-migrants would have been in a position to influence the speech of native Londoners. Milroy and others have shown that the responsiveness of vernacular speakers in modern societies to the linguistic norms of standard varieties of their language is much more limited than conservative politicians

and educators would like to be the case (Milroy and Milroy 1992: 109–115, with references). Adherence to non-standard, sometimes covert, community norms is a way of showing solidarity with one's community (Labov 1963; Trudgill 1983). It seems unlikely that vernacular speakers in the past would have been more responsive to external normative pressures than those of the present. In any case, appeal to outside influences to explain particular linguistic developments reflects, in large measure, biases that linguistic change must have external causes (see Faber 1992 for further discussion). Instead, our goal here is to construct, insofar as possible, a scenario in which evolution of the Modern English vowel system can be explained on the basis of internal factors alone. Such a scenario seems to us to be a necessary precursor to empirical determination of the actual role of cross-dialect influences and other external factors in shaping the modern English system. While we are not uninterested in either the causes of particular sound changes or in the causes of sound change in general, we prefer to start with a description of what happened. In the case of MEAT/MATE and the allied Great English Vowel Shift, even a cursory review of the literature suggests that adequate description poses a sufficient challenge.

Sources of evidence for the vowel system of English in various times and places are varied. In addition to changing spelling conventions and poetic rhymes, we have orthoepical evidence from various periods, to the extent that this is interpretable. There is also considerable evidence for modern variants in the *Survey of English Dialects* (SED). As with the other sources of evidence, this evidence must be interpreted with caution. Particular variants observed by SED fieldworkers in the middle of the twentieth century cannot be assumed to have had highly comparable distributions 300–400 years ago (similarly, Stockwell and Minkova 1988). Aside from the spread of standard and standard-like forms at the expense of regional variation, the existence at other times of competing regional standards emanating from other centers of influence, especially in the north and in the north Midlands cannot be excluded. Nonetheless, the SED records provide presumptive evidence for the validity of particular systems that might be posited for earlier stages of the language.

One sort of evidence we will not be using is literary puns. Although extensive studies are available of puns in Shakespeare's works (e.g., Kökeritz 1953), in an era that is surely relevant to our topic, we are not convinced that all (or even any) of these puns are necessarily based on complete or perceived homonymy. As Kökeritz (1953: 53ff) notes, phonological reconstruction is necessary to distinguish true homonymic puns from those that are not truly homonymic. If phonological reconstruction is necessary to determine which

puns are homonymic, then the existence of a particular class of putatively homonymic puns cannot be used to argue for a particular reconstruction without risking circularity. As a result, we will not be using puns as evidence in the present investigation.

2.2 The 'top half' shifts and their chronology

Table 1.1. Late Middle English Front Vowels

Long Vowels	Keywords	Short Vowels	Keywords	Diphthongs	Keywords
ī	BITE	i	BIT	ij	NIGHT
ē	FEED				
ē, ê	HEAP, SPEAK	ε	BET		
(ō), â	(STONE), NAME	æ	CAT	æj	DAY

The Middle English front vowel space, in Table 1.1, was quite crowded. In addition to the short vowels /i ε æ/, there were long vowels /ī ē ē â/ and diphthongs /ij/ (< *ig) and /æj/ (< *eg, *æg). We follow Dobson (1968), Stockwell (1985), and Stockwell and Minkova (1988; 1990; 2002) in interpreting the short vowels as qualitatively as well as quantitatively distinct from their long counterparts. This interpretation is based on the fact that there were different numbers of long and short vowels. If both the short vowels and the long vowels were evenly distributed in the front vowel space, there would necessarily have been qualitative differences between the short vowels and their long counterparts. These differences would have been most striking for *ε, which would, in the ideal case, have been equidistant from *ē and *ē, while *i and *æ would have been relatively close to *ī and *â, respectively. Further, when *ε lengthened in open syllables the resulting vowel was not identical with *ē or with *ē (see section 2.3.1), supporting the suggestion that *ε was qualitatively distinct from both *ē and *ē. In what follows, we will use the symbol ê to refer to this lengthened *ε; we will likewise use â, when it is necessary to distinguish original long from lengthened æ. Lass (1980, 1989, 1992b) bases his opposing interpretation that short vowels differed from their long counterparts only in quantity primarily on the fact that 16th-century orthoepists, especially John Hart, do not describe any qualitative differences. However, it is worth noting that John Hart is describing a vowel system several hundred years more advanced than that of Middle English. In particular, the upper half vowel shifts had already taken place. Thus, the fact that post-shift /ī/

in FEED might have been qualitatively identical to *ī, or nearly so, in no way means that the pre-shift *ī in BITE was. And if BET and HEAP had vowels of the same quality for Hart, this qualitative identity may reflect raising of *ē incidental to the Vowel Shift. In any case, the system in Table 1.1, more or less, provided the input to the Vowel Shift, which we agree should be separated into two; as regards the front vowels, the diphthongization of *ī BITE and raising of *ē FEED must be separated, both chronologically and areally, from the raising of *ē HEAP and of *æ/*æj DAY/NAME (Johnston 1992; Stockwell and Minkova 1988; Lass 1989).

Stockwell and Minkova suggest that the impetus for the top-half shifts involving *ī BITE and *ē FEED was the early creation of a diphthong in *ij NIGHT following the full lenition of velar and palatal fricatives *ɣ/z (and epenthesis of /w/ or /j/ before their voiceless counterparts). Words in the BITE *ī class gradually transferred to the *ij NIGHT class, an example of merger-by-transfer. Then, according to Stockwell and Minkova, the onset in *ij NIGHT lowered, as *ē FEED, already fairly high, raised further, to fill the gap vacated by the lowering of *ij NIGHT (similarly, Jespersen 1909: 233ff). We agree with Stockwell and Minkova that *ī BITE diphthongized before *ē FEED rose. However we disagree that merger of *ī BITE and *ij NIGHT necessarily played a crucial role in the development of [aj]-like diphthongs for either class. Our disagreement is based on the existence of SED (Orton and Barry 1969) sites in the far north of England in which the *ī BITE and *ij NIGHT classes are still distinct. In these locales, the reflex of *ī in BITE is /aj/, /æj/, or /ɛj/. At most of these sites, *ij NIGHT merged with *ē FEED rather than with *ī BITE. However, at five sites,⁶ *ī BITE, *ij NIGHT, and *ē FEED are all distinct. At these sites, *ē FEED emerges as a mid central diphthong, /əj/ or /ɛj/,⁷ and *ij NIGHT is /i/. Thus diphthongization of *ī BITE, as far as /æj/, is dependent neither on raising of *ē FEED nor on merger with *ij NIGHT.

The dialectological evidence regarding the relation between the diphthongization of *ī BITE and the raising of *ē FEED is consistent with the historical attestations of these changes in Southern and Eastern sources, as summarized by Dobson (1968). The merger of *ī BITE and *ij NIGHT was complete by 1400, although it is primarily observed in Eastern (e.g., Norfolk) sources in the 15th century (§140), and the diphthongization of the merged phoneme had begun by 1400 as well (§137). The raising of *ē FEED to /i/ was complete by 1450 (Stockwell and Minkova 1988) or 1500 (Dobson, 1968: §132). These chronologies suggest that, at least for the front vowels, diphthongization of the high vowel preceded raising of the mid-high vowel.

Lass (1989; 1992a), following Luick (1964: §482), Wolfe (1972) and others, suggests instead that the raising of *ē FEED (and *ō) pushed *ī/ij BITE/NIGHT

(and *ū/uw) out of the way; as Luick observed, *ū did not diphthongize in dialects in which *ō had previously fronted. Lass' chronological argument (most recently, 1992a) is based primarily on an overt parallelism with the back vowels. That is, if *ō raised before *ū diphthongized, it must also be the case that *ē raised before *ī diphthongized. It seems to us that, rather than being a premise in an argument for a particular chronology, this parallelism is one possible consequent of a demonstration that the chronologies for diphthongization and raising are the same for the front and back vowels. In particular, while, as described before, the dialectological evidence suggests that *ī diphthongized before *ē raised, there is dialectological evidence suggesting that *ō raised before *ū diphthongized. According to the SED (Orton and Barry 1969), in a small region of west central Gloucestershire,⁸ *ō has raised to [ū], while *ū is only marginally a diphthong [ʊū] (similarly, Stockwell and Minkova 1988).⁹ This evidence, combined with that adduced earlier, clearly supports an ordering of *ō raising followed by *ū diphthongization. However, the chronological and dialectological evidence suggests that *ī BITE diphthongized before *ē FEED rose.

Further evidence for this chronology comes, paradoxically, from a handful of forms in which *ē raising is attested quite early, especially in eastern and south-eastern sources, as collated by Weřna (2004). In a group of French borrowings (e.g., *friar*, *inquire*, *entire*, *choir*, *contrive*, *dice*), many ending in /r/, /ē/ raised to [ī] early enough to merge with *ī, and subsequently diphthongize. Thus, even if the chronologies described previously allowed for ordering *ē raising before *ī diphthongization, they would not support positing a causal link. Rather, they suggest that the two changes spread independently. In some areas, *ē raising began early enough to feed *ī diphthongization, but in the vast majority of the area in which both changes occurred, *ī diphthongization occurred first, so that the subsequent raising did not lead to merger.

2.3 The 'bottom half' shifts

Stockwell and Minkova (1988) treat the changes involving *ǣ NAME as resulting from merger with *ǣj DAY < *ǣj, ej. The dialectological evidence in SED summarized by Anderson (1987) suggests that this change originated in the north Midlands and eventually spread to virtually all of England, except for a corner in the northwest Midlands. Based on late medieval spellings (c. 1350–1450), especially of *lady*, Johnston (1992) likewise suggests that the bottom-half shifts originated in the Yorkshire Dales (similarly, Luick 1964: §515) by the late 14th century. These shifts may have begun even earlier. Johnston (1992) presents evidence that [ǣ] had raised in some Yorkshire dialects prior to the top half

shifts described in section 2.2, and, indeed, prior to open syllable lengthening (OSL). In these dialects (and in other northern dialects), Old English **ā* STONE had not backed to /ɔ/. In most of these dialects, NAME and STONE ultimately merged; that is, **æ*, when it lengthened to [æ̃], merged with **ā*. However, in a few parts of the West Riding of Yorkshire, STONE merged with HEAP/SPEAK, as /ɪə/, while NAME varies between /ɪə/ and /eə/. Assuming that OSL affected all short vowel qualities at the same time, Johnston's reconstruction involves an early merger of reflexes of OE **ā* STONE and **ē* HEAP; following OSL, **ê* SPEAK merged with STONE/HEAP while **æ̃* NAME remained distinct.

Minkova (1982) demonstrates that OSL was a concomitant of the loss of final *-e*. According to the authorities cited by Minkova, both OSL and loss of *-e* were underway in the north early in the 13th century. It follows then that the bottom half shifts began, at least in some areas, by the start of the 13th century. The merger of **æ̃* NAME and **æj* DAY did not reach southern Standard English until the early 17th century. The raising of **ê/ē* SPEAK/HEAP to /i/ (and the consequent merger with **ē* FEED) did not take place until the 16th century in non-standard (especially northern) speech and late in the 17th century in the standard (Dobson §106, §107); thus, Stockwell and Minkova (1988) exclude this final raising to merger from the vowel shift proper. However, in our view, the ultimate merger of **ê/*ē* HEAP/SPEAK with **ē* FEED in /i/ is the last step in a sequence of events set in motion by the late Middle English lengthening of **ε* SPEAK in stressed open syllables.

2.3.1 *Step 1: The lengthening of *ε*

Despite the crowded Middle English front vowel space, the lengthening of **ε* SPEAK did not immediately lead to merger. This claim is supported by two pieces of evidence. First of all, **ê* SPEAK remained distinct from **ē* HEAP at least until the middle of the last century in a wide area of northwestern England, according to the SED, and more scattered areas elsewhere.¹⁰ This area (indicated in Figure 1.2) includes Lancashire and the West Riding of Yorkshire, as well as Cheshire, Derbyshire, and parts of Staffordshire, Shropshire, Suffolk, Cornwall, Devon, Hampshire, Gloucestershire, Wiltshire, Oxfordshire, and Buckinghamshire. The typical contrast is something like /ɪə/ in HEAP vs. /ej/ in SPEAK (Orton and Barry 1969). In much of the area in which **ē* HEAP and **ê* SPEAK are distinct, they are distinct from **ē* FEED as well. As in Standard English, the reflex of **ē* FEED tends to be /i/. Given the retention of a distinction between **ē* and **ê* in some areas, with both patterning as long vowels, ordinary comparative methodology requires reconstructing a two-stage process in the ancestors of Southern Standard English (cf. Lass 1988):

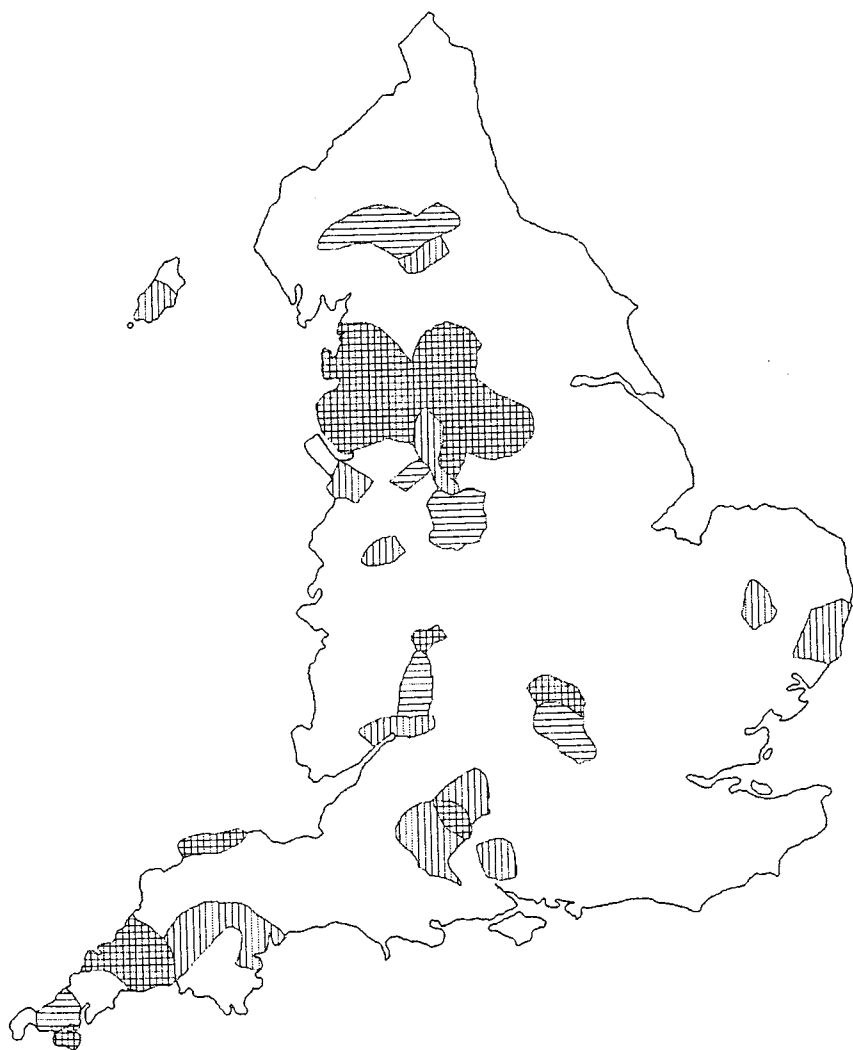


Figure 1.2 Regions of England in which the SPEAK and HEAP classes remain distinct, according to the Survey of English Dialects. Key: cross-hatching indicates that the SPEAK class is distinct from both the HEAP class and the FEED class; vertical stripes, that HEAP and FEED have merged, and are distinct from SPEAK; and horizontal stripes, that SPEAK has merged with FEED, and both are distinct from HEAP. (In all maps, Scotland and Wales are not shown, because they were not surveyed for SED.)

first *ê lengthened in virtually all of England; later, in a more restricted area, reflexes of *ê merged with those of *ē.

In any case, this three-way contrast of *ē FEED, *ε HEAP, and *ê SPEAK was earlier more widespread than indicated in SED. In a study of rhyming patterns used by Chaucer and contemporary poets, Ogura (1980; 1987, ch. 2) found that in the late 14th century, *ê SPEAK rhymed with *ē HEAP and with *ē FEED, but *ε HEAP and *ē FEED did not rhyme with each other. Ogura interprets these facts as reflecting lexical diffusion leading to the ultimate merger of *ē FEED and *ε HEAP. However, if, as Ogura suggests, this merger was complete by the middle of the 15th century, subsequent developments are difficult to interpret. Consequently, we would like to suggest that *ē HEAP, *ē FEED, and *ê SPEAK were phonetically very close, but nonetheless distinct. That is, as illustrated in Figure 1.3a, *ê SPEAK stood in a near merger relationship to both *ē FEED and to *ē HEAP. Recall that in the modern near mergers that we have studied, words may be perceived as rhyming without having phonetically identical nuclei. We want to stress that these near merged rhymes are conceptually distinct from so-called false or inexact rhymes. The difference is that in near merged rhymes, neither rhymers nor readers are conscious of any phonetic differences between the rhyming elements. In contrast, in inexact rhymes, rhymers and readers alike treat two words as if they rhyme, despite their awareness of phonological differences.

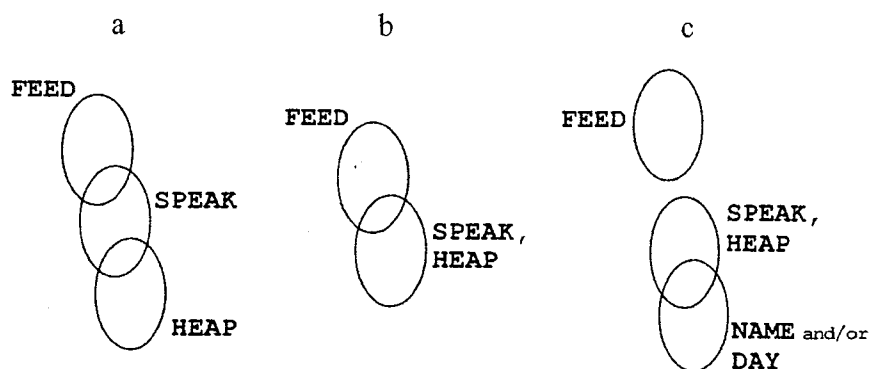


Figure 1.3 Schematic diagrams representing hypothetical overlap of reflexes of Middle English front long vowels and diphthongs. In A, the SPEAK class overlaps with both the FEED class and the HEAP class. In B, the SPEAK and HEAP classes have fallen together, with the result that both overlap with the FEED class. In C, the FEED class has diverged from the SPEAK/HEAP class, which has now come to overlap with the NAME class or the DAY class, neither of which is represented in A or B.

2.3.2 Step 2: Merger of *ê with *ē and convergence with *ē

Ogura also found that by the first part of the 15th century, *ē FEED, *ē HEAP, and *ê SPEAK all rhymed with each other. She interprets this to mean that all three sounds had merged. We agree with Ogura that the change in rhyming patterns between the late 14th and early 15th centuries is evidence for phonological change. However, we disagree with her as to what that change was. We suspect that two things had happened. First of all, in Chaucer's language, *ê SPEAK totally merged with *ē HEAP. Secondly, *ē HEAP (now including *ê SPEAK) moved into a near merger relationship with *ē FEED. If the merger of *ê SPEAK and *ē HEAP proceeded by *ē HEAP moving into the phonetic space occupied by *ê SPEAK, as indicated in Figure 1.3b, then the near merger of *ē FEED and *ē HEAP would have been a consequence of the earlier near merger of *ē FEED and *ê SPEAK, and the two changes are reduced to one. We distinguish between the true merger of *ē HEAP and *ê SPEAK and the near merger of *ē FEED and *ē HEAP based on subsequent developments: *ē HEAP and *ê SPEAK shared subsequent developments, while *ē FEED and *ē HEAP diverged in descendants of Chaucer's language.

2.3.3 Step 3: Divergence of *ê/ē from *ē and convergence with *æ and/or *æj

Several pieces of evidence suggest that *ē HEAP and *ē FEED diverged. First of all, around the turn of the 16th century, the spelling <ea> was reintroduced for *ē HEAP, on old Saxon models (Scragg 1974), and this spelling was the norm by the early 17th century. Secondly, according to Dobson (1968) and others, /i/ in FEED was the norm by the turn of the 16th century. Third, also starting in the 16th century, *ē HEAP, but not *ē FEED, approximated *æ NAME and/or *æj DAY, as illustrated in Figure 1.3c. This near merger continued into the early 18th century in some speech varieties, and, as we will show (in section 2.3.4) into at least the mid-20th century in some parts of England. Contemporary evidence for the approximation of HEAP to NAME and/or DAY, cited by Dobson (1968), Labov (1975, 1994: 298–303), Harris (1985), and others, indicates that HEAP had the same vowel as NAME and/or DAY for some speakers in some areas. Most of this evidence is from non-orthoepical sources. Labov (1994: 302) suggests a socio-economic factor. The few orthoepists who report a system in which HEAP and NAME have the same value were the sons of tradesmen, while their contemporaries who did not report such a system were from landed gentry or noble families. Further, as noted by Milroy (1992), rejection of evidence in support of system (1.3c) (e.g., by Luick 1964: §489, Wolfe 1972, and Cercignani 1981) has been based in large measure on the presumption that sounds once merged

cannot unmerge. This presumption is only valid for true mergers, not for near mergers.

Here we have the crux of the matter. It is relatively straightforward to derive the modern English system in which reflexes of **æ* NAME and **æj* DAY contrast with reflexes of **ē* FEED, **ē* HEAP, and **ê* SPEAK without the intermediate stage in which **ē* HEAP and **ê* SPEAK had apparently merged with **æ* NAME or **æj* DAY, as in (1.3c). However, if the speech form in which NAME and DAY contrast with FEED, HEAP, and SPEAK is a direct descendant of one in which HEAP, SPEAK, and NAME and/or DAY were truly merged, there are severe difficulties. There are several 'solutions' in the literature.

The first 'solution' is to deny the validity of the sources suggesting system (1.3c) in the precursor of Standard English. This is the 'solution' adopted by Luick (1964), Wolfe (1972), and Cercignani (1981), among others. One problem with this 'solution' is that, while much of the evidence suggesting system (1.3c) comes from sources that are relatively easy to explain away, John Hart, generally considered the 'best' orthoepist, clearly reports the same vowel in HEAP and DAY, one that differed from his vowel in NAME (see Wolfe 1972: 35ff for discussion).

The second 'solution' is to assert that the contemporary standard pronunciation of HEAP/SPEAK with /i/ rather than /e/ was borrowed from another dialect in which system (1.3c) had not occurred because (1.3b) had led to true merger of **ē/ê* HEAP/SPEAK with **ē* FEED; in such dialects, HEAP/SPEAK would have raised to /i/ when FEED did, in the 15th century. Dobson (§108) notes that the dialects most likely to have influenced the standard, those of Essex, Suffolk, and Norfolk, also apparently had (1.3c). If the raised variant of HEAP/SPEAK was borrowed from any of these dialects to the standard, it is still necessary to explain how HEAP and NAME diverged in them. Further, it seems to us unlikely that any source dialect would have had exactly the same words in the HEAP/SPEAK class as the standard. Whether the dialect borrowing hypothesis is to be interpreted as borrowing lexical items or as changing the pronunciation of lexical items under the influence of the source dialect, changes in the lexical inventories of the dialects would have led to a residue of words in the HEAP/SPEAK class with /e/ rather than /i/. Such a residue clearly exists, in the well known set of 'exceptions' *great*, *break*, *steak*.¹¹ However, the dialect borrowing hypothesis provides no such handy account of words from the NAME and DAY classes which surface in the standard with /i/ rather than /e/. Chief among these are *measles*, from ME *maseles*, with **ā*, and *pleat*, a doublet from *plait*. (Other anomalous outcomes, like 19th-century *raisin* with /i/, have been leveled out.)

As a result of difficulties with the dialect borrowing hypothesis, Dobson (§108) suggests that *all* words in the HEAP/SPEAK class had variants with



Figure 1.4. Regions of England in which the SED found relics of a merger of SPEAK/HEAP with NAME and/or DAY. Key: horizontal stripes, indicate that SPEAK and/or HEAP is merged with NAME; vertical stripes, that SPEAK and/or HEAP is merged with DAY; and cross-hatching, that SPEAK and/or HEAP is merged with both NAME and DAY.

/ē/ and variants with */ē/*, starting as early as the 14th century. Thus, in effect, systems (1.3b) and (1.3c) existed simultaneously in the precursor to Standard English. As **æ* NAME raised to */ē/*, the lower variant in the HEAP class merged with NAME, and, at the same time, the higher variant merged with

FEED, and, with FEED, raised to /i/ in the 15th century. In Dobson's view, the HEAP/SPEAK variants with /ē/ dominated through the 17th century, but the higher variants in /i/ (< *ē) ultimately won out.

As Labov (1975) pointed out, the diachronic problem disappears if we assume that the 16th and 17th century *ē/ê HEAP/SPEAK and *æ NAME and/or *æj DAY merger was a near merger and not a true merger. It is important to note that Labov's analysis is not a special instance of the first 'solution' described before, that there never was a merger of HEAP/SPEAK with NAME and/or DAY. That solution requires explaining away the observations from the 16th century. In contrast, Labov's near merger account does not require discarding this evidence, since 16th-century speakers who treated HEAP and NAME words as rhyming were behaving exactly like modern speakers with near mergers. That is, Labov's account incorporates a psycholinguistic explanation rather than carelessness for the observations of these speakers.

2.3.4 Step 4: Merger of *ê/ē with *ē and of *æ with *æj

The near merger of HEAP/SPEAK with NAME and/or DAY did not necessarily occur in the same wide geographical area as the earlier merger of HEAP and SPEAK. However the widely dispersed reports of a comparable merger in contemporary dialects (Figure 1.4) suggest that it too was relatively widespread. (The transcriptional identity of reflexes of *ê and *æ in SED reports for these areas may, of course, mask a contemporary near merger like that observed by Harris (1985) in Belfast.) In addition to the approximation and repulsion of HEAP/SPEAK and NAME and/or DAY, two additional changes occurred in the history of the standard. These are the merger of *æ NAME and *æj DAY already mentioned and the raising of *ê/ē HEAP/SPEAK to /i/, merging with *ē FEED. These changes are in principle independent. Thus, there are eight possible descendants of the system in (2c). These outcomes are listed in Table 1.2. Seven of these possible outcomes are attested in the SED records.

The first possible outcome is no change. That is, *ē HEAP, *ê SPEAK, and *æ NAME would continue to be distinct from *ē FEED and from *æj DAY. This pattern is attested in the North Riding of Yorkshire, in Hampshire, and in parts of Gloucestershire, Devon, Cornwall, and Suffolk.¹² The second outcome is reversal of the near merger, with no additional change. This pattern is attested in parts of Cumberland, Lancashire, and NW Yorkshire, as well as in scattered locations in Staffordshire, Dorset, Cornwall, and Essex.¹³ (This pattern may, of course, be a direct continuation of (1.3b) rather than an outcome of (1.3c) with re-splitting of *ē HEAP and/or *ê SPEAK from *æ NAME.) As

Table 1.2 Possible Descendants of Vowel System (1.3c)

<i>Outcome</i>	<i># of Different Vowels</i>	<i>Changes from 1.3c</i>	<i>Contrasting Word Classes</i>	<i>Where Attested</i>
1.	3	no change	HEAP/SPEAK/ NAME vs. DAY vs. FEED	Yorks, Hamps, parts of Gloucestershire, Cornwall, Devon, Suffolk
2.	4	Resplit	HEAP/SPEAK vs. NAME vs. DAY vs. FEED	parts of Cumberland, Lancs, parts of NW Yorks, Dorset, Essex
3.	2	Merger 1	HEAP/SPEAK/ NAME/DAY vs. FEED	SED site Ch 6 (Hanmer, Flintshire)
4.	3	Resplit + Merger 1	HEAP/SPEAK vs. NAME/DAY vs. FEED	Central Yorks and Lincolnshire, Westmorland
5.	2	Merger 2	HEAP/SPEAK/ NAME/FEED vs. DAY	Scattered locations in N Yorks, Hamps, Staffordshire
6.	3	Resplit + Merger 2	HEAP/SPEAK/ FEED vs. NAME vs. DAY	East Anglia, Kent, Wilts, Somerset, Oxfordshire, Herefordshire; earlier and independently in far North
7.	2	Resplit + Merger 1 + Merger 2	HEAP/SPEAK/ FEED vs. NAME/ DAY	SE England, S Midlands (Standard English)
8.	1	Merger 1 + Merger 2	HEAP/SPEAK/ FEED/NAME/ DAY	Not attested

already indicated, the merger of *æ NAME and *æj DAY probably began in the West Riding of Yorkshire. In the West Riding of Yorkshire and in Lancashire, this was the only merger to occur in the front vowel system, although the pronunciation of the vowels has changed. The third possible outcome then is superposition of this merger on the preceding *ē/*ê/*æ HEAP/SPEAK/NAME merger or near merger, giving rise to a system in which *ē/*ê/*æ/*æj

HEAP/SPEAK/NAME/DAY contrast with *ē FEED. This system is attested only in Cheshire (C6 Hanmer [Flintshire]). Anderson (1987) suggests, however, that it was formerly more widespread in the South Midlands. The fourth outcome is reversal of the near merger, coupled with merger of *ǣ NAME and *æj DAY, giving rise to a system with a three-way contrast of *ē/*ê HEAP/SPEAK, *ǣ/*æj NAME/DAY, and *ē FEED. This system is attested in central Yorkshire, in Lincolnshire, and in southern Westmorland.

The fifth possible outcome is merger of *ē/*ê/*ǣ HEAP/SPEAK/NAME with *ē FEED. This system is attested only in a few isolated locations in Hampshire, Yorkshire, and Staffordshire.¹⁴ There are, in addition, dialects in which *ē/*ê HEAP/SPEAK diverged from *ǣ NAME, merging instead with *ē FEED. This is the sixth possible outcome, and it is attested in East Anglia and Kent, as well as in Somerset, Herefordshire, Wiltshire, and Oxfordshire, and in Derbyshire (and parts of adjacent counties). In the seventh possible outcome, everything happened. That is, *ē/*ê HEAP/SPEAK diverged from *ǣ NAME; *ǣ NAME then merged with *æj DAY, and *ē/*ê HEAP/SPEAK with *ē FEED. This is the Standard English system, indicated with small cross-hatches in Figure 1.5. Aside from the coastal areas where it is probably a late intrusion (Bristol, Isle of Man, coastal Northumberland and Durham), this system is attested in two large areas, the Southeast of England (including London), and the South Midlands. (The eighth possible outcome of system (1.3c), collapse of all five vowel classes into a single category, is not attested anywhere.)

Because the *ǣ/*æj NAME/DAY and *ē/*ê/*ǣ HEAP/SPEAK/FEED mergers are logically independent, they could have occurred in different orders in different areas. As already noted, the *ǣ/*æj NAME/DAY merger originated in the West Riding of Yorkshire. Most of the area in which this merger took place but not the merger of *ē/*ê/*ǣ HEAP/SPEAK/FEED is in the north. This area is marked with horizontal stripes in Figure 1.5. In contrast, most of the area in which *ē/*ê/*ǣ HEAP/SPEAK/FEED merged but not *ǣ/*æj NAME/DAY is in the east and south. This area is marked with vertical stripes in Figure 1.5. This geographical location is consistent with Dobson's observation that the earliest indications of the *ē/*ê/*ǣ HEAP/SPEAK/FEED merger are in eastern sources.

To our puzzlement, Anderson (1987) describes the *ǣ/*æj NAME/DAY merger as atypical for the south. He attributes its spread to a South Midlands koine in which HEAP/SPEAK/NAME/DAY were merged (outcome 3 on Table 1.2). Although SED records such a system only in Flintshire (Cheshire 6), it was attested in various locations in the South Midlands in the 19th century. However, it is difficult to see how such a system could have provided the basis for a merger of *æj DAY with *ǣ NAME rather than with *ē/*ê HEAP/SPEAK,



Figure 1.5 Geographic extent of NAME/DAY and SPEAK/HEAP/FEED mergers, in SED. Key: horizontal stripes indicate that NAME is merged with DAY; vertical stripes, that SPEAK/HEAP is merged with FEED; and cross-hatching, that both mergers occurred.

unless this system in fact reflected a near merger of *ē/*ê HEAP/SPEAK with *ǣ/*æj NAME/DAY. In any case, we prefer to interpret the apparent atypicality of the *ǣ/*æj NAME/DAY merger in the Southeast as reflecting the late spread of this change from the West Riding of Yorkshire to the Southeast.

Given that the geographic evidence suggests a southern or eastern origin for the raising of **ē/*ê* HEAP/SPEAK to /i/, and the diachronic evidence provided by Dobson suggests an eastern origin, it is likely that the two large areas in which both the **ǣ/*æj* NAME/DAY merger and the raising of **ē/*ê* HEAP/SPEAK to /i/ are attested underwent these changes in different orders. In the Southeast, **ē/*ê* HEAP/SPEAK raised to /i/ before the **ǣ/*æj* NAME/DAY merger, while in the Midlands, **ǣ* NAME and **æj* DAY merged before **ē/*ê* HEAP/SPEAK raised to /i/, both resulting in the same system.

3. Summary and Conclusion

We can summarize our account of developments undergone by reflexes of Middle English **ē* as a series of mergers and near mergers, culminating in Southern Standard English, in a merger with reflexes of **ē*. Over a period of 500-600 years (20-24 generations), **ē* nearly merged with **ē*, merged with **ê*, nearly merged with **ǣ* and/or **æj*, and finally merged with **ē*. Only in a theory of language which distinguishes between near and true mergers can this sequence of developments have occurred in the history of a single language variety. While we certainly do not wish to claim that there are isolated villages in the Pennines in which Elizabethan English has been preserved, unchanged, our reconstruction derives support from the contemporary attestation of comparable vowel systems to those that we have posited for earlier stages of the language.

Further, our reconstruction constitutes an extended plausibility argument that the modern English vowel system can be attributed to a series of internally motivated, natural sound changes, without requiring recourse to external factors. To reiterate some of our introductory remarks, we are not claiming that there were no such externally-motivated changes in the history of English. Rather, just as our reconstruction is true to what is known from sociolinguistic studies of modern speech communities, so too any account relying on attested pre-modern population movements must be true to what is known from modern studies of language change in contact situations. While our account relies on modern descriptions of near mergers in a variety of speech communities, to the extent that it is plausible, it also provides presumptive evidence for the validity of the concept of near merger.

In our account we distinguish between the radiation of a linguistic innovation outward from its area of origin and the borrowing of innovated forms. The Standard English contrast of HEAP/SPEAK/FEED with NAME/DAY can be explained as the result of a series of ordinary linguistic innovations

originating in different parts of England, without recourse to dialects in which different innovations occurred, and without recourse to otherwise unattested diglossic situations. Rather, we hope to have demonstrated that the concept of near merger, imported from modern sociolinguistic studies, can indeed, as Labov suggested 35 years ago, shed light on the development of the Modern English vowel system.

Notes

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- 1 Here and throughout, words in capital letters represent classes of words with the same vowel nucleus. Thus, we use "FOOL/FULL" to refer to those words containing /ul/ and those words containing /ul/, respectively.
- 2 We are grateful to Tom D. Pratt for bringing this sign to our attention.
- 3 Č refers to any palatalized consonant. The functional load of the contrast between ČjV and ČijV is, according to Diehm and Johnson, quite low. Nonetheless, the sequences are acoustically distinct, but not perceived as categorically different by Russian speakers.
- 4 See section 2.3.3 for further discussion of the *ē/æj problem. In later work, Lass (1992b: 10) seems more open to the possibility of a "marginal (but cooptable) difference" between sounds in his discussion of possible quality differences between *ī and *i. See section 2.2 for further discussion.
- 5 For similar caveats, see Guy (1990). On changes in British society and class structure in the early Modern period, see Coward (1988) and Earle (1989).
- 6 Du 4 Witton-le-Wear, Du 5 Bishop Middleham, We 4 Stavely-in-Kendall, Y 3 Skelton, and Y 13 Horton-in-Ribblesdale.
- 7 With the exception of Y 3 Skelton, where *ē FEED is /iə/, and is merged with reflexes of *ē HEAP, *ê SPEAK, *ê NAME, and *ā STONE.
- 8 Gl 6 Slimbridge and 7 Latteridge.
- 9 Stockwell and Minkova (1988) phonemicize these Gloucestershire reflexes of *ō and *ū as /ū/ and /ou/, while Orton, Sanderson, and Widdowson (1978) phonemicize both as /ū/. In light of the consistency of the fieldworker's transcriptions (of 20 items containing *ū in the first two parts of Orton and Barry (1969), 18 have [ʊū] at Gl 6 and 19 at Gl 7; of 13 items containing *ō, 9 have [ū] at Gl 6 as do all 13 at Gl 7; the remaining 4 items with *ō are missing at Gl 6 or have a vowel other than [ū] or [ʊū], including one token of *broody* with [au]), it seems likely that the

contrast is real. However, given the phonetic similarity between [ū] and [ʊ̄], the possibility of a near merger cannot be excluded.

- 10 Our claims about the distribution of dialect forms in England are based on Kolb (1966), Anderson (1987), Orton et al. (1978), Kolb, Glauser, Elmer, and Stamm 1979, and our own independent collation of the SED Basic Materials (Orton and Barry 1969; Orton and Halliday 1962; Orton and Tilling 1969; Orton and Wakelin 1967), guided by the phonemicizations implicit in Orton et al. (1978). Our interpretations of the SED material differ from Anderson's in several respects. Aside from trivial differences in the exact placement of boundaries and differences resulting from the fact that we collated a different subset of the lexical material than did Anderson, there are two fundamental differences. First, we recorded forms that were identified in the Basic Materials as "older" at the expense of those reflecting Standard English, even if the latter were more typical of a site, while Anderson gave equal weight to each form recorded. Secondly, Anderson's treatment of *ē and *ê is somewhat confused. In his introduction (p. 11) and in the key to maps 59A and B (p. 90), *ē is designated E_1 , and *ê E_2 ; however, in the discussion of long front vowels (p. 85), *ê is designated E_1 . While the reference on p. 85 may be a simple typographical error, it is precisely with regard to those areas in which *ē and *ê are still distinct that our maps are most different from Anderson's.

Because of the importance to our argument of the non-standard systems in the West Midlands, the first and second authors independently collated materials from twenty-six sites in this region and seven Gloucestershire sites, using distinct but overlapping sets of items from the Basic Materials. For twenty out of these thirty-three sites, our initial classifications agreed. Differences in interpretation for nine additional sites were resolved through negotiation. In four remaining cases, Ch 1 Kingsley, Db 3 Burbage, Db 4 Youlgreave, and St 1 Warslow, no agreement was reached. For these sites, we used the classifications of the first author.

With regard to the systems mapped, a further caveat is in order. The areas in which *ē, *ê, and *ē̄, for example, are still distinct may differ with regard to both the phonetic realizations of these categories and with regard to other mergers. Thus, in some parts of the cross-hatched area in Figure 1.2, *ê has merged with *æj, while in others it is distinct from *ē, *ē̄, *ǣ, and *æj, although not, perhaps, from reflexes of OE *ā STONE.

- 11 More plausibly, Luick (1964: §500) treats *great* and *break* as borrowings, while forms like *heap* represent the normal development. Throughout the 17th century, the orthoepists treat *great* and *break* as regular. Anomalous pronunciations with [e] first appear in the early 18th century. Until late in that century pronunciations of *great* with [i] still occurred, but were considered affected. SED also records scattered instances of *break* with [i], e.g., Sa 2 Prees, Db 4 Youlgreave, St 1 Warslow, St 2 Mow Cop. The anomalous vowel in *yea* is generally explained as parallelism with that in *nay*. The only thing exceptional about *steak* is its spelling. The source for its nucleus is Old Norse /ei/, which has [e] as its normal reflex (Jespersen 1909: 76; Luick 1964: §389; Bloomfield 1984: 360–361). Other forms with ON /ei/

are *raise*, *swain*, *nay*, *they*, *bait*, *hale* and *wail*; *weak* is anomalous in that it fell in with ME *ē rather than *æj.

- 12 Dv 10 Cornwood, Dv 9 Widecombe-in-the-Moor, Cornwall 6 St. Buryan, Sf 5 Kersey, Gl 5 Sherborne, Gl 6 Slimbridge.
- 13 Cu 6 Gosforth, La 1 Coniston, St 1 Warslow, Wa 2 Hockley Heath, Ess 11 Netteswell.
- 14 Y 3 Skelton, St 3 Alton, Ha 1 Hatherden.

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