THE PHONOLOGY OF THE DIALECTS OF ENGLAND

by

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The dialects of England can be classified into three main groups: standard, urban and rural dialects. Rural dialects exhibit the greatest divergence from standard speech as well as showing the greatest variation among themselves. Geographically, rural dialects are grouped into three main regions: those of the South, of the Midlands and of the North.

The concept of diaphonemes is needed for a simple description of the phonologies of individual dialects. They are also necessary for an adequate method of comparison between dialects. Diaphonemic merger or split in synchronic grammar corresponds to phonetic merger or split in diachronic grammar. Thus the diaphonemic contrasts /e:/ vs. /ei/, /ɔː:/ vs. /ou/ present in some rural dialects (mostly in the west of England) exist wherever the Middle English (ME) phonemes /a:/ and /ai/; /ɔː/ and /ou/, respectively, did not merge in early Modern English.

Other important developments in standard English not shared by all dialects include the raising of /a/ to [æ], the unrounding and lowering of ME /u/ to /ʌ/, the diphthongization of /u:/ to /au/, the rounding of /a/ to /ɔ/ after /w/, the lengthening of /a/ to /a:/ when followed by voiceless fricatives, the merger of ME /ɛː/ with /eː/ and the loss of /r/ finally and before consonants.

On the other hand, there are often dialectal developments absent from the standard language. These include the widespread loss of /h/, the voicing of initial voiceless fricatives in south-western England.
and such local changes as the South Yorkshire diphthongization of ME /ɔː:/ and /oː:/ to /oi/ and /ui/, respectively.

Sound changes do not usually happen in isolation. The study of the phonologies of individual dialects reveals the inter-dependency of most sound changes - due mostly to a tendency in people to keep different phonemes apart in pronunciation and to maintain existing symmetries.
1.1 The purpose of this thesis is to present the phonological system of English dialects spoken in England today. It will 
(a) classify the dialects on a geographical basis,
(b) enumerate the phonemes necessary to describe fully the phonology of any particular dialect, as well as describe the principal allophones of the phonemes, and
(c) draw conclusions from the data presented about the nature of dialectal variation within the English language area and about the relationships such variations have with the processes of language change.

1.2 The primary source of data for this thesis is the Survey of English Dialects (SED), edited by Orton and Dieth at the University of Leeds. This work has proved to be very reliable and useful, due primarily to two factors:
(1) Uniformity of coverage. The SED has surveyed the pronunciation of a large number of words in rural and some urban communities in all parts of England and the Isle of Man. Unlike in earlier surveys, the location of every informant is precisely pinpointed on the map.
(2) Reliability. The SED has used a consistent and easily understandable system of phonetic notation for its transcriptions, namely, the International Phonetic Alphabet (IPA).
Two earlier works attempting to provide a general survey of English dialects have proved to be mostly of historical interest only. They are the *Early English Pronunciation* (1889) by Ellis and the *English Dialect Grammar* (EDG) by Wright, published in 1905. Both of these surveys attempted to cover all of the British Isles. Both of them are imprecise about the location of their informants. There is considerable doubt about the competence of their field-workers in many areas, and the phonetic symbols used in their transcriptions (especially in the case of Ellis's work) are difficult to decipher. Despite all of these problems - not at all surprising, since Ellis and Wright were pioneers in their field, laying the groundwork on which later dialectologists could build - there is still much we can learn from these works, especially about the changes affecting English dialects in the past hundred years.

Many detailed monographs dealing with individual English dialects have appeared since the beginning of this century. They include Kokeritz (1932) on the Suffolk dialect, Orton (1933) on the dialect of South Durham, Sivertsen (1960) on Cockney speech and Hedevind (1967) on the dialect of Dentdale in Yorkshire. An article by Wells in *JOL* (1970) on the phonetic characteristics of urban dialects has also been very useful.

1.3 In this thesis reference will often be made to older stages of the language. Wright's EDG was often used as a reference work for the Old English (OE) sources of modern English sounds. Another useful work in this area is *A Short History of English* by Wyld. For a detailed study of the pronunciation of English (standard and dialectal) at the beginning of the modern English period, one should consult *The Pronunciation of English 1500-1700* by Dobson.
1.4 The phonetic symbols used in this thesis will normally be those of the IPA, as defined in the Principles of the International Phonetic Association. The following substitutions will be made for typographical convenience:

[ə] for IPA [ɛ]
[ɛ] for IPA [ɛ]
[ɔ] for IPA [o]

Note, however, that [ü] will continue to be used for the slightly fronted high rounded vowel (e.g. Isle of Man moon [mü:n]), while [y] will be retained for the fully fronted equivalent (e.g. Devon moon [my:n]).

Another divergence from IPA usage will be in the transcription of the stressed vowel in polysyllabic words. Whereas according to IPA usage, an apostrophe has to be placed in front of the syllable bearing the primary stress in a word (e.g., ['bju:tɪful]), we will be using an acute accent placed above the stressed vowel (e.g., [bjʊ:tɪful]).

The use of parentheses around phonetic transcriptions will follow normal linguistic usage, i.e. [ ] will be placed around a "narrow", purely phonetic or allophonic transcription, while / / will be placed around "broad", phonemic or diaphonemic (see 2.4) transcriptions.

1.5 The word dialect has, of necessity, a rather vague meaning. It can refer to any speech used by people of a certain geographical region or, alternatively, by people of a certain social class, which is characterized by the presence of certain phonetic, morphologic, syntactic and vocabulary features. Also, within any dialect so defined, one can always find sub-
divisions further distinguished from its neighbours by various features. Such subdivisions can also be referred to as dialects. One could, in theory, continue subdividing dialects until one would arrive at the level of the individual speaker or "idiolect".

In this work, the word dialect will refer to a collection of speech-forms spoken in some clearly defined area of England that have sufficient uniformity to be considered together. Any such subdivision of a language into dialects is, necessarily, arbitrary, and can only be defended on grounds of convenience. The isophones (see p.11 for a definition) used to define the boundaries of dialects were chosen because they were considered to be the most important from the point of view of English phonology.

Of course, our concept of dialects is an idealized one. Generally speaking, no-one ever speaks pure dialect, unless it is one of the so-called standard dialects. Instead, people living in an area use the characteristics of the local dialect most of the time, while light or heavy influence is exercised on their speech by other dialects. The most important "foreign" influence on any dialect is that of one or other variety of standard English.

In order to classify the dialects of England, we should first consider the three main subdivisions of dialects - subdivisions based on social class rather than on geographical area.

1.6 **Standard dialects.** The standard dialects of English are the high-prestige forms of the language, used primarily by the upper and middle classes as well as by institutions such as government, schools and broadcasting. What is nor-
nally considered in England as "good English" is actually a standard dialect of the language, to be referred to in this work as Southern Standard British (SSB). Names such as "Received pronunciation", "The Queen's English", "BBC English" and "Oxford English" refer essentially to the same dialect.

SSB is primarily used in the south-eastern corner of England. In other parts of the country and in the rest of the English-speaking world, other varieties of the standard language are used, different from SSB in their phonetics, and, except in Australia and New Zealand, also different from it in their phonemic structure.

1.7 Urban dialects. From a numerical point of view, urban dialects are the most important, seeing that England is one of the most urbanized countries of the world (about 80%, according to the Encyclopædia Britannica (1972), vol.8, p.417). The "substandard" dialects that are spoken by most people living in the towns and cities of England do not have the prestige of the standard dialects, but because of the numerical strength of their speakers they are spreading at the expense of rural dialects. For an example of how an urban dialect (that of the city of Norwich) is displacing a rural dialect (that of Norfolk county), see Trudgill (1974).

The most important of the urban dialects is Cockney, the urban dialect spoken in London and nearby towns in the south-east of England. It is by no means a uniform dialect; but there are sufficient features common to all of its varieties for it to be considered a single dialect.
1.8 **Rural dialects.** From many points of view the most interesting dialects are the rural ones. In their pure form they exist only in isolated villages, often spoken by elderly people only. More people speak a mixed variety of language, heavily influenced by standard or urban dialects, but preserving many characteristics of the rural dialect of the area.

Many rural dialects are very conservative, preserving older phonetic forms and distinctions lost elsewhere. In other cases, the rural dialects were quite innovative, shifting vowels further than most urban dialects, merging distinctions preserved elsewhere. Because of their variety, these dialects offer invaluable data to the linguist. Despite the small number of people speaking "pure" dialect today, most of the data in this paper are from rural dialects. This is partially so because the three extensive surveys of English dialects, mentioned in 1.2, were all essentially surveys of rural dialects. The other reason for concentrating on them is that urban dialects are mostly transitional forms of speech, with their phonetics mostly based on the pronunciation of neighbouring rural dialects, while their phonology is close to that of the standard dialects. Therefore their study sheds much less light on the phonemic systems present in English than does the study of rural dialects.
When considering any one dialect, its sounds can be easily grouped into phonemes. This can be done by utilizing contrasts, an approach favoured by structural linguistics - elaborated, for example, in Harris (1951). Alternatively, one can set up underlying forms, from which the "surface" phonetic realizations can be derived by applying ordered rules. This is the transformational method, applied to English by Chomsky and Halle (1968).

The first of these methods is a synchronic one, since it is independent of the historical changes that have shaped the sounds of the dialect or language. On the other hand, the second approach has much in common with diachronic linguistics. This is due to the fact that most of the transformational rules correspond to phonetic changes that have occurred in the history of the language.

As examples, let us consider the following pairs of English words, together with their SSB phonemic transcriptions:

<table>
<thead>
<tr>
<th>Word</th>
<th>Phonemic Transcription</th>
</tr>
</thead>
<tbody>
<tr>
<td>wild</td>
<td>/waild/</td>
</tr>
<tr>
<td>wilderness</td>
<td>/wildənis/</td>
</tr>
<tr>
<td>child</td>
<td>/tșaild/</td>
</tr>
<tr>
<td>children</td>
<td>/tșildron/</td>
</tr>
<tr>
<td>oblige</td>
<td>/oblăidz/</td>
</tr>
<tr>
<td>obligation</td>
<td>/obligeișən/</td>
</tr>
<tr>
<td>sign</td>
<td>/sain/</td>
</tr>
<tr>
<td>signal</td>
<td>/sịgnəl/</td>
</tr>
</tbody>
</table>

On the basis of such correspondences we can establish that the
SSB diphthong /ai/ has some kind of alternation with the vowel /i/. We should set up an underlying form, call it ~i~, from which /ai/ can be derived through the application of a simple rule. Similarly, /i/ could be derived from an underlying vowel ~i~. At a deeper level of representation, ~i~ could be derived in certain cases from ~i~, explaining the alternations presented above.

As it happens, of course, underlying ~i~ corresponds to ME /i:/, and underlying ~i~ to ME /i/, with the change /i/ to /i:/ in certain phonetic environments occurring in late ME.

The main purpose of this paragraph is to show why transformational rules will hardly ever be mentioned in this paper. Where they might have any usefulness at all, they would simply be another way of expressing historical sound changes.

2.3 At this point, the concept of diaphoneme will be introduced. For a relatively rigorous definition, some set-theory terminology is used:

Diaphonemes are mutually exclusive sets of phonemes occurring in different dialects. Two phonemes in different dialects will belong to the same diaphoneme only if they can both be regular developments of the same phoneme at an earlier stage of the language.

To put it another way, no two phonemes within any one dialect can belong to the same diaphoneme, and conversely, no phoneme can belong simultaneously to two different diaphonemes within the same dialect. In addition, two phonemes in different dialects, no matter how similar in phonetic realization, can never belong to the same diaphoneme if they cannot normally be derived in a regular way from the same earlier source.

It is therefore possible to have two phonemes, practically identical in pronunciation, occurring in different dialects and belonging to diffe-
rent diaphonemes. As an example, consider the following data:

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Wiltshire</th>
<th>Yorkshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>sky</td>
<td>[skai]</td>
<td>[skai]</td>
</tr>
<tr>
<td>eight</td>
<td>[ait]</td>
<td>[eit]</td>
</tr>
</tbody>
</table>

The diaphonemic representation of these two words will be /skai/ and /eit/ in both dialects. Evidently, the phone [ai] belongs to two different diaphonemes in the two dialects.

2.4 The slash brackets / / will be used around diaphonemes, identical to those used around phonemes in the individual dialects. This identity of notation will facilitate our understanding of the concept of diaphoneme. For example, the symbol /e:/ will be used to refer to:

(1) the vowel phoneme occurring in words like spade (but not, normally, clay) in most dialects of western England; and

(2) the diaphoneme occurring in most dialects of western England, referring to the vowel [e:] or [e:] when it is derived from ME /a:/ under normal circumstances.

Though theoretically any symbol could be used to denote diaphonemes, in practice the phonetic symbol most commonly used for the phonetic realization of the diaphoneme will be utilized. Thus /ai/ will represent the diaphoneme normally corresponding to ME /i:/, since [ai] is the most usual of its many pronunciations (note that the symbol i is uniformly replaced by /i/ in diaphonemic representations). The most common pronunciation of a diaphoneme will be referred to as its prototypal pronunciation.

2.5 Neutralization and merger of diaphonemes.
It often happens that two phonemes contrast in a dialect, but the contrast is partially or completely lost in others. In the first case, we talk of neutralization, and the "neutralized" sound is assigned to the diaphoneme whose prototypal pronunciation is closer to it.

As an example, /a/ and /e/ contrast in England and in some North American dialects before /r/, but merge in others, both having the pronunciation [ɛ]. Where the contrast exists, marry is represented diaphonemically by /məri:/ while merry is /məri:/ . Where neutralization has taken place, both words are represented by /məri:/.

When neutralization is unconditional, we talk of merger. It is again the phonetic value of the merged sound that determines which diaphoneme it should be assigned to. For example, some varieties of North American English (including Canadian English) have merged the vowels of the words -cot and caught. The merged sound is normally [ɑ], rather than [ɔ:], so that in the dialects where this merger has occurred, both words shall be transcribed diaphonemically as /kɔt/.

2.6 The contrary phenomenon, called phonemic split also occurs, though less commonly. It usually happens when allophones come to contrast with each other due to the loss of a conditioning phoneme, to analogy, or to borrowing from another language or dialect. Thus at one time in the history of English, the diaphoneme /u/ was the only one present in words such as cut and put, with probably both rounded and unrounded back allophones. This is still the case with most dialects in the Midlands and the north of England. But in the south and in the standard language, an additional diaphoneme /ʌ/ has to be introduced, to account for such contrasts as put - putt or look - luck.
3.1 Even untrained observers are aware of the wide range of pronunciations that exist in England. People often talk about different kinds of accent, and can usually determine the rough geographical area and social class a person belongs to, just based on his accent.

Most of the dialects heard in England today differ little in their phonemic structure from that of SSB. It is only the rural dialects, especially the ones spoken relatively far from London and other great cities, that present a very different phonemic structure.

3.2 In dialectology, it is traditional to divide dialects into a small number of discrete groups, then proceed to describe the phonology of each. This is not a very satisfactory method, because no matter where one draws the boundaries of the different dialects, some important dividing lines will be left out.

These important dividing lines in dialectology are called isophones. Here is a formal definition:

An isophone is a line drawn on the map that separates dialect areas using either different pronunciations of a certain diaphoneme; or using different diaphonemes in a certain class of words. An example of the first possibility occurs in map 3, which shows that north and west of the isophone (not actually drawn on the map), /a/ in apple is pronounced [a], whereas on the other side of the line it is pronounced [æ]. An example of the se-
cond kind of isophone is given on map 42. South of the line (again, not actually drawn), words such as blind and find usually contain the vowel /ai/, while north of it the usual vowel is /i/.

Thus it is preferable to look at each phonetic variable one by one, to see how it varies in different parts of the country. But for reference purposes it is still advisable to divide England into a number of dialect areas, with the more important isophones defining their boundaries. It will be found that often several of the important isophones will run together, providing a convenient boundary between the dialect areas to be established.

The geographical division of urban dialects is different from that of rural dialects. Map 1 shows how England has been divided up into rural dialects (see also 3.4, 3.5 and 3.6 below), while urban dialect areas are shown on map 2. (see 3.7 also). These dialect divisions are often different from those suggested by Ellis or Wright in their surveys of English dialects. This is mostly due to an attempt in this thesis to work with as few dialect areas as possible while still retaining a large amount of uniformity within each.

3.3 Here follows a list of the 16 rural dialect areas proposed for England, together with their geographical extent and phonological characteristics. For the sake of legibility, examples and maps demonstrating these phonological characteristics will be given in the right-hand margin, with a colon separating the map numbers from the word examples.

The names of counties will normally be abbreviated - only at their
first mention will they be written out in full. County names and areas represent the situation as it was at the time the field-work for the SED was done, i.e. before the recent reorganization of local government in England.

The sixteen rural dialect areas shall be grouped into three main regions, each of which has its own phonological characteristics, which will also be outlined.

3.4 SOUTHERN DIALECTS

The northern boundary of this region, separating it from the dialects of the Midlands, is essentially a straight line connecting the Severn and the Wash. This boundary coincides roughly with five isophones, as given below.

(i) The northern boundary of the area where ME /u/ regularly became /ʌ/.
(ii) The northern boundary of the area where ME /a/ became /o/ after /w/.
(iii) The northern boundary of the area where ME /o:/ was eventually shortened to /u/ before /k/.
(iv) The northern limit of the area where ME /a/ and /o/ were lengthened to /a:/ and /ɔ:/, respectively, when followed by the voiceless fricatives /f/, /θ/ and /s/.
(v) The northern limit of the development of "dark" [ɔ] as an allophone of pre-consonantal and final /l/.

Map 32: cut, luck
Map 26: wasp, what
Map 31: look, took
Maps 28, 29, 62: chaff, bath, grass; cough, froth, loss
Map 18: all, colt, milk
Unless otherwise mentioned, the following phonetic and phonemic features are also true of the southern dialects in England:

(vi) ME /a:/ and /ai/ have merged in the diaphoneme /ei/, whose pronunciation varies from [ei] to [ai]. Thus the words made and maid are normally pronounced identically as /meid/.

(vii) In a parallel fashion, ME /o:/ and /ou/ have merged in the diaphoneme /ou/, whose pronunciation often starts from a central vowel - we find [ʌu] or [əu]. The words no and know therefore rhyme.

(viii) The ME long vowels /i:/ and /u:/ normally became the diphthongs /ai/ and /au/, respectively. There is a lot of variation in the phonetic realizations of these diaphonemes.

(ix) ME /e:/ and /e:/ have merged in the diaphoneme /i:/, so that the words sea and see are both represented by /si:/.

Here, then, follows the list of the seven dialect areas included among those of the south, together with their more important phonemic and phonetic characteristics.

1) EAST ANGLIA (EA)

EA includes the counties of Norfolk (Nf), Suffolk (Sf), Essex (Ess) and the rural areas around London (Ln) north of the Thames.

Since SSB is essentially an outgrowth of the dialects spoken around London, it is not surprising that the dialects of EA are very close in phonemic structure to SSB. Important characteristic features of EA dialects are:
(i) /a/ is regularly raised in pronunciation to [æ]. Further raising and consequent merger with /e/=[æ] is common - in some localities, such as Ess 12 of the SED, it is universal, so that the phoneme /a/ disappears there.

(ii) In parts of rural Nf, the ME contrasts /a:/ vs. /ai/ and /o:/ vs /ou/ are retained, as contrasts between the diaphonemes /e:/ and /ei/, /o:/ and /ou/, respectively.

(iii) OE /y:/ is reflected as /i:/ in much of rural EA, as opposed to the /ai/ usual elsewhere. The intermediate ME stage was /e:/.

(iv) Pre-consonantal and final /r/ (hence to be referred to as PFR) is lost. Intrusive /r/ is introduced between certain vowels.

(v) /h/ is often retained.

(vi) Except in Nf, ME /i:/ is usually reflected as /oi/, not as /ai/.

Among its neighbours, the SE shares with EA features (i) and (vi), while the SMI share with it feature (iv).
(2) **THE SOUTH-EAST (SE)**

The SE includes the counties of Kent (K), Surrey (Su), Berkshire (Brk), Sussex (Sx), the Isle of Wight (IW), Ln south of the Thames and the southernmost parts of Buckingham (Bkh) and Oxford (Ox). Distinguishing features of the SE dialects are:

(i) /a/ is pronounced [æ].
(ii) ME /æ:/ before /d/ is normally shortened to /i/ instead of /e/.
(iii) PFR is regularly preserved.
(iv) /h/ is lost.
(v) ME /i:/ is usually reflected as /oi/ instead of /ai/.

Features (i) and (v) are shared with EA, (ii) and (iii) with Wx and (iv) with both Wx and the SML, from among neighbouring dialect regions.

(3) **WESSEX (Wx)**

The Wx dialect region includes the counties of Gloucester (Gl), Wiltshire (W), Dorset (Do), Hampshire (Ha) (except for the IW) and parts of eastern Somerset (So). Distinguishing features are:

(i) ME /a/ retains its low [a] quality.
(ii) ME /a:/ became /e:/, to be in contrast with /ei/ = [ai], derived from ME /ai/. This /ei/ is also in contrast with /ai/ = [ei] derived from ME /i:/.  
(iii) ME /ɔ:/ and /ou/ are normally reflected

Map 3: apple, cat  
Maps 20, 21: bread, head, red  
Map 17: arm, far  
Map 76: hay, whole  
Map 40: sky, knife  
Maps 30, 48: both, mow
as the monophthong /o:/.

(iv) ME /ɛ:/ is reflected as /e:/ more often than as /i:/._ In front of /d/ this vowel was later shortened to /i/.

(v) ME /o/ usually became /a/ before /r/.

(vi) PFR and /h/ are both preserved.

(vii) Initial voiceless fricatives /f/, /θ/, /s/ and /š/ became voiced, with the further shift /θ/ to /ð/ before /r/.

Among all its neighbouring dialects, the SW is closest to Wx. It shares with it features (i), (ii), (iii) and (vii) - and it also keeps PFR. With its other neighbours Wx shares at most one of the features enumerated.

(4) THE SOUTHWEST (SW)

The SW includes the counties of Devon (D) and Cornwall (Co), together with the westernmost parts of So. Its distinguishing features are:

(i) /a/ remains [a].

(ii) /ɛ:/ and /ei/ are kept apart.

(iii) ME /ɛ:/ became normally /ei/ not /ɛ:/ or /i:/ as elsewhere in the south.

(iv) /ai/ is normally monophthongized to /æ:/ in D.

(v) In D, /u/ and /u:/ are fronted to [y] and [y:], respectively.
(vi) /au/ and /oi/ have centralized pronunciations [ɔː]~[ɔ̆] and [ʌ], respectively.

(vii) ME /ɔː/ is normally shifted in D to [uː]. Since /uː/ in D is pronounced [yː] (see (v) above), this [uː] has to be identified with a different diaphoneme that we shall call /ʊː/.

(viii) PFR is preserved, but /h/ is lost.

(ix) Intervocalic /t/ became voiced to /d/.

(x) Initial voiceless fricatives were voiced, just as in Wx.

The SW shares four of these features with Wx: (i), (ii), (ix) and (x), while sharing only (ix) and (x) with its other neighbour, So.

(5) SOMERSET (So)

This dialect area includes most of the county of So, excluding some of its extremities belonging to Wx and the SW. The phonemic structure of the So dialect is very close to that of SSB - there are only three significant differences from it, all in its consonantism:

(i) PFR is preserved.

(ii) Initial voiceless fricatives were normally voiced, as in Wx and the SW.

(iii) Intervocalic /t/ was voiced to /d/.

Somerset shares these features with its neighbours, Wx and the SW, but its vocalism is close to that of SSB and is therefore quite distinct from that of these other dialects.
(6) MONMOUTH (Mo)

The Mo dialect corresponds almost exactly to the county of Monmouth, often considered as part of Wales. Indeed, we find that its dialect is very close to the dialect spoken in south-eastern Wales, as shown, for example, by the article on Welsh phonology in Wakelin (1972). Some important features typical of the Mo dialect are:

(i) /a/ is kept as [a].
(ii) /e:/ and /ei/ are kept apart.
(iii) /o:/ and /ou/ are kept apart.
(iv) The diaphoneme /ea/ is usually pronounced as a monophthong [ɛ:].
(v) /ɔ:/ is pronounced [œ:].
(vi) PFR is lost but /h/ is kept.

Map 3: apple, cat
Maps 36, 37: spade, clay
Maps 50, 48: both, mow
Maps 60, 61: hair, hare
Map 73: bird, burn
Maps 17, 76: arm, hay

(7) THE SOUTH MIDLANDS (SML)

The name SML was given to this dialect region for lack of any more suitable names. In actual fact it is not included among the dialects of the Midlands. It includes the counties of Cambridgeshire (Ca), Huntingdon (Hu), Bedford (Bd) and most of Hertford (Hrt), Bkh and Ox. Features characteristic of it are:

(i) /a/ is pronounced [a].
(ii) /u/ is frequently replaced by /ʌ/.
(iii) /iu:/ is often replaced by /u:/.
(iv) PFR is lost in the eastern half of the SML. /h/ is always lost.

Map 3: apple, cat
Maps 30, 92: foot, hoof
Map 58: few, tune
Maps 17, 76: arm, hay
DIALECTS OF THE MIDLANDS

The southern boundary of this region is, of course, the northern boundary of the dialects of the south, as shown on p. 13. Its northern boundary was chosen rather arbitrarily, because few isophones coincide in the area. The isophone marking this boundary is the one corresponding to the vowel in words such as spade, i.e. to the normal development of ME /aː/. South of the isophone (also in the Isle of Man) we find the diaphonemes /eː/ or /eɪ/ in these words, while north of it we find the centring diphthongs /ia/, /ea/ or /ia/. See map 36.

Geographically, the line starts around Fleetwood in northern Lancashire. From there it follows an essentially straight course eastward to the Humber, then it turns south to exclude all but the southernmost part of Lincolnshire from the Midlands.

Generally speaking, dialects of the Midlands have the following important differences in phonemic and phonetic structure from SSB:

(i) /a/ is pronounced [aː].
(ii) ME /a/ remains /a/ after /w/.
(iii) ME /u/ remains /u/.
(iv) ME /a/ remains /a/ when followed by voiceless fricatives.
(v) ME /oː/ became /uː/ without shortening before /k/.
(vi) /h/ is normally lost.
(vii) /l/ retains its "clear" [l] pronunciation even finally and before consonants.

Map 3: apple, cat
Map 26: wasp, what
Map 32: cut, luck
Maps 28, 29, 62: chaff, bath, grass
Map 31: look, book
Map 76: hay, whole
Map 18: ball, colt
Here follows a list of the six dialect areas to be included among the dialects of the Midlands, together with their individual phonetic and phonemic characteristics.

(1) THE CENTRAL MIDLANDS (CML)

The CML dialect region includes the counties of Northampton (Nth), Warwick (Wa), Stafford (St), Leicester (Lei) and Rutland (R), the eastern half of Worcester (Wo), the southern half of Derby (Db) and the southernmost part of Lincolnshire (L). Its distinguishing features are:

(i) ME /i:/ was normally shifted to /o'i/ in St and Wa, instead of the more normal /ai/ present in the rest of the CML.

(ii) Final /g/ remained after [ŋ].

Otherwise, the CML dialects resemble SSB, except for the differences typical of Midlands dialects in general, as outlined above.

(2) THE WEST MIDLANDS (WMl)

The WMl dialect area includes the counties of Shropshire (Sa) and Herefordshire (He) and parts of Wo and Mo. Its distinguishing features are:

(i) /a/ remains [æ] in Sa, but it is raised to [æ] in the rest of the area.

(ii) In a development going back to OE times, /a/ is replaced by /o/ before nasal consonants.

Map 3: apple, cat
Maps 23, 24: man, hand, hammer
(iii) Unlike in other dialects of the Midlands, ME /u/ normally developed into /A/ in most of the WML. In some localities in Sa, the diaphoneme /u/ has actually disappeared.

(iv) In Sa, ME /a:/ and /ai/ have merged in the diaphoneme /e:/ . In He and Wo, on the other hand, the two ME phonemes have been kept apart, /a:/ developing into [ei] while ME /ai/ has become [æi]. The diaphonemic representation of these two sounds is /e:/ and /ei/, respectively.

(v) In a parallel fashion, ME /ɔ:/ and /ou/ have merged in Sa, both becoming /o:/, while kept apart further south as /o:/ and /ou/ = [u], respectively.

(vi) The development of ME /ɛ:/ to /e:/ or /ei/, instead of /i:/, is quite common in the WML.

(vii) In He, the diaphonemes /ai/, /au/ and /ɔ:/ have the rather peculiar pronunciations of [æi], [au] and [æ:], respectively.

(viii) PFR is kept in the WML.

Evidently, the dialects spoken in the WML differ much more markedly from SSB than those spoken in the CML. In addition, there are a number of important features that are different in Sa from the features present in He and Wo, so that one might almost be justified in setting up two different dialect regions in the WML.
(3) THE NORTH MIDLANDS (NML)

The NML dialect area includes Cheshire (Ch), most of Db and the county of Nottingham (Nt). Its characteristic features are:

(i) The diaphoneme /a/, when followed by a nasal consonant, is normally replaced by /o/.

(ii) In a special development, restricted to Db and eastern Ch, ME /ɛ:/ and /e:/ became /ei/ instead of /i:/; To compensate for this, in the same area ME /ai/ became /i:/; Elsewhere, ME /ai/ merged with ME /a:/ to result in /e:/.

(iii) The development of ME /u:/ has also been interesting in the NML. In most of Ch it became [ai] - to be identified still with /au/, as /ai/ in Ch is pronounced [ai]. In Db, on the other hand, ME /u:/ became /ɛ:/.

(iv) The diaphoneme /u:/ is normally fronted to [u:] in Ch, while in Db it is replaced by /eu/ = [ɛu].

(v) In a number of words that had [iɔ] in ME, we find /ei/ rather than /ai/ in the NML, in common with dialects of the north.

(vi) The diaphoneme /eə/ of other dialects is normally replaced by /ɛ:/ in the NML. This results in a merger with the development of

Maps 23, 24: man, hand, hammer
Maps 33, 34: three, speak
Maps 37, 39: clay, straight
Map 36: spade
Maps 14, 46: cloud
Maps 11, 55: moon, do
Maps 44, 105: fight, height
Maps 60, 61: hair, hare
ME /u:/ - see (iii) above.

(vii) The initial combinations of /kl/ and /gl/ have become /tl/ and /dl/, respectively.

(viii) PFR is normally lost.

(4) SOUTH YORKSHIRE (SY)

This dialect is truly a transitional one. We have classified it with the Midlands dialects because of its treatment of ME /a:/.

Geographically, it consists of the southern, protruding portion of Yorkshire (Y), around the cities of Bradford, Leeds and Sheffield. The SY rural dialects are characterized by the following features:

(i) ME /a:/ and /ai/ are both reflected as /e:/.

But before ME /ɔ/ we find /ei/.

(ii) Most words with /iɔ/ in ME have developed their vowel to /i:/ rather than /ai/. Other words of this class have /ei/ instead.

(iii) Most cases of ME /ɛ:/ developed into /iə/ in SY - thus merging with the resultant of ME /e:r/ and /ɛ:r/. Thus tea and tear (n.) are both pronounced [tɪə].

(iv) /ai/ is often replaced by /a:/.

(v) /au/ (from ME /u:/) is regularly replaced by /a:/.

(vi) ME /ɔ:/ in the south and most of the Midlands had two main OE sources. In SY, as in the north generally, these two OE sounds developed in dif-

Map 17: far, arm
ferent ways. OE /a:/, through the ME stage /o:/, developed into /uə/, parallel to the /e:/ to /iə/ change shown in (iii). On the other hand, OE /o/ in open syllables developed into /oi/ in SY.

(vii) ME /o:/ normally became /ui/ in SY - cf. the change of OE /o/ to /oi/ given above. But before /k/ the more usual /u:/ is found.

(viii) PFR is lost.

Features (iv), (v), (vi) and (vii) are all quite peculiar, and they give the SY rural dialect a very special place within the system of English dialects.

(5) LANCASHIRE (La)

Properly speaking, the La dialect area includes all of the county of La within the Midlands dialect region - that is, south of the city of Fleetwood. Among its characteristics are:

(i) The change of OE /a/ to /o/ in front of nasal consonants.
(ii) ME /e:/ became either /iə/ or /ei/.
(iii) ME /a:/ and /ai/ merged in /e:/; But /aiə/ normally became /ei/, and so did ME /iə/ in several words. In other words ME /iə/ became /iː/.
(iv) ME /u:/ became /au/ or /aː/.

Maps 50, 52: both, oak
Map 53: coal, coat
Maps 55, 92: moon, foot
Map 31: look
Map 17: far, arm
Maps 23, 24: man, hand, hammer
Maps 35, 34: tea, speak
Maps 36, 37, 39: spade, clay, straight
Map 44: fight
Map 43: night
Map 46, 47: house, ground
(v) In southern LA, ME /ɔː/ and /ou/ have merged in /oː/. But in the northern part of the county, ME /ɔː/ normally became /uə/, while ME /ou/ developed into /oː/.

(vi) ME /eu/ remained in LA, instead of merging with /iu/.

(vii) In southern LA, /ar/ is usually replaced by /ɔr/.

(viii) Unlike in the NML and SY, PFR is kept.

(6) ISLE OF MAN (IM)

The IM is not strictly speaking part of England. However, it was included in the SED, so that its dialect will also be considered here. Because English is a relatively recent introduction (cf EB vol. 14, p. 745), the phonemic structure of the dialect spoken on the island is close to that of SSB. Only because of its geographical position was the IM included in the Midlands. The following features are different from SSB:

(i) The diaphoneme /ʌ/ is absent. In its place, ME /u/ developed into [ɔ], thus merging with ME /o/.

(ii) ME /o/ before the voiceless fricatives /f/, /θ/ and /s/ developed into /ɔː/ - in common with most southern rural dialects.

(iii) ME /aiɡ/ and /iɡ/ normally became /ei/ - and so did occasionally ME /ɛː/.

Maps 50, 53, 48: both, coal, mow

Map 58: few

Map 122: arm

Map 17: arm, far

Maps 32, 92: cut, foot

Map 29: cough, froth, loss

Maps 38, 43, 44, 35: straight, night, cream
(iv) PFR is kept and /r/ normally has the trilled pronunciation [r].

(v) ME [æ] (usually transcribed as /hw/) where, whale is preserved.

(vi) /θ/ is often replaced by /t/. thigh, thin

Of these features, (iii), (iv) and (v) could be considered as typical of (parts) of the north. On the other hand, some characteristics of the IM dialect (such as the fronting of /a/ to [æ] and the lengthening of ME /a/ and /o/ when followed by voiceless fricatives) occur only in the south aside from the IM.

3.6 NORTHERN DIALECTS

The rural dialects spoken between the Midlands dialects and Scotland are called Northern dialects. They share features (i) to (iv) and feature (vii) with the Midlands. Some other characteristics of the north are as follows:

(i) ME /a:/ became a diphthong with a centring off-glide: /iə/, /eə/ or /ia/.

(ii) ME [aiɡ] (including earlier [eiɡ]) and certain occurrences of ME [iɡ] (probably pronounced [eiɡ] in such words) regularly became /ei/ in the north.

(iii) ME /alm/ became /a:m/.

(iv) ME /ou/ (including earlier /ou/) usually became /ou/, distinct from the resultant of ME /ɔ:/.

Map 17: red, arm, far

Maps 36, 38, 39, 44: spade, eight, straight, fight, height

Map 63: palm, calm

Maps 48, 54: mow, grow
(v) Instead of the diaphonemes /tʃ/ and /dž/,
we often find /k/ and /ɡ/. This is probably
due to the strong Scandinavian influence exer-
cised over this area prior to the 11th century.
See under 4.38 (vi) for a full discussion.

Here follows a list of the three dialect areas included with
the north, together with their phonological characteristics.

(1) LINCOLNSHIRE (L)

This dialect area includes all of L except its southern-
most parts (which belong to the CM1). Parts of Y immediately
to the north of the Humber share most of the characteristics
of the L dialect, so that they can also be included here.
These characteristics are:

(i) ME /a:/ and /ai/ have merged in the
diaphoneme /eə/ = [ɛə].
(ii) ME /e:/ did not merge with ME /e:/
and is today reflected as /iə/.
(iii) In an analogous way, ME /ɔ:/ became
/uə/ in L, distinct from the resultant
of ME /ou/ - still /ou/ today.
(iv) /ɔ:/ is often replaced by /o/.
(v) PFR and /h/ are both lost.

Map 75: church, bridge
Maps 36, 37: spade, clay
Maps 34, 35: speak, cream
Maps 50, 52: both, oak
Map 48: mow
Map 73: burn
Maps 17, 76: arm, hay
THE MIDDLE NORTH (MN)

The MN dialect area includes most of Y (excluding, of course, SY), northern La, Westmoreland (We) and southernmost Cumberland (Cu). Just as the south-eastern part of this region shares certain features with the L dialect, the speech of northern L, immediately to the south of the Humber, has certain things in common with the MN dialect — such as feature (viii) below.

Important characteristics of the MN are:

(i) ME /ɛ:/ is reflected as /iə/.
(ii) ME /a:/ merged with ME /ɛ:/ in eastern Y, to give /iə/. Elsewhere we normally find /ia/.
(iii) ME /ai/ has also had divergent developments - /æ/ in the east, but /e:/ in the west.
(iv) The development of OE /a:/ to ME /ɔ:/ and hence to modern /uæ/ occurred only in parts of eastern Y. Elsewhere rounding never did take place, and the development was the same as for ME /a:/ (normally from OE /a/ in open syllables) given above under (ii): /iə/ or /ia/.

Thus the word stone has three diaphonemic varieties in the MN: /stuan/, /stian/ and /stian/.

Map 34: speak
Map 36: spade
Map 37: clay
Maps 50, 51, 52: both, loaf, oak
(v) OE /o/ in open syllables, on the other hand, regularly became /ɔ:/ in all ME dialects, and hence /uə/ in the MN.

(vi) ME /i:/ and /u:/ did not develop in a parallel fashion in the MN dialect. ME /i:/ became /ai/, as in most of England, while ME /u:/ did not get diphthongized in the MN and remained /u:/.

This retention of ME /u:/ is shared with the Far North dialects and with Scotland.

(vii) Though ME /u:/ was retained, this did not mean merger with the resultant of ME /oː/. This latter ME sound was diphthongized in the MN, to /iə/ in the east and to /iu/ in the west.

(viii) When followed by /nd/, ME /i/ and /u/ remained short in the MN.

(ix) ME [iʃ] became /i:/ not /ai/.

(x) Corresponding to ME /ou/, we often find /a:/ or /ɔː/. Where the diaphoneme /ou/ occurs, it is pronounced [əʊ] or [ɔː].

(xi) PFR and /h/ are lost.

(xii) The consonant /g/ is lost after [ŋ], even medially.

(xiii) Initial /kl/ and /gl/ are normally replaced by /tl/ and /gl/, respectively.

Map 53: coal, coat

Map 40: sky

Map 46: cloud

Maps 55, 56: moon, do

Maps 42, 47: blind, ground

Map 43: night

Maps 48, 49, 51: mow, snow, grow

Maps 17, 76: arm, hay

Map 82: sing, finger

climb, glove
Evidently, the MN dialects contain some of the most interesting phonetic developments in all of England. One should make a special note of the many different sources of the diaphoneme /iə/, especially in eastern Y, where the words mean, mane, moan and moon can all be pronounced [mian] = /miə/. Cf. EDG (pp 520-531).

(3) THE FAR NORTH (FN)

The FN dialect region occupies the area between the MN and the Scottish border. It includes the counties of Durham (Du), Northumberland (Nb) and most of Cu. Its characteristic features include the following:

(i) ME /e:/ and /e:/ merged to give /i:/.

(ii) ME /a:/ (including OE /a:/, unrounded in most of the north) became /iə/ in the east and /ia/ in the west.

(iii) OE /o/ in open syllables became /ɔ:/ in ME and hence /uə/ in the modern FN dialect.

(iv) As an exception to (ii) and (iii), corresponding to SSB /ou/ of whatever source (i.e. OE /a:/, /o/ or /ou/) usually we find /ʊ:/ in eastern Nb - a sound that is probably an imitation of the SSB [əu] pronunciation of /ou/. Cf. 4.20 below.

Even ME /o/ often became /ʊ:/ in this area.
(v) ME /ai/ normally became /e/. 
(vi) ME /i/ and /u/ before /nd/ remained short. 
(vii) ME /i:/ often became /ei/ instead of /ai/. 
(viii) ME /u:/ has remained unchanged. 
(ix) ME /o:/ usually became /iə/. 
(x) SSB /ɔ:/ is often replaced by /a:/.
(xi) In Nb, /ɔ:/ is usually replaced by /o/ = [ɔ]. Since PFR is preserved in Nb, the uvular [u] pronunciation of /r/ must be responsible, as /ɔ:/ always develops in front of ME /r/ only. 
(xii) PFR is normally retained. The pronunciation of /r/ is uvular [u] in Nb, and the dental trill [r] in northern Cu, similar to Scottish usage. 
(xiii) ME /h/ and /hw/ are kept. 
(xiv) ME /ŋ/ is always replaced by /ŋ/.

One should note the large number of features shared with the MN, either partially or completely: (ii), (iii), (v), (vi), (viii), (ix), and (xiv) all have their counterparts in the dialect region to the south. For features shared with Scottish dialects, see 3.8.
3.7 URBAN DIALECTS

As mentioned before, as far as the number of speakers is concerned, urban dialects are the most important. Much less space is devoted to them partially because they differ less from each other in phonological structure than do rural dialects, and partially because of the shortage of data. The two main surveys utilized are Wells (1970), covering the urban dialects of all of England, and Sivertsen (1960), which deals with the most important urban dialect in England, Cockney.

On the whole, the phonemic structure of urban dialects is very close to that of SSB. Like SSB, they have merged the ME vowels /a:/ and /ai/ as /ei/, /ɔ:/ and /ou/ as /ou/ and /ɛ:/ and /e:/ as /i:/.

Therefore made and maid are both /meid/, no and know are both /nou/ and sea and see are both /si:/.

Another general characteristic is the loss of /h/.

One can set up nine main urban dialect areas, which will be dealt with in the same way as were the rural dialect-areas. Each area will be identified by the most important city or cities in it and other chief cities within it will follow the name of the dialect area in parentheses.

(1) The LONDON area (Cambridge, Norwich, Colchester).

The main differences from SSB are:

(i) ME /ɔ/, /ɔ:/ or /ou/ before PFR be- morning, board, four
came /oə/, pronounced [ɔə]. This is in contrast with the diaphoneme /ou/, derived from ME /au/. Thus saw /soʊ/ and sore /soʊ/ do not rhyme.

(ii) Just as SSB /ɔː/ is replaced by /ou/ (see above), other vowel shifts also characterize these dialects, especially Cockney. The interpretation of Sivertsen (1960) will be adopted here:

<table>
<thead>
<tr>
<th>SSB</th>
<th>Cockney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoneme</td>
<td>Pronunciation</td>
</tr>
<tr>
<td>/ei/</td>
<td>/ai/</td>
</tr>
<tr>
<td>/ai/</td>
<td>/oi/</td>
</tr>
<tr>
<td>/oi/</td>
<td>/ʌi/</td>
</tr>
<tr>
<td>/au/</td>
<td>/eu/</td>
</tr>
<tr>
<td>/ou/</td>
<td>/ʌu/</td>
</tr>
</tbody>
</table>

(iii) /a/ = [æ] is often replaced by /e/ = [ɛ]. On the other hand, /ʌ/ is pronounced [ə].

(iv) The use of intrusive /r/ is widespread.

(v) /h/ is lost as a phoneme - [h] is often used, however, for emphasis before vowels.

(2) The BRISTOL - DOVER area (Folkestone, Brighton, Portsmouth, Southampton, Torquay, Plymouth, Bath)

The following are the main differences between this area and SSB:
(i) /a/ is pronounced [a].

(ii) /ei/ and /ou/ are usually replaced by /e:/ and /o:/, respectively, in the towns of D and Co.

(iii) PFR is normally kept.

(iv) /h/ is lost.

It is interesting to note how far the urban dialects have adopted the phonetics but not the phonology of the rural dialects spoken in the area. Cf. 3.4 (3) - (5).

The other seven urban dialect regions correspond roughly to the Midlands and northern rural dialects in geographical extent. They all lack the disphoneme /ɔ/ (as in cut, blood), replacing it with /u/. They contain /a/, not /a:/, before the voiceless fricatives /f/, /θ/ and /s/ (e.g. after, bath, grass), but retain /a:/ in words like calm, farm, far, spa and tomato. /a/ is always pronounced [a], while /a:/ is always [a:]. Other differences from SSB will be noted under each dialect separately.

(3) The BIRMINGHAM area (Coventry, Stafford)

The diphthongs are shifted in this area ( /ei/ to [aɪ], /ai/ to [ɔɪ], etc.). /h/ is missing.

(4) The LEICESTER area (Nottingham, Derby, Stoke-on-Trent)

In this area diphthongs retain their SSB values, more or less. Thus /ei/ is [ɛɪ] and /ou/ is [ɔu]. /h/ is again missing.
(5) The LIVERPOOL area

The dialect of Liverpool resembles the Leicester area dialect. It differs from SSB in two additional ways: Final unstressed /i/ (e.g. baby, lady) is replaced by /i:/ and the diaphoneme /æ/ (e.g. care, scarce) is normally replaced by /ə:/, so that fur and fair have the same pronunciation.

(6) The MANCHESTER area (Wigan)

This dialect differs from the Leicester area dialect mostly in that its high diphthongs are high in pronunciation: /speid/ is pronounced [spəd] or [speɪd] ( = spade ), while coat is pronounced [kət] or [kət].

(7) The NORTHERN LANCASHIRE area (Oldham, Rochdale, Blackburn, Preston, Blackpool)

Here the difference from the Manchester area dialect is in the retention of PFR, i.e. fear is /fiːr/ and arm is /aːrm/.

(8) The LEEDS - SHEFFIELD area (Huddersfield, Bradford)

Here the main difference from the Manchester dialect is in the presence of voicing assimilation - that is, Bradford is pronounced /brætʃəd/ etc.

(9) The NEWCASTLE (-on-Tyne) area (Sunderland, Middlesbrough, Stockton)

There are two important differences from SSB. SSB /ei/ and /ou/ are often replaced by a rising diphthongs /iə/ and /uə/ (cf.
the presence in the rural dialects of the area of the rising diphthongs /iə/ and /uə/. Secondly, both PFR and /h/ are normally retained, the former often with the uvular [ʁ] pronunciation typical of the Nb rural dialect (cf. (xii) on p. 32).

3.8 DIALECTS OF SOUTHERN SCOTLAND (SS)

Though in this paper there will be no detailed discussion of the phonology of Scottish dialects, it will be instructive to look at how dialects in SS form a link between the more central Scottish dialects and the rural dialects of northern England.

The source of all data given below is the introduction to the Scottish National Dictionary (SND). In that work the SS dialects are defined as those spoken in the counties of Roxburgh, Selkirk and Dumfries (in the latter, east of the river Nith).

The characteristics of this dialect are set out below, together with how they contrast with features in other Scottish dialects and in the neighbouring FN and CN dialects of England (see pp. 29-32). The numbers in parentheses refer to the respective paragraph in the SND.

(i) (97.1) OE /aː/, except initially, became /iə/, just as in much of the north of England, but unlike the /eː/ of other Scottish dialects.

(ii) (97.2) OE /a/ in open syllables developed similarly - just as in the rest of Scotland and in the north of England.
(iii) (97.3) OE /æg/ became /e:/ everywhere in Scotland, just as in the CN and FN rural dialects in England.

(iv) (97.4) OE initial /a:/ became /jι/ in SS, unlike the /e:/ of other Scottish dialects, but similar to the FN forms of /je/ or /jι/ in such words.

(v) (100) OE /o:/ became /ɔː/ in front of /r/, /v/ and /z/, becoming /y/ in other environments. These vowels have a tendency, like elsewhere in Scotland, to unround to /e:/ and /i:/, respectively. In England, we find no front rounded vowels today where OE had /o:/, but the FN forms /iu/~/iɔ/ in such words probably reflect an earlier */yː/.

(vi) (101) OE /u:/ was diphthongized to /ou/=[ʌu] in final position, a development unique to the SS dialect.

(vii) (103) In a parallel fashion, corresponding to final /i:/ of other dialects, we find /ei/ in SS, again making this dialect unique among its neighbours.

(viii) (104) The diaphoneme /e/ has a very open, [æ] pronunciation in this dialect. /e/ corresponds not only to ME /e/, but also to ME /a/ in many words, especially when followed by /r/ or /clay, nail; cf. map 37

oak, one; cf. maps 52, 94

floor

moon, do; cf. maps 55, 56

cow, how

see, three, cf. map 33

ash, wash, harvest; cf. maps 64, 89, 22
/s/. This substitution of /e/ for /a/ before these consonants is found both in other Scottish and neighbouring English dialects.

(ix) (107) As part of the same tendency for front vowels to open, OE /i/ and /y/ are reflected as [e], though this vowel should still be considered as part of the diaphoneme /i/.

(x) (105) OE /o/ in open syllables became /uə/ (in dialect literature often written uw), just as in the English North, but unlike elsewhere in Scotland.

(xi) (65, 66 & 109) There is no trace left in the SS dialect of initial /k/ and /g/ before /n/. The preservation of initial clusters /kn/ /gn/ used to be general in Scotland, but today it is restricted to the North of Scotland and to insular dialects - fast disappearing even there.

(xii) (76.5) Similarly, initial /w/ before /r/ is lost in SS - it is only kept in parts of the North in the form of /v/.

(xiii) (111) As in the rest of Scotland, and unlike in any dialect in England, ME [g] and [x] are preserved in SS. But there is a tendency, absent in the rest of Scotland, to develop a sit, spin, bid

coal, nose, throat;

write, wrong

laugh, daughter,

night, eight;
voiced glide in front of these consonants. Thus laugh is pronounced [laux], daughter is [dɔɔxtər], light is [leiɡt] and fight is [faɪɡt]. Among the younger generation there is even a tendency to leave out the [x] or [ɡ] altogether, probably under the influence of SSB and neighbouring dialects in England.

(xiv) (72, 75) The diaphonemes /h/ and /hw/ are preserved in SS, as they are normally in the rest of Scotland and in the FN in England.

house, where; cf. map 76
IV
DIAPHONEMES IN THE DIALECTS OF ENGLAND

4.1 Now that we have a brief outline of the dialects spoken in England, together with their more important phonetic and phonological characteristics, we can proceed to a detailed description of the diaphonemes occurring in these dialects.

Each dialect shall be discussed under three headings:
(a) Distribution. In which dialects does the diaphoneme occur? What kind of positional restrictions apply to it different from the restrictions that apply in SSB?
(b) Allophones. What are the phonetic realizations of the diaphoneme in the different dialects?
(c) Derivation. What are the regular ME sources of the diaphoneme in the various dialects? Occasionally, references will be made to OE and Old French sources. Special emphasis will be placed on historical developments different from those in SSB.

4.2 VOWEL DIAPHONEMES

It is traditional to divide English vowels into two large groups: lax and tense vowels. This approach is as valid for the dialects as for the standard language.

The division is essentially made for reasons of convenience. The vowels within both groups have much in common. Lax vowels tend to be
short and monophthongal, and - when stressed - they cannot occur in morpheme-final position. On the other hand, tense vowels tend to be long and diphthongized, and they frequently do occur at the end of morphemes. Another important distinction between the two classes is that lax vowels are regularly derived from ME short vowels, whereas tense vowels are either regularly derived from ME long vowels or diphthongs, or they are derived from the lengthening of earlier short vowels.

4.3 LAX VOWELS

In any one dialect in England, there are at most six lax vowel diaphonemes present (aside from the "schwa" /ə/, to be discussed separately). Here is a list of the six diaphonemes, together with some examples as they occur in SSB:

/i/ [i] pit /pit/; pretty /prɪtɪ/; busy /bɪzɪ/; women /wɪmn/  
/e/ [ɛ] pet /pet/; any /ˈeni/; bury /ˈberi/; head /hed/; friend /frend/; said /sed/; leopard /ˈlɛpəd/; says /sez/  
/a/ [æ] pat /pat/  
/o/ [o] pot /pot/; wash /ˈwaʃ/; cough /kɒf/; because /bɪkəz/  
/u/ [u] put /pat/; woman /ˈwʊmən/; book /buk/; should /ʃʊd/  
/ʌ/ [ʌ] putt /pat/; son /sʌn/; rough /rʌf/; blood /bʌld/; does /dəz/

The examples were chosen to demonstrate the different spellings used for the various diaphonemes, often showing their different origins.
This system of six lax vowels exists in SSB and in the urban and rural dialects of the South. In the Midlands and the North, the diaphoneme /\a/ is missing in both the rural and urban dialects, though it may be present in the standard language used in the area. In some limited areas on the border of the southern and midlands dialects, it is /u/, not /\a/, that is missing. In a few rural localities of EA and the SE, /a/ is absent, again reducing the system to five diaphonemes. See below for more elaboration.

4.4 /i/

(a) Present everywhere.

(b) Normally [i]. It tends to have a higher and tenser realization in the Midlands and the North than in the South. In parts of the South and in Y there is a strong tendency towards centralization, especially in monosyllables and next to /r/.

Some works, such as Hedevind (1967), suggest that one should add another diaphoneme to the inventory of lax vowels on account of the central vowel [i:]. Contrasts like knit /nit/ versus not /nɔt/ are offered from the dialect of Dentdale (Y) (ibid, p. 53). Actually, the word not is the only example offered by the book where the vowel [i:] does not occur next to ME /r/. Since the word not usually receives no stress within the sentence, the presence of [i:] in it could be interpreted as a somewhat emphatic, raised form of the diaphoneme /a/.

In its other occurrences, [i:] is simply an allophone of /i/ when it is found next to the consonant /r/: bird /bird/=[bɪrd]; red /rid/=[rɪd]. The examples given are, of course, from the Dentdale dialect.
(c) (i) In all dialects, /i/ is the regular development of ME /i/ when not followed by /r/, [g]$^1$/nd/ and /mb/. For exceptions see under /u/ and /i:/.

(ii) ME /i/ before the consonant clusters /nd/ and /mb/ remained /i/ in the CN and the FN - just as ME /u/ remained /u/ before /nd/ in the same area.

(iii) ME /ɛː:/ was commonly shortened to /e/ before dental consonants in most southern and midlands dialects. But in several areas of the South, the change was to /i/, suggesting that the shortening took place after the raising of /ɛː:/ to /iː:/.

(iv) OE /y/ in most words is now regularly reflected as /i/. There is no trace left of the earlier /e/ in EA and the SE, except in those words where the standard language, and hence the dialects, have adopted the /e/. However, KÖkeritz (1932) still reported /é/ as an alternative SF pronunciation in many words with OE /y/ (e.g. bridge, fill, fist, lift, shut, etc.).

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$^1$ The use of square brackets around [g] is to emphasize the fact that [g] is really an allophone of the phoneme /h/ in ME, occurring after palatal vowels.
4.5 /e/

(a) Present everywhere.

(b) Normally [ɛ]. Aside from the widespread development of a short off-glide [ɛ̃] (especially in monosyllabic words before voiced stops), there is little variation in the pronunciation of this diaphoneme.

(c) (i) Normally, ME /e/ remained /e/ in all dialects, except when followed by PFR.

(ii) In the Midlands (except SY) and most of the South, as well as in the standard dialects, ME /ɛ:/ normally shortened to /e/ before dental stops - though there are many exceptions (e.g. beat, seat, lead (vb)).

(iii) ME /a/ often became /e/ in the urban and rural dialects of EA and the SE. This development is universal in those dialects where the diaphoneme /a/ is missing - e.g. Ess 12\(^1\) and K 4. In front of palatal or velar consonants the change /a/ to /e/ often occurs also in other dialects of England.

(iv) In a typical EA and SE development, OE /y/ became /e/ in later times. But

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1 Abbreviations such as Ess 12 refer to localities surveyed in the SED (in this case locality 12 in Essex), as abbreviated in that work.
there is no trace left of this in con-
temporary dialects, except in words
where the standard language itself
has borrowed the /e/. See 4.4 (c)
(iv).

4.6 /a/

(a) Present everywhere except in a few localities in EA and the SE
- e.g. Ess.12 and K 4. See map 3.

(b) In SSB and in the dialects of EA, the SE, So, the southern part
of the WML and the IM the raised pronunciation [æ] is normal. Else­
where we find the low front unrounded (cardinal 4) pronunciation
[a], with occasional occurrences of its back counterpart [a], es­
pecially near the Scottish border.

(c) (i) In most environments, ME /a/ remained
/a/ in all dialects where /a/ is present.
For cases where it became /e/, /o/, /a:/,
/œ:/ or /ai/ because of some conditioning
factor, see under those diaphonemes.

(ii) In words where ME /œ:/ became /e/ in
SSB, it became /a/ in parts of eastern Ha
in an interesting special development.
Cf. 4. 23 (c) (v).

(iii) ME /o/ before /r/ became /a/ in Wx and
So.

Map 3: apple, cat
Map 20: lead (n.),
bread, red
Maps 25, 68:
porridge, morning
4.7 /o/

(a) Present everywhere except in northern Nb - more precisely in Nb 1 of the SED. See map 4.

(b) Normally [ɔ]. But in Lj, parts of south-eastern Y and in Sf, the half-open, fully rounded [ɔ] is usual. On the other hand, the unrounded [a] occurs sporadically in the WMI - Wx area, one of the many similarities between the dialects of this region and those of North America. See map h.

(c) (i) The main source of /o/ is ME /o/ in all dialects. For cases where it was lengthened to /ɔː/, see under that dia- phoneme.

(ii) In the WMI, Ch and La OE /a/ was rounded to /o/ before nasal consonants, and in most words this /o/ is preserved to this day in the rural dialects of the area. Formerly the extent of this /o/ was much greater, as we can see from the EDG, pp. 25-28.

(iii) In SSB and in the dialects of the South, also spreading to Midlands dialects today, ME /a/ was rounded to /o/ after /w/ (unless immediately followed by a velar consonant - e.g. wag, wax).

(iv) On the IM, ME /u/ regularly became /o/ = [ɔ], presumably in imitation of...
the diaphoneme /ʌ/, usual in such words in SSB.

(v) In Nb and northern Du, ME /i/ and /u/ before PFR became /o/ in the modern rural dialect. No doubt the uvular pronunciation of /r/ in the area is the main cause of this development.

4.8 /u/

(a) Present everywhere, except possibly in some SMI and WMI localities.

(b) Normally slightly unrounded [u]. In D and western So we find the lax high front rounded [œ] - cf. the presence of /u:/ = [y:] in the same area. Unrounded [u] is quite common, especially in monosyllables like good and foot. See map 5.

(c) (i) In the rural and urban dialects of the North and the Midlands (except parts of the WMI and the IM), /u/ is the regular continuation of ME /u/.

(ii) In the South and parts of the WMI, ME /u/ has remained between labial consonants and /l/, as well as occasionally in other words after labial consonants (note, however, words such as bun, but which normally have /ʌ/).

(iii) ME /o:/ became regularly /u:/ and then shortened to /u/ before /k/ and occasionally Maps 30, 31: book, pull, bull, full, wool, put, butcher

Maps 72, 73: work, bird, burn

Map 32: cut, son

Look, hoof, soot
before /f/ and /t/ in SSB, the urban dialects and the rural dialects of the South and parts of the Midlands.

(iv) ME /i/ after /w/ became /u/ near the Scottish border. Cf. the similar Scottish development (SND § 59).

(v) ME /u/ before the consonant cluster /nd/ has remained in the MN and FN. Cf. the comparable retention of /i/ before /nd/ in the same area (p. 43).

(vi) In north-western Y and parts of Cu, ME /u/ is retained before PFR. In northern Cu, ME /i/ also became /u/ before PFR.

4.9 /ʌ/

(a) Present in the standard dialects and in the urban and rural dialects of the South and most of the WML. Note that in parts of the Midlands, [ʌ] appears in free variation with [ʊ], therefore it is to be assigned to the diaphoneme /u/.

(b) The principal allophone of /ʌ/ is the low central unrounded [ʌ]. In the standard speech of the Midlands and the North, /ʌ/ is pronounced with the higher central vowel [ʊ]. In the London area it is usually fronted to [æ] - not to be confused with /a/ which is pronounced [æ] there.
(c) (i) The principal source of /ʌ/ is ME /u/, except as noted under 4.8.

(ii) ME /o/ before /g/ became /ʌ/ in much of the SW.

(iii) ME /o:/ was shortened very early in some words, so that it shared the development of ME /u/ to /ʌ/ where this diaphoneme exists.

Map 32: cut, son
dog, frog

Map 93: blood, flood, Monday

4.10 TENSE VOWELS

The number of tense vowel diaphonemes in English is much larger than that of lax vowel diaphonemes. It is usual to divide tense vowels into five subclasses, depending on the nature of their prototypal pronunciation. Here follows a list of tense vowel diaphonemes, together with examples from SSB or other dialects:

I LONG VOWELS

/i:/ SSB  [i:] see /si:/; sea /si:/; receive /risiːv/; believe /biːlv/; people /piːpl/; these /ðiːz/, machine /maʃin/; Caesar /sizər/; city /sitiː/

/e:/ Wessex  [e:] spade /speːd/; speak /spək/; key /kei:/

/ɛ:/ NML  [ɛ:] cloud /klaːd/; how /ɛ:/; mare /meː/; hair /ɛː/

/æ:/ Devon  [æ:] sky /skei:/; knife /næfi:/; fight /væt/

/a:/ SSB  [ɑː] father /fɑːθər/; part /paːt/; heart /haːt/; laugh /laːf/; clerk /klærk/; Shah /ʃaː/
/ɔ:/  SSB  [ɔː]  saw /sɔː/; caught /kɔːt/; all /ɔːl/; brought
/brɔːt/; broad /bʁɔːd/; horse /hɔːs/; board
/bɔːd/; war /wɔː/; mourn /mɔːn/; door /dɔː/
/ɔː/  Wessex  [ɔː]  loaf /loːf/; mow /mɔː/; nose /noːz/; dough /dɔː/
/ɔː/  Devon  [uː]  both /bɔːθ/; coat /kəʊt/
/uː/  SSB  [uː]  moon /muːn/; move /muːv/; shoe /ʃuː/; through
/ðruː/; chew /tʃuː/; June /dʒuːn/; rueful
/rjuːˈfəʊl/
/ʊː/  Nb  [ʊː]  fox /fɔːks/; road /rʊd/; dough /dʊː/
/ɜː/  SSB  [ɜː]  bird /bɜːd/; burn /bɜːn/; fern /fɜːn/; work
/ɜːk/; myrrh /mɜː/; learn /lɜːn/

II  DIPHTHONGS WITH AN /i/ GLIDE
/ei/  SSB  [eɪ]  spade /spæd/; maid /meɪd/; gauge /geɪdʒ/;
clay /kleɪ/; great /ɡreɪt/; neighbour /ˈnɛɪbər/;
they /ðeɪ/; weight /weɪt/
/ai/  SSB  [aɪ]  bite /baɪt/; sky /skai/; aisle /ail/; neither
/ˈneɪðəːr/; lie /laɪ/; night /naɪt/; rye /raɪ/;
buy /bai/; eye /aɪ/; height /hæɪt/
/oi/  SSB  [ɔi]  voice /vois/; boy /boi/; buoy /boi/
/ui/  SY  [uɪ]  moon /muin/; foot /fuit/; flood /fluid/

III  DIPHTHONGS WITH A /u/ GLIDE
/eu/  SY  [œu]  dew /deu/; few /feu/
/au/  SSB  [au]  house /haus/; now /nau/; drought /draʊt/.
/ou/  SSB  [oʊ]  note /nout/; mauve /mouv/; boat /bou/; toe /tou/;
shoulder /ˈʃʊldər/; mow /mou/; sew /sou/
IV  DIPHTHONGS WITH A /ə/ GLIDE

/iə/  SSB  [iə]  deer  /diə/;  dear  /diə/;  weird  /wiəd/;  fierce  
/fias/;  here  /hiə/;  theatre  /θiətə/

/eə/  SSB  [eə]  hare  /heə/;  hair  /heə/;  heir  /eə/;  bear  /beə/;  
there  /θeə/;  scarce  /skəə/  

/œ/  Midl.  [œ]  four  /foœ/;  hoarse  /oœs/;  door  /doœ/.

/œ/  SSB  [œ]  poor  /pœə/;  tour  /tuœ/;  sure  /ʃuœ/

V  EVEN AND RISING DIPHTHONGS

/ia/  FN  [ia-ι]  spade  /spiəd/;  gate  /ιat/;  both  /biəθ/

/iu/  SSB  [iu:]  few  /fiu/;  feud  /fiuəd/;  tune  /tiuən/;  due  /diu/;  
beauty  /biúti/  

/ua/  Y  [ua]  nose  /nuaz/;  road  /ruad/;  foal  /fuəl/

Naturally, no dialect contains all of these diaphonemes. The  
following are those that occur in all or practically all of the dia­
lects spoken in England:

/i:/  /a:/  /ɔ:/  /u:/  /ʊ:/

/ei/  /ai/  /oi/  /iu/

Of the others, the following are widespread, though not universal:  
(a)  /e:/  and  /o:/  are  typical  of  the  dialects  spoken  in  the  West  of  
England - all the way from the SW to La. Scattered survivals of  
these diaphonemes occur in Nf.

(b)  /au/  is  missing  in  the  rural  dialects  of  the  North,  while  /ou/  
is  missing  in  the  SW - Wx area.
(c) The diphthongs /iə/; /ɛə/ and /uə/ are missing in most dialects that have preserved PFR. This is because the sounds [iə], [ɛə] and [uə] can be considered in these areas as allophones of the diaphonemes /i/, /e/ and /u/, respectively, occurring before /r/. However, there are areas in the North, where the three diphthongs considered here do occur as diaphonemes even though PFR is retained. This happens because in these areas ME /a:/, /ɛ:/ and /ɔ:/ have normally developed into these diphthongs.

All the other diaphonemes mentioned above are very limited in their geographical distribution. For a detailed treatment, see under each diaphoneme separately.

\[ /i:/ \]

(a) Present everywhere, except in locality Y 6 in north-western Yorkshire, where it seems to be uniformly replaced by /ei/. 

(b) In much of England, the monophthong [i:] is replaced by various kinds of diphthongs. We find an on-glide in the [iː] or [ɔi(:)] of EA, the SMI or north-western Y. [ɛi:] occurs in south Durham - cf. Orton (1933), p. 4. The "weaker" diphthong [iː] is widespread all over England. See map 6.

(c) (i) In SSB and all dialects except those in most of the NML, ME /e:/ regularly became /i:/.

(ii) ME /ɛ:/ usually became /i:/ in the standard and urban dialects, merging Map 33: three, feel

Maps 34, 35: speak, reach, cream
with the resultant of ME /e:/.

This development to /i:/ is also true in a large number of rural dialects: in the south (except Wx and the SW), the CML and most of the WML, the IM and the FN.

Because of the influence of the standard language, /i:/ has spread to some other rural dialects in certain words, such as teacher.

Before dental stops, ME /ɛ:/ usually became shortened to /e/ or /i/ in the standard language and the rural dialects of the south and most of the Midlands. /i:/ in such words is usual only in the FN.

(iii) ME /ai/ became /i:/ in the same NML rural dialects where ME /e:/ became /ei/. This is why the diaphoneme /i:/ does not disappear in the NML.

Interestingly, ME /ɛ:/ became /i:/ in this area in those words where it became /ei/ in the standard language, suggesting an early merger of ME /ai/ with /ɛ:/ in this area.

(iv) ME /iə/ developed to /i:/ instead of /ai/ in the north, La and the SY.

(v) In the southern part of EA, OE /y:/ became /i:/ instead of /ai/, suggesting an early development of the diaphoneme /i:/.
/y:/ to /e:/: analogous to the /y/ to /e/ change typical of the dialects of this area in early ME.

(vi) In much of the north, ME /o:/ became /i:/ instead of /iə/ at the end of a word.

(vii) ME /i/ became /i:/ before /ɔ/ in the rural dialects of La and So (EDG, § 72).

4.12 /e:/

(a) This diaphoneme is absent from the standard language and from most urban dialects (though present in urban dialects of the SW, La and the north). But /e:/ is very much alive in the rural dialects, absenting itself only in the SE, the SML, So, the CML, L and the IM only. In the rural areas of EA it is disappearing today, cf. Kökeritz (1932), pp. 17 – 20. See map 7.

(b) The usual pronunciation of /e:/ is the higher-mid front unrounded [e:]. Lowered [ɛ:] occurs occasionally in D and So, and is usual in most of Cu and We.

The sound [ei] occurring in EA and He is also included in the diaphoneme /e:/, despite its diphthongal nature, because there is another diphthong, pronounced [aɪ] or [æɪ], in the areas mentioned that has to be included in the diaphoneme /ei/ (see 4.22).

Slight diphthongization of /e:/ to [eə] also occurs in eastern Y.

(c) (i) ME /a:/ resulted in /e:/ in all southern and Midland dialects where /e:/ occurs.

Map 56: do, two (from the dialectal OE /two:/)

Map 36: spade, gate
(ii) ME /ai/ resulted in /e:/ in OX, Sa, the NML, the CN and the FN, though there is some interference in the north from the diaphoneme /eə/.

(iii) ME [aɪɻ] resulted in /e:/ in SA and occasionally in Wx.

(iv) ME /eː/ resulted in /e:/ in the Wx area mostly - not, of course, in words where it was shortened to /e/ or /i/.

(v) ME /aː/ and /ai/ before PFR became /eː/ instead of the more usual /eə/ or /e/ in Cu and We.

Maps 37, 102: clay, reins, rain
Map 39: straight
Maps 34, 35: reach, speak, cream
Maps 60, 61: hare, hair

4.13 /eː/

(a) This is a diaphoneme of very limited geographical distribution. It occurs only in Db (except its northernmost part), St and Ch.

(b) Always [ɛː]. Note that this same sound [ɛː] also occurs as an allophone of the diaphoneme /eː/ in both the south-west and the north-west of England.

(c) (i) ME /uː/ regularly became /ɛː/ in Db, presumably by going through the stages [uː] → [aʊ] → [ɛʊ] → [ɛə] → [ɛː].

(ii) ME /aː/ and /ai/ before PFR became /ɛː/ instead of /eə/ in Ch and St, as well as occasionally in Db.

Maps 46, 47: cloud, house, ground
Maps 60, 61: hare, hair, mare, pear
\[4.14\] /\varepsilon:/

(a) This is another very rare diaphoneme. Its extent is restricted to the county of D. See maps \(40, 41\).

(b) Normally [\varepsilon:], which in D contrasts with [a:]. Thus in northern D, ice /\varepsilon:s/ contrasts with ass /a:s/. The vowel [\varepsilon:] also exists in Wx and Nf as allophone of the diaphoneme /a:/.

(c) (i) In northern D, ME /i:/ regularly became /\varepsilon:/, except before /r/ where /ai/ is retained (e.g. iron /\varepsilon:ron/).

(ii) In southern D this development did not happen before voiceless consonants, where /ai/ is kept.

Note: Because of this predictability of occurrence of the diaphoneme /\varepsilon:/, one could include this sound with the diaphoneme /ai/. However, one should try to avoid inclusion of a monophthongal allophone with a diphthongal diaphoneme.

\[4.15\] /a:/

(a) Present in all dialects.

(b) Normally, low front unrounded [a:]. In Nf and the SE, we find the low back unrounded vowel [\varepsilon:], also present in south D, but only when followed by /r/. The somewhat raised [\varepsilon:] also occurs, especially in Wx, the WML, the IM and Du. See map 8.

Generally speaking, the urban dialects have the same pronunciation of /a:/ as the rural dialect appropriate for their area.
(c) (i) The principal source of /a:/ in the various English dialects is ME /a/ lengthened by diverse conditioning factors. The most important of these is pre-consonantal and final /r/, before which /a/ became /a:/ by compensatory lengthening wherever the PFR later disappeared (including SSB).

(ii) ME /a/ became /a:/ when followed by the voiceless fricatives /f/, /θ/ or /s/, and often before /n/ followed by a dental consonant - in SSB, the rural and urban dialects of the south and often in the CML, the WML and the IM.

(iii) In a number of words /a:/ is general in all standard and urban dialects as well as in the majority of rural dialects. These include native words (before ME /lm/) and words of foreign origin where the /a:/ is in imitation of a long [a:] vowel in the language from which the particular word is borrowed.

(iv) ME /u:/ became /a:/ in south La and SY, just as it became /ɛ:/ further south.

(v) ME /au/ became /a:/ in much of the north, but the exact boundaries of this change have been obliterated by analogy and borrowing.
(vi) In most of England, OE /aːw/ eventually fell together with /ou/ because of the general rounding of OE /aː/. But in the rural dialects of the north, there are still many traces of the more conservative, unrounded vowel, which has monophthongized to /aː/.

(vii) ME /e/ before PFR often became /aː/. In words where even the standard language has borrowed this vowel, the dialects have it too, but in other words there is little or no trace of this /aː/ today. This is in marked contrast to the state of affairs a generation or more back, when /aː/ was common in certain dialects in such words as certain and servant. Cf. Wright (p.55), Hedevind (pp. 112-114), Kökeritz (pp. 171-176), Orton (pp. 27-28). Presumably, the influence of SSB /ɔː/ has been too strong to resist.

Map 49: snow, mow, own (but not grow, for example, from OE /grōːwan/.)

far, heart

4.16 /ɔː/

(a) Present everywhere except in the rural dialects of eastern Nb and eastern Du (see the note relating to Du in Orton (pp. 3-4), for example).
(b) Normally the lower-mid back rounded vowel [ɔː], with a tendency towards the higher [oː] being exhibited mostly in the SW. In the urban dialects around London, including Cockney, we find a diphthongized allophone [ou]. In the He - Gl - Wo area the unrounded form [ɑː] is common. See map 9.

(c) (i) Except in the rural dialects of the north, ME /au/ regularly resulted in /ɔː/.

(ii) ME [aux] and [oux] normally became /ɔː/, except again in the rural dialects of the north and the northern half of the Midlands.

(iii) ME /a/ before pre-consonantal and final /l/ regularly became /ɔː/ in all dialects where /ɔː/ exists.

(iv) ME /o/ became lengthened to /ɔː/ when followed by the voiceless fricatives /ʃ/, /θ/ and /s/ in the rural and urban dialects of the south and of the WM. This development also exists in old-fashioned SSB.

(v) ME /o/ before /g/ usually became /ɔː/ in the WM - yet another development common to this area and North America.

(vi) ME /o/ before pre-consonantal and

Maps 66, 67: thaw, saw, law
Maps 65, 124: caught, brought, daughter
Maps 28, 29: cough, froth, cross
Map 27: dog, log
Map 68: morning
final /r/ usually became /ɔː/ in those dialects in which PFR is lost. However, absence of this lengthening is quite common, especially before /s/, where the /r/ had been lost earlier than in other positions.

(vii) On the other hand, ME /ɔː/, /oː/ and /ou/ before PFR became /ɔː/ only in a few rural dialects - mostly in EA and the CM1. Of course, most urban dialects and SSB do have /ɔː/ in such words.

(viii) ME /wa/ before PFR also became /woː/ in SSB and the dialects of the south, where the rounding of /wa/ to /wo/ is usual.

(ix) OE /aːw/, which normally merged with /ou/ in ME, due to the usual rounding of OE /aː/, merged with ME /au/ instead in the western parts of the FN and hence became /ɔː/ in the modern rural dialect of the area.

(x) ME /ou/, of whatever origin, often resulted in /ɔː/ in the SW rural dialects.
4.17 /o:/

(a) Like its front unrounded counterpart /e:/, this diaphoneme is restricted to the urban and rural dialects of the west and of the FN, aside from a marginal presence in EA. Unlike /e:/, it is completely absent from SY and most dialects of the north.

(b) Normally the higher-mid back rounded [o:]. There is no tendency towards the lower sound [ɔː] (unlike in the case of /e:/), no doubt to avoid confusion with /ɔː/.

In Nf and parts of the CML, the diphthongized [ou] should be considered as an allophone of /o:/, because in these areas there is another diphthong [ɔu] that is assigned to /ou/. Compare 4.12 (b).

See map 10 for the geographical distribution of the diaphoneme /o:/ in the rural dialects of England.

(c) (i) /o:/ is usually derived from ME /ɔː/, whether ultimately from OE /aː/ or from OE /o/ in open syllables.

(ii) ME /ou/ normally became /o:/ wherever /o:/ exists, except in EA and the He-Mon area.

(iii) In parts of the NML, ME /ɔː/ and /ou/ before PFR resulted in /o:/.

Maps 50, 51: both, whole, loaf
Map 53: coal, coat
Maps 48-49: mow, snow, grow
Maps 69, 70: four, mourning, hoarse
/o:/

(a) This is a diaphoneme restricted to D, the westernmost part of So and the easternmost part of Co. As shown in 4.19, this area coincides with the region where /u:/ is pronounced [y:]. See map 9.

(b) Always [u:].

(c) Always derived from ME /ɔ:/.

Note: The rationale for setting up this diaphoneme is that in the the D area most words that contained /ɔ:/ in ME, have a back high rounded vowel [u:] today, contrasting both with /u:/ = [y:] and with /o:/ = [o:]. It is true that all the words with this /o:/ diaphoneme have an alternate pronunciation [o:] in the area. But words that had /ou/ in ME (e.g. mow, snow) always have /o:/ (occasionally /ɔ:/), never [u:] - so that the phone [u:] cannot be considered as simply a variant of /o:/.

In the Ch area, where /u:/ is also fronted to [ü:] or [y:], we also find the phones [u:] or [œ:] as variants of /o:/ but here this raising of /o:/ occurs regardless of whether /o:/ is derived from ME /ɔ:/ or /ou/, so that [u:] can be considered as an allophone of /o:/, so that we do not need /o:/ to fully explain the phonology of the area.

/u:/

(a) Present everywhere.

(b) Normally [u:], with slight fronting in EA, the CMI and the IM. This fronted sound is described in Kokeritz (1932), pp 42-44, as
a sound almost identical to Swedish /u/ in hus. Phonetically, [ʊː] is a high front overrounded vowel, pronounced with a very narrow lip opening, often slightly diphthongized.

In D, western So and eastern Co, as well as in parts of Ch and La, /u:/ is fully fronted to [yː]. One should note the subsequent development of the diaphoneme /oː/ to "fill in" the gap between /oː/ and /uː/.

(c) (i) ME /oː/ regularly became /uː/ (cf. the similar raising of ME /eː/ to /iː/), except in the rural dialects of southern Db, SY and the CN and FN. Due to the influence of SSB, /uː/ is spreading in words with ME /oː/ in the dialects of SY and the CN.

(ii) ME /uː/ was retained in the rural dialects of the FN and parts of the CN. This area, of course, is in complementary distribution with the area where ME /oː/ became /uː/ (see above).

Before /nd/, ME /u/ lengthened to /uː/, just as ME /i/ lengthened to /iː/ in the same environments, in the same dialects. Because of later diphthongization of the long high vowels in most dialects, we find /uː/ in such words only in the rural dialects of eastern Y.
(iii) Before labial consonants, ME /u:/ was normally retained in all dialects.
(iv) ME /eu/ and /iu/ normally became /u:/ in D and Nf. After /l/ and palatal consonants, this development extends to practically all dialects of the south and the Midlands, including SSB (though /iu/ after /l/ is still occasionally heard in old-fashioned speech). After /r/, /u:/ in words of this class is universal.

(a) A rare diaphoneme, existing only in the rural dialects of Nb and northern Du. The origin of this diaphoneme is shrouded in mystery. Perhaps it is an attempt at the imitation of SSB /ou/ pronounced [ɔ:]. Alternatively, it could be a monophthongization of an earlier diphthong /uə/, still current in much of the north, in the same way as the OF diphthong /ue/ has been reduced to /œ/ or /œ/ in modern French (e.g. OF /pluet/, modern /plœ/ - written pleut, 'it rains').

It is interesting to note that /œ:/ is not even mentioned in the EDG as a possible pronunciation of the vowel in words that contain /ou/ in SSB, even though it is unlikely that this sound, of widespread use today in Nb, was completely unknown there seventy
years ago. Similarly, there is no trace of a similar sound in
neighbouring Scottish dialects, at least according to the SND.

See map 9 for the actual distribution of /ɔː/ in the dialects.

(b) Always higher-mid front rounded [ɔː].

(c) (i) ME /ɔː/ normally results in /ɔː/, whether
derived from OE /aː/ or OE /o/ in open syl-
lables. In this merger of the two OE sources,
the rural dialects of Nb and northern Du are
unique among the rural dialects of the FN and
northern CN areas. That this /ɔː/ is a recent
development, probably borrowed, is also shown
by the fact that it does not occur in a number
of common words with OE /aː/ (such as both,
which always has the presumably older form
/ɪə/ in the area).

But saying that /ɔː/ is a borrowed diaphoneme
in Nb and Du does not really explain its origin.
Why was a similar vowel not borrowed by other
northern rural dialects? Is there any connection
between the presence of /ɔː/ and that of [u],
also unique to this area? Unfortunately, the
amount of data does not allow an answer to these
questions at the present time.

(ii) ME /ou/ and /o/ before pre-consonantal and
final /l/ also resulted in /ɔː/ in this area,
but not as regularly as ME /ɔː/. Of the words

Maps 51-53:
loaf, oak,
coal, coat

Maps 48, 49:
mow, snow
examined, it is commonly used in dough, gold, mow and yolk, it occurs occasionally in old and snow and is absent in cold, colt, grow, own, sew, shoulder and throw. Evidently, the presence of /ɔ:/ in these words is not predictable on the basis of historical developments. What we have is a progressive replacement of dialectal /a:/, /iə/ etc. by /ɔ:/ in those words that contain /ou/ in SSB.

(iii) ME /o/ in closed syllables is also often replaced by /ɔ:/ in the Nb rural dialects. Since these words contain /o/, not /ou/ in SSB, the theory that dialectal /ɔ:/ is derived from SSB /ou/ is further damaged.

4.21 /ɔ:/

(a) Present everywhere except in the rural dialects of much of the FN, and in locality Lei 1. We should note that in areas that have preserved PFR, diaphoneme /ɔ:/ is restricted in distribution to occur only before the consonant /r/.

(b) Phonetically, /ɔ:/ is usually a long mid central unrounded vowel, denoted either [ɔ:] or [œ:] in linguistic literature. In Mo the front rounded vowel [œ:] is found instead.

In areas where PFR is preserved, what is normally transcribed as
a succession of diaphonemes /3:r/, is actually a uniform vowel throughout, namely an "r-coloured" [3:] vowel, often written [3:]. This vowel is also common in North American English.

(c) (i) ME /i/, /u/ and /e/ before PFR normally became /3:/ in all dialects where this diaphoneme exists. ME /o/ between /w/ and PFR developed in the same way.

(ii) SSB /ea/ is regularly replaced by /3:/ in both the rural and urban dialects of most of La.

(iii) There is a strong tendency in many rural dialects to replace SSB /i/, /e/ and /a/ by /3:/ before intervocalic /r/. A similar tendency exists in North American English.

4.22 /ei/

(a) This diphthongal diaphoneme is present everywhere except in the rural dialects of Ox and Sa and some of the urban dialects spoken in the southwest and the north. See map 12.

(b) The most general pronunciation of /ei/ is [ei]. A higher variety [ei] occurs in some forms of the standard language and in the dialects of So and the IM. One should note here that the diphthong [ei] also occurs as an allophone of /e:/ in parts of EA and the WMI (cf. 4.12).
On the other hand, in much of the south /ei/ has a more open pronunciation. In the rural and urban dialects of most of EA, parts of the SE, Gl and He we find mostly [æi], while the low [ai] is found occasionally in EA (including often Cockney) and is typical of the pronunciation of /ei/ in Wx and Wo. See map 12.

(c) (i) ME [aiç] became /ei/ practically everywhere /ei/ exists - rural dialects of Db being the main exception, though some words such as eight contain /ei/ even there.

(ii) ME /ai/ before other consonants normally became /ei/ in the standard language, in urban dialects where /ei/ exists and in the rural dialects of the south (except Ox), the CML, He and the IM.

(iii) ME /a:/ became /ei/ in the standard language, in most urban dialects and the following rural dialects: EA (though traces of /e:/ survive - see 4.12), the SE, So, the SML, the CML and the IM.

(iv) ME /e:/ became /ei/ in the rural dialects of the NM1 and in Y 6.

(v) ME /ɛ:/ in most words became /ei/ in the rural dialects of the SW, the NM1, SY and La, as well as occasionally in Wx and the WML. But in some words of this class /ei/ occurs only in the SW rural dialects (e.g.}

Maps 38-39: straight, eight

Map 37: clay, maid

Map 36: spade, gate

Map 33: three, see, feel

Map 34: speak, reach
bean, tea, wheat). Yet other words, such as meat for example, have a different distribution of /ei/. In the words break, great and steak the use of /ei/ is general in the standard language and the urban dialects, and because of the influence of these /ei/ is more widespread in these words in the rural dialects also.

In words where ME /e:/ was shortened to /e/ in SSB, /ei/ is absent in all dialects.

(vi) In the FN rural dialects there has been a strong tendency for ME /i:/ to develop into /ei/ instead of /ai/.

Only in a few words do we find /ai/ in all northern dialects (e.g. hive, iron).

(vii) OE /e/ or /eo/ before [xt] were normally raised to /i/ by ME times in the dialects of the south and much of the Midlands, and hence developed into /ai/ or /oi/ in the modern dialects. But in the rural dialects of the north, as well as of La, SY, the NML and the IM, the older distinction between OE /e/ and /i/
before [xt] has been preserved in the form of an /ei/ − /i:/ distinction. In the IM, all words with ME [iɔ] have /ei/ today.

Map 43: night, light

4.23 /ai/

(a) The diaphoneme /ai/ is absent in several rural dialects: parts of Sf, most of Ess, parts of K and Sx, in Ha, northern So and in most of the CML. In all these areas it is normally replaced by /oi/. See map 13.

In northern D, /ai/ is present only before intervocalic /r/ (e.g. iron).

(b) The pronunciation of /ai/ varies a great deal from dialect to dialect. In the standard dialects and in the urban and rural dialects of the north and of Sa and St in the Midlands and of So and the SW in the south we normally find [aɪ].

The somewhat advanced [æɪ] is found on the IM and occasionally in eastern Y and western So.

Back [ɔɪ] is usual over a large area: La, SY, the NML, the CML (except St), the SML and the London area, including much of K. In SY and Lei, this [ɔɪ] varies optionally with a monophthongized [a:].

Finally, centralized [æɪ] or [əɪ] occur in the SML, Mo, Wx and most of EA and Sx.

See map 13 for the exact distribution of these allophones in the rural dialects of England.
(i) ME /i:/ normally became /ai/ in all dialects, except where /æ:/, /ei/ or /oi/ are the normal developments (see under those diaphonemes).

(ii) OE /i/ before the consonant clusters /nd/ and /mb/ remained short in the rural dialects of the CN and FN, but was lengthened to ME /i:/ in other dialects and hence became /ai/ in most dialects (including SSB) today.

(iii) The ME sequence [iɔ] became /i:/ and hence /ai/ in most modern dialects. But in the rural dialects of the north, of La and SY, the compensatory lengthening of ME /i/ to /i:/ before the lost [ɔ] took place only after the diphthongization of ME /i:/, so that in these dialects we find /i:/, not /ai/ in such words.

(iv) ME /a/ became /ai/ before /ʃ/ in the SW rural dialect and parts of So and Wx. Cf. the corresponding lengthening of ME /i/ to /i:/ before /ʃ/ in So (see 4.11).

(v) In western Ha, especially in locality Há 3, ME /ɛ:/ normally became /ai/ in an interesting local development. Note that in words where ME /ɛ:/ was shortened to /e/ in

Maps 40-41: sky, knife

Map 42: blind, find, climb

Map 43: light, night

Maps 22, 89: ash, wash

Map 34: speak, reach
SSB, it was shortened to /a/ in this area, cf. 4.6 (c) (ii).

(vi) Corresponding to SSB /oi/, we often find /ai/ in rural dialects. See below for further comments.

4.24 /oi/

(a) Present everywhere except in the rural dialects of Ch and some neighbouring areas in Db and La.

(b) Normally [ɔi]. A more centralized pronunciation is current in the SW. See map 107.

(c) (i) /oi/ is normally derived from ME /ɔi/ and /ui/, though these ME sounds are often replaced by /ai/, especially in the rural dialects of the Midlands.

(ii) ME /i:/ has become /oi/ instead of /ai/ in several urban and rural dialects, especially in the London area, Wx and the CML.

(iii) OE /ɔ/ in open syllables became /oi/ in the SY rural dialects. This development, probably reflecting an earlier */ɔ:/, is closely paralleled by the development of ME /ɔ:/ to /ui/ in the same areas.

4.25 /ui/

Map 107: poison, boil, join

Map 107: poison, boil, boy

Maps 40-41:
sky, knife

Map 53: coal, throat
(a) A rare diaphoneme, occurring almost exclusively in the rural
dialects of SY. Elsewhere there are only scattered examples of
/ui/, mostly in EA and the SE.

(b) Always [ui].

(c) (i) In SY, ME /o:/ normally became /ui/, except finally and before /k/, where /u:/ is usual.

(ii) In the rural dialects of EA and the SE, there are traces of the diaphoneme /ui/, survival of early ME /ui/. In the SED, the only word showing /ui/ is boy (VIII.1.3), but Kokeritz (1932), p.63, notes /ui/ in the following words occurring in Sf: boil, boiler, boy, coin, destroy, noise, ointment, point, poisonous, voice.

Maps 55-104: moon, lose-

4.26 /eu/

(a) A rare diaphoneme, restricted to St, the NML, La, SY and parts of the northwestern area of Y.

(b) Always [euj].

(c) (i) In parts of St and most of Db, ME /o:/ regularly developed into /eu/ - cf. the development of ME /e:/ to /ei/ in roughly the same area (4.22.(c) (iv)).

(ii) ME /o/ before /Id/ often became /eu/ in the rural dialects of the NML and La.

(iii) ME /eu/ remained in the rural dialects of La and SY.

Maps 55-56: moon, do

Map 112: cold, old

Maps 57-58: dew, few
4.27  /au/

(a) This diaphoneme is absent in the rural dialects of Db, much of
SY and southern La and practically all of the CN and FN. See map
14. /au/ is present in all standard and urban dialects.

(b) Like its counterpart /ai/, /au/ has much variation in its pronun-
ciation.

[aʊ] is usual in the standard language, the urban dialects of
the north, and the rural dialects (where present) of La, Y, nor-
thern L, Sa and So.

Centralized [ɔu] or [ʌu] are normal in Wx (except Ha), Mo and
the southern WMl. In the SW rural dialects, we find a centralized
glide [ɣ] in the interesting local pronunciation [æɜ] or [æə]. In
southern Gl the rising diphthong [uː] is found - or is this sound
a survival of ME /uː/?

In the rest of the dialects, rural and urban, we find the advanced
diphthongs [æu] and [ɛu], neatly corresponding to the [ai] or [ei]

One interesting development is in parts of the rural dialects of
Ch and St, where we find [ai] in words containing /au/ in neighbouring
dialects: house [aɪs], about [əbæɪt]. Since /ai/ in this area is pro-
nounced [ai], for convenience's sake this [ai] sound is to be included
with diaphoneme /au/.

See map 14 for the pronunciation of /au/ in the various rural dia-
lects.

(c) Wherever the diaphoneme /au/ occurs, it is
the normal development of ME /uː/.

Maps 46-47, 108-109:
cloud, bound, plough, drought
4.28  /ou/

(a) This diaphoneme is absent from the rural dialects of the SW, most of Wx, Sa, Ch and La. It is also absent from the urban dialects spoken in the same areas, but present in all other dialects. See map 15.

(b) The pronunciation [ou] itself is rare, occurring mostly in the CML and So. More common is the somewhat lower [ɔu], typical of the FN, SY, L, the NML, Nf and the SE.

In most of the CN the first part of the diphthong is unrounded, so that we find [au] or [ou] in the area. Unrounding, fronting and raising occurs in He, where we find [æu].

The centralized diphthongs [ɔu] (also written [əu]) or [au] are typical of most varieties of SSB and of the urban and rural dialects spoken around London. See map 15 for the pronunciation of /ou/ in the various rural dialects of England.

(c) (i) ME /ɔː/, whether from OE /aː/ or from OE /o/ in open syllables, became /ou/ in SSB and most urban dialects, as well as in the rural dialects of EA (except Nf), the SE, the SML and parts of So and the WML.

(ii) ME /ou/ and /o/ before /l/ followed by a consonant became /ou/ in SSB and all urban and rural dialects of the south and of the Midlands where /ou/ exists. The situation is more complicated in the

Maps 50-53: both, whole, loaf, throat, oak, coal, coat

Maps 48-49, 54, 110-112: mow, snow, grow, dough, sew, cold
rural dialects of the north, owing to the fact that already in ME times, dialectal /au/ (hence modern /ɔ:/) often replaced the /ou/ of other dialects. Since the combination /a:w/ never merged with /ou/ in the north, we do not normally find /ou/ in such words in the rural dialects of the north. See 4.16 (c) (ix).

(iii) In the rural dialects of the north and some neighbouring Midlands dialects, ME /au/ (including when derived from earlier [oux]) normally developed into /ou/.

4.29 /iə/ (a) The diaphoneme /iə/ is absent in all PFR preserving urban dialects (i.e. the Bristol - Dover, Northern Lancashire and Newcastle area dialects). It is also absent in most PFR preserving rural dialects (the SE, Wx, So, the SW and the WM1), but present in La and FN rural dialects. The diaphoneme is present in all dialects that have lost PFR, including SSB.

In parts of Wx and So, one word (bean, see map 97) was found to contain /iə/, the normal development of ME /ɛː/ being /iː/ in the area. This indicates that in principle the territorial extent of the diaphoneme /iə/ should be extended to Wx and So as well, though it is on the verge of extinction there.
(b) The normal pronunciation of /iə/ is the centring diphthong [iə]. In eastern St we find a diphthong with a higher starting point: [iə], while in Mo the rising front rounded [æː] is usual. Cf.:4.21 (b) for the realization of /ɜː/ as [æː] in Mo.

In Nb and northern Du /iə/ is pronounced [iɔ] when followed by /r/, doubtless because of the uvular [ə] pronunciation of /r/ in the area.

(c) (i) ME /e:/ before /r/ became /iə/ in all dialects where this diaphoneme exists.

(ii) ME /ɛ:/ before /r/ also became /iə/ in all dialects where /iə/ exists with the exception of the rural dialect in Nf where it became /eə/. However, in many words ME /ɛː/ before /r/ became /eə/ in SSB and hence in most dialects - but in the rural dialects of the north /iə/ is preserved in such words to this day.

(iii) ME /ɛː/ normally became /iə/ in the rural dialects of L and the MN. In a number of words the distribution of /iə/ is even more widespread, extending to the rural dialects of SY and La. In one word (bean, map 97) /iə/ occurs even in parts of the EML, Wx and So.

(iv) ME /aː/ became /iə/ in the rural dialects
of western Y and the FN. As has already been mentioned OE /a:/ remained unrounded in the dialects of the CN and FN, so that it developed like ME /a:/ in this area. With the exception of eastern Nb (where we find /ɔ:/ in such words), the rural dialects of the eastern half of the CN and the FN have retained /iɔ/ in words with OE /a:/.

(v) ME /ɔ:/ became /iɔ/ in the rural dialects of the MN, and - to a lesser extent - of the FN. The development was, in all likelihood: /ɔ:/ → /ɔ:/ → /y:/ → /iu:/ → /iu/ → /iɔ/. The earlier stage /iu/ still occurs occasionally in the rural dialects of the north, while evidence of the still earlier /ɔ:/ or /y:/ stages is found in some Scottish dialects (cf. SND, §35).

Map 50-52: both, whole, oak, bone

Map 55: moon

4.30 /eə/

(a) The diaphoneme /eə/ is present only in those dialects that have lost PFR - and even among these it is absent in the rural and urban dialects of most of Ch, St and parts of Db, due to its consistent replacement by /ɛ:/ (see 4.13).

(b) Normally, /eə/ is pronounced [ɛə]. It occasionally becomes monophthongized to [ɛ:] (especially in Du and Mon), but unlike in parts
of the northwestern Midlands, this monophthong should still be considered as an allophone of /eə/. The reason is that in these areas there is no question of merger with some other phoneme, while in the Ch - St area we find [ɛ:] corresponding to both the /eə/ and /au/ diaphonemes of other dialects.

(c) (i) ME /a:/ and /ai/ before /r/ became /eə/ wherever this diaphoneme exists.
(ii) ME /ɛ:/ before /r/ also has had a strong tendency to develop into /eə/. In words where SSB also has /eə/, we find /eə/ in most urban dialects and the rural dialects of the south and the Midlands. In words that contain /iə/ in SSB, /eə/ is found normally only in the Nf rural dialect.
(iii) Instead of /ɔː/, we normally find /eə/ in the rural dialects of north-eastern Lei.
(iv) ME /a:/ and /ai/ (except before [ŋ]) normally became /eə/ in the rural dialects of L and parts of eastern Y.

<table>
<thead>
<tr>
<th>Maps 60-61:</th>
<th>Maps 59:</th>
<th>Maps 72-73:</th>
<th>Maps 36-37:</th>
</tr>
</thead>
<tbody>
<tr>
<td>hare, hair</td>
<td>bear, pear</td>
<td>burn, bird</td>
<td>spade, clay</td>
</tr>
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</table>

4.31 /ɔə/

(a) On the basis of data obtained from the SED it is necessary to set up a diaphoneme /ɔə/ for the rural dialects of EA and the SMI, contrasting with the diaphoneme /ɔː/. /ɔə/ is also present in Cockney and some very old-fashioned forms of SSB.
The following minimal pairs will illustrate the contrast between 
/o:/ and /ɔː/: saw /sɔː/ vs. sore /soʊ/; flaw /flɔː/ vs. floor /floʊ/.

(b) Always [ɔː], except in Nf, where we find [oə].

(c) Wherever /oː/ exists, it results from ME /o/, /ɔː/, /oː/ or /ou/ followed by PFR (later to be lost). The use of /oː/ in such words is more common before original final /r/ (as in four) than before original pre-consonantal /r/ (as in forty), where it was more readily replaced by /ɔː/.

Maps 68-71: morning, board, floor, four

4.32 /uə/

(a) The diaphoneme /uə/ exists in all dialects that have lost PFR. In addition, it occurs in the rural dialects of Wx, the SML, La and Cu.

(b) The pronunciation of /uə/ varies rather freely between [uə] and [ʊə]. In Ch we find the more fronted [ʊə] (cf. sure, SED IX.7.12).

(c) (i) ME /oː/ before PFR normally became /uə/ in those dialects where PFR later disappeared. However, both in SSB and the rural dialects of the Midlands, there has been a strong tendency to replace /uə/ by /ɔː/ in such words. Thus, in SSB for example, most words with /uə/ have an al-
ternative pronunciation with /ɔ:/ (e.g. poor), while others occur only with /ɔ:/ (e.g. door, floor).

(ii) ME /iu/ before final /r/ became /iuə/ in those dialects where the /r/ was later lost - and the /i/ of this triphthong was later lost after the same consonants as in the case of /iu/ (see below).

(iii) ME /ɔ:/ became /uə/ in the rural dialects of the north (except eastern Nb and northern Du), SY and La, as well as occasionally in the south. This occurrence of /uə/ in southern rural dialects is sporadic, and is restricted to a few words. Among the words examined in the SED, /uə/ occurs in the south (Wx mostly) in the words both, coat, comb, loaf, nose, throat and whole, while absent in coal, oak and spokes.

In the rural dialects of the FN and parts of the CN, OE /a:/ did not become /ɔ:/ in ME as it did in other parts of England. Because of this, in this area dialectal /uə/ is restricted to words pure, sure

Maps 50-53: both, oak, coal
with OE /o/ in open syllables. In these words, on the other hand, we find /oi/, not /uə/, in SY.

The development of ME /ɔ:/ to /uə/ in (mostly) northern dialects is an exact parallel to the development of ME /ɛ:/ to /iə/ in roughly the same area.

4.33 /ia/

(a) This diaphoneme is restricted in occurrence to the rural dialects of the FN and most of the MN.

(b) /ia/ is normally an even diphthong, that is, neither part receives prominence over the other. In the southern and central parts of the area the actual pronunciation of this diaphoneme varies between [iα] and [eα], while in Nb, northern Cu and parts of Du we find [iɛ].

(c) The only source of /ia/ in English dialects is ME /a:/, which in the north results either from OE /a/ in open syllables or is the continuation of OE /a:/, unrounded in the north. However, in the case of the latter there has been much interference from the diaphoneme /ɔ:/, in imitation of the SSB /ou/ present in such words. Thus loaf, for example, is often pronounced /lo:f/, rather than /liaf/ in the rural dialects of the north.

Maps 36, 50-53: spade, both, loaf
(a) This is the only non-falling diphthong that is widespread in England. It occurs in SSB, all the urban dialects and in most rural dialects. The only rural dialects that seem to lack this diaphoneme are in D and a few localities of So, Bk, Cl and Db. In all these areas SSB /iu/ is regularly replaced by /u:/.

See map 16 for the actual distribution of /iu/.

(b) The first part of this diphthong varies between the pure semi-vowel [i] (usual in Wx, So, Mo, the CML, the WM1 and the IM) and the very short high front unrounded [i], usual elsewhere. The second part of the diphthong is always the high rounded tense vowel, normally [u:] but fronted to [yi:] or [yː] in the same areas where /u:/ is also fronted. Cf. 4.19 (b).

(c) (i) The usual source of /iu/ is ME /iu/ (often from French /y/ or OE /eu/).

In the rural dialects of SY and La, earlier /eu/ is often retained to this day, so that only OE /iu/ and French /y/ resulted in /iu/ today.

In Wx, So and the WM1, the /iu/ of other dialects is replaced by /u:/ after dental consonants /t/, /d/ and /n/. Note the similar North American development.

Earlier /iu/ is practically universally replaced by /u:/ after /r/, /l/, /s/ and palatal consonants.
(ii) In the rural dialects of the MN, and occasionally in Nf, ME /o:/ became /iu/, not /iə/, /ui/ or /u:/ as in other dialects. This /iu/ is probably the natural development of an earlier */y:/ - a sound still current in some Scottish dialects for ME /o:/ (cf. 3.8 (v)).

4.35 /ua/

(a) This diphthongal diaphoneme is restricted to a few rural locations in north-western Y.
(b) Always an even diphthong [ua].
(c) /ua/ is always derived from ME /ɔ:/, just as its front counterpart /ia/ is derived from ME /a:/ in the same area. Actually, among all the words examined, it occurs only in three words: hose, road, throat.

4.36 The "schwa"

All the vowels discussed so far can occur in both stressed and unstressed syllables, with all emphasis being placed on their presence in stressed syllables. Now we should discuss a vowel that can only occur in unstressed position. It is the neutral vowel, or schwa [ə]. It occurs in all dialects of English, normally as the reduction of OE /a/, /e/, /o/ and /u/ - as well as of most diphthongs - in most completely unstressed syllables. Only earlier /i/ has normally retained
its original phonetic value, though in many cases /i/, too, became /ə/ in unstressed syllables. See, for example, map 74 for the distribution of /ə/ and /i/ in the word rabbit /ræbit/~ /ræbət/.

4.37 CONSONANTS

The consonantal system of English dialects is much more uniform than their vocalic system. 22 consonantal diaphonemes are present in all dialects spoken in England. They are, with examples from SSB:

/p/ pie /pai/, supper /sʌpə/, top /tɒp/
/t/ tie /taɪ/, pretty /prɪtɪː/, cat /kæt/, missed /mɪst/, Thomas /tɒməs/
/k/ kite /kait/, cat /kæt/, character /kærəkə/, quarter /kwɔːtə/,
.lax /laks/, accurate /ˈækjʊərət/., lack /læk/, acquire /əkwaɪə/
/b/ buy /bai/, ebb /eɪb/, cab /kæb/
/d/ die /dai/, add /æd/, mad /mæd/
/g/ goal /gɔul/, aggravate /ˈæɡrəveɪt/, bag /bæg/, examine /ɪɡˈzæmɪn/,
give /gɪv/, ghost /gɒst/, guerilla /ˈɡɜːrɪlə/ 
/tʃ/ child /tʃaɪld/, cello /tʃəˈlou/, batch /bætʃ/, nature /nɛɪtʃə/ 
/dʒ/ jet /dʒeɪt/, age /eɪdʒ/, edge /eɪdʒ/, soldier /ˈsɔldər/ 
/f/ fire /faɪə/, suffer /səˈfər/, laugh /laːf/, photograph /fəˈtɒɡræf/,
lieutenant /ˈlaɪtənənt/ 
/th/ thin /θɪn/, eighth /eɪθθ/ 
/s/ sigh /sai/, sent /sɛnt/, scent /sɛnt/, assent /əsɛnt/, class /klɑːs/ 
/ʃ/ shy /ʃai/, machine /məʃən/, schedule /ˈʃedjuəl/, sugar /ˈʃʊɡə/, mission /mɪʃən/, nation /ˈneɪʃən/, facial /ˈfæʃəl/, noxious /nəkʃəs/ 
/θ/ the /θiː/ ~ /θə/, those /ðəʊz/, bathe /beθ/
Two consonants occur in SSB (in addition to these) that are absent in some of the dialects. They are /h/ and /ŋ/.

/h/ occurs in SSB in pre-vocalic position only (e.g. hat /hat/, back-hand /bæk hænd/, nihilism /naihilizm/). Its occurrence in words like huge and hue are only apparent exceptions, because according to the analysis adopted in this paper the sequence [ju:] in such words is analysed as the diaphoneme /iu/, which is a vowel.

/h/ occurs in all standard varieties of English — indeed, its presence is one of the hallmarks of "educated" speech. It is absent from most popular dialects, urban and rural. Among the rural dialects it is present only in four restricted areas:

1. East Anglia

2. Most of Wx and So, together with the southernmost part of Mo.
(3) The Far North

(4) The Isle of Man

In the rest of England, people regularly "drop their aitches". It is noteworthy that in all varieties of English spoken outside England, /h/ is preserved - even in those dialects (such as those of Australia and New Zealand) that are otherwise very close to the southern English urban dialects in their phonology.

The sequence /hw/ (actually pronounced [w]) is present in some varieties of standard English (mostly old-fashioned or pedantic) and in the rural dialects next to the Scottish border and on the IM. It occurs in words such as whale and where. Outside England the use of /hw/ is widespread in Scotland, Ireland and North America, but in England it is normally replaced by /w/.

See map 76 for the distribution of /h/ and /hw/ in English rural dialects.

As a sound, the velar nasal [ŋ] exists in all dialects of English. The diaphoneme /ŋ/, however, is absent in certain Midlands dialects. The reason is that in these dialects [ŋ] occurs only before the velar consonants /k/ and /g/, in a position where [n] cannot occur. Hence [ŋ] in such dialects can be considered as an allophone of /n/. In other dialects, including SSB, the final consonant cluster /ng/ has been reduced to [ŋ], so that we find contrasts such as sin [sin] vs. sing [sin]. Using generative phonology, we could still avoid the use of a new diaphoneme (by introducing a deletion rule for final /g/ after
However, /g/ after /n/ was also lost within a word before certain suffixes (e.g. the nominalizer -er, gerund -ing), while being preserved before others (e.g. the comparative -er, superlative -est). Thus we find singer [sɪŋə], banging [bæŋŋ] but younger [ˈjʌŋə] and longest [ˈlɒŋgɪst] (all examples from SSB). Since the loss of original /g/ cannot be determined on the basis of phonetic environment alone, it is necessary to set up the diaphoneme /ŋ/ in most dialects. See map 82.

Corresponding to certain consonantal diaphonemes of SSB we find different diaphonemes in some dialects according to various conditioning factors. Some regular correspondences are:

(a) Initial /f/, /θ/, /s/ and /z/, when occurring before vowels or voiced consonants, have usually become voiced to /v/, /ǥ/, /z/ and /ʒ/, respectively, in the rural dialects of Wx, So and the SW. The change did not affect all words with such initials equally — for example, it is less widespread before consonants (e.g. fly, smoke) than before vowels.

In a further change along the same lines, we should note that corresponding to SSB /θ/ before /r/ we find /ð/, not /ʒ/ in these dialects: three /driː/, throw /drou/ or /dʁoː/.

It is noteworthy that a similar voicing of initial fricatives has occurred in some nearby Germanic languages, most importantly Dutch, which has vijf and zes for English five and six. In most German dialects also, initial /s/ before vowels has become [z]: sechs [zeks].
Initial /θ/ was not only voiced in these two languages, but it also became a stop in all positions, not only before /r/ as in the English dialects concerned: Dutch dun, driě; German dünn, drei for English thin, three (Wx & SW dialect /sɪn/, /dɾiː/).

See maps 78-81 for the geographical distribution of this voicing phenomenon.

(b) ME PFR were lost in all standard dialects. Of the nine urban dialect areas PFR has been kept only in three: Bristol-Dover, North Lancashire and Newcastle. Of the rural dialects, PFR is kept in the following: the SE, Wx, the SW, So, the WML, La and the FN. Traces of it survive in L and the IM. Outside England, the dialects also split in their treatment of ME PFR. It is retained in Wales, Ireland, Scotland and much of North America, while lost in parts of New England (see Kurath (1961), p 115), most of the American South, Australia, New Zealand, South Africa and the Caribbean.

Where PFR is lost, the vocalic system is profoundly affected, as the diphthongal phonemes /iə/, /uə/ and /eə/ have to be introduced to account for the ending of words such as peer, poor and pear and the diaphonemes /aː/ and /ɔː/ become much more frequent than in the dialects preserving PFR.

In dialects that have lost PFR, the vowels /iə/, /aː/ and /ɔː/ seem to have developed an "underlying" (mostly deleted) /r/ even where no /r/ existed originally. This accounts for the presence of the so-called "linking r" in words and phrases such as idea of /ɪdiərəv/,
the Shah of Persia /ʃə ʃæ:riːv pəːʃə/ and thawing /ɔː riːŋ/.

See map 17 for areas where PPR is lost and map 66 for the presence of linking r in rural dialects.

(c) Intervocalic /t/ was voiced to /d/ in the rural dialects of the SW, So and parts of Wx. Cf. the similar development in North American English. See map 77 for the distribution of the /bədər/ pronunciation of butter in the rural dialects.

In Cockney and the urban and rural dialects spoken around London, the glottal stop [] is a frequent allophone of intervocalic /t/.

(d) The velar consonants /k/ and /ɡ/ were replaced by /t/ and /d/, respectively, in many Midlands and northern dialects when followed by /l/ or /w/. Thus we would find climb /tlaim/ or /tlim/, glove /dluv/, guilt /twilt/ and Gwynn /dwin/. See SED guilt (V.2.11) and glove (VI.14.7), for example.

(e) The clusters [tʃ] and [dʒ] (actually, from /tʃu-/ and /dʒu-/) were replaced by the affricates /ts̪/ and /d̪z̪/, respectively, in the rural dialects of Wx, So and the WMI, as well as in several urban dialects including Cockney. In these dialects tune is /tʃuːn/ and dew is /dʒuː/. See map 57.

In many words that contained the sequence /tʃ/ and /dʒ/ already in ME, this change has spread to most English dialects including SSB: nature, soldier.
OE /k/ and /g/ were palatalized to /tʃ/ and /dʒ/ in certain environments (/k/ always when followed by a front vowel or finally after a front vowel; /g/ only when geminated, medially before or finally after a front vowel). Examples in SSB are: OE /kild/ → SSB child /tʃaild/; OE swelc /swelk/ → SSB such /sʌtʃ/ (note that the intervening /l/ did not prevent the palatalization); OE ecg /egg/ → SSB edge /edʒ/.

This palatalization affected all English dialects. However, there are many words where the expected palatalization is absent. Such words are especially common in the rural dialects of the north, due to the heavy Scandinavian influence present in the area in OE times. See map 75 for the frequency of /k/ instead of /tʃ/ in the words birch (OE bierce), chaff (OE ceaf), church (OE circe), churn (OE cyrin), flitch (OE flicce) and such (OE swelc).
5.1 As we can see from this paper, the phonemic structure of English presents a complicated picture. But if we look at it carefully, we can see that its patterns are rather symmetrical and that the historical developments within individual dialects have had a large degree of internal consistency.

5.2 A good example in symmetrical development is seen in the regular modern developments of the ME long vowels /a:/ and /ɔ:/ (e.g. spade, throat). The two ME sounds have developed symmetrically in most of England, as shown in the following table (cf. also maps 36, 53).

<table>
<thead>
<tr>
<th>ME /a:/</th>
<th>ME /ɔ:/</th>
<th>Dialects</th>
</tr>
</thead>
<tbody>
<tr>
<td>/e:/</td>
<td>/ɔ:/</td>
<td>Wx, the SW, WML, NML, urban dialect (2)</td>
</tr>
<tr>
<td>/ei/ [ei]</td>
<td>/ou/ [ou]</td>
<td>So, IM, urban dialects (6), (7) &amp; (8)</td>
</tr>
<tr>
<td>/ei/ [ei]</td>
<td>/ou/ [ou ʌ]</td>
<td>SE, SML, CML, many standard dialects</td>
</tr>
<tr>
<td>/ei/ [ei ʌ]</td>
<td>/ou/ [ou ʌ]</td>
<td>Much of EA, SSB, Cockney</td>
</tr>
<tr>
<td>/iə/</td>
<td>/uə/</td>
<td>Eastern Y</td>
</tr>
</tbody>
</table>

Evidently, the only major area where symmetry does not occur is in the dialects of the north. In L and parts of Y we find centring diphthongs for both ME vowels (/eə/ or /iə/ for ME /a:/ and /uə/ for ME /ɔ:/), while
in the rest of the north we mostly find identical reflexes /iə/ or /ia/ for OE /aː/ and OE /a/ in open syllables, with only OE /o/ in open syllables developing to ME /ɔː/ and hence to modern dialectal /ua/. Occasionally we also find dialectal /ɔː/ and /ʊː/ in the north, corresponding to SSB /ou/, diaphonemes that represent developments that did not affect ME /aː/.

5.3 Similar symmetry occurs in most dialects of English in the development of the ME long vowels /iː/ and /uː/. We find the following vowels in words such as sky and cloud (cf. maps 40, 46).

<table>
<thead>
<tr>
<th>ME /iː/</th>
<th>ME /uː/</th>
<th>Dialects</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ai/=[ai]</td>
<td>/au/=[au]</td>
<td>Sa, central L, parts of south Y, northern La, SSB</td>
</tr>
<tr>
<td>/ai/=[ai-ʊi]</td>
<td>/au/=[au-ʊi]</td>
<td>EA (except Nf), the SE, Ha, SML, CML, St</td>
</tr>
</tbody>
</table>

Again, we do not find symmetry everywhere. The early modern English diphthongs /ai/ and /au/ were again monophthongized: /ai/ to /æː/ in D, /au/ to /aː/ or /ɛː/ in Db, south Y and south La, with no equivalent change in the other diphthong. In the rural dialects of the MN and FN, ME /uː/ was retained unchanged, while /iː/ was diphthongized to /ai/.

5.4 The ME short vowels /a/ and /o/ were lengthened to /aː/ and /ɔː/ in the dialects of the south and the southern parts of the Midlands when followed by the voiceless fricatives /f/, /θ/ and /s/. See maps 62 and 28, for example. This is another sound change that affected two sounds
sharing several common features in the same way.

5.5 Different kinds of patterns can be seen in the way certain sound changes affect each other. There seems to be a "natural" tendency in languages to keep phonemes apart. This implies that if one phoneme is shifted in pronunciation towards another, the other will also shift, so that the contrast between the two is maintained. Of course, in some cases this does not happen and we find phonemic merger.

5.6 There are many examples of sound changes occurring as a kind of chain-reaction. Here are some:

(a) During the so-called Great English Vowel Shift, the long front vowels were progressively raised, except for ME /iː/ which was diphthongized to /ai/ in most dialects. The components of this shift were:

(i) ME /aː/ was raised to /ei/ or /eː/ in all dialects except the rural dialects of the north where a diphthong with a higher starting point developed: /iə/ or /ia/. E.g. spade (OE spadu → ME /spaːd/), map 36.

(ii) ME /ɛː/ normally merged with ME /eː/, to be raised to /iː/ in the modern standard language and most dialects.

In the rural dialects of parts of Wx and the WML, ME /ɛː/ merged with ME /aː/ instead to give modern /eː/. The same merger took place in parts of the CML, where the resultant today is /ei/. Note that in a number of words it was this merger that was adopted
into the standard language: break (OE brecan → ME /brɛ:k/), drain (OE dreahnian → ME /drɛ:n/), great (OE gret → ME /gre:t/), steak (ON steik → ME /ste:k/) and yea (OE gēa → ME /jɛ:/). As we know from the evidence of rhymes from poetry up to the 18th century, merger of ME /aː/ and /ɛː/ used to be much more common in the standard language.

In the rural dialects of the SW, ME /ɛː/ merged with ME /ai/ to give /ei/.

In the NMI, SY and La rural dialects ME /ɛː/ has produced /ei/ also, but in this area this does not represent a merger with any major ME vowel or diphthong (it does, however, correspond to the ME sequence [aiʃ], so that eat and eight are both pronounced /eiː/).

Finally, in the L and MN rural dialects ME /ɛː/ gave /iː/, not normally a merger with ME /aː/, /ai/ or /ɛː/.

See maps 34, 35, 96, 97 for the diaphonemes present in speak, cream, eat and bean. Maps 99, 100 and 102 show the pronunciation of great, break and drain, already discussed above.

(iii) ME /eː/ was raised to /iː/ in all dialects except for the rural dialects in parts of St and Db, where it became /ei/. E.g. three (OE þreo → ME /ðreː/). See map 33.

(iv) ME /iː/ developed into the modern diphthong /ai/ in most dialects, further shifted to /oi/ in some southern and Midlands dialects. This further shift is easily understood if we consider that /ei/ is pronounced [aɪ] or [əɪ] in many of these areas.

According to most authorities, the intermediate stage between ME [iː] and modern standard [aɪ] was a diphthong whose first part was the
neutral vowel [ə], rather than any kind of fully fronted vowel. See for example Dobson (1968), §137, which proposes the following sequence for the development of ME /i:/ in SSB: [iː]→[ɪiː]→[əiː]→[ʌiː]→[aiː]. It is interesting to note that in certain dialects of modern English /iː/ (from ME /eː/ or /əː/) has started to shift in the same direction. On the other hand, in certain southern dialects the older shift is still incomplete, since /ai/ is still pronounced [əi] or [ʌi]. See map 41 for knife (OE cnif).

(v) ME /ai/, of diverse origins, should also be considered here. In most dialects it has had the same development since ME times as ME /aː/, but this merger is not universal. Among the urban dialects, only those near the Welsh border have kept these two sounds apart (ME /ai/ is reflected as /ei/, against the /eː/ from ME /aː/). The same distinction is kept in the rural dialects of Wx, the SW and the WML (except Sa), while it is being lost in EA. In the western half of the MN, ME /ai/ became /eː/, while ME /aː/ was diphthongized to /ia/. In all other dialects merger of ME /ai/ and /aː/ is normal - /ei/ being the most common resultant, but we also find /eː/ (Mo, OX, Sa, the NML, SY, La and next to the Scottish border), /eə/ (in L) and /iə/ (in parts of the MN and FN).

In parts of St, Ch and Db, ME /ai/ developed to /iː/, thus avoiding merger with any other ME phoneme.

See map 37, showing the pronunciations of the vowel in clay (OE clæg→ME /klai/).

When followed by [s], ME /ai/ became /ei/ in practically all dialects. See maps 38, 39 for eight (OE ahta→ME [aiːt]), straight (OE strekt→ME [straːkt]).
(b) Back rounded vowels underwent a similar but not completely equivalent development during the Great Vowel Shift. Its components were:

(i) ME /ɔː/ was raised to /oː/ or /ou/ in the south and the Midlands, with occasional further raising to [uː] (= /ʊː/, cf. 4.18) in D. A higher-mid rounded vowel has also been adopted (probably as a borrowing, cf. 4.20) in the Nb and northern Du rural dialects, but here it was fronted: /ʊː/. But elsewhere in the north, ME /ɔː/ occurred normally only as the development of OE /o/ in open syllables (e.g. coal, OE col, ME /koːl/), which became /oi/ in SY and /uə/ in the other rural dialects of the area. See map 53.

OE /aː/ was rounded to /oː/ in all dialects of the south and the Midlands in ME times, but in the north only in L and SY, eventually diphthongizing to /uə/. In the rest of the northern rural dialects, OE /aː/ merged with /a/ in open syllables, for the development of which see (a) (i) above. E.g. loaf (OE hlaf, ME /laːf/ in the north, /lɔːf/ elsewhere). See map 51.

(ii) ME /oː/ was raised to /uː/ in most dialects. In parts of Db and St, ME /oː/ became /eu/ just as ME /eː/ became /ei/.

In areas where /oː/ has a tendency to "over-round" to [ʊː] or [uː] (even producing a new diaphoneme /ʊː/ in D, cf. above), the pronunciation of /uː/ also tends to shift in the direction of a fully fronted [uː].

Yet in areas of the north where ME /ɔː/ was not raised to /oː/ or /ou/, ME /oː/ was not shifted to /uː/ either, developing to /ui/ in SY (cf. ME /ɔː/ to /oi/ in the same region) and /iu/ or /iə/ in the rural dialects of the MN and FN. See map 55 for moon (OE mona, ME /moːn/).
This triple development of ME /o:/, depending on how ME /ɔ:/ evolved is a powerful argument in favour of the push-chain/ pull-chain theory of phonetic change (see Martinet (1964), pp. 53-60).

(iii) ME /u:/ was diphthongized to /au/ in those areas where ME /o:/ became /u:/ - an evident "pushing" effect. In the rural dialects of the MN and FN, ME /u:/ has remained unchanged. See map 46 for cloud (OE clūd → ME /kluːd/).

(iv) ME /au/ normally became /o:/, but there has been a strong tendency in the north to merge with ME /ou/, especially before ME [x]. See map 65 for example, for brought (OE brohte → early ME [brɔuxt] → ME [brauxt] in the south and Midlands, [brouxt] in the north).

(v) ME /ou/ corresponds neatly to ME /ai /. In parts of the west and in Nf it remained /ou/, distinct from the /ɔ:/ derived from ME /ɔ:/ . Even in parts of the CML it retained a separate identity - we find [ɔʊ] for ME /ou/, while [ou] for ME /ɔ:/.

In the rural dialects of the north, ME /ou/ is also preserved - often with a more open pronunciation: [əʊ] or [au]. See map 54 for grow (OE grōwan, ME /grou/).

(c) There is little doubt that three changes affecting short vowels in the south of England are also related in a similar way. They are:

(i) ME /u/ became /ʌ/ in all dialects of the south and in the WML.
In imitation of this, we find /ɔ/ for ME /u/ on the IM. See map 32 for cut.

(ii) ME /a/ was raised to [æ] in much of the south and on the IM, presumably to keep its distance from the low, unrounded /ʌ/. Around London, where /ʌ/ has acquired its most advanced [a] allophone, the
diaphoneme /a/ has tended to merge with /e/. See map 3 for apple.

(iii) According to (i) above, ME /u/ in most cases has become /ʌ/ in the dialects of the south. The main reason why the diaphoneme /u/ still exists in the area is that ME /oː/, after being raised to /uː/ was shortened to /u/ in many words, especially when followed by /k/. This shortening is much rarer in those dialects where ME /u/ has been preserved. See map 31 for look.

5.7 Thus a survey of the phonemic systems of different dialects gives us a good insight into how sound changes operate. It does not, however, explain them. For a better understanding of how sound changes occur, how they spread from speaker to speaker, locality to locality, social class to social class, a different kind of survey is needed. Instead of examining the speech of relatively few, pre-selected people in a large number of localities, it would have to consider the speech of a large number of people of all ages and social backgrounds, taken perhaps at random in certain localities. By that method one could establish how far certain features discussed in the present survey have actually survived today in English dialects.

Which phonetic and phonemic characteristics of dialects can compete with Standard English and can survive for several generations to come — and which ones will die out or have already died out? By comparing Wright's EDG with the SED made some 50 years later, we can see how much local dialects have retreated in this century. Naturally, it is around London and the other large cities that local dialects have lost most of their traditional features: Around London there are no traces left of
/e/ from OE /y/ (e.g. bridge, king), of /e:/ from ME /a:/ (e.g. spade)
or of /a:/ instead of SSB /3:/ (e.g. servant).

Nevertheless, as this survey has shown, there are still many dialectal survivals in England today, contributing to our knowledge and understanding of the history of the English sound system.
LIST OF MAPS

Map 1 ... Rural dialects of England.
Map 2 ... Urban dialects of England.

Maps 3 - 18 show the distribution and pronunciation of certain individual diphthonges within the rural dialects of England.

Map 3 ... /a/
Map 4 ... /o/
Map 5 ... /u/
Map 6 ... /i: /
Map 7 ... /e: /
Map 8 ... /a: /
Map 9 ... /ɔ:/ /ɔː:/ /oː:
Map 10 ... /oː:
Map 11 ... /uː:
Map 12 ... /ei /
Map 13 ... /ai /
Map 14 ... /au /
Map 15 ... /ou /
Map 16 ... /iu /

Map 17 ... /r /
Map 18 ... /l/ (pre-consonantal and final)

Maps 19 - 82 show the pronunciations of words demonstrating regular phonetic changes in the various rural dialects of England.

Map 19 ... whip ( ME /i/ after /w/ ).
Map 20 ... lead (noun) { ME /ɛ:/ before /d/ )
Map 21 ... head
Map 22 ... ash ( ME /a/ before /ʃ/ )
Map 23 ... man
Map 24 ... hammer
Map 25 ... porridge ( ME /o/ before inter-vocalic /r/ )
Map 26 ... what, wasp ( ME /a/ after /w/ )
Map 27 ... dog ( ME /o/ before final /g/ )
Map 28 ... cross (ME /o/ before voiceless fricatives )
Map 29 ... cough
Map 30 ... hoof ( ME /oː/ before /f/ )
Map 31 ... look ( ME /oː/ before /k/ )
Map 32 ... cut ( ME /u/ )
Map 33 ... three ( ME /eː/ )
Map 34 ... speak ( ME /ɛ:/ )
Map 35 ... cream ( ME /ɛ:/ in certain words )

Map 36 ... spade ( ME /a:/ )

Map 37 ... clay ( ME /ai/ )

Map 38 ... eight ( ME [ai] )

Map 39 ... straight

Map 40 ... sky ( ME /i:/ finally and before voiced consonants )

Map 41 ... knife ( ME /i:/ before voiceless consonants )

Map 42 ... blind ( ME /i/ before /nd/ )

Map 43 ... night ( OE iht )

Map 44 ... fight ( OE eoh )

Map 45 ... mice ( OE /y:/ )

Map 46 ... cloud ( ME /u:/ )

Map 47 ... ground ( ME /u/ before /nd/ )

Map 48 ... mow ( OE ãw )

Map 49 ... snow

Map 50 ... both ( ME ã )

Map 51 ... loaf

Map 52 ... oak ( OE ã initially )

Map 53 ... coal ( OE ã in open syllables )

Map 54 ... grow ( OE ãw )

Map 55 ... moon ( ME /o:/ )

Map 56 ... do ( ME /o:/ finally )

Map 57 ... dew ( ME /eu/ after dental consonants )

Map 58 ... few ( ME /eu/ elsewhere )

Map 59 ... hear ( ME /e:/ and /ɛ:/ before PFR )

Map 60 ... hare ( ME /a:/ before PFR )

Map 61 ... hair ( OE ã before PFR )

Map 62 ... chaff ( ME /a/ before voiceless fricatives )

Map 63 ... palm ( ME /au/ before /m/ )

Map 64 ... harvest ( ME /a/ before PFR )

Map 65 ... brought ( OE oht )

Map 66 ... thawing ( OE aw; development of "intrusive" r )

Map 67 ... saw (noun) ( ME /au/ )

Map 68 ... morning ( ME /o/ before PFR )

Map 69 ... four ( ME /ou/ before PFR )

Map 70 ... hoarse ( OE ã before PFR )

Map 71 ... door ( ME /o:/ before PFR )

Map 72 ... work ( ME /o/ between /w/ and PFR )

Map 73 ... burn ( ME /u/ before PFR; metathesis in OE )

Map 74 ... rabbit ( ME unstressed /i/ )

Map 75 ... birch, chaff, churn, church, flitch, such ( OE /k/ in palatal environments )

Map 76 ... hay ( ME /h/ )
Maps 77 ... butter ( ME intervocalic /t/ )

Map 78 ... finger

Map 79 ... thigh three ( OE initial voiceless fricatives )

Map 80 ... seven snow

Map 81 ... shilling

Map 82 ... finger, tongue ( ME /ng/ )

Maps 83 - 126 show words that have had irregular phonetic developments in some of the dialects. Those that are marked with an asterisk have irregular pronunciations in SSB as well. The etymology of each word is given in parentheses.

Map 83 ... squirrel ( OF escuruel )

Map 84 ... bury* ( OE byrgan )

Map 85 ... herring ( OE héring )

Map 86 ... any* ( OE ēnig )
    many* ( OE manig )

Map 87 ... deaf* ( OE déaf )

Map 88 ... hot* ( OE hát )

Map 89 ... wash ( OE wascan )

Map 90 ... tongue* ( OE tang )

Map 91 ... wrong* ( OE wrang )

Map 92 ... foot* ( OE fôt )

Map 93 ... flood* ( OE flōd )

Map 94 ... one* ( OE όn )

Map 95 ... among* ( OE onmang )

Map 96 ... eat ( OE étan )

Map 97 ... bean ( OE bēan )

Map 98 ... key* ( OE cēg ME /kay/ )

Map 99 ... great* ( OE gréat )

Map 100 ... break* ( OE brecan )

Map 101 ... drain* ( OE dreahnian )

Map 102 ... reins* ( OF rene, from Latin retina )

Map 103 ... died* ( ON deyja )

Map 104 ... either* ( OE ēgær )

Map 105 ... height ( OE híchpo )

Map 106 ... eye* ( OE ēage )

Map 107 ... poison ( OF poison, from Latin potionem )

Map 108 ... drought ( OE drúgeaf )

Map 109 ... plough* ( OE plōh )

Map 110 ... dough ( OE dāh )

Map 111 ... sev* ( OE siwan, siowan )

Map 112 ... cold ( OE cald )

Map 113 ... chew* ( OE ceowan )

Map 114 ... lose* ( OE losian )

Map 115 ... room ( OE rūm )

Map 116 ... ewe ( OE eowu )

Map 117 ... half ( OE helalf )

Map 118 ... father* ( OE fæder )
Map 119.. calf (OE cealf)
Map 120.. laugh* (OE hlæhhan)
Map 121.. grass (OE gras)
Map 122.. arm (OE arm)
Map 123.. water* (OE wæter)
Map 124.. daughter* (OE dohter)
Map 125.. horse (OE hors)

Map 126.. worm (OE wyrm)  
          elm (OE elm)

The last two maps provide the numbering of the survey localities as given in the SED.

Map 127.. Numbering of survey localities in the SED.

Map 128.. Abbreviations of county names in England.
BIBLIOGRAPHY


APPENDIX

A LIST OF ABBREVIATIONS

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<tr>
<th>Abbreviation</th>
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The following brief index is provided to serve as a quick source of reference as to the pages on which the various dialects and diaphonemes are discussed in detail.

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Consonants 86
VOLUME TWO
The rural dialects of England.
(See 3.3 - 3.6)

Cities and towns shown on the right are:

10 London
11 Cambridge
12 Norwich
13 Colchester
20 Bristol
21 Dover
22 Folkestone
23 Brighton
24 Portsmouth
25 Southampton
26 Torquay
27 Plymouth
28 Bath
30 Birmingham
31 Coventry
32 Stafford
40 Leicester
41 Nottingham
42 Derby
43 Stoke-on-Trent
50 Liverpool
60 Manchester
61 Wigan
70 Oldham
71 Rochdale
72 Blackburn
73 Preston
74 Blackpool
80 Leeds
81 Sheffield
82 Huddersfield
83 Bradford
90 Newcastle
91 Sunderland
92 Middlesbrough
93 Stockton

The urban dialects of England.
(See 3.7)

The numbers within circles refer to the numbering of the urban dialect regions within the text.
The vowel in *apple* (IV.11.8):

- Unmarked /ɜ/ [ə]
- /e/ [ɛ]
- /o/ [ɔ]

The vowel in *dock* (II.2.8):

- Unmarked /ɔ/ [ɔ]
- /a/ [a]
- /ɔː/ [ɔː]
- /ɛː/ [ɛː]
- /eː/ [eː]

MAP 3

MAP 4
The vowel in bull (III.1.14):

Unmarked /u/ [u]

\[ \hat{u}/ \] [ɔ]

\[ o/ \] [o]

\[ u:/ \] [u:] (with loss of /l/)

Pronunciation of the diaphoneme /i:/ - chiefly as in three (VII.1.3), cf. map 33.

Unmarked [i:] [ɪ]

\[ i\i/ \] [ei]

[ei] [ɛi]
MAP 7

Distribution and pronunciation of the diaphoneme /e:/:

Unmarked No /e:/
- [e:]
- [ɛ:]
+ [ɛ:][ɛ:]
- [ei]
- [e:][ei]

Sources: break (IX.3.5), clay (IV.4.2), eat (VI.5.1),

MAP 8

Pronunciation of the diaphoneme /a:/:

- [a:]
- [a:][ɛ:]
- [a:][ɛ:]
- [a:][ɛ:]
- [ɛ:]
- [ɛ:]

Sources: ask (IX.2.4), draught (V.3.11), father (VIII.1.1), grass (II.9.1a), half (VIII.7.6), harvest (II.6.1), own (VIII.9.6)
Unrounded [ɛː] pronunciation of the diaphoneme /ɔː/. Sources: brought (VIII.1.11), thaw (VII.6.15).

Presence of the diaphoneme /ɔː/. Sources: coal (IV.4.5a), fox (IV.5.11), nose (VI.4.6), pond. (IV.1.5)

Presence of the diaphoneme /oː/ [uː]. Sources: both (VII.2.11), whole (VII.2.12).

Distribution and pronunciation of the diaphoneme /oː/:

- Unmarked No /oː/  [oː]-[uː]
- [oː]
- [oː]-[ɔŋ]

Sources: both (VII.2.11), coal (IV.4.5a), grow (IX.3.9), oak (IV.10.2), spokes (I.9.6).
MAP 11

Pronunciation of the diaphoneme /u:/:

- Unmarked [u:] [ʊː]
- [ɛi] [əi] [eː]
- [y:]

Sources: cloud (VII.6.2), moon (VII.6.3).

MAP 12

Distribution and pronunciation of the diaphoneme /ei/:

- No /ei/ [eə] [ɛi]
- Unmarked [eɪ] [æi] [əi]

Sources: clay (IV.4.2), spade (I.7.6).
Distribution and pronunciation of the diaphoneme /ai/: 

Unmarked No /ai/  
[ai]  [ai]  [ai]  [ai]  [aɪ]  [aɪ]  [aɪ]  [aɪ]

Sources: iron (IV.4.5b), knife (I.7.18), night (VII.3.9), poison (IV.11.4), sky (VII.6.1), time (VII.5.1).

Distribution and pronunciation of the diaphoneme /au/: 

Unmarked No /au/  
[ai]  [ai]  [ai]  [ai]  [aɪ]  [aɪ]  [aɪ]  [aɪ]

Sources: cloud (VII.6.2), ground (IV.4.1), how (VII.8.11).
MAP 15

Distribution and pronunciation of the diaphoneme /ou/:

Unmarked  No /ou/  × [ʌu]~[ɔu]
- [ou]
- [ou]~[au]
- [ou]~[au]
- [ou]~[au]

Sources: grow (IX.3.9), mow (II.9.3), nose (VI.4.6), sew (V.10.3)

MAP 16

Distribution and pronunciation of the diaphoneme /iu/:

Unmarked  No /iu/  × [iʊ]~[iə]
- [iu]
- [iu]~[iə]
- [iu]~[iə]~[iɔ]
- [iu]~[iə]

Sources: dew (VII.6.7), ewe (III.6.6), few (VII.1.1)
Pronunciation of /r/ and its loss in pre-consonantal and final position:

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<td></td>
<td>kept</td>
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<td>loss optional</td>
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MAP 17

Pronunciation of pre-consonantal and final /l/:

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<td></td>
<td>[:]) (&quot;dark&quot; /l/)</td>
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Source: milk (III.13,12).
MAP 19

The vowel in *whip* (I.5.12):

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<tr>
<td>E</td>
<td>/e/</td>
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<tr>
<td>^</td>
<td>/ʌ/</td>
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MAP 20

The vowel in *lead* (plumbum) (IV.4.5c):

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* /e:/*
* /a/*
* /ɨ/ ~ /e/*
MAP 21
The vowel in head (VI.1.1)

Unmarked /e/ /i/ /i:/ /æ/ /i:/ /ju~/iu/

MAP 22
The vowel in ash (V.4.4):

MAP 23

The vowel in man (VIII.1.6):

Unmarked    /a/
            /e/
            /o/

MAP 24

The vowel in hammer (I.7.13):

Unmarked    /a/
            /e/
            /o/
Presence of the diaphoneme /a/ in:

MAP 25

The stressed vowel in porridge (V.7.1):

Unmarked /o/

I /a/

* /ɔː:/

MAP 26

Presence of the diaphoneme /a/ in:

<table>
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<td>—</td>
<td>wasp (IV.8.7)</td>
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</tbody>
</table>

* This symbol shows /a:/ in wasp.
MAP 27

The vowel in **dog** (III.13.1):

- **Unmarked** /o/
- /Æ:/
- /u/
- /ɔ:/
- /ʌ/

MAP 28

The vowel in **cross** (VIII.5.14):

- **Unmarked** /o/
- /ɔ:/
- /ɔ:/
- /ɔːr/
MAP 29

The vowel in cough (VI.8.2-3):

Unmarked /o/ /u/ /õ:/ /ou/ /or/ /eu/

MAP 30

The vowel in hoof (III.4.10):

Unmarked /u/ /i:/ /u:/ /iu/ /iɔ/ /iː/ /eu/ /æ/ /æ/
The vowel in **look** (III.13.18 and VIII.1.23):

Unmarked /u/  
\(\nearrow\) /eu/  
\(\nearrow\) /\\/  
\(\nearrow\) /\~\/iu/  
\(\nearrow\) /i\~/  
\(\nearrow\) /iu/

The vowel in **cut** (VI.2.2)

Unmarked /\~/  
\(\nearrow\) /u/  
\(\nearrow\) /o/
MAP 33

The vowel in three (VII.1.3):

Unmarked  /i:/
/ei/
/e:/

MAP 34

The vowel in speak (VI.5.5):

Unmarked  /i:/
/ei/=[æɪ]~[eɪ]
/ei/=[æɪ]
/e:/
/eα/
/ei/
The vowel in *cream* (V.5.3):

Unmarked /i:/
- /ei/ = [æi]–[ei]
+ /ei/ = [aɪ]
- /e:/
- /iə/
- /e/

The vowel in *spade* (I.7.6):

Unmarked /ei/
- /e:/
- /iə/
- /i:/
MAP 37

The vowel in *clay* (IV.4.2):

- Unmarked /ei/
- /e:/
- /æ/
- /i:/
- /iə/

MAP 38

The vowel in *eight* (VII.1.7):

- Unmarked /ei/
- /e:/
- /æ/
- /ai/
- /oi/
MAP 39

The vowel in straight (IX.1.2):

Unmarked /ei/
/e:/
/ai/
/i: /
/oi/

MAP 40

The vowel in sky (VII.6.1):

Unmarked /ai/
/æ: /
/ei/
/oi/
/a:/
MAP 41
The vowel in **knife** (I.7.18):

<table>
<thead>
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<th>Unmarked</th>
<th>/ai/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/æ:/</td>
<td></td>
</tr>
<tr>
<td>/ei/</td>
<td></td>
</tr>
<tr>
<td>/ɔi/</td>
<td></td>
</tr>
<tr>
<td>/a:/</td>
<td></td>
</tr>
</tbody>
</table>

MAP 42
The vowel in **blind** (VI.3.4):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ai/, /ɔi/ or /æ:/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i/</td>
<td></td>
</tr>
</tbody>
</table>
MAP 43

The vowel in night (VII.3.9,11):

Unmarked /ai/, /oi/ or /æ:/
/i:/
/ei/

MAP 44

The vowel in fight (III.13.6):

Unmarked /ai/, /oi/ or /æ:/
/i:/
/ei/
MAP 45
The vowel in *mice* (IV.5.1a):

- Unmarked
- /i:/
- /i/
- All other diaphonemes

MAP 46
The vowel in *cloud* (VII.6.2):

- Unmarked /au/
- /au/ = [ai]
- /u:/
- /a:/
- /ə:/
- /e:/
The vowel in *ground* (IV.4.1):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/au/</th>
<th>/eə/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/au/ = [aɪ]</td>
<td>/ɛ:/</td>
</tr>
<tr>
<td></td>
<td>/u:/</td>
<td>/u/</td>
</tr>
<tr>
<td></td>
<td>/a:/</td>
<td>/ʌ/</td>
</tr>
</tbody>
</table>

The vowel in *mow* (II.9.3):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ou/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/ɔː/</td>
</tr>
<tr>
<td></td>
<td>/ɔ:/</td>
</tr>
<tr>
<td></td>
<td>/a:/</td>
</tr>
<tr>
<td></td>
<td>/ʊ:/</td>
</tr>
</tbody>
</table>
The vowel in snow (VII.6.13):

Unmarked /ou/ /ð:/
/o:/ /u:/
/o:/ /u:/
/a:/ /au/

The vowel in both (VII.2.11):

Unmarked /ou/ /o:/ /æ/ /æ/ /au/
/o:/ /æ/ /æ/ /æ/ /au/
/o:/ /æ/ /æ/ /æ/ /æ/
/a:/ /æ/ /æ/ /æ/ /æ/
The vowel in *loaf* (V.6.9):

- Unmarked /ou/
- /u:/
- /iə/

**MAP 51**

Pronunciation of *oak* (IV.10.2):

- Unmarked /ouk/
- /oːk/
- /oːk/ 
- /iək/

**MAP 52**
MAP 53

The vowel in coal (IV.4.5a):

Unmarked /ou/  □ /ʊə/  ○ /ɔi/
Ⅰ /oː/  □ /uə/  ○ /uː/
Ⅹ /æː/  — /ɔː/  A /au/

MAP 54

The vowel in grow (IX.3.9):

Unmarked /ou/  E /eu/
Ⅰ /oː/  □ /uː/
Ⅹ /aː/  ○ /uː/
Ⅸ /ɔː/  A /au/
The vowel in moon (VII.6.3):

Unmarked  /u:/  \- /u/
  /iu/  \- /eu/
  /iə/  \- /ui/

The vowel in do (IX.5.1):

Unmarked  /u:/
  /iə/
  /iu/
  /eu/
  /i:/
The pronunciation of *dew* (VII.6.7):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/diu/</th>
<th>/djau/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/dʒiːə/</td>
<td>/dʒau̯/</td>
</tr>
<tr>
<td></td>
<td>/dzuː/</td>
<td>/daɪɡ/</td>
</tr>
<tr>
<td></td>
<td>/deu/</td>
<td>/dzuː/</td>
</tr>
</tbody>
</table>

The vowel in *few* (VII.1.19; VII.8.21):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/iːu/</th>
<th>/jau̯/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/iːu̯/</td>
<td>/ou̯/</td>
</tr>
<tr>
<td></td>
<td>/uː/</td>
<td>/au̯/</td>
</tr>
</tbody>
</table>
MAP 59

Ending of hear (VI.4.2):

Unmarked /iə/ = [iə]

/ɪə/ = [ɪə]

/ɪə/ = [ɪə]

/ɪə/ = [ɪə]

/ɪə/ = [ɪə]

MAP 60

Ending of hare (IV.5.10):

Unmarked /eə/ = [eə]

/eə/ = [eə]

/eə/ = [eə]

/eə/ = [eə]

/eə/ = [eə]
Ending of hair (VI.2.1):

Unmarked /ə/ = [ə]
/ɛ/ = [ɛ]
/er/ = [eə]
/əə/ = [εə]
/air/ = [æə]
/iar/ = [ɛə]
/3r/ = [ə]
/air/ = [əə]

The vowel in chaff (II.8.5):

Unmarked /a:/
/ɑ/
Pronunciation of *palm* (of hand) (VI.7.5):

Unmarked /paːm/  /parm/  /parm/  /palm/  /pəlm/  /pəlm/  /poːm/  /pəlm/  /poːlm/

MAP 63

Pronunciation of the letter sequence *ar* in harvest (II.6.1):

Unmarked /aː/  /ər/  /ər/  /ɜːr/
The vowel in *brought* (VIII.1.11): 

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ɔ:/</th>
<th>/or/</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>/ou/</td>
<td>/a:/</td>
</tr>
<tr>
<td>+</td>
<td>/eu/</td>
<td>/e/</td>
</tr>
</tbody>
</table>

The stressed vowel in *thawing* (VII.6.15) and the presence of intrusive *r* in it:

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ɔ:/</th>
<th>/o:/</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>/a:/</td>
<td>/u:/</td>
</tr>
<tr>
<td>-</td>
<td>/ou/</td>
<td>/ɔːr/</td>
</tr>
</tbody>
</table>
The vowel in *saw* (noun) (I.7.17):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ɔ:/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/a:/</td>
</tr>
<tr>
<td></td>
<td>/ou/</td>
</tr>
<tr>
<td></td>
<td>/ɔr/</td>
</tr>
</tbody>
</table>

The letter sequence *or* in *morning* (VII.3.1)

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ɔ:/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/œ:/</td>
</tr>
<tr>
<td></td>
<td>/a:/</td>
</tr>
<tr>
<td></td>
<td>/ə:/</td>
</tr>
<tr>
<td></td>
<td>/œr/</td>
</tr>
<tr>
<td></td>
<td>/ɔr/</td>
</tr>
</tbody>
</table>
The ending of *four* (VII.1.4):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ɔ:/</th>
<th>/oː/</th>
<th>/ə:/</th>
<th>/ʊː/</th>
<th>/ɜːr/</th>
<th>/əː/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/ɪə/</td>
<td></td>
<td>/ɑː:/</td>
<td>/ɛː/</td>
<td>/œə/</td>
<td>/ʊər/</td>
</tr>
</tbody>
</table>

Pronunciation of the sequence *oar* in *hoarse* (VI.5.16):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/ɔː/</th>
<th>/ɔːr/</th>
<th>/ɔːː/</th>
<th>/ɔː/</th>
<th>/ɔːr/</th>
<th>/ɔːː/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/ kwargs</td>
<td>/ŋʊə/</td>
<td>/ŋə/</td>
<td>/ŋə/</td>
<td>/ŋʊə/</td>
<td>/ŋə/</td>
</tr>
</tbody>
</table>

MAP 69

MAP 70
The vowel in *door* (V.1.8):

Unmarked /uə/ or /ur/ = [uə]

O /ur/ = [uə]

I /o:(r)/

O /œ(r)/

X /iœə/ or /iur/  

E /œuə/ or /eur/

The vowel in *work* (VIII.4.8):

Unmarked /ɜ:(r)/

I /a:(r)/

O /œ(r)/ or /o/

+ /u(r)/
Pronunciation of burn (IV.6.1):

Unmarked /bɜː(r)n/  Φ /brun/
 /baːn/  + /bun/
 /boːrn/  δ /beən/
 /bon/  ∧ /bɒn/
 /burn/  ×

The unstressed vowel in rabbit (III.13.13):

Unmarked /i/  /
 /ə/  ∧
 /ʌ/  ○
 /u/
Frequency of /k/ instead of /tʃ/ in six selected words:

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/k/ does not occur</th>
<th>/k/ occurs in one of the words</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>/k/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>/k/</td>
</tr>
</tbody>
</table>

The words are:

- birch (IV.10.1)
- chaff (II.8.5)
- churn (V.5.5)
- church (VIII.5.1)
- flitch (III.12.3)

Preservation of initial /h/ in hay (II.9.1):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/h/ is lost</th>
<th>/h/ is preserved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MAP 75

MAP 76
The intervocalic consonant in *butter* (V.5.4):

- Unmarked /t/
- /d/
- /ʔ/
- /θ/
- /θə/

The initial consonant in *finger* (VI.7.7):

- Unmarked /f/
- /v/
The initial consonant in *thigh* (VI.9.3) and *three* (VII.1.3):

<table>
<thead>
<tr>
<th></th>
<th>thigh</th>
<th>three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmarked</td>
<td>/θ/</td>
<td>/θ/</td>
</tr>
<tr>
<td></td>
<td>/θ/</td>
<td>/θ/</td>
</tr>
<tr>
<td></td>
<td>/θ/</td>
<td>/θ/</td>
</tr>
<tr>
<td></td>
<td>/θ/</td>
<td>/θ/</td>
</tr>
<tr>
<td></td>
<td>/θ/</td>
<td>/θ/</td>
</tr>
</tbody>
</table>

The initial consonant in *seven* (VII.1.6) and *snow* (VII.6.13):

<table>
<thead>
<tr>
<th></th>
<th>seven</th>
<th>snow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmarked</td>
<td>/s/</td>
<td>/s/</td>
</tr>
<tr>
<td></td>
<td>/z/</td>
<td>/z/</td>
</tr>
<tr>
<td></td>
<td>/z/</td>
<td>/z/</td>
</tr>
</tbody>
</table>
The initial consonant in *shilling* (VII.7.5):

Unmarked /ʃ/ /θ/ /ʒ/

MAP 82

The pronunciation of the *ŋ̩* sequence in *finger* (VI.7.7) and *tongue* (VI.5.4):

<table>
<thead>
<tr>
<th></th>
<th>finger</th>
<th>tongue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmarked</td>
<td>[ŋ̩]</td>
<td>[ŋ̩]</td>
</tr>
<tr>
<td>-</td>
<td>[ŋ̩]</td>
<td>[ŋ̩]</td>
</tr>
<tr>
<td>+</td>
<td>[ŋ̩̞]</td>
<td>[ŋ̩̞]</td>
</tr>
<tr>
<td>+</td>
<td>[ŋ̩̭]</td>
<td>[ŋ̩̭]</td>
</tr>
</tbody>
</table>
The stressed vowel in *squirrel* (IV.5.8):

- Unmarked /i/ •¥ /a/
- /æ/ /

The stressed vowel in *bury* (VIII.5.11):

- Unmarked /e/
- /æ/ /
- /u/
The stressed vowel in *herring* (IV.9.11):

Unmarked /e/  
+ /3:/  
+ /a/  
+ /je/  
+ /j3:/ or /iə/  
* /ɪ/  
* /ja/  
* /jæ/  
* /ju/  
* /jo/  

The occurrence of /o/ in *any* (VII.3.16) and *many* (VII.8.11):

+ /o/ in *any* only  
+ /o/ in *many* only  
+ /o/ in both words
The vowel in *deaf* (VI.4.5):

- Unmarked: /e/  
- /i:/  
- /i/  
- /ɪə/  
- /e:/  
- /ei/  
- /a:/  
- /ia/ or /ja/  
- /ɪə/  
- /wu/
The vowel in *tongs* (V.3.7):

Unmarked /ə/ /e/  
- /iə/  
* /a/  
* /ɔ: /  

MAP 89

Pronunciation of *wash* (V.9.5):

Unmarked /wɔs/ /weis/  
* /wois/  
* /waːs/  
/was/
MAP 91

The vowel in wrong (IX.7.1a):

| Unmarked | /o/ | o /ɔ:/ |
| Unmarked | /e/ | /u/ |
| Unmarked | /a/ | /ɔ:/ |

MAP 92

The vowel in foot (VI.10.1):

| Unmarked | /u/ | /œ/ |
| Unmarked | /ʌ/ | /iu/ |
| Unmarked | /iː/ | /uə/ |
| Unmarked | /ə/ | /u/ |
The vowel in *flood* (IV.1.4):

Unmarked /ʌ/  ○ /iu/
- /u/  ○ /ui/
- /ɔ:/  △ /o/
* /iə/

The pronunciation(s) of *one* (VII.1.1):

Unmarked /wan/  ○ /wa:n/
○ /wun/  △ /jen~/ian/
○ /won/  /jin/
○ /wɔ:n/  △ /jan~/ian/
○ /u:n/  ○ /wan~/wɔn/
○ /wan/  ○ /wun~/won/
○ /wɔ:n/  ○ /wan~/wɔn/
The stressed vowel in *among* (IX.2.12):

- Unmarked: \(/\alpha/\)
- /\o/\sim/\u/
- /\u/
- /\o/\sim/\o/\sim/\u/
- /\a/
- /\u/\sim/\alpha/

Pronunciation of *eat* (VI.5.11):

- Unmarked: /\i:t/\sim/\i:at/
- /\e:t/\sim/\j:at/
- /\i:\at/\sim/\i:et/
- /\e:t/\sim/\j:et/
- /\i:\et/
- /\i:t/\sim/\i:et/
Pronunciation of bean (V.7.18):

Unmarked /biːn/ /biːn/ /biːn/ /biːn/ /biːn/ /biːn/ /biːn/ /biːn/

MAP 97

Pronunciation of key (V.1.10):

Unmarked /kiː/ /kiː/ /kiː/ /kiː/ /kiː/ /kiː/ /kiː/ /kiː/
Pronunciation of great (IX.1.6):

Unmarked /greɪt/ = /griːt/ = /grɛt/

+ /ɡriːt/ = /ɡrit/ = /ɡrɛt/ = /ɡret/

− /ɡreɪt/ = /ɡet/ = /ɡrut/ = /ɡrʌt/

MAP 99

The vowel in break (IX.3.6):

Unmarked /ei/ = /e/ = /ɛə/ = /ai/

+ /iː/ = /i:/ = /iː/ = /ai/

− /eː/ = /i/ = /iː/ = /ai/

MAP 100
The vowel in *drain* (vb) (IV.1.9):

- **Unmarked**: /ei/  
- + /iː/  
- - /eː/  
- ø /iə/  
- * /oi/

---

The vowel in *reins* (I.5.5):

- **Unmarked**: /ei/  
- + /iː/  
- - /eː/  
- ø /iə/  
- * /ai/
The pronunciation of **died** (III.7.2):

Unmarked /daɪd/, /dɔɪd/ or /deɪd/

- /daɪd/
- /dɔɪd/
- /deɪd/

The stressed vowel in **either** (VII.2.13):

Unmarked /ai/, /oi/ or /æː/  

- /ai/
- /ei/
- /ou/
- /eː/
The vowel in *height* (VI.10.9):

Unmarked /aɪ/, /ɔi/ or /æː/: /iː/ /ei/ /ɛ/ 

Pronunciation of *eye* (VI.3.1):

Unmarked /aɪ/, /ɔi/ or /æː/: /iː/ /ei/ /iːː~/aɪ/ /aː/
The stressed vowel in *poison* (IV.11.4-5):

- Unmarked /oi/
- /a: /
- /ei/
- /u/
- /ai/ + /ei/

Pronunciation of *drought* (VII.6.20):

- Unmarked /draut/
- /dru:t/
- /drot/
- /draft/
- /dr:ft/
Pronunciation of plough (I.8.1):

- Unmarked: /plau/ /plu:/ /pliu/ /pliu:/ /pla:/
- Variation: /pluf/ /pliəf/ /plou/ /ple:/

Pronunciation of dough (V.6.3):

- Unmarked: /dou/ /do:/ /dɔ:/ /do:f/ /pla:/
The vowel of *chew* (III.2.11):

- Unmarked /u:/
- /ou/
- /eu/
- /au/
- /a:/
- /o:/
- /iu/
The vowel of *room* (V.2.4):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/u:/</th>
<th>X</th>
<th>/au/</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>/u/</td>
<td>O</td>
<td>/ou/</td>
</tr>
<tr>
<td>*</td>
<td>/iː/</td>
<td>O</td>
<td>/eu/</td>
</tr>
<tr>
<td>△</td>
<td>/iə/</td>
<td>⋁</td>
<td>/ʌ/</td>
</tr>
</tbody>
</table>

Pronunciation of *ewe* (III.6.6):

<table>
<thead>
<tr>
<th>Unmarked</th>
<th>/iu/</th>
<th>O</th>
<th>/joː/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/jou/</td>
<td>/eu/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/jæu/</td>
<td>/au/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/jau/</td>
<td>/u:/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/jau/</td>
<td>/ou/</td>
<td></td>
</tr>
</tbody>
</table>
The vowel in *half* (VII.7.6):

Unmarked /a:/
/a/  /3: /
/o:/  /i: /
/ar/  /ɔ:~/a: /
/æ/  /e/ 
/ei/  

The stressed vowel in *father* (VIII.1.1):

Unmarked /a:/
/a/  /e/ 
/ar/  /ja/ 
/æ/  /je/ 
/ei/  

### Map 119

**Pronunciation of calf (III.1.2):**

- **Unmarked** /kaːf/ /kəːf/
- /kɑːf/ /kəːf/
- /koːf/ /kɒf/ /kəːf/
- /karf/ /kaːrʃ/ /kəːf/ /kəːf/
- /koːrf/ /kəːf/ /kəːf/
- /kaːf~/ /kəːf/ /kəːf/

### Map 120

**Pronunciation of laugh (VIII.8.7):**

- **Unmarked** /laːf/ /lɑːf/
- /lɑːf/ /lɑːf/
- /loːf/ /lɑːf/ /lɑːf/
- /larf/ /lɔːrf/ /lərf/
- /lof/ /lɔf/ /ləf/
MAP 121

Pronunciation of *grass* (II.9.1a):

- Unmarked: /gra:s/
- /gras/
- /gros/
- /gres/
- /grias/
- /g³:s/ /g³:rs/

MAP 122

Pronunciation of *arm* (VI.6.8):

- Unmarked: /a:m/
- /a rm/
- /ə r̩m/
- /əm/
- /ərm/
- /ə:r̩m/
Pronunciation of the stressed vowel in
water (III.3.2):

Unmarked /ɔ:/
+ /ar/
− /a/
+ /e/
− /æ:
+ /ou/
+ /o:
− /æ:
+ /ε:
− /ε:
+ /ei/
− /ɔ:r/

MAP 123

Pronunciation of the stressed vowel in
daughter (VIII.1.4):

Unmarked /ɔ:/
+ /ar/
− /a:
+ /æ:
− /æ:
− /æ:
− /æ:
+ /ou/
+ /o:
− /æ:
+ /ε:
− /ε:
+ /eu/
− /ar/
+ /au/
+ /au/

MAP 124
The occurrence of intrusive /ə/:

MAP 125
Pronunciation of the sequence or in horse (I.6.5):

- Unmarked /ɔ:/ /ɔːr/ /oə/
- /ɔ/
- /uə/
- /ɜːr/
- /ʌ:

MAP 126
The occurrence of intrusive /ə/:

- worm /wɜːm/ (IV.9.1)
- elm /ɛləm/ (IV.10.4)
Numbering of survey localities in the SED.

Abbreviations of county names in England.