Joanna Przedlacka

Estuary English
A sociophonetic study

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Preface

The purpose of the present work is to establish the nature of Estuary English, a supossedly new variety. The phenomenon was first observed in 1984, yet the literature on the subject has had a largely impressionistic character. Moreover, the existing divergence of the definitions of Estuary English reveals uncertainty as to the nature of the linguistic developments in the southeast of England.

The aim of the present experimental research carried out in the Home Counties was to verify whether the link between the accent of the capital and the rest of the southeast, implied by most definitions, really exists. The study involved two dimensions: (1) a qualitative analysis was carried out to see whether vowel shifts of the Home Counties are consistent with London realisations and (2) a quantitative analysis which was aimed at testing claims about Estuary English being between RP and Cockney as regards the incidence of *l*-vocalisation and glottalling. To provide answers to both questions, the Home Counties recordings were compared with the recordings of Cockney and RP.

The data for Estuary English were recorded in four localities in the Home Counties adjacent to London. For diachronic comparison, the speech of the informants was confronted with 1950s transcriptions of speakers from the same localities, as recorded by the fieldworkers for the Survey of English Dialects.

This monograph is divided into four chapters discussing respectively the alleged sources of Estuary English (Chapter1), aims and methods of the present study (Chapter2), the data obtained (Chapter 3) and their analysis (Chapter4).

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List of symbols and abbreviations

A level	Advanced Level examination
B, Bucks	Buckinghamshire
BBC	British Broadcasting Corporation
C	County
E	Essex
EE	Estuary English
GCSE	General Certificate of Secondary Education
GL	Greater London
GM	Grant maintained
IPA	International Phonetic Alphabet
F	Female
K	Kent
LEA	Local Education Authority
M	Male
MC	Middle Class
n	Number of speakers
rec.	recorded
RP	Received Pronunciation
SED	Survey of English Dialects
S	Surrey
U-RP	Upper class RP
VA	Voluntary Aided
VC	Voluntary Controlled
WC	Working Class
//	enclose phonemic transcriptions
[ ]	enclose phonetic transcriptions
~	and/or
-	no data

Phonetic notation is taken from the International Phonetic Alphabet, revised to 1993, corrected 1996, as reproduced in Appendix 2.

CHAPTER ONE

ESTUARY ENGLISH: ITS SOCIAL AND LINGUISTIC BACKGROUND

1. 1 Estuary English: introductory statements and definitions

In 1984 David Rosewarne published his findings on what he chose to term „Estuary English". The newly identified accent was in evidence in radio and TV recordings that he had collected. The pronunciation of its speakers, neither RP nor broad Cockney, could be placed in the middle of a continuum between the two. Since then, the term itself has gained wide currency and became almost anecdotal. Indeed, it is now familiar not only to linguists, but also to the general public. The accent itself has been hailed, largely by journalists, as „the new standard English" as well as a democratic and modern pronunciation. Recently referred to by the acronym EE, Estuary English came close to being institutionalised, like BBC or RP, the accent whose possession was a requirement for the corporation's newsreaders. It even got a mention in Gimson's *Pronunciation of English* (revised by Alan Cruttenden), a standard and perhaps one of the most well-known textbooks on English phonetics.

While not attempting at an exhaustive phonetic description, a few articles drew attention to the salient features of the accent. The description was based largely on loose, impressionistic observations, backed up by a handful of anecdotes. As for its social connotations, the term has been bandied about freely. It came to denote a form of speech, which was modern, youthful and high on street credibility and was promoted as the way to speak in „Mr Major's classless Britain". Alternatively, EE was branded „appalling speech that buzzes about our ears" (one of press comments, quoted by Maidment 1994), depending on the author's sentiment towards regional accents.

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Before long, claims of its fast spread followed. The accent was said to „sweep southern Britain" (Hymas 1993) and claimed to have been heard as far as Devon or Cornwall. This implies that it has travelled very far indeed from its original Thames estuary heartland. Unfortunately, these claims were not based on empirical research or systematic studies examining the linguistic origins of the speakers in question. Again, reliance on fragmentary observations was the source. Incidentally, these may have been accurate, especially as descriptions of individual speakers. As generalisations about the speech of an area or a social group, they were perhaps premature.

Chapter One looks at Rosewarne's interpretation of the phenomenon and subsequent interest in the issue. It presents the debate his publications have triggered and explains the concepts which were mistakenly applied. Attention is devoted to the various definitions of the variety and its perceptions. As shown below, the existing definitions of the variety are divergent if not contradictory. Moreover, EE has been called an accent, a dialect and even a new standard. (For an explanation of these terms see 1.2).

The first and the most frequently quoted definition of EE, calls it „a variety of modified regional speech. It is a mixture of non-regional and local south-eastern English pronunciation and intonation" (Rosewarne 1984). The term itself acknowledges the geographical sources of the new pronunciation: „estuary" referred to is the one of the Thames. The speakers of the variety can be found „grouped in the middle ground" on a continuum of accents ranging from Received Pronunciation (RP) to London speech. Such formulation on its own could in theory be taken to mean that accents other than Cockney together with RP, assuming that this was the intended meaning of „non-regional", make up the variety in question.

However, the sentence immediately following makes it clear that the influence is that of the accent of the capital: „a continuum with RP and London speech at either end". In his more recent article Rosewarne (1994b: 3) talks about EE being a form of pronunciation between RP

and Cockney. The terms are obviously used interchangeably to refer to „*generally* [italics mine; J.P.] working class speech of London area" (Rosewarne 1994b). This is also pointed out by Wells (1994a: 261), who uses the term Cockney to refer to „the broadest London working class variety", while calling various shades of London accent „popular London" (Wells 1982: 302). Wells defines EE pronunciation as located somewhere in the continuum between RP and Cockney". Also, in his lectures (1998b) on Cockney and EE, Wells calls the latter „Standard English spoken with a non-RP, London influenced accent".

In fact, whether it is indeed Cockney or another, less broad form of London accent is here irrelevant. Accents shade off imperceptibly into one another. Therefore it is impossible to establish a boundary between Cockney and popular London speech or EE and Cockney. Descriptions of a given accent are usually idealised and focus on the common core, when each variety consists of a number of partly or to a large degree overlapping idiolects.

At that stage we arrive at Rosewarne's statement that „speakers of Estuary English have features of both accents in varying degrees". This again confirms that in language we are dealing with there exist differences between groups or individuals, perhaps more striking in latter case. It becomes therefore clear that a variety is an artificial construct and any delimitations of this kind are impossible. Therefore, boundaries on the scale are simply established for the convenience of reference. Placing the variety at some unspecified point or in the middle of the continuum does not make a difference. In fact, using divergent definitions we arrive at the same part of the spectrum consisting of a large number of idiolects. Whether there exists an entity, which can be termed „Estuary English" is another matter.

What complicates the issue further is the possibility of looking at EE from a number of different angles. In a more recent article, Rosewarne (1996) restates his definition of the variety,

adding a new element. He claims that Estuary speech lies on a continuum between RP on the one

end, and „Cockney or *another localisable* [italics mine; J.P.] south-eastern accent on the other".

The above statement redefines EE as a collection of mesolects. In such understansing the

term covers any of the southeastern accents, perhaps without their broadest characteristics.

Consequently, there is no question of Cockney or any other form of London accent influencing

the neighbouring varieties; instead one deals with a static coexistence of a number of accent

continua.

Rosewarne (1994a, 1996) attributes the rise of EE to the growth of comprehensives. The

mix of linguistic backgrounds gave rise to accent accommodation which consisted in speakers of

local accents discarding certain features and RP speakers toning down their pronunciation.

Rosewarne also points out that the press has created a confusing picture, taking EE to be

synonymous with Cockney. The author calls his research „perhaps the first attempt to investigate

the levelling of English speech in Britain".

Dialect levelling, also a complex of changes, consists in the features of a given variety

falling into line with those heard in the neighbouring varieties. As a result the more marked

differences disappear and a widely localisable variety comes into existence. Here, again, the

change is not unidirectional (influence of one accent) but comes about as a result of a two-way

accommodation.

Wells (1998a) redefines EE as „Standard English spoken with an accent that includes

features localisable in the southeast of England". Such definition is not concerned with the

supposed influence of Cockney, at the same time acknowledging its differences from RP, but

stresses the wide localisability of the variety.

At this point are adduced several other colourful if imprecise definitions, which show the

perception of accents and the image this variety supposedly projects. Coggle (1993a) refers to EE

as the accent that „minds its 'p's and 'k's but drops its 't's". Hymas (1993) calls it „the classless dialect sweeping southern Britain" and „the high cockney" [orthography in the original; J.P.], a term which shows a positive attitude towards the accent (compare 'Received Pronunciation'). Bex (1994) remarks that it „is chiefly adopted by the young" and probably a passing fashion, which agrees with Coggle's remarks about the accent being „modern and high on street credibility".

1.2 Dialect and accent

For the sake of clarity, it is here necessary to explain the apparently familiar terms such as „dialect" and „accent", which have caused confusion of two kinds. First, one is mistakenly taken for another, which leads to coining new misleading terms. Second, their linguistic and non-technical interpretations obviously differ, attributing various senses to these words.

According to *The Oxford Companion to the English Language*, accent is a set of habits that make up one's pronunciation which also betrays a person's origins and/or social class. Because accent refers solely to the phonological level of the language, everyone has an accent, as it is absolutely impossible to speak without one. However, in popular understanding, „An accent, for most people, is something they would prefer to speak without" (Abercrombie 1953: 113). In that sense the word has pejorative connotations. Undesirably then, an accent giving away one's origins and social standing implies either „learning the wrong thing" when a native speaker of the language who has an accent is involved, or a „failure to learn something" in the case of a foreign accent. The term „dialect" comprises a set of phonological, lexical, morphological and syntactic features which make up a form of a language. Naturally, an accent constitutes a part of a dialect, but they are not equivalent terms.

In newspapers we encounter the terms „dialect" and „accent", used interchangeably. Rosewarne, who coined the term, refers to EE, using a more generic term, „variety", which, however, can be chiefly distinguished by its features of pronunciation and intonation. Other publications merely quote Rosewarne's definition. Thus, EE is assumed to be foremost an accent, which is nevertheless associated with the tendency to use a number of lexical and syntactic characteristics. These are not exclusive to it, but apparently present in EE speech more frequently than in other varieties. Also, this form of pronunciation, which is said to be accompanied by expressions like *cheers* or *basically*, is more open to Americanisms.

Standard English is not a regional but an official form of the language used by the media, scientific publications and public information sources. Unlike other dialects, though, it is used by educated people all over the world, and thus Standard English is a universal, not a local phenomenon. Paradoxically, then, it is a „non-dialectal" dialect, like RP is an „accentless" accent. The relationship between Standard English and RP is not a simple one. A speaker of Standard English can at the same time be an RP speaker, but it is also true that many educated people use it with a more or less broad accent. Naturally, outside the UK, Standard English could be spoken with a local accent or a country's respective standard pronunciation.

1.3 Standard and prestige

EE has provoked a debate about standards. As seen indirectly from the previous sections, two kinds of comments or queries can be distinguished. On the one hand, the variety attracts criticism. Supposedly, it exemplifies an „erosion of standards" (Bex 1994) and „decline into sloppiness" (Hymas 1993). It even receives official condemnation by the Secretary of State for Education, who states that this form of English should be disallowed to be taught at schools. On

the other hand it is speculated whether the accent can become a future pronunciation standard which indicates a high rating.

In fact, the above seem to be two different debates, in which another meaning of the term is applied. At this point, an explanation is required of the concepts of standards and prestige, which influence and reflect our perception of accents. First, the linguistic and non-technical understanding of the former obviously differ, and are sometimes mistakenly used. Second, various definitions of the concept are adopted, which attribute various senses to the term.

The term „standard" can be used in a technical or non-technical sense. Collins dictionary defines standard as „an accepted or approved example of something against which others are judged or measured". Such definition implies that standard is in a way equated with correctness. Moreover, in the minds of the general public, correctness does not allow for variety (Cheshire and Milroy 1993). Therefore, divergence from the approved norm invariably encounters negative reactions. It appears that it is in this meaning that the term has been used in the newspaper debates. Here, a comparison is made against RP, a pronunciation officially acknowledged to be „correct". Consequently, EE does not score high, simply by virtue of being a different entity.

Another question concerns the actual technical definition of the term „standard". Admittedly, linguists use the latter in a number of ways. As McArthur (1992) remarks, the term can form a part of three types of opposition. Merely contrasted with sub-standard, this definition overlaps with the nonlinguistic understanding of the term. „Standard" can be the antonym of „non-standard", i.e. any variety which is different from it, disregarding social judgements or the issue of correctness. Finally, it can be a member of a set of three, where a distinction is made between „non-standard" and „sub-standard".

Crystal (1992: 366) defines the concept as „a prestige variety of language used within a speech community, providing an institutionalised norm for such purposes as media or language

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teaching". A similar definition is provided by Holmes (1992: 83), who simply states that „standard varieties are codified varieties", and McArthur (1992: 979), who writes about „agreed norms (...) used with a particular ends in mind". Thus, there seems to be little doubt that the codified variety is the standard, or, to be more exact, the variety in question becomes one through institutionalisation.

Another question is whether a standard is to be equated with prestige. In other words, if we can assume that a standard variety will invariably be regarded as prestigious. Prestige is understood as a subjectively positive view of a form of a language, such as an accent or dialect. Prestigious varieties can be defined as the ones perceived as a desirable way of speaking by a part of a society or a group. Therefore, their features in total or in part are adopted by the speakers in question. To what degree is it a conscious decision is disregarded here, imitation being a visible manifestation of attitudes. It is worth pointing out that as prestige is a subjective matter, what is prestigious for one part of a society may be negatively viewed by another.

Returning to the link between standard and prestige, for some linguists the concepts are not synonymous. Milroy's (1992: 129) definition of the former is not essentially different as regards its institutionalised aspect. He defines a standard variety as the one whose salient feature is invariance. The norm develops due to purely functional reasons being imposed by those who wield political or administrative power. However, Milroy differs from Crystal in that he makes a distinction between the two concepts. The latter, Milroy goes on to say, „can be subjectively attached by speakers to forms and varieties, which are (...) in conflict with the codified norms of the standard".

Similarly, Holmes (1992: 348), who acknowledges that there is a close connection between the two, nevertheless makes a distinction between them. In addition, she distinguishes between overt and covert prestige, the former meaning that the variety is question is openly

admired. It is the standard variety that enjoys this kind of prestige. Its speakers are rated highly on qualities such as status, competence and suitability for high rank jobs. For this reason it is „held to be 'the best' way of speaking in the community". Overt prestige is therefore, unintentionally perhaps, institutionalised in a way, while covert prestige refers to positive attitudes towards non-standard varieties. People use a particular vernacular as it expresses their solidarity with a given culture, group identity, and sometimes negative attitudes to groups with higher social status, who incidentally use what is considered to be a standard pronunciation, in many senses of the term. In Britain, this is particularly true of local and social accents.

Finally, for the sake of clarity it is also important to maintain a distinction between „standard language" and „language standard". The former has already been defined as the codified variety. The latter, however, is understood as a certain level below which a cultivated language should not fall. A statement like: „For some the standard is and should be the highest and best form of language" (McArthur 1992: 980) clearly indicates the non-technical sense of the word.

„Standard" and „prestige" might overlap, but the terms are not always synonymous. In other words, although a standard accent may at the same time be regarded as prestigious, this does not automatically follow. The relationship between the two entities is not straightforward either. It is not reduced to the presence or absence of positive evaluation, but also refers to who holds it prestigious, for what reasons and what the consequences are. Thus, while for some speakers the current standard is also their own speech and they value it as such, speakers of other varieties might wish to modify their pronunciation towards standard or keep it distinct. On the other hand, speakers of the overtly prestigious standard may want to tone it down, too.

As regards these two separate categories, „standard" has to do with institution, while „prestige" with the connotations of a given accent, which result from our attitudes towards it.

Therefore, the whole controversy seems ungrounded. If a prestige pronunciation and a standard pronunciation are not the same, the two accent varieties can coexist without endangering each other. EE will not become a standard unless we codify it. As for its prestige, if this is a desirable way of speaking for a certain group, then there is little that anyone can do.

1.4 Other claims

Rosewarne (1994a) observes that EE is most in evidence in Essex and Kent, which he attributes to an eastward movement of London speakers. While the observation might indeed be accurate, this does not necessarily involve a spread of the accent to other speakers. The increased presence of London speakers outside the capital makes for the overall impression of the accent in question being influential. In fact, London speakers just continue to use their native variety. Whether the accent has been adopted by non-Londoners or what the linguistic origins of the informants were, Rosewarne does not specify.

In the same study, Rosewarne (1994a) remarks that since he started research into the variety, EE has moved outside its original heartland and has spread as far as Norwich and Cornwall, being now spoken „south of a line from the Wash to the Avon". According to Coggle (1993b), it can be already heard as far north and west as Cambridgeshire, Northamptonshire and Oxfordshire. Hymas (1993) goes even further, claiming that EE is now spoken as far west as Devon and Cornwall and also in Hertfordshire and Berkshire. However, he also quotes McArthur saying „it will change the language map of southern England". In both cases a map is provided to indicate how large an area it has covered.

It seems, however, that these observations were not experimentally verified. Rosewarne (1994a) mentions an EE speaker from Dorset, but does not explain what his linguistic origins

were. Moreover, a pronunciation of one person does not give grounds for generalisations about the spread of the variety or speech of an area.

As regards the spread of EE in the society, Rosewarne's (1984) claims that the accent was popular in the City, business circles, and in the Parliament are repeated by Coggle (1993ab), Hymas (1993), and McArthur (1993). Whether the accent is indeed spoken by these groups has not been tested. Even if indeed this is the case, it does not give grounds for more general claims. The above milieus do not constitute homogenuous groups as regards age, education or geographical origins.

In fact, not many of the claims made about the variety have been backed up by a systematic study. Only Rosewarne's (1984, 1994ab) descriptions of the accent were based on the media and Kingsway College students recordings. The observations thus made might indeed be accurate as regards the features of pronunciation and intonation of the speech of the informants.

However, while agreeing with Rosewarne, other writers contribute little but impressionistic observations and anecdotes to support the claims. The material, in turn, serves as a basis for generalisation about the speech of such a large area as the Southeast of England. While of little scientific value, impressionistic observations might still indicate the presence of London features outside the capital. However, at that stage, they certainly do not give grounds for linguistic generalisations.

Moreover, generalisations thus made seem to have been extended to expressions. Certain colloquialisms (*cheers* for *thank you*) and syntactic features of Cockney, such as *innit* for *isn't*, seem to have been lumped together and them tagged to someone's accent description. As for the former, „some commentators seem not to appreciate that RP can be spoken in informal situations" (Wells 1994a: 262). The resulting mixture thus created forms an image rather than a description of an Estuary speaker.

1.5 Received Pronunciation

The existing definitions of RP are extremely divergent, which springs from taking different kinds of factors into account: social, regional, and phonological, respectively. Moreover, the current situation is one of a rapid change (cf. Crystal 1997) and the sociolinguistic correlations which used to serve as a base are no longer so straightforward. Thus, what was possible at the beginning of the 20th century and even earlier has become debatable towards its end.

Originally, RP was defined as "everyday speech in the families of Southern English persons whose menfolk have been educated at the great public boarding schools" (Jones 1917). It seems now a very narrow delimitation, but at the time it was indeed the case. Nowadays, due to the influence of the BBC, RP has become so widespread that it is "unrealistic to try to label the accent as belonging to a particular section of society" (Ramsaran 1990: 178). The original definition has thus narrowed down its scope and now applies only to U-RP (classification from Wells 1982), which, indeed, is an exclusive property of a social class.

Undeniably, RP still enjoys a high prestige, but contemporary scholars adopt a more cautious approach. Wakelin (1977: 5) defines it as an accent "*usually* [italics mine; J.P.] associated with a higher social or educational background". It seems that since the latter is true these days, one of the initial ingredients of the definition is no longer there. Today, linguists talk of a „wider-based RP". However, putting forward a regional definition does not clarify the matter either but, on the contrary, can lead to confusion. Although historically RP has a regional base, having undergone modification it discarded some of its regional characteristics. Because its

speakers do not come solely from the South East, the accent is no longer "*synchronically southern*" (Ramsaran 1990: 179). In fact, non-localisability remains its defining characteristics.

What complicates the matter further is "a dilution of the original concept of RP" observed by Gimson (1977: x). On the one hand, RP exerts influence on regional accents, which through the contact modify their traditional sound system (cf. Wakelin 1977: 5), on the other hand, RP itself is not resistant to change either since it adopts regional features. In fact, Wells (1994c) writes about more recent phonetic developments in RP which resemble Cockney characteristics. Elsewhere (1998c) he also points out that the accent of London and the southeast is the source of the changes that have been taking place in RP.

If phonological criteria are chosen to define the accent in question, it has to be borne in mind that this particular mode of pronunciation is evolving in its phonological system not only phonetically (cf. Gimson 1980). Thus, depending on the set of features selected, innovations included or not, we arrive at many divergent systems.

Today, RP is the accent of the 3% of the society. It is still used in the media and continues to be a model in English language teaching. This is mainly due to the fact that RP is by far the most thoroughly described accent of English. Its substitution might be costly and any suitable replacement might be lacking. Therefore, it makes perfect sense to keep it for these purposes.

RP can simply be defined as a regionally neutral, non-localisable accent, an unusual one, since it fails to offer clues to the regional origins of the speaker. These days, it mainly indicates a person's educational background, but in the past, while serving the same function, it was chiefly meant to distinguish its user as a person of a high social status. Although it is not true anymore, the accent is still perceived as such and therefore can sometimes be treated with hostility, as Christophersen (1987) remarks.

1.6 Current interest in Estuary English

Paradoxically, although the term has been used in a large number of articles, contributions to the subject remain rather scarce. In fact, the main body of literature consists of Rosewarne's (1984, 1994ab, 1996) and Wells's papers (1992, 1994ab, 1997, 1998ab) in which their authors characterise the chief tendencies in the accent. Other writings are newspaper articles, whose subject is the variety itself. Their purpose is probably to bring a number of EE-related linguistic issues to the attention of the general public. While the non-technical descriptions still have a certain accuracy, in the journalists' writings we find incorrect statements, such as „a form of a glottal stop, a feature of cockney where ts, ps and ks are swallowed in expressions such as (...) te*t*nical" (Hymas 1993). Moreover, basic linguistic concepts, like accent, dialect, standard seem to be imprecise, if not completely misunderstood.

Rosewarne (1984) draws attention to the current changes in linguistic fashion. The newly identified accent is speculated to be a very influential one, a kind of 'Advanced' RP. The latter is the speech of the young members of the upper class, also "used for prestige value in certain professional circles" (Gimson 1980: 80), a kind of pronunciation that other RP speakers might view as „affected". According to the English phonetician, it indicates current trends, which might have shown the direction of changes in RP.

Instead, as Rosewarne claims, a different thing happened. Since the exclusive social group ceased to be a model for general imitation, they are no longer linguistic trendsetters. This, in turn, led to an increasing popularity of a different accent, i.e. EE, which rather than elevating a speaker to a supposedly higher social position places them in the middle of the social scale, which can be due to the partial obscuration of their linguistic background. Having in mind the sociolinguistic

aspects of the variety Rosewarne concludes that EE might become the RP of the future. At the same time, Wells (1997) says that such claims are partly justified. He, however, refers to the fact that EE features are losing their localisability.

It is worth pointing out that Rosewarne merely draws attention to a number of social and linguistic phenomena which are linked. He has never declared that EE is a **new** variety, although his statements seem to have been misinterpreted and, consequently, claims were made about an emergence of a new accent. In fact, he explicitly denies (Rosewarne1994a) that we are dealing with a new phenomenon, objecting to the term New London Voice. Like Wells (1997), Rosewarne puts forward a plausible suggestion that EE is a part of a centuries-old process, namely that of London pronunciation making an impact and setting standards.

In *Do you speak Estuary?* Coggle's (1994b) attempts at a more detailed phonetic description of the variety, go beyond glottaling and *l*-vocalisation. In the book addressed to a lay reader orthographic renditions are used to illustrate the phonetic qualities of EE phonemes. Coggle relies on Rosewarne's definition and illustrates the pronunciations with overheard and invented utterances. The book also includes a section on vocabulary and grammar associated with EE speaker. Finally, he describes a stereotypical speaker of EE and places various TV personalities with degrees of London accent on the RP - Cockney - Estuary continuum. Authentic TV or radio utterances which illustrate the pronunciations used are orthographic renditions. Coggle also remarks that the spread was assisted by the overspill of Londoners, who, due to social considerations, modified their speech to help them fit in. This would again mean that we are dealing with accent convergence rather than an influence of one variety on another.

Finally, there exist a (presumably) large body of newspaper articles where the term „Estuary English" gets a mention, whose exact number is, however, not known to the present writer. But a CD-ROM search of the available 1996 and 1997 issues of *The Guardian* and *The*

Observer, threw up 14 articles, in which the term had appeared. This indicates that despite the fuzziness of the concept the term seems to be in a wide use, though in a clearly non-technical sense, to conjure a certain image of a person.

A couple of contexts, in which EE is mentioned, include (a) descriptions of individuals, either factual or reflecting the author's attitude towards the person, like „the stereotypical trendy teacher", who speaks „in estuary English tones" (*The Guardian* 4 Nov 1997) or „'He [Prince Edward] is not as posh as the others', said one guest commenting approvingly on his estuary English accent" (*The Guardian* 20 Jan 1996); (b) remarks about the blur of class barriers: „now that the scions of aristocracy have adopted Estuary English, even accent is a less accurate class indicator than it would have been a few decades ago" (*The Observer,* 26 Oct 1997), and (c) statements concerning the presence of the variety in the Home Counties „the old Surrey burr, which has not yet been *entirely* [italics mine; J.P.] displaced by Estuary English" (*The Guardian,* 6 Dec 1997).

While the accuracy of these remarks is debatable, they perhaps indicate if not social spread of London accent, then at least certain connotations the pronunciation does have. As for its geographical spread or an individual's adoption of the variety, these remain mere speculations, for lack of a consistent relevant research in the field and ignoring the linguistic background of the speakers in question.

EE appears to be of interest in linguistic circles as well. An Internet search revealed that the issue had been discussed several times on the LINGUIST List. It now also makes a part of three courses on „English accents", „English dialects and sociolects", and „Accents of English" at the University College, London (phonetic features of EE are discussed), the University of Bielefeld and the University of Essex, respectively. Unfortunately, the material covered at the other two courses was not made available on the universities' web sites. The LINGUIST List

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includes a discussion of Coggle's and Rosewarne's findings and a comment from Kerswill, who views EE as a part of a more general dialect levelling process in the Southeast of England.

1.7 BBC permissiveness: changing attitudes to accents

A factor which might have contributed to the identification of EE and the subsequent claims of its spread is the stronger presence of regional accents on the BBC. Their appearance in the corporation broadcasts might seem particularly striking as for decades in their radio and TV channels a uniform manner of pronunciation was used. Thus, the RP accent became synonymous with BBC English in the minds of the general public and, indeed, such term is in popular use.

Such accent choice was motivated by the desire to create a relationship with the audience. In the early years, the corporation propagated „elitist, upper middle class culture" (Leitner 1982b: 58). Being the speech of the class the programmes were chiefly addressed to, the RP accent was under the circumstances a neutral accent. It emphasised the lack of a social distance between the broadcaster and the listener. With such purpose in mind, the decision of the Advisory Committee on Spoken English to use „the type of educated English which can be broadcast without evoking any considerable degree of relevant adverse criticism" is not surprising (Leitner 1982a: 98). The neutrality claim seems perhaps false to a contemporary listener, although it was unquestionable at the time. Paradoxically, in the 1920s „neutral" was synonymous with „of high social status", which is no longer the case.

Nowadays, even if not completely lost, those sharp class distinctions have at least become blurred, which found its linguistic reflection in the greater permissiveness of the BBC. Cruttenden (1994: 79) remarks that many announcers now „have markedly non-RP or non-British accents". Since the corporation broadcasts are now addressing a wider audience, a wider scope of

the accents seems a natural consequence, assuming that the original aim to create a relationship with the audience is still kept.

1.8 The importance of London speech

London's pronunciation has been making itself felt for at least five centuries. „Not only did its courtly and upper class speech lay the historical basis for Standard English and in many respects RP, but its working class accent is today the most influential source of phonological innovation in England" (Wells 1982: 301). Indeed, RP, the accent regarded as a standard, is derived from the speech of London. The features of inner city Cockney, a working class London accent, seem to be spreading outside the capital. Some current changes in progress, involving „typical" London pronunciations, such as intervocalic glottaling and TH-fronting, are reported to occur in other towns. Possibly, one of the reasons for their diffusion is the covert prestige of London accent (Milroy 1996).

It seems therefore that while London still remains the most influential source of innovation, the situation is reversed as regards the question who is actually leading the changes. In the past, it was seemingly the upper class, but now their speech is no longer setting trends. Working class cockney seems to have taken over that role and one might begin speculating about the reasons for the phenomenon. Alternatively, when looking close at the history of London speech, we discover that little has changed. In fact, it is the working class members that have always been the innovators.

Paradoxically, this does not contradict Wells's statement. Once the exclusive property of a social class and the accent, whose possession was a trapping of privilege, RP does indeed descend from the speech of the Royal Court, because their pronunciation and that of London

working class have in fact common roots. Let us then cast a glance at the sociolinguistic situation in London.

At the beginning of the 16th century, London, the political and cultural capital of England, was also the largest English town and thus the focus of the official and cultural life of the country. Its population equalled one-tenth the population of England. A fast rate of expansion and thousands flocking in to experience the life of the capital meant that one person in ten was exposed to London speech. Society being structured into classes, this was as well true about the language. English lacked a universally recognised national standard (cf. Dobson 1955) so that its dialects and the subsequently emerging accents enjoyed an equal status. The divisions did not find a linguistic reflection. Social classes did speak differently, but these differences were not clear-cut, and should rather be regarded as tendencies. The speech of the court and the upper class prevailingly employed Southern features, while the speech of the middle class contained numerous East Midland and Southeastern forms (cf. Wyld 1936: 97). While this roughly mirrored the social structure, there existed no rigid divide. No stigma was attached to any particular features of pronunciation either.

In fact, this could not indeed have happened as the pronunciation of aristocracy had a number of characteristics in common with the so-called 'vulgar speech'. In the 17th century the upper class still „knew no necessity to adhere to a rigid form of speech in order to establish their worthiness or respectability" (Matthews 1938: 218). At the time, accent was not a marker of social position.

As can be seen, this accent was shared by the whole social spectrum, the pronunciation of London also being the speech of the court and the upper class. It is believed that this group exerted influence on English pronunciation and indeed, the variety they were using, evolved into

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the present-day RP. However, as Matthews (1938) argues, it cannot have been a direct process. The upper class people were a relatively small and, more importantly, socially isolated group. The impact of their speech was therefore confined to the visitors to the royal court. Consequently, they were unlikely linguistic trendsetters and wide imitation of their accent could not ensue.

This influence was due to the operation of social factors rather than the number of speakers using the variety. The social prestige which the group enjoyed was extended to their speech. Simultaneously, awareness of the „vulgar" characteristics of the accent increased. Variability in good speech, especially the features which aristocrats and „the good populace of London" had in common, began to be considered undesirable for anyone with social aspirations. Consequently, attempts were made to impose a uniform pronunciation standard, largely by subjectively declaring a given pronunciation incorrect.

Matthews (1938: 225) quotes Lowe, an 18th century grammarian justifying his prescriptivism: „I have founded my rules upon what I conceive to be the most common way of pronouncing them among the better sort of people in London". This shows that it is prestige that eventually elevates a variety to the position of a linguistic norm and, consequently, standard at that time equalled prestige. The concept obviously was not understood simply as „averaging out of the differences" (McArthur 1992: 979).

As can be seen, the role of the upper class in the formation of the future standard was only indirect. Wyld (1936) writes that in time the coexisting social varieties began to emphasise what was later considered to be „polite" and „vulgar" features. Possibly, rather than mere phonological developments of the accents in question, the characteristics shared by them were rooted out by prescriptivism, due to their connotations. Thus, the upper class speech has „bitten the hand that fed it" (Matthews 1938: 313).

In the light of London's linguistic history, it appears plausible to interpret EE as a geographical and social diffusion of London features. Such phenomenon would be a continuation of the old process and a confirmation that the capital still remains „a linguistic centre of gravity" (Wells 1982: 301). The current situation and the one existing four or five hundred years ago show certain parallels, although the respective social situations are by no means identical. The present-day continuum of accent varieties, ranging from Cockney to RP, also includes intermediate forms of what Wells (1982: 302) calls 'popular London' speech. The working class speech which leads the innovations seems to exhibit a linear development. However, what fluctuates, is the society's attitudes.

1.9 Attitudes towards RP and Estuary English

Accents owe their prestige primarily to social factors. It can naturally be expected that once changes begin to take place in the social structure, the change of attitudes will follow. Indeed, opinions about the pleasing quality of sounds are subjective and have a limited scope. They spring from the association of the accent with the circumstances in which it is used and with its users. Intelligibility, too, is a subjective matter, because it results from a person being familiar with one accent and it increases with our continued exposure to a variety.

The social acceptability of RP was originally very high. From the 19th century onwards the segregation into classes became less rigid and the division less apparent. ("Yet the accent most unfortunately persists"; Spencer 1957: 17). Later, even though more changes took place, RP continues to exist and seems to have long outlived the system it grew out of, becoming solely an anachronic reminder of the social structures of the past. It is hardly surprising that the attitudes to it are now virtually reversed. Spencer is not the only linguist to have observed this fact. His

contention is shared by Abercrombie (1965), who speaks about the accent bar, recognising that, depending on which side of it we are, our career and chances in life may be affected. He believes that this is simply not right in a modern society and that no pronunciation convention should be disadvantageous or advantageous to a speaker. However, such claims have to a large extent lost their strength since the RP accent is no longer a prerequisite for social advancement. Consequently, it ceased to be the accent that the majority of people with social ambitions aspire to have.

Supposedly, the reversal of attitudes gave rise to EE. Its emergence, as Hymas claims is „the product of shrinking class differences". Consequently, it has been hailed as a more modern and democratic pronunciation. On the other hand, it seems to share the fate of many linguistic innovations. It is enough to look at the issue of *The Sunday Times* of 21 March 1993 which published readers' letters containing complaints about the current state of the language, calling the new pronunciation "increasingly slovenly use of speech", describing the spread of EE as "horrifying" and referring to the speakers of the new variety as "idiots on radio and television who speak English like the dregs of humanity". One can therefore conclude that in the minds of the public EE is the antonym of RP.

Many speakers who modify their accents towards RP wish to retain regional traces, and thus they stop short of the acrolect. Approximated RP (Near-RP) is then viewed as RP, while the seemingly „neutral BBC accent" is perceived as affected. Moreover, an opposing pressure seems to be in operation: despite the influence of the broadcast word and movement towards traditionally prestigious varieties, regional varieties survive and even become increasingly prestigious. Thus, models are still there, but countermodels are born ("the young are often influenced nowadays by other prestigious accents, e.g. Cockney or Mid-Atlantic"; cf. Gimson 1977: xi).

Similarly to RP, which betrays no locality, EE is said to "obscure sociolinguistic origins" (Rosewarne 1984). However, while alongside other attributes, RP placed those who spoke it at the top of the social ladder, EE is said to serve a different function: to place its speakers in the middle ground. People no longer wish to distinguish themselves by means of their accent.

EE also received a mention in Cruttenden's revised *Gimson's pronunciation of English*. The author defines EE as „a middle class pronunciation typical of the Thames estuary" (1994: 86). Interestingly, Davenport and Hannahs (1998: 34) understand the variety as „working and lower middle class speech in South Eastern England".

It follows then, that the existing definitions of the concept are mutually contradictory. On the one hand, it is defined as near-RP, that is the accent which has enjoyed a high prestige and was overtly recommended. Therefore, it could be expected that its approximation is also a desirable model. On the other hand, it is contrasted with RP and referred to as an exemplification of „erosion of standards", and warnings are given „that we must not slip into slovenliness" (one of press comments quoted by Maidment 1994).

The question is therefore what the debate is about. Assuming that EE, like other varieties, comprises a spectrum of accents, from a local form of near-RP to broader, London- based forms, which end of the continuum are the protests against? This becomes a valid question especially in the light of the fact that the boundary between RP and EE is not clear cut. The fuzziness of RP/EE (touched on in section 1.1) or indeed EE/Cockney is pointed out by Maidment (1994) who draws attention to features such as glottaling and *h*-dropping. Depending on the speech style they are used in varying degrees. Thus, someone described as EE speaker might avoid glottaling in their formal end of the stylistic range, while an RP speaker will use more glottal stops in their more casual style. The issue of overlap is also raised by Wells (1992).

Among the current comments on the issue we find the expression „epidemic proportions" (Honey 1997: 96), which implies that concern is expressed about the state of the language. Honey goes on to say „Until (...) we can be sure there is no real loss to the language we must seek ways of trying to bring this new tendency in spoken standard English under control". This comment bears a close resemblance to (1770) Lowe, cited by Matthews „I have founded my rules upon what I conceive to be the most common way of pronouncing them among the better sort of people in London". Somewhat surprisingly for a modern society such linguistic attitudes are still present, as the above quotation shows. Indeed, Mugglestone (1995: 96) remarks that the present day „prescriptive denunciations of change" are reflected in attitudes towards EE and the treatment of its certain pronunciations as shibboleths.

EE has been defined as middle class and working class speech, a bastardised version of Cockney (the Minister of Education, Gillian Shephard, quoted by Wells 1997) as well as Regional RP, mentioned in connection with declining standards and hailed as a new standard. Clearly, the term „Estuary English" has over time become „all things to all people". The issue seems to result from heightened sensitivity to accents, whether local or non-regional. The protests against its use are in fact futile attempts to stop language change. Rather than constituting a linguistic phenomenon, EE exemplifies class-based attitudes. It seems that what began as an attempt to attract attention to certain pronunciation trends became a vehicle for telling others how they should speak. This seems a modern version of linguistic prescriptivism where being on either side of „the accent bar" (Abercrombie 1965) is bound to cause offence.

1.10 Final remarks

As shown above, the existing divergence of the definitions of EE uncovers uncertainty as to the nature of the linguistic developments in Southeastern England. For the purposes of the present study EE is defined solely as an accent. The work looks at the phonetic make-up of the variety and is not concerned with its supposedly characteristic use of expressions and lexis. Also, a neutral definition proposed by Wells (1998c) is adopted here, where EE is understood as the speech of London and the southeast.

The experimental research carried out in the Home Counties is to verify whether the link between the accent of the capital and the rest of the southeast, implied by most definitions, is indeed present. This is done in two dimensions: a qualitative analysis aims to see whether vowel shifts in the Home Counties are consistent with London realisations. A quantitative analysis aims to test claims about EE being between RP and Cockney as regards the incidence of *l*-vocalisation and glottalling. To provide answers to both questions, the Home Counties recordings are compared with the recordings of Cockney and RP. The methods employed in the study are described in Chapter Two.

CHAPTER TWO

AIMS AND METHODS

2. 1 Aims

The existing literature on EE has a largely impressionistic character, while the present study has a fully balanced structure of a formal survey, modelled on a highly controlled laboratory experiment. It combines elements of traditional rural dialect geography with modern methods of urban dialectology. The study makes a comparison in real time between the present day teenage speech from the Home Counties and the 1950s transcriptions of rural speech taken from the Survey of English Dialects (SED). The diachronic dimension is introduced in order to establish whether features recognised as EE are indeed a new phenomenon. The SED informants were born in the 1870s and 1880s, whereas the present study informants in the 1980s so that the diachronic dimension spans approximately a century.

Naturally, to achieve strict comparability, certain aspects of the original methodology had to be replicated. Consequently, this affects the selection of localities and a method of data collection. The present study used a modified lexical questionnaire employed in the original survey, which was done in order to elicit the same lexical items and retain the same word-list style. Additionally, the method ensures comparability on a synchronic plane, as the same items are elicited from every speaker. Because the formal and somewhat artificial nature of the interview affects the style of speech used, informants tend to employ the more 'standard' end of their stylistic range. For this reason this traditional dialectology method has received considerable criticism, the nature of the elicited data being considered as its drawback.

However, it has to be pointed out that the word-list style, although rare, is also legitimate linguistic behaviour. Moreover, stylistic infiltration of new features is well documented in literature; cf. Labov (1966), Trudgill (1974, 1988), and Docherty *et al* (1995, 1997). Simultaneously, Milroy (1984) observes that the tendency to move away from non-standard variants as the speakers move towards formal styles, is very general. It follows therefore that an innovation which has reached the most formal style can be assumed to be a core feature of a given variety, present in all other styles.

The SED informants were predominantly males, usually over 60 years old, who had not left their place of residence for longer periods of time. Such choice of informants was motivated by the conviction held in traditional dialectology that males speak more genuine form of a dialect. The present work introduces a sociolinguistic dimension incorporating independent social variables, such as gender and class, and keeping age a controlled variable. The amount of inter-speaker variability is investigated to establish whether the subjects can be considered speakers of one variety. Unlike in modern urban dialectology, informants are selected according to a set of criteria, not by random sampling of the population. When dealing with a small population of a village, sampling is not considered a suitable technique, especially with the selection of informants being further limited to adolescents.

The present work looks at the phonetic make-up of EE. It intends to verify empirically whether the hypotheses about the nature of the variety are tenable. Lastly, it aims to investigate whether any of the features of the variety are consistent with the characteristics of the London accent as well as with RP. The detailed description of the methods employed in the study is presented in the sections which follow.

2.2 Preliminary inquiry

The Education Departments of Kent, Essex, Surrey and Buckinghamshire County

Councils were contacted in order to obtain information about all the state secondary schools in the respective counties. Specific information about the schools was obtained from the schools' prospectuses. Additional information about the social and economic background of the pupils as well as informal assessment of the popularity of the schools, which appeared to fit the criteria, was acquired from Education Departments.

At that stage the schools were approached. In the telephone conversation the purpose of the research was explained, the accuracy of the information provided by the County Councils was checked, and the schools were asked about their willingness to co-operate. Also, it was established whether a given school currently had pupils from the localities of interest. In most cases the response on the part of the officials was favourable and the schools volunteered to search their pupil databases to establish whether they had potentially suitable informants. Afterwards, another round of phone calls was made to check the results of the search. When the result was positive, the schools were sent an official letter of introduction from the Phonetics Laboratory, University of Oxford, outlining the research project, describing the interview and setting out the detailed criteria for the selection of informants. A copy of the questionnaire was also sent with the letter for the teachers' inspection so that parental consent could be obtained. The questionnaire was made available to the teachers, but not shown to the informants.

2. 3 The informants

That sound changes are most advanced in the youngest group of speakers is a fact well documented in sociolinguistic literature; cf. Labov (1966, 1998), Trudgill (1974), Kerswill and Williams (1994), Docherty *et al* (1995), and Ash (1999). Because adolescents are at the cutting age of sound change, 14-16 year olds were chosen as the most suitable age group if current linguistic innovations are to be studied.

The EE informants were selected in accordance with a set of carefully determined criteria. The priority criterion was their place of residence, not school, as schools were not located in the selected villages. The subjects were required to be natives of the village in question or have moved into the locality not later than at the age of five. They had to be between 14 and 16 years old. Their speech was expected to be typical of the local vernacular in the opinion of the teachers. Being exposed to the speech of the local teenagers, the teachers were considered to give the most accurate judgement on whether a given adolescent fits the criterion of being representative.

One of the schools returned my phone call, expressing their willingness to participate in the project as well as concern about the lack of suitable informants. As the headteacher explained, being a selective school meant that the majority of the pupils came from well off backgrounds and tended not to have accents. However, they promised to find an informant with a relatively broadest accent. During my visit in another selective school, the headteacher informed me that there was no overt pressure on the pupils to modify their accents. However, he believed the students have 'school' and 'playground' language, i.e. they speak differently to their peers and teachers. A similar phenomenon is described in other dialect studies. Kerswill and Williams (1997: 164) report that the pupils „differentiated between school and home speech" as it was „taken for granted that both parents and teachers would correct the students' speech".

The subjects should not have had elocution lessons, which would tend to defeat the purpose of the study or any speech defects. A friendly and outgoing manner and willingness to participate in the project were felt to be of more importance than academic excellence, since the concern was that they should feel at ease during the interview.

For the study of EE eighteen teenagers were interviewed altogether. The speech of two WC Tingewick speakers has not been included in the present study. Those two teenagers

were recorded in the same school. The other school, where MC speakers from the locality were sought, withdrew their original permission to carry out interviews. Consequently, the locality was abandoned. The sixteen informants were between 14 and 16 years of age. Nine of them were 14 at the time of the interview, five were 16, and two were 15. The subjects were grouped in three ways: by social class, by gender and by county. Thus we had eight male and eight female speakers, eight middle class, eight working class, and four subjects per locality.

All the informants were considered natives of the localities in question. Ten of them lived in their respective villages since birth, the remaining six moved to their respective places of residence not later than at the age of 5. A 14 year old WC Essex male constitutes an exception since he moved to the locality at the age of 7. However, he was considered to fit the set of criteria since he had never lived outside Chelmsford area. His previous place of residence was another village within a 15-mile radius from the locality selected for the present study. One of the informants lived in London for the first 24 months of his life. Two other subjects were resident in Bexleyheath and Ilford, located on the verge of Greater London (GL), but not within the capital itself. Six of the informants were children of London parents. None of the teenagers had any speech impediments or deficits. None had attended any speech or elocution lessons. The data concerning the informants' ages, places and length of previous residence as well as their parents' birthplaces are summarised in the table below.

TABLE 1

The EE informants' age, place and length of previous residence as well as parents'

birthplaces

	Age	Previous residence	Length	Mother	Father
Females					
Bucks MC	16	-	-	London	London
Bucks WC	14	-	-	London	London
Essex MC	14	-	-	Essex	Essex
Essex WC	14	Ilford (GL)	5 years	Essex	
Kent MC	16	-	-	not asked	not asked
Kent WC	14	Bexleyheath (GL)	3 years	London	Essex
Surrey MC	14	-	-	Surrey	Surrey
Surrey WC	14	-	-	West Sussex	West Sussex
Males					
Bucks MC	16	-	-	London	Bucks
Bucks WC	14	-	-	Oxfordshire	Bucks
Essex MC	16	Milton Keynes	5 years	Liverpool	Lancaster
Essex WC	14	Essex	6 years	Wales	Essex
Kent MC	14	-	-	London	Essex
Kent WC	16	London	2 years	London	London
Surrey MC	15	not asked	4 years	Blackpool	Surrey
Surrey WC	15	Cornwall	3 years	London	London

Recordings of Cockney speakers were made in an East London comprehensive. The two informants, a female and a male were aged 14 and 15 respectively. Both were born and brought up in Bethnal Green, the area considered the traditional Cockney heartland, where Sivertsen's (1960) study of the dialect was also conducted. The interview procedure, described below in section 2.4, was the same as in the case of EE data collection.

Recordings of RP speakers were made at Eton College. The two informants, both male, were aged 13, had been selected by an Eton College teacher, himself an RP speaker, in whose opinion their speech was characteristic of RP. As the description below in 3.3 shows, one of my subjects shows a number of features, which are described in literature as U-RP, while the other could be classified as a mainstream RP speaker. The interview procedure was the same as in the case of EE data collection.

2. 4 The interview: basic procedures

The RP and Cockney recordings were made in November 1998, whereas the EE interviews were conducted between November 1997 and March 1998. The teenagers had been told about the project and expressed their willingness to participate. The schools were visited and the informants were introduced to the present fieldworker who was then shown a room where the interviews could be carried out.

All the interviews were carried out in the informants' schools and conducted on a one to one basis. In all the schools a member of staff was invited to be present during the interviews, but none expressed the wish to do so. A quiet room was sought in order to eliminate possible background noise, which might otherwise have interfered with the interview, especially disturbing the shy informants and having an adverse effect on the quality of the recording. Usually the interviews took place in the headteachers' offices or in a classroom, where the informant and the fieldworker could be comfortably seated and the

equipment plugged in and appropriately positioned.

Before the start of the interview its basic procedure was explained to the informants in order to ascertain that the subjects had an understanding of what they were expected to do. The project was outlined to them, i.e. they were told that they were participating in a research project concerned with language change. However, they were unaware of the fact that the study focuses on the phonetic level of the language, since the fieldworker did not want them to have a full understanding of the purpose. To put them at ease, the teenagers were assured the experiment was not an assessment test and therefore any answer given would be considered satisfactory. They were also asked for permission to be taped, which, as the fieldworker explained, was done for her personal records since otherwise she would be unable to remember a large amount of detail from a number of interviews. None of the informants had any objections and most of them appeared to find the situation comfortable and seemed happy to help. Their co-operativeness* thus secured, the interview could be started.

The questionnaire was always preceded by a conversation, which started off with asking the interviewees' names and ages and proceeded to questions about their family, school curriculum, choice of subjects for GCSE, hobbies, spare time activities, plans for the future and anything else they wished to talk about. This had a double purpose: the conversation was to put them at ease and check the accuracy of the preliminary information supplied by the school as well as gather additional information about their background and family origins. The conversations were also recorded, but the material was not used in full in the present study.

For ease of understanding, the informants were handed a typewritten copy of the questionnaire, which they were asked to consult in case of doubt. The fieldworker had the questionnaire in front of her and read out the questions aloud at natural speed, while the

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* Their eagerness to co-coperate apparently followed from the fact that they were let off their lessons to participate in the present study.

answers were given immediately. The whole set of 116 questions was asked consecutively, without a break during the interview. No notes were taken by the fieldworker. At the end of the interview the questionnaires were collected and the informants were thanked for their time and assistance. The interviews took on average 30 minutes to record with approximately 5 minutes out of the total recording time taken up by the conversation. The subjects were not paid for their participation. A contribution was made to the schools' funds instead.

2.5 The recordings

The recordings were made using a Beyer Dynamic model number CP430 microphone connected to a Marantz tape-recorder. The microphone was placed on a microphone stand, appropriately but unobtrusively, approximately 12 inches from the subject's mouth. The subjects were asked to speak as they normally do, i.e. refrain from shouting. They were told there was no need to lean towards the microphone. Also, they were instructed not to cover their mouths, tap on the table or rustle the papers, as these noises could be picked up by the microphone. This had been done before the recording had began.

During the informal conversations and before passing on to the questionnaire the volume of the recording was adjusted to each speaker in order to assure the most suitable recording level. In a few cases background noise could not be eliminated as it was caused by the start of the school lunch break or building and maintenance work in progress. However, the use of the positional microphone ensured that the target words were not distorted and the sounds remained audible, even though a certain level of noise can be heard on the tape. TDK CDing 2 chrome-dioxide audio tapes were used.

Naturally, recording on audio tapes has limitations as a means of data storage. Due to its nature, articulatory information on, for instance, the type of lip rounding or tongue movement is inevitably lost. Yet, paradoxically, since it ensures higher overall accuracy, it is

preferable to note taking during the interview. In this way, phonetic material is retrievable. The possibility of replaying the speech data a required number of times not only makes for more accurate transcriptions but also enables verification by other phoneticians, who thus gain access to the data rather than somewhat biased phonetic transcriptions. Another advantage of audio recordings is that the informants are not embarrassed by the interviewer's constant note taking and the interview can proceed smoothly and at reasonable speed.

The recordings were subsequently transferred to a disk and processed using *Waves* speech processing software (Entropic Research Laboratory Inc., Washington) and a Silicon Graphics Indy Computer. The recording of each word was saved into a separate labelled file. Incidental material, i.e. words and phrases other than the target answers, were also retained. This amounted to 2815 data points altogether, 2254 for EE recordings, 285 tokens for RP recordings and 276 data points for Cockney recordings. All the data provided approximately 47 minutes of continuous recording. The words were listened to using Sennheiser HD320 headphones.

2.6 The analysis

The method employed here is an auditory impressionistic analysis. Words were grouped into variables. The present writer then listened to all instances of a given word, comparing them across all the speakers. To ensure accuracy, the procedure was repeated a number of times. Where need arose, words were also listened to in a different order, i.e. all tokens representing a given variable within one informant. Using this procedure, the target words were than transcribed with reference to the Cardinal Vowels. The notation used was from the International Phonetic Alphabet (IPA), revised to 1993, corrected 1996.

Reliability was checked as follows: a random check of 10% of the database was performed by two phoneticians, each checked 5% of the words. Each file had been assigned a

number. Items to be checked were selected using a set of random numbers. The phoneticians transcribed the words independently. Their versions were compared with the present writer's transcriptions. Because it would be unrealistic to expect agreement as regards individual sounds or notation, their and the present writer's versions were checked for category consistency rather than notation or the precise vowel qualities, as the latter were bound to differ. For example, a quality slightly more open than Cardinal 3 [ɛ], yet not reaching /æ/, can be marked either [ɛ̞] or [æ̝]. Another example is one of the transcriptions for *l*-vocalisation where the difference between the two versions was reflected in the presence or absence of rounding in a close-mid back vocoid ([ʊ] vs. [ɤ]). Such result was not regarded as a discrepancy, since both realisations fall into the „vocalised" as opposed to „non-vocalised" category. A similar criterion was set by Vieregge and Broeders (1995: 175), who considered transcriptions to be in agreement when the same phonetic symbol „plus any of a limited number of diacritics" was used in two separate transcriptions.

It is worth pointing out here that in a purely impressionistic analysis it is impossible to discriminate between certain categories as in the case of front rounded and back unrounded vowels, due to their auditory similarity. As an illustration can serve the present analysis, where observations concerned the quality of the GOAT-vowel and MOUTH-vowel in some EE speakers. The present author interprets the vowel quality in question as offset fronting, represented as [əʏ], thus assuming that the present data is in line with Kerswill and Williams (1994) who observe onset fronting in Milton Keynes. However, in his discussion of the realisation of the GOAT-vowel in RP, Wells (1982: 294) interprets the quality as one with „minimal lip rounding", and consequently a back one, representing the type [ɜɤ], this is an equally plausible interpretation of the EE data. However, only direct observation or spectrographic analysis is needed in such cases.

Altogether, the sample revealed a discrepancy of 5.35%, constituted by 12 out of 224 lexical items checked. Those tokens were given special attention. They were listened to once again by myself and my colleagues performing the check. The reasons for discrepancies were discussed and an agreed version of the records was jointly produced. An additional check was performed on all the tokens for a given variable if discrepancy was found to be substantial.

2.7 Initial stage: selection of localities

A decision was made to carry out the fieldwork in the counties adjacent to London area, which included Berkshire, Buckinghamshire, Hertfordshire, Essex, Kent and Surrey. London has extended into some of these counties and parts of them now overlap with what is called Greater London. A further decision was made to introduce a geographical dimension into the study, i.e. investigate the accents on the different sides of the capital. The four counties selected were Buckinghamshire, Essex, Kent, and Surrey, which represented the geographical spread, i.e. North West, North East, South East and South West respectively. It was considered sufficient to limit the field study to one locality per county. The selected localities mark the boundaries of an area approximately 30 miles (around 50 km) in diameter.
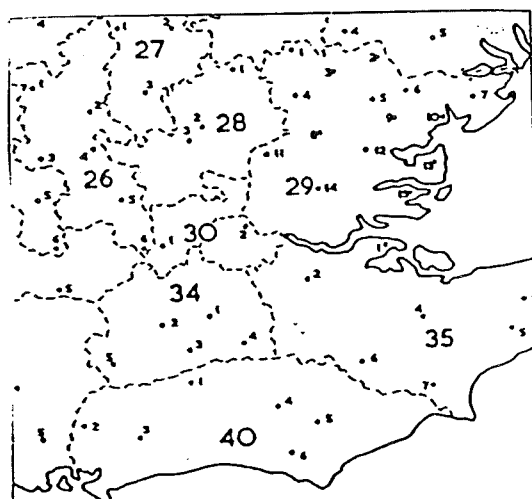
County	Locality
26. Bucks	4.Buckland
29. Essex	12.Little Baddow
35. Kent	2. Farningham
34. Surrey	1.Walton-on-the-Hill

MAP 1. Localities selected for the present study. Map reproduced from the SED

A number of positive and negative criteria were used in the village and, consequently, school selection procedure. First of all, the selection was constrained by the representation of the data in the SED and originally only the localities investigated there were considered, which was done for the sake of a potential diachronic comparison. The total number of localities investigated in the SED equals 312, while in the counties of interest for the present study 33 villages were visited, which included 6 localities in Buckinghamshire, 15 in Essex, 5 in Surrey, and 7 in Kent.

The next criterion was the proximity to Greater London. This followed from the assumption that if a geographical diffusion of the London accent is indeed taking place, it would be happening gradually, spreading first to the localities in the direct vicinity of the capital. The present writer aimed to select villages equally distant from Greater London and therefore Berkshire and Hertfordshire were eliminated at the preliminary stage, since the nearest localities were substantially farther from the capital. As those counties are fairly rural areas, with unusually high land and property prices, they were regarded as unlikely to exhibit social stratification required for the study. Geographical barriers and the vicinity of railway lines were also taken into consideration. Ideally, therefore, the present writer sought the localities within the M25, which had good public transport connections with the capital.

The representation of data in the SED was the next criterion. This proved problematic only in the case of Buckinghamshire. In Essex, Kent and Surrey all the localities were adequately represented, i.e. the data for the selected words were present in the SED. The first choice of localities at this stage thus involved Doddinghurst (Essex), Farningham (Kent), and Walton-on-the-Hill (Surrey). In Buckinghamshire, out of the villages on the SED survey, the locality closest to London was Horton. The village proved an inadequate choice, as it was underrepresented on the SED since in a substantial number of the target words the data were missing. Many of the lexical items selected for my questionnaire were either not asked about

by the SED fieldworkers or the words themselves were not known by the inhabitants of the village so that no basis for diachronic comparison was provided and on these grounds the locality was rejected. Rather than working with an incomplete set of data a more suitable replacement was sought. Further difficulties were encountered in the case of Buckinghamshire and Essex, where one of the criteria was not met.

The next criterion was the availability of suitable informants, i.e. female and male adolescents aged between 14 and 16 years of age. To introduce class differentiation to the study, teenagers from a given locality attending two different types of secondary schools were sought. A prospectus on the secondary education in Essex was consulted at this stage and telephone calls to schools in the area were made. Almost all the secondary schools in the area were comprehensives, the only selective school being a single sex convent school. As a consequence, the balanced design of the experiment could not have been maintained and, for for this reason the initial choice had to be abandoned in favour of another locality. As in the proximity of Little Baddow there functioned both selective and comprehensive secondary schools the necessary inquiries were made which revealed that all the three schools had prospective informants, i.e. natives of the locality in the specified age range. Thus, Little Baddow became the next locality selected for the experiment.

Problems of a similar nature were encountered in Buckinghamshire. The alternative choice, Long Crendon, was eliminated due to the lack of suitably differentiated informants. To confirm the accuracy of the preliminary information given by the schools, inquiries involved Buckinghamshire County Council Education Department and a Middle School which had pupils from the locality on roll. The latter school confirmed that all their students continued their secondary education in one school only. Further inquiries involving Educational Services revealed that the absence of two different types of schools would be the case for the remaining localities.

It was established that such differentiation could potentially be achieved only for Tingewick, among the six localities the one most distant from London. Both schools there confirmed having suitable subjects. One of the schools was visited and the recordings of two informants were made. The other school showed no reaction to a letter sent to them and ignored several phone calls. Another letter sent from the Phonetics Laboratory received a negative response. Consequently, the locality was abandoned and the recordings were not included in the final analysis. As all the localities investigated in the SED were eliminated, alternative recordings were made in Aylesbury, where four informants in three schools were successfully interviewed.

2.8 The questionnaire

The preparation of the present questionnaire started with the selection of items to be included. The SED index of key words was consulted and the vocabulary related to farming, tending to farm animals, and dialect words were excluded, as were lexical items, which were not part of everyday vocabulary or appeared to present potential elicitation difficulties. This was done to tailor the SED questionnaire to the type of informant interviewed in the course of the fieldwork, who differed in age and social standing from the SED informants. It was assumed implausible that 1990s teenagers, brought up in a different environment, should be familiar with specific farming or dialect words. Elicitation under such circumstances would prove impossible. Likewise, auxiliary verbs, articles, prepositions and personal pronouns were eliminated as well, due to predicted elicitation difficulties.

The remaining basic vocabulary was examined for material of phonetic interest. Only those items were selected which exemplified one or more variables, i.e. those which contained a vowel or consonant of interest. The final list consisted of 116 lexical items. Out of which, 60 exemplified more than one variable. The selected sample thus provided at least seven words to

represent each variable, with the exception of variables 7 /aɪ/ (5 items), 11 (*str*-cluster) and 14 (yod-dropping; 4 items).

At that stage the original SED questionnaire was consulted. Wherever possible, the original formulation of the questions was kept, with certain necessary modifications. Having the above type of informant in mind, other questions needed to be phrased differently to elicit the same target word. Thus, *butter* was elicited twice, as the answer to questions 14 „What is the yellow, spreadable stuff that you make from milk?" and 104 „What do you put on crumpets?", *cut* was elicited in response to 17 „You go to the hairdresser's to _____" (as a part of a phrase) and 82 „What do you use a knife for?".

Because all the questions were designed to elicit the desired words without mentioning them, the lexical item never appears in the formulation of the question itself. The two main types of questions used (the classification is taken from Chambers and Trudgill 1980, Francis 1983) included completion questions and naming questions. In the former type the fieldworker reads the question out and stops at the point where the informant is expected to supply the answer as in, e.g., question 16 „When you refuse you say _____". The latter are questions that typically start with „What do you call ___", „What is the name of _____", as in question 20 „What is the name of the animal that gives milk?" In the study, questions that involve naming by definition prevailed, while questions of another type, viz. naming in the presence of an object, were generally avoided. Only two of those are included, where they clearly show an advantage of being the simplest way of asking about the given word. The full text of the questionnaire is adduced as Appendix One.

The purpose of the questions was to elicit material of phonetic and phonological interest only. All the questions were prepared in advance, randomised, and asked in the same form. They were randomised. Because entries in the SED were designed to elicit phonological as well as syntactic, semantic, lexical and morphological material. For this reason some of the

questions, were in the present study employed for a different purpose.

Because Francis (1983) stresses the importance of trying out the questionnaire in the field and its revision, this was done by the present writer before the onset of the experiment. The efficiency of the questionnaire as a data collection tool was tested on a speaker of Southern British English, a graduate student at the University of Oxford. The purpose of the test was twofold: (1) to eliminate ambiguities in the questions themselves and thus assure the smooth running of the interviews and (2) to assess how much time a single interview would take. In the test run, the procedure employed was the same as in the actual fieldwork. The questions were read out at normal speed. The subject was presented with a typed copy of the questionnaire and asked to give one-word answers. The test was neither taped nor preceded by a conversation as this was considered unnecessary. The difference between the test and the interviews was that the subject was aware of the purpose of the study.

The subject provided helpful comments on the phrasing of the questions. The suggested changes were implemented, i.e. a number of questions were rephrased and thus made more precise. For example, question 13, „To make a parcel you need brown paper and _____", was in his opinion likely to elicit *sellotape* rather than *string*. Therefore the phrase „to tie it up" was added. My informant also suggested a more careful phrasing of those questions, where the referent was ambiguous and which might otherwise elicit a variety of responses.

Not all potential difficulties in the elicitation procedure could have been predicted. Even the precision of the questions does not eliminate variety as the responses are an idiosyncratic matter.

2.9 Other remarks

Some of the questions made the informants hesitate. Others did not immediately produce the expected response, i.e. the target word or the responses received were humorous.

In such cases additional questions were asked or the original formulation was clarified. In one case the question „What happens to water in 100 C?" produced a response „I'm not into science". The fieldworker did not want this to result in data loss and therefore the informant was given further prompts, finally providing the target word *boils*.

The two generally unsuccessful questions were number 12 and 74 since they failed to elicit *among* (in all instances) and *such* (only one correct answer). Another unsuccessful question was number 95, where *thaws* was elicited only in a few instances, the majority of informants supplying the phrase *turns into water*. A couple of other questions failed to elicit the expected word as the first answer, although the word was supplied after additional questions were asked. In the first two interviews, instead of *boring* (93) the answer was consistently *rubbish*. In question 24 „When something goes off, it goes _____", the phrase *go off* was interpreted by two informants as *explode*, instead of *go bad*, which resulted in an entirely different answer.

2.10 Phonetic variables

Fourteen phonetic variables investigated included five consonants and nine vowels. The motivation behind the choice of variables is straightforward. They have been chosen to test the validity of the specific claims about phonetic realisations which characterise an EE speaker as well as that of comparative claims regarding the incidence of glottaling and *l-*vocalisation in RP, Cockney and EE. The variables examined in the present study are listed below. The key words for the vowel sounds are taken from Wells's (1982) reference vowel set.

2.10.1 Vocalic variables

The following set of vocalic variables was employed:

- **FLEECE**

Rosewarne (1994b) describes the EE quailty of this vowel as dipthongal with the first element lowered and centralised, of the type [əi]

- **TRAP**

This variable was chosen to test Rosewarne's (1994b) claim that the EE realisation of this vowel has a quality closer than that in RP, possibly dipthongal, of the type [ɛ^ə] ~ [ɛ^ɪ].

- **STRUT**

Coggle (1993b) states that „the Estuary English pronunciation of the u sound in words *like cup, love, hut* is much closer to the RP pronunciation of a as in *cap, lav, hat*". It is therefore inferred that the vowel has a front quality in EE, of the type [ɐ].

- **THOUGHT**

Coggle's (1993b) description suggests that EE uses a dipthongal realisation of the phoneme. Rosewarne (1994b) also describes the EE realisation as diphthongal, specifying the quality of the offglide as central unless before dark /l/, where the offglide is a high back rounded vocoid. It is therefore asumed that EE has realisations of the type [ɔə] ~ [oʊ], as opposed to the RP monophthong.

- **GOOSE**

Rosewarne (1994b), describes the EE realisation as having a diphthongal quality, with the starting point centralised and a back rounded offglide, of the type [əu]. Wells (1994a) states that the realisation has a central quality, which can be diphthongal [ɨʉ], more retracted variants occurring before dark /l/.

- **FACE**

Rosewarne's (1994b) statement about the homophony of *say* and *sigh* in EE implies a low front onglide. Wells (1992, 1997a, 1998b) and Maidment (1994) suggest that EE might agree with Cockney as regards the diphthong shift in FACE, PRICE and GOAT, but they do not

make a categorical statement.

- **PRICE**

Rosewarne's (1994b) statement mentioned above implies the quality of the onglide in EE does not differ from the RP realisation. Wells and Maidment suggest that the onset has a back quality, of the type [ɑɪ].

- **GOAT**

Coggle (1993b) and Rosewarne (1994b) imply that the EE realisation has a lower onset than that found in RP. The diphthong in GOAT is supposed to be subject to a similar shift as in Cockney. It can be inferred that EE has realisations of the type [ʌʊ] ~ [ɐʊ], i.e. with a low onset and a high, back and rounded offset, which are also found in London.

- **MOUTH**

Wells (1994a: 263) states that „it seems most intuitive to write EE (...) /mæʊθ/". The EE quality of this vowel is then described as diphthongal, with a front onglide, aproximately halfway between Cardinal 3 and Cardinal 4. The offglide is high, back and rounded. Wells (1992, 1998b) remarks that EE differs from Cockney, where monophthongal variants are found.

2.10.2 Consonantal variables

The following set of consonantal variables was used:

- **Glottaling**

Wells (1994a: 261) remarks that EE is characterised by a tendency towards „use of [ʔ] for traditional [t] in many non-initial positions (take i' off)". Consequently, *t*-glottaling has been selected as one of the variables in the present study to establish whether, indeed, such realisations are common. EE is also compared with Cockney and RP as regards the incidence of features. Rosewarne (1984) also maintains that EE speakers use more glottal stops for /t/ in

syllable-final position than RP speakers and fewer than Cockney speakers.

- **str-cluster**

    Rosewarne (1994b) claims that „/st/ in initial and in postvocalic medial (but not final) is pronounced by a minority of EE speakers as /sht/, for example, /ʃ/ for *station* and /ʃ/ for *estuary*”. It is here assumed that [s] assimilates to the following [tr] cluster in retroflection degree of lip rounding. Brown (1981) divides rounded consonants into three classes, where [r] together with [ʃ ʒ tʃ dʒ] are in the group with most marked lip movement as well as protrusion and reversion of the lips. In the examples cited such assimilation cannot be explained.

- **TH-fronting**

    Wells (1992, 1994, 1997a, 1998b), Coggle (1993b) and Rosewarne (1994b) claim that the tendency to pronounce (TH) as a labiodental fricative generally does not extend to EE. Because the change has been reported in other urban dialect studies, it has been selected for the present investigation.

- **L-vocalisation**

    Rosewarne (1984) claims that as regards *l*-vocalisation EE speakers are also between RP and Cockney. Wells (1994a) remarks that EE agrees with Cockney, but differs from RP, in having *l*-vocalisation. Maidment (1994) also considers vocalised realisations a feature of EE.

- **Yod-dropping**

    Rosewarne (1994ab) states that „The dropping of yod (...) occurs in EE after alveolars”. Coggle (1993a) claims the contrary, ascribing the absence of yod to its low social prestige: „Estuary English speakers have recognised Yod-dropping as 'undesirable' and have therefore turned fairly solidly to using Yod”. Wells (1992) disregards such claims, but mentions the EE tendency towards yod-coalescence in stressed syllables before /uː/, as in *Tuesday, reduce* and *student.* In this study, Yod-dropping is understood narrowly, only as presence or absence of phonetic [j]. No attempt is made to look at how pairs, such as *do* and *due* (both without the

phonetic [j]) are kept distinct by neighbouring vowel qualities, as discussed in Kelly and Local (1989).

2.11 School profiles

Selective. This type of school mainly offers academic education till the age of 18. This means that after taking their General Certificate of Secondary Education (GCSE), pupils can stay on for another two years to do A-levels. GCSE is an examination taken in usually ten subjects at the age of 16. A-level (Advanced Level) is usually taken in three subjects, at the age of 18, which is a university requirement.

Due to the „comprehensive reorganisation" of the 1960s and 1970s ', which aimed to abolish the 11+ selection, grammar schools are now in the minority. The selective schools chosen for the study are among the 161 remaining grammar schools in the United Kingdom. In selective education pupils are admitted on the basis of the results of the entrance exams and tests, which vary between schools.

Five of the six selective schools chosen for the study were among the top 100 secondary schools in the country listed by *The Independent* (16 November 1997). Four of those six schools were also listed by *The Times* (November 18, 1997) among the 34 state schools achieving top A-level results, with the average entrance university points per candidate ranging from 25.6 to 32.3. University entrance points are received for grades obtained at A-level examinations. For grade A, 10 points are awarded, grade B obtains 8 points, while grade C obtains 6. In terms of grades then, the figures suggest the average A level result for those school was ABB. For comparison, the average number of university entrance points in the selected comprehensives ranged between 7.1 and 12.6. Table 2 below offers profiles of the selective schools chosen for the present study. The data were taken from *The Independent* listing mentioned above for the schools involved.

The selective schools were single-sex ones. Originally, two schools per locality were sought, to exemplify middle class (MC) and working class (WC) respectively. However, it turned out that the subjects who fulfil the set of criteria could be found in single-sex schools only. Each pair of the selective schools were considered to be strictly comparable. They were located in the same street, maintained contacts, had the same source of funding and a similar admissions policy. They had a very high rate of success at GCSE and A-level examinations. For the latter the percentage of pupils achieving at least five A-C passes at GCSE ranged between 96% and 100%.

All the schools were very popular, with the number of applicants ranging from 3:1 to 6:1 per place. To gain entry, candidates had to pass a series of exams, including a verbal reasoning test as well as tests in particular subjects. Most of the pupils decided to continue education to reach the A-level standard. The prevailing majority of the school leavers applied for university places, between 5% and 15% of the pupils applied to Oxford or Cambridge.

TABLE 2

Profiles of the selective schools chosen for the present study.

School	Applicants per place	Admission procedure	% staying for sixth form	% going to university
Bucks 1	3:1	11+ and verbal reasoning	95%	90%
Bucks 2	4:1	11+ and verbal reasoning	97%	96%
Essex 1	5:1	11+ for selective schools in Essex	99%	95%
Essex 2	6:1	11+, verbal reasoning, English and maths	99%	98%
Kent 2	4:1	verbal reasoning, English and maths	90%	85%

Non selective. The other type were comprehensive schools. In England, they are the

most common (85%) form of secondary education. Comprehensives do not select pupils on the grounds of academic ability but admit students from their catchment areas. This is the immediate neighbourhood, usually within a circa 10-15 mile radius, from which a school takes its pupils. Only non-selective schools funded by the Local Education Authority (LEA) have catchment areas. Comprehensives often lack a true comprehensive character, as the top 20 % of the ability range tend to choose and be accepted by grammar schools. Because the pupils intake is also determined by its catchment area, they can resemble secondary modern. This type of institution offers general education usually up to the minimum school leaving age, which is 16, and tends to admit pupils of average and below average ability. The Buckinghamshire non-selective school was a secondary modern. The other three were comprehensives.

State schools also vary as regards sources of funding and the type of control. Secondary schools are divided into county (C), voluntary aided (VA), voluntary controlled (VC) and grant maintained (GM). County schools are wholly maintained by their Local Education Authorities (LEA), who pay all their maintenance costs and staff salaries. The premises of voluntary-aided and voluntary-controlled schools are owned by the church or other foundations. In return for some degree of control they meet about 15% of the costs. As the voluntary body governors are in the majority in the governing board these schools have more independence than those owned by a county. In the latter, LEAs meet all the costs and also exert control.

Table 3 below presents the percentage of pupils receiving five or more grade A-C GCSE passes in the comprehensives and selective schools. Because for the two pairs of selective schools the score was the same for both schools, only one figure is given. The scores contrasted sharply with those in the non-selective schools. In Buckinghamshire and Kent, they were also lower than the LEA averages. In Essex, however, the score was higher than the

LEA average. The data were taken from *The Times* Secondary School & College Performance Tables (1997) for state and independent secondary education in England and Wales.

TABLE 3

Percentage of candidates in the selected schools receiving 5 or more A-C grades at GCSE examinations.

County	Selective school	Non-selective school	LEA average
Bucks	98.0	11.0	59.0
Essex	100.0	56.0	44.6
Kent	98.0 96.0	34.0	45.0
Surrey	66.0*	37.0	51.0

*non-selective.

For Buckinghamshire, Essex and Kent selective and non-selective schools were contrasted as indicators of two different social classes. Because in Surrey all state secondary schools are comprehensive, maximally contrasting schools were sought. The two comprehensives differed in their GCSE results, university entrance points and the type of funding. One of the schools was grant-maintained, the other was funded by its LEA. The grant-maintained schools chose to opt out of the control of their local education authority, which was allowed by the 1988 Education Act, should the pupils' parents and the majority of the governing body so wish. These schools are in fact still state-maintained, as the funding is supplied by the government, although this is not done through LEAs. A grant is given individually, depending on each pupil.

In effect, GM schools have a measure of independence, not enjoyed by the county schools. This allows them to make decisions concerning staff employment, organisation, equipment purchase, which leads to the general improvement of the standards. However, the GCSE results have failed to be correlated with the expectations. The GM comprehensive school had a lower GCSE success rate (as shown in table above) as well as worse A-level

results (14.1 university points) than the county-funded one (21.0 university points). The school with better results was in the study treated as an MC one. This exemplifies the difficulty in assigning individuals to a given social class and the abstractness of such notions, as pointed out by Trudgill (1974: 33). Also Milroy (1980:14) highlights the complexity of the problem warning that „the groups we end up with (...) do not necessarily have any objective or even intersubjective reality". This leads us to the issue of social class.

2.12 Social class

Social class is a complex notion and can be defined in a number of ways. The sociological literature contains many various approaches to the issue and definitions of social and socio-economic class. A number of factors, such as occupation, income, education and type of housing are taken into account. An alternative approach is to ask people which class they consider themselves belonging to. Usually, three social classes are distinguished: upper, middle and working, the majority of the population belonging to either of the latter categories. The latter two can be further subdivided into lower and upper, depending on what kind of stratification is needed for a given study. Adolescents can be ascribed to a given class on the basis of their parents' occupation.

Linguists acknowledge the complexity of the issue, at the same time stating that in the discipline class has been broadly interpreted. Trudgill (1974) states that the informants are sociologically classified in order to relate their speech to their background. Milroy and Milroy (1985b: 93) express the view that ascribing informants to a social class is „simply a convenient way of making sense of the distribution of linguistic variation". The authors go on to say that a greater precision of the concept would be an advance. Holmes (1992) calls the term „a shorthand for differences between people which are associated with dfferences between social prestige, wealth and education".

Current sociolinguistic studies adopt various approaches. Thus, Labov's (1966) experiment was conducted in three department stores, which were socially stratified and involved indices such as location, price ranges and advertising. Fowler's restudy (Labov 1994) of Labov's experiment took into account the type of newspaper the stores advertised in (*New York Times* as a middle class quality paper, *Daily News* as a working class tabloid, as well as employees' fashions and hair styles.) In his study of Norwich community, Trudgill (1974) used the multi-item index of the factors mentioned above, in order to increase the validity of the classification.

Heath's (1980) study of Cannock speech did not employ terms such as Middle Class or Working Class, as the author considered them „merely insults or slogans in the class war and thus emptied of any meaning". In fact, however, the basis for clasification remained the same as in other studies, as a modified government socio-economic classification, purely based on the occupation type. Also, Chambers and Trudgill (1980) made a reference to a study where in addition to the level of education a criterion of social ambition was added. However, the results did not closely correlate with the scores for education.

In the present study, social class is defined solely by the type of school. Selective (grammar) schools were contrasted with non-selective ones, within the state education system. This is done for a number of reasons. Firstly, the criteria mentioned above are not applicable to adolescents despite their undeniable objectivity. In case of adolescents, occupation and income are instantly ruled out as classificatory basis. The youngest group are in fact beyond classification in a way, being more peer than society oriented.

Parents occupation was here not considered a satisfactory criterion either. Kerswill and Williams (1997: 162) argue that „young people are born into and to some extent socialised within a certain social class, they are nevertheless subject to different experiences from their parents and need to negotiate space for their own culture". Therefore, it follows that

adolescents identify themselves with youth culture in general or groups within their networks rather than with their parents.

Trudgill (1974) points out that occupation is the most important criterion in establishing social class. The type of school attended is in a way an equivalent to profession of an adult. Because schools offer different types of education, they have different ethos, values and ideas concerning the relationship between an individual and society. Martin (1988: 48) states that they are perceived as agencies of social control. Also, the type of education indicates an individual's interests and their professional ambitions as well as their future place in society.

The next problem is on what basis a given school is classified as representative of a „middle" or „working" class. Kerswill and Williams (1997) make the classification on the basis of the socioeconomic profile of the catchment areas of the schools, a criterion which could not be employed in the present study. Selective schools have a catchment area in a sense, which is wider than in the case of comprehensives. However, the primary admission criterion is the candidates' ability. For Surrey, where two comprehensives were visited, their catchment areas overlapped as they both had subjects from the locality in question. Therefore, the schools were assigned to broadly understood social classes on the basis of their success rate at GCSE and A-level examinations.

CHAPTER THREE

THE DATA

3.1 The Survey of English Dialects or the way things were

This chapter presents EE speech data from the Home Counties. For diachronic comparison, it also contains the SED data collected in the same localities. Also, RP and Cockney data are included for comparison on the synchronic plane.

Table 1 below presents the material from the Survey of English Dialects. The words are listed in alphabetical order. The pronunciations for each county are those of the respective localities visited in the course of the present fieldwork. An exception is Buckinghamshire, where the data come from Buckland, a locality nearest to Aylesbury. Only those parts of words which represent the variables have been reproduced. When more than one variant was recorded, all the pronunciations are shown in square brackets, with the informant's number attached. Also, the informants' comments on the pronunciation variants are included. Some data points are missing, usually due to a different lexical item being elicited in response to the question.

The responses adduced here were elicited in the questionnaire, while pronunciations taken from incidental material have not been included. If a different form of the word was elicited e.g. *boiling* for *boils*, this is indicated in the table. The table presents only words also elicited in the present fieldwork. Two words, *butter* and *cut*, are elicited twice in the present questionnaire as well as in the SED. These pronunciations are shown only once.

The 1950s data are presented using symbols taken from the International Phonetic Alphabet (IPA; revised to 1993, corrected 1996). The SED uses the 1951 notation, which if

different, was replaced.

TABLE 1

Some linguistic features of the Home Counties' speech in the 1950s. The data are taken from the Survey of English Dialects.

	Bucks	**Essex**	**Surrey**	**Kent**
	Buckland	Little Baddow	Walton-on-the-Hill	Farningham
active	ạ	ɛ	æ	-
afternoon	üː	ʊuː	uː	uː
ago	üː	ɔʊ	ʌʊ	ʌʊ
almost	-	-	-	-
always	ɔːɫ	ɔːɫ	ɔːɫ	ɔːɫ
ankle	ạɫ	ɛ ʊ	æ ʊ	æ ʊ
apples	a ɫ	ɛ ʊ	æ ʊ	æ ʊ
April	ɛɪ əɫ	ɛɪ ʊ	ëɪ ɫ	æ̈ɪ ɫ
ash	a	ɛᵊ	æ	æ
bad	a	ɛ	æː	-
bag	-	ɛ	æː	ạ̈ˑ
bald	ọ̈ːᵊ	ɔːɫ	ɔːɫ	ɔːɫ
bat	aʔ	ɛt	æt	æt
blue	üː	ʲʊuː	uː	uː

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bedroom	ü:	ʊuː	ʊ	uː
board	oˑəᵗ	ɔː	ɔː	‑ ɔː
boil(ing)	o̤ɪ̵ɫɪ	ɔɪɫɪ	ɔɪʊs	ɔɪʊ
boots	ü:t	ʊuːt	uːt	ü:t [u]
brand-new	nü:	nʲʊuː	nuː	nuː
brother	ʌð	ʌð	ʌð	ʌð
butter	ʌʔ	ʌt	ʌt	ʌt
cat	aʔ	ɛət	æt	æt
chew	uː	ʊuː	uˑ	uˑ
child	ɑ̈ɪɫ	ö̤ɪɫ	ɑ̈ɪɫ	ɑ̈ɪɫ ɔɪɫ[rec.2nd visit]
children	ɫ	ɫ	ɫ	ɫ
coal	ʌʊɫ	ɔʊʏ	ɔʊ [ɔʊɫ]	ʊʊɫ [oːᵊl]
cold	kʌʊɫd	kɔʊd	kɔʊd	kɔʊd
comb	ʌʊ	ɔʊ	ʌʊ	ʌʊ
cool it	ü:ɫ ɪʔ	ʊuːɫ ɪʔ	uːɫ ɪt	uːɫ ɪt
cousins	ʌ	ʌ	ʌ	ʌ
cow	ɛ̈ʏ	ɛʊ	æʊ	æʊ
cucumber	ü: ʌ ɛ̈ʏ ʌ[older]	ʊuː ʌ	uː ʌ	u ʌ

cut (get your hair cut)	ʌʔ	ʌt	ʌt	ʌt
daughter	ɔːᵊʔ	ɔːt	ɔːt	ɔːt
deaL	-	-	-	-
devil	ł	ʊ	ʊ	ʊ
door	oˈəɾ	ɔːə	ɔː	ɔˈə
drunk	ʌ	ʌ	ʌ	ʌ
dust	ʌ	ʌ	ʌ	ʌ
dull	-	ʌł	ʊł	-
eat	iːt	ïiːt	iːt	iːt
ate	ɛʔ	ɛt	iːt	iːt
eaten	ɛʔ	ïiːʔn	iːtn	iːtn
eight	ɛɪʔ	ɛ̈ɪt	ɛ̈ɪt	ɛ̈ɪt
eyebrows	äɪ ɛʊ̈	ɔ̈ɪ ɛʊ	ɔɪ æʊ	ɑɪ æʊ
fat	-	-	-	-
father	ð	ð	ð	ð
feet	iːʔ	ïiːt	iːt	iːt
few	üː	uː	uː	ŭ
fault	ɔːʔ	ɔːłt	ɔːłt [ɔː łt]	ɔːt
floor	oˈəᵗ	ɔːə	ɔː	ɔː

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fool	üːɬ	ʊuːʋ̥	uː uːɬ	uːɬ
forty	ɔ˞ːʔd̥	ɔːəɟ̥	ǫ̈ːt	ɔːt
four	oˑəɽ	ɔə	ǫ̈ː	ɔə a˞ː
girls	ɬ	ɬ	ɬ	ɬ
gold	ʌʊɬ	ɔʊɬ	ɔʊɬ	ɔʊ
great	ɛʔ	ɛɪt	ę̈ɪt	ę̈ɪt
handle	a ɬ	ɛ ʋ̈ɬ	æ ʊ	æ ʊ
heat	iːʔ	ïiːt	iːt	iːt
help yourself	ɛɬ ɛɬ	ɛɬ ɛʊɬ	ɛɬ ɛɬ	ɛʊ ɛʊ
home	ʌʊ	ɔʊ	ʌʊ	ʌʊ
horse	ɔ˞ː	ɒ	ɔ	ɔːˀ
ill	–	ɪɬ	–	–
kettle	ʔɬ	tʊɬ tɬ	tʊ tʊɬ	ʔɬ
kittens	ʔn	ʔn	tn	tn
more	oˑəɽ	ɔə	ɔː	ɔə˞
ladder	a	ɛ	æ	æ
lightning	ä̈ɪʔn	ä̈ɪʔn	ɔɪtn	ɑɪtn
little	ʔəɬ	tɬ [tɬ ʔɬ]	tɬ [d̥ɬ dɬ]	[tɬ ʔɬ]
(whole)meal	ɪəɬ	oʊɬ ïiːʊɬ	iʊ [ɪ̈ʊ] *oatmeal*	ɪʊ [ɪʊ] *wheatmeal*

meat	ɛɪʔ [very old]	ï̈iːt	iːt	iːt
milk	-	ɪɫ	-	ɪʊ
mole	ʌʊɫ	ɔʊɫ	ɔʊɫ ɔʊ	ɔʊ
mother	ʌð	ʌð	ʌð	ʌð̃
money	ʌ	ʌ	ʌ	ʌ
mouse	ɛü	ɛʊ	ɛ̃ʊ	æʊ
mouth	ɛʊθ	ɛʊθ	æʊθ	æ̃ũθ
new year's day	nüː ɛɪ	nʲuː ɛɪ	nuː æɪ	nuː ë̈ɪ
nothing	ʌθ	ʌθ	ʌθ	ʌθ
no	ʌʊ	ɑʊ	ʌʊ	Ẅʊ
old	ʌʊɫd	ɔʊd	ɔʊɫd	ɔʊɫd ɔʊd
the other	ʌð	ʌð	ʌð	ʌð
owl	ɛüᵊɫ	ɛʊɫz	ę̈ʊ	æʊ
own	ʌʊ	ɔʊ	ʌʊ	ʌʊ
pool	-	-	-	-
pull	-	ʊɫ	ʊl	ʉ̈ɫ
road	ʌʊ	ɔʊ	ʌʊ	ʌʊ
roof	üː	ʊuː	uː	uː
salt	-	ɔːɫt ɔːlt	ɔːɫt	-
school	üːɫ	ʊuːʊ	uːᵘ	uːɫ

shoes	ü:	ɪʊuː	uː ʲuː	ü
shoulder	ʌʊɫ	ɔʊɫ	ɔʊɫ	ɔʊɫ
shut it	ʌʔ ɪʔ	ʌt ɪt	ʌt ɪt	ʌd̥ ɪt
sit down	-	sɪt dɛʊn	sɪ dæʊn	tɛɪk ə siː?
				sɪt dẽ̃n
smoke	ʌʊ	ɔʊ	ʌʊ	ʌʊ
snor(ing)	snɔˑəɾɪn	snɔːɾɪn	snɔˑəɾən	snɔˑə
such	ʌ	ʌ	ʌ	ʌ
suit	süː?	sʲʊuːt	suːt	suːt
straight	strɛɪʔ	strɛɪt	strɛɪt	strɛɪt
stranger	strɛə	strɛɪ	strɛ̢ɪ	strɛ̢̃ɪ̃
straw	strɔː	strɔːə	strɔː	strɔː
string	str	str	str	str
tail	ɛɪəɫ	ɛ̢ɪʊ	æɪʊ [ë̢ɪʊ ą̊ɪʊ]	ą̊ɪʊ [aɪʊ]
thaw	θɔˑɪn	θɔːɾɪn	θɔˑɪn	θɔˑɪn
till	ɫ	-	ɫ̢	ɪʊ ɪl [ʌntɪɫ]
tomorrow	ə	ə	ə	ə
trousers	ɛü	ɛʊ	æʊ	æʊ
tried	ɑ̈ɪ	ö̈ɪ	ɔɪ	ǫɪ
Tuesday	tüː	tʲu	tuː	tüː

two	üː	ʊuː	uː	üː
uncle	ʌ ɫ	ʌ ʊ	ʌ ɫ	ʌ ʊ
wall	ɔːᵊɫ	-	ɔː	ɔː
water	ɔːᵊʔ	ɔːt	ɔːt	ɒt
white	ə̈ɪt	ɔ̈ɪt	ɑɪt	ɑɪt
whole (of it)	ɒʊɫ	ɔʊɫ	ʌʊl ɔn ət	ɔʊɫ əv ɪt

Below follows a description of the phonetic variables for each county in the 1950s. Realisational variants of the vocalic variables are given for the locality investigated and for the whole county, if different. In both cases the realisational ranges were established on the basis of between at least five lexical items. The words were randomly selected out of those repeated in the present study. The number was considered sufficient for the purpose when the sample exhibited no variability. Where a number of variants appeared in the SED data, more words were looked at. Responses for all the localities were taken into consideration.

Vocalic variables are discussed separately for each county. Consonantal variables are presented together.

1950s vowels

3. 1.1 Buckinghamshire

FLEECE

Like the localities in Kent and Surrey, Buckinghamshire exhibited [iː], this also being the main variant in the county, resembling Kent in this respect. Other realisations in the county included [ɛɪ], [əi] (1 instance) and [iə]. The last of these variants was judged as 'older' by the informants in the SED. Buckinghamshire differed from the remaining three counties by virtue

of not having a single instance of the variant with a retracted, not centralised, starting point [ii], present in the other counties.

TRAP

Like the rest of the county, Buckinghamshire reveals consistently open variants [a] ~ [a]. With its open realisations of the phoneme /æ/, the area bore no resemblance to the other three counties. A single instance of [æ] found can be safely disregarded here. The only realisation in all the words was an open [a], the variant not present in the other three counties.

STRUT

Like the localities in the other three counties, Buckinghamshire consistently used [ʌ]. In the county, other variants were also present, their retracted realisations ranging between open and rounded close mid [ʌ] ~ [ʌ] ~ [ʊ]. Again, as in Kent, the back open unrounded realisations prevail.

THOUGHT

The locality revealed both diphthongal and monophthongal realisations of the vowel. Buckinghamshire differed from the other three counties by the presence of rhoticity. The sound's onset ranged between close-mid and open mid, the former occurring only in rhotic pronunciations. The realisations of the vowel in the locality ranged between [oᵊʳ] and [ɔ]. On the basis of the responses for the above-mentioned lexical items, in other villages monophthongal realisations appear to have been prevalent. As a county, Buckinghamshire resembled Kent and Surrey both in the presence of rhoticity as well as the quality of the vowel. Here, in several cases the phoneme was realised as [aː], such pronunciation being judged as „very old" by the informants. Indeed it appears not to have survived until the present day in the southeast of England, as no such pronunciations were present in the EE

speech nor did the rhotic forms emerge.

GOOSE

Interestingly, the rural speech of the Home Counties in the 1950s seems to have resembled the present standard, the realisations of this vowel generally ranging between [u] ~ [ü]. Moreover, a fair amount of uniformity across the four counties was observed, the differences mainly consisting in a slight degree of fronting, yet still remaining in the back region. The Buckinghamshire locality was representative of the county, with realisations ranging between [u] ~ [ü]. The county speech exhibited most centralisation in comparison to the other three counties. Such realisations were infrequent in Kent and Essex and completely absent from Surrey. In all the four counties a number of other realisations, such as [əu], [üu], [ɛu], [ʊ], occurred sporadically.

FACE

As regards the SED data, there are differences between the counties in the degree of openness of the first element. The Buckinghamshire locality had realisations of the type [ɛɪ] ~ [ɛ̞ɪ], these being identical with the relevant sounds in the Essex and Kent localities, as well as realisations ranging between [eɪ] and [ɛɪ]. The phoneme was sometimes also pronounced as the centring diphthongal glide [eə], the monophthongal realisation [ɛ] being also present.

PRICE

Regional varietiess in the 1950s generally had the starting point in the back region. Buckinghamshire and Essex had the offset around the region of cardinal 6. Thus Buckinghamshire mainly revealed [ɔɪ], in Essex the range being [ɔɪ ~ ɔ̈ɪ]. The Buckinghamshire locality differed from the county as it had a back, centralised unrounded

onset, ranging between [äɪ] and [ɐ̈ɪ].

GOAT

In Buckinghamshire the most frequent variant was [ʌʊ] with a lowered and unrounded starting point and a back rounded offset. This realisation characterised the speech of the locality, being in this respect identical with the sound of the localities in Kent and Surrey. Another variant common in Buckinghamshire was [ou].

MOUTH

Interestingly, none of the realisations which characterised the speech of the other three Home Counties were present in Buckinghamshire. Apart from [ɛʊ], Buckinghamshire had two other variants, [ɛü] and [ɛ̈ï]. Conversely, these two Buckinghamshire realisations were not present in the three other counties. Therefore Buckinghamshire, with its closer starting point and the fronted and in a few instances unrounded offset, differed from the other three counties, where the fronting or unrounding tendencies were not observed at the time. The Buckinghamshire locality had realisations with a closer onset, of the type [ɛʊ] and [ɛü]. Such closer offset also characterised the speech of the Essex locality, where however no offset fronting was observed.

3.1.2 Essex

FLEECE

The locality is representative of the county, having [ïi]. This realisation, a diphthongal glide with a centralised, but not lowered starting point [ïi], seems to have been prevalent in the whole of Essex. However, variants such as [ɪi] and [əi] are not uncommon. The last of these, a diphthongal glide with a central starting point, has also been recognised as EE (Rosewarne 1994b) and Cockney (Wells 1982).

TRAP

The three variants: [æ̞] ~ [ɛ] and [æ], characterised the speech of Essex, but here the situation was reversed. Like in Kent and Surrey, [æ̞] and [ɛ] were frequent indeed, but the prevailing one was the more open vowel [æ], which merely made its appearance in Surrey. Essex also has sporadic [ɛ], as well as the diphthongal realisations [ɛ³] and [ɛᴵ]. The locality had a closer range, between [ɛ] and [ɛ³].

STRUT

Essex differed from the other three counties, exhibiting some degree of centralisation, not present elsewhere. The prevailing variant was still [ʌ], the two other types of realisations being sporadic. Thus, the realisations ranged between [ʌ] ~ [ʌ̟] ~ [Ä], i.e. from back open to a central vowel. Interestingly, the centralisation appears to show that the historical development of this vowel was most advanced in Essex. The Essex locality however, consistently used the back variant [ʌ], which was also true of the three localities in other counties.

THOUGHT

Diphthongal realisations were present in the rural speech of the Home Counties in the 1950s, where they existed alongside monophthongal ones. Essex had mainly realisation of the [ɔː] and [ɔə] type, with an open-mid onset. Both monophthongal and diphthongal variants were present. Sporadically, the vowel was realised as [ɒ], an even more open monophthong. However, unlike in Buckinghamshire, no rhotic forms were found. The locality exhibited the same range as the county.

GOOSE

In Essex as well as Kent the realisations ranged between fully back to central [u] ~ [ʉ] ~

[ü]. The locality had only back variants, a monophthong and a diphthong, [ʊu] ~ [ü], which are said to characterise the present day RP (cf. Cruttenden 1994). The Essex locality differed from the other three in having the diphthongal back realisation.

FACE

Essex exhibits most lowering with the range of realisations like that of Kent and Surrey. The variants with a centralised onset [ɛ̈ɪ] were not found, the two most frequent ones being [æɪ] and [aɪ]. However, the locality has a closer range between [ɛɪ] and [ẹɪ], and the same range characterised the localities in Buckinghamshire and Kent.

PRICE

Essex had the starting point within the region of cardinal 6, i.e. a back, open mid rounded onset. A number of centralised and rounded tokens were also present. These characterised the speech of the selected locality.

GOAT

The SED data show certain uniformity between the four counties, with similarities between Kent and Essex, where the main variant is [ɒu], whose first segment is lowered and rounded. Other realisations with the first element lowered were also present in Surrey [ö̞ʊ], [ɛ̈ʊ], Kent [ö̞ʊ] and Essex [ʌ̈ʊ], [ɛ̈ʊ], the last one also having [ɔʊ], not present elsewhere. The locality had a variant with a back rounded open-mid onset and a rounded offset [oʊ]. The presence of rounding in the onset distinguished the Essex locality from the three others, which were characterised by a lowered, unrounded starting point.

MOUTH

The Cockney diphthong [ɛʊ], with its starting point closer and more front than that of RP, was present in all the four counties. Strikingly, it was also the prevailing realisation of the

diphthong in the area, the Home Counties thus showing a high degree of uniformity. Other variants were present, but constituted a minority of the responses. These included [æʊ] in Surrey, Kent and Essex, sporadic [ɑə], [æə], [ǣʊ] in Kent, and [aʊ] in Essex. Surrey, Kent and Essex have a more open starting point of the diphthong, generally between [ɛ] and [æ]) while its end point was a back rounded vowel. As regards the quality of the onset, the Essex locality resembled the one in Buckinghamshire. However, in Essex only back offsets were present.

3.1.3 Surrey

FLEECE

The SED data reveal slight differences between the Home Counties. Surrey has two main variants, [iː:] and [ɪi], the latter being prevalent. In the five words on whose basis the range was established, we find one instance of [i̞], i.e. a slightly lowered variant of [iː], and one diphthongal glide [ii], with a centralised starting point.

TRAP

Again, Surrey and Kent bear a close resemblance to each other, with the vowel ranging from [æ̝] to [ɛ], the latter being especially frequent in both counties. In Surrey, a more open variant [æ], i.e. a vowel halfway between open and open mid, is also present. The locality consistently used [æ].

STRUT

In Surrey all tokens consistently have [ʌ], no other variants being found.

THOUGHT

In Surrey the vowel ranged from [ɔː] to [ɔə], rhotic forms also being present. The locality had only monophthongal realisations.

GOOSE

Surrey had more retracted variants [ʊu] and [u], which make the vowel almost identical with RP in this respect. The locality only had the back monophthongal realisation.

FACE

The contemporary data show a few more open realisations ([æ̝ɪ], and no centring or monophthongal ones. In 1950s Surrey the most frequent realisation was [ɛɪ] or [ë ɪ], a closer ([eɪ]) or more open first element ([æɪ]) being also present. The Surrey locality had centralised realisations [ɛɪ] or [ë ɪ]. In this respect it differs from the other three localities, whose onsets were also open mid, but exhibited no centralisation.

PRICE

In Surrey, the unrounded forms prevailed, their realisations ranging from [ɑɪ] to [ʌɪ]. The locality had back rounded and unrounded onsets, of the type [ɑɪ] ~ [ɔɪ].

GOAT

Surrey had diphthongs with lowered and rounded onsets, of the type [ɔʊ] ~ [o̞ʊ]. The locality had diphthongs with a low and unrounded onset and a back rounded offset, of the type [ʌʊ]. Offset fronting did not appear in the SED data.

MOUTH

The locality had realisations with a front onset, whose quality was prevailingly halfway between open and open-mid [æʊ], closer qualities, of the type [ɛʊ] being also present. The offset was back and rounded. The locality was thus untypical: as in the county only closer onsets were present, sometimes the starting point had a centralised quality.

3.1.4 Kent

FLEECE

Kent revealed the same forms as Surrey, their realisations ranging from [iː] to [ii], the former being more frequent. The sounds, [i̜] and [ɹi] are also encountered. In the three Home Counties we find sporadic realisations of the phoneme /iː/ as [i̜]. They can be said to show similarities in the range of the realisation of the phoneme, with preferences for one variant or another.

TRAP

The locality speech exhibits a range between [æ̝] and [æ]. The county has a broader range, which also includes closer realisations of the vowel.

STRUT

Kent shows the range [ʌ] ~ [ʌ̟] ~ [ɒ], where the first variant is probably more frequent. The locality in question has only the back variant [ʌ].

THOUGHT

In Kent, the vowel ranged from [ɔː] to [ɔə], rhotic forms also being present, as well as a small number of tokens of the type [oɐ]. As can be seen they show a closer first element and a more open offglide. The locality had both diphthongal and monophthongal realisations.

GOOSE

Like in Essex, in Kent the realisations ranged between [u] ~ [ʉ] ~ [ü]. The locality had the back variant [u], and one instance of the centralised realisation [ü].

FACE

Kent generally shows lower variants, ranging from [æɪ] to [ɛɪ] and [ë̞ɪ], as well as

sporadic [aɪ].

PRICE

Kent had mainly [aɪ] and its rounded counterpart [ɒɪ]. The locality exhibits the same

range as Surrey, i.e. [aɪ] ~ [ɔɪ].

GOAT

The locality was untypical of the county by virtue of having diphthongs with a low and

unrounded onset, which was sometimes centralised, thus representing the type [ʌʊ] ~ [Ӓʊ].

The county had a variety of realisations which differentiated by the quality of the onset. Thus,

the starting point was usually back and rounded, with various degrees of openness, from open

to close mid. These were realisations of the type [ɒʊ] ~ [ɔʊ] ~ [oʊ]. Also, front, unrounded

onsets in the region of open mid were sporadically found. Both in the county and the locality

the offset was consistently back and rounded. No offset fronting appeared in the SED data.

MOUTH

Like the Surrey locality, the locality in Kent consistently showed realisations with a

front raised starting point, between open and open-mid and a back rounded offset [æʊ]. Closer

onset qualities were also found, but these were in minority. The county had a wider range,

with generally closer onset qualities. Thus [æʊ] appeared, alongside [ɛʊ], with an open mid

onset, but the latter prevailed. Sometimes the open mid-onset was centralised [ëʊ]. In Kent,

realisations of the type [aə], [æə], [ǟʊ] also occurred, yet they were sporadic. An instance of a

monophthongal realisation, with the quality of a high central vowel [ü] was present. No

instances of fronted offsets were found.

3.1.5 Consonants: all counties

GLOTTALING

In the 1950s, the rural areas of Buckinghamshire revealed prevailing realisations of the syllable non-initial /t/ as a glottal stop, with the frequency of 65.5% for a word list. The selected locality had an even higher incidence of glottaling (89.2%).

It is too far-fetched to claim that glottaling is a unique feature of EE, as it is now heard all over England and used in many non-standard varieties. The figures for Surrey, Kent and Essex are 11.08%, 8.51% and 18.1%, respectively. Essex resembles Kent and Surrey as regards the incidence of glottaling. With its 16.6% incidence, the locality, was representative of the country, where the figure was 18.1%. These data reflect the responses to the 24 lexical items in the elicitation task. A similar list was used in the present questionnaire.

STR-CLUSTER

In the 1950s, none of the four Home Counties supplied instances of the cluster with /s/ having a ʃ-like quality.

TH-FRONTING

Th-fronting is associated with inner city Cockney. A sporadic labiodental realisations of the fricative present in the SED included one instance of a labiodental variant in *nothing* and one in *father* (Essex), while Surrey offered four tokens with [v] in *other*. Interestingly, no such realisations were recorded by the SED fieldworkers in the two London localities of Harmondsworth and Hackney. Likewise, Buckinghamshire and Kent exhibited only dental fricatives. This was true of both the localities examined and the counties as a whole.

L-VOCALISATION

The data for a word list taken from the SED reveal a certain number of vocalised tokens present at the time, which disproves claims about the recent spread of this feature or its source

being the accent of London. This might indeed be the case, but only as regards its frequency rather than the realisation itself. The four counties in question differed not in the presence or absence of *l*-vocalisation, but in its incidence, the figures for the counties being Surrey 35% (39.5%), Kent 12.25 (50.0%), Essex 9.5%, (30.7%).

Both as a whole county and the selected locality Buckinghamshire had only 3.5% of vocalised *l*s. The other three counties showed a higher incidence of *l*-vocalisation. Thus, with respect to the two EE „distinctive" features it stood out against the other three Home Counties. Strikingly, Surrey, Kent and Essex reveal a similar pattern as regards glottaling and *l*-vocalisation, both features being present in their speech, although to a limited extent.

YOD-DROPPING

The SED responses to the entries *new, new (year's day), suit* and *Tuesday* reveals differences in the Southeast. Buckinghamshire, Kent and Surrey offered realisations with [j] neither in the county n'or the locality. The locality in Essex had both variants, with and without the yod.

TABLE 2
Prevailing vocalic and consonantal realisations in the localities investigated for the variables examined in the present study. The data are from the SED.

	Bucks	Essex	Surrey	Kent
FLEECE	[i]	[əɪ]	[i]	
TRAP	[a]~ [a̡]	[ɛ] ~ [ɛ⁹]	[æ]	[æ] ~ [æ̡]
STRUT	[ʌ]			
THOUGHT	[oᵊʳ] ~ [ɔ]	[ɔ] ~ [ɔ⁹]	[ɔ] ~ [ɔ̡]	[ɔ] ~ [ɔ⁹]
GOOSE	[ʉ] ~ [u]	[ʊu] ~ [u]	[u]	

FACE	[ɛɪ] ~ [ẹɪ]		[ë̩ɪ] ~ [ë̩ɪ]	[ɛɪ]
PRICE	[äɪ]	[ɔ̈ɪ]	[ɑɪ] ~ [ɔɪ]	
MOUTH	[ɛʊ] ~ [ɛʏ]	[ɛʊ]	[æʊ]	
GOAT	[ʌʊ]	[ɔʊ]	[ʌʊ]	
GLOTTALING	[ʔ]	[t]		
STR CLUSTER	[str]			
TH-FRONTING	[ð]~ [θ]			
L-VOCALISATION		[ɫ] ~ [ʊ]		
YOD DROPPING	No yod	[j] ~ no yod	no yod	

3.2 Cockney

Data on Cockney come from the recordings of two adolescents, natives of the Bethnal Green area in East London. The interview procedure was the same as in the case of EE data collection, i.e. the teenagers were asked to give answers to the lexical elicitation questionnaire. This part of the interview was preceded by a short conversation. Below follows a description of the material analysed, the variables being the same as in the case of EE recordings.

3.2.1 Vowels

FLEECE

The speakers have diphthongal realisations of the type [əi] ~ [ɪ̈i] with the first element centralised, as reported in Sivertsen (1960) and Wells (1982).

TRAP

Cockney informants' range between [æ] and [ɛ], yet not reaching C [ɛ], is closer than that of mainstream RP speakers. The data are thus in line with Sivertsen (1960), Wells (1982) and Cruttenden (1994). Each of the speakers used both variants in equal proportions and no diphthongal realisations were found. Impressionistically, closer qualities occurred before voiced segments.

STRUT

The data support the claims of Wells (1982) and Cruttenden (1994) who describe the Cockney realisation as a vowel ranging from the central area to the region approaching the quality of cardinal [a], i.e. front (and open). Both informants have a front range, [ạ] ~ [a] ~ [ɐ̞], with only a few tokens having a slightly less open and more back quality [ə] ~ [ʌ̟]. The symbol [ạ] denotes an open front vowel, slightly raised with reference to Cardinal 4, but not along the peripheral tract, and therefore devoid of the quality of [æ].

THOUGHT

Monophthongal and diphthongal variants are present, the former in open syllables, as in *door* and *floor*. Closed syllables, as in *horse* or *board*, have closer realisations, [o] ~ [ʊ], but prevailingly diphthongal [oᵁ]. The female speaker uttered slightly more open variants whose quality ranged between [ɔ̣] ~ [ọᵁ] and [ʊ].

GOOSE

Monophthongal and diphthongal realisations are present, the second element of the latter being a back vocalic segment. The starting point is lowered and slightly fronted with respect to the RP vowel, not however enough to reach the quality of [ə]. The realisation found in the sample is thus [ɵʊ] ~ [əʏ̞]. The monophthongs are vowels in the back region.

FACE

The realisation range between [e̞ɪ] and [ɛ̝ɪ] overlaps with the qualities in the descriptions of the RP usage as well as those found in the data from Eton College. In fact, my Cockney and RP informants hardly differ as regards the quality of this diphthong, the main difference being a slightly more open quality of the first element, which appears to be an idiosyncratic characteristic of the speaker. In Cockney, no lowering of the first element is found. Thus, on the whole, both Cockney and RP informants have the first element closer than EE speakers. Open realisations, of the type mentioned by Sivertsen (1960) and Cruttenden (1994) were not found. Pointner's (1996) transcriptions of his Romford data also contained the more open realisations of the [ʌɪ] type.

Wells (1982) mentions the social stigma attached to the open Cockney realisations. However, their absence from the sample cannot be attributed simply to the speakers being on their guard in the formal word elicitation task, since those variants are also absent from the conversation which precedes the questionnaire.

PRICE

Realisations range between [a̠ɪ] and [ɑ̈ɪ]. A back and slightly rounded variant appears in only two out of nine data points, which agrees with Sivertsen's (1960: 64) observation that the initial element is „generally unrounded". But Sivertsen also claims that the onset of the diphthong is „more truly back" than in RP, which is not supported by my data. The reverse appears to be the case of RP recordings, where the first element at least as far back and also raised.

Strikingly, my Cockney data include two instances of a front, monophthongal realisations of this phoneme, [æˑ] in *white* and *whiteboard*, both uttered by the male speaker. Sivertsen observes the contrary, remarking that monophthongal allophones are more back

than the diphthongal variants. However, she also establishes that the realisational range of the first element of the diphthong ranges from back open „towards front half close". Assuming that the offglide can be weakened, this provides an explanation for the presence of [æˑ]. Wells's (1982: 308) statement involves the range from „central to fully back, [ɑ̈] to [ɑ]", which makes such pronunciations difficult to account for.

GOAT

Realisations are similar to the type found in the RP data, i.e. the first element is generally a central vowel and the second is back and rounded, thus [əʊ] ~ [ɜʊ]. The difference between RP and Cockney data is in that fewer Cockney data have the unrounding found in RP. The Cockney onglide is however not as low as [æ̈] ~ [ɐ] (cf. Cruttenden 1994 or Wells 1982), but very similar to that found in the RP data, i.e. [ə] ~ [ɜ]. Also, a slightly higher starting point [ə̝] is present only in three data items.

MOUTH

The data include only ten words containing this phoneme. Both speakers have the broad Cockney monophthong in *mouth* (!) [æˑː] and [a̠ː], the female speaker exhibiting a slight offglide. In the articulation of other lexical items both speakers revealed diphthongal realisations of the type [æʊ] ~ [a̠ʊ] ~ [æɤ], i.e. with the first element having an open front, raised quality, but not higher than [æ]. The female speaker unrounded the second element [æɤ] in two words.

. **3.2.2 Consonants**

GLOTTALING

As many as 85.2% of the tokens exhibit *t*-glottaling. Interestingly, both in the conversation and in the questionnaire itself, all the word-internal intervocalic *t*s were realised

as the glottal stop [ʔ], even when the speakers were asked to repeat the word. One exception was the item *water* with an aspirated /t/, uttered by the female speaker. However, in answer to another question she pronounced the same word with the glottal stop. The figure for intervocalic *t*-glottaling is thus close to 100%. Consequently, the present data show a striking increase in comparison with Hudson and Holloway's (1977) study, where only 17% of the tokens were glottalised. Wells (1982) attributes such low incidence to the circumstances of the interview, i.e. being interviewed by an outsider and the procedure being taped. Since the present interview circumstances were the same, one could infer that intervocalic *t*-glottaling has lost the stigma it once had within the last 20 years. Indeed, Trudgill (1988) attributes the increase in glottaling to the fact that the feature is no longer felt to be stigmatised. Similarly, Kerswill and Williams (1994: 7) remark that glottaling is now increasingly tolerated "in careful speech" in other dialects.

One of the instances of *forty* contained no glottal stop. The /t/ is in this case realised as breathy voice between the preceding and the following vowel. Beaken (1971) as well as Pierrehumbert and Talkin (1992) also report „incomplete" and glottal creak variants. This phenomenon could tentatively be interpreted as a further stage in the lenition of /t/, its first stage consisting of an oral alveolar gesture accompanied by a glottal closure [ʔt]. The next stage is the loss of the oral gesture and the stopping is retained in the glottis. Here, the glottal gesture is present not as a complete closure but a breathy voice.

As regards the glottaling of other consonants, one instance in my data is the item *couple*, where /p/ is replaced by the glottal stop. Beaken (1971) reports word-final replacement of /p/ as rare (ratio 1:2), and does not mention its occurrence in an intervocalic context.

STR-CLUSTER

The realisation of /s/ in the cluster as [ʃ] present in the male informant's speech (in the 3

out of 4 tokens), but absent from the female's. This is in line with the EE data, where male speakers had a higher proportion of the feature (42% as opposed to females, with 25% of the tokens)

TH-FRONTING

The male speaker consistently used a labiodental variant [f] and [v], while the female speaker had a range of realisations. Four out of her eight tokens had a labiodental variant, two had a dental fricative with a labial gesture [ð^v], and the remaining two were standard voiced dental fricatives [ð]. Three of the four labiodental realisations were voiceless. However, on the basis of such a small sample it would be premature to assume that *th*-fronting affects voiceless segments first. The results are in line with the expectations as regards gender, i.e. female speech being closer to the standard with respect to those features of pronunciation which are considered stigmatised.

L-VOCALISATION

It would be incorrect to assume that the vocalisation of syllable non-initial [l] is more widespread in Cockney than in EE despite the fact that in the former 92.0% of the tokens were vocalised. This is indeed a higher incidence than in the EE data, where the overall figure was 77.4%. Strikingly, however, the comparison with the speech of the individual counties places Cockney on a par with Kent (93.8.%) and Essex (90.9%), as opposed to Surrey and Buckinghamshire, characterised by a lower incidence (21.1% and 43.2% respectively).

In the case of items like *fault* and *salt,* t-glottaling occurs more frequently after the product of *l*-vocalisation rather than a liquid. In all the four tokens the *l*s are vocalised and in two instances (both in the female speaker) glottaling is present.

YOD-DROPPING

All the four speakers (RP and Cockney) showed variable yod-dropping. This change

seems loosely connected with a standard vs. non-standard realisation as such. The key issue here is to determine to which lexixal items yod-dropping is extended. Thus, Cruttenden (1994) remarks that RP shows alternative pronunciations of /j+u/ sequences. In my data, both RP and Cockney speakers have no yod in *suit,* which is however present in all the instances of *Tuesday.* Interestingly, *new* shows a clearer distinction between RP and Cockney, since the three out of the four tokens have yod, while the reverse is true for Cockney, where five out of six tokens show yod-dropping. On the whole, the Cockney speakers appear to have more yod dropping than the RP speakers. However, it would be premature to generalise on the basis of such a small sample.

3.2.3 Other items

As regards lexical incidence, Wells (1982:304) mentions traditional Cockney forms, where, in words such as *again, get, engine,* /e/ is realised as [ɪ]. Such forms are as well encountered in my data. Both informants have [ɪ] in *kettle* and the female speaker also has this realisation in *get.* However, *celery,* uttered by the female informant has [ɛ] in the first syllable, which is in line with Wells's suggestion that the older /æ/-forms reported by Matthews (1938) „may well have died out".

3.3 Received Pronunciation

Data on RP come from the recordings of two 13 year old Etonians. As the description below shows, one of my subjects has a number of features which are described in literature as U-RP, the other could be called a mainstream-RP speaker. The former informant's voice quality is also characterised by 'plumminess', typical of upper class RP. The interview procedure was the same as that of EE data collection, carried out in the Home Counties.

Below follows a description of the variables analysed.

3.3.1 Vowels

FLEECE

Only eight tokens were recorded. With the exception of one, which has the quality of [ɪi], the vowel has a monophthongal realisation [i̞].

TRAP

Both [æ] and [a] are present. Each of the speakers uses both variants in similar proportions. The latter variant [a] is reported by Wells (1982) as „newly current". Cruttenden (1994) states that it is used by many younger RP speakers. Gimson (1984) and Jones (1960) describe the RP quality as a sound intermediate between cardinal vowels 3 and 4, specifying its more open quality only before dark /l/.

STRUT

One of the speakers prevailingly uses a back range [ʌ̟] ~ [ʌ], the other has a central variant, and in some words a variant slightly in front of the central region, i.e. [ɐ̞] ~ [ɐ], but never a truly front vowel.

THOUGHT

Prevailingly, the realisations are monophthongs ranging between [o̞] and [ɔ̞]. Again, there are slight differences between the speakers, the one consistently using a closer quality of the vowel and the other exhibiting more variability, with both closer and more open realisations. A few tokens in the speech of both informants have a slight centring offglide, yet they cannot be classified as truly diphthongal.

GOOSE

Both speakers have monophthongal variants only, with a slight offglide in a few cases.

One consistently uses the back vowel [ʉ], the other has a central range, with some less rounded tokens [ʉ̈] ~ [ɨ].

FACE

As said above, RP appears identical with Cockney as regards the realisation of this phoneme, with a range between [ẹɪ] and [ẹɪ]. Again, the biggest difference in RP is that between the individuals, one of whom has a slightly more open vowel quality.

PRICE

Realisations of this phoneme range between [aɪ] ~ [ʌ̞ɪ], i.e. a diphthong with a front centralised onset to a back and raised one. Three tokens, viz. both instances of *white* and one of *tried,* give an impression of a slight rounding of the onset [ɒ̞ɪ]. The RP onset is at least as far back as the onset in the Cockney data and is also raised. The two RP speakers' vowel ranges partly overlap, one of the informants consistently using back, slightly raised onsets, the other one having both back and centralised onsets.

GOAT

The first element is a vowel in the central region, between [ə̞] ~ [ɜ]. The second element is back and rounded in half of the data points, in the other half the rounding is not present. This is in line with Wells's (1982: 294) statement about the rounding of the second element of /əʊ/, which „is weak and maybe non-existent". Thus the diphthongs represent the type [ə̞ʊ] ~ [ɜɤ] ~ [ɘʊ]. In my data there is yet another idiosyncratic difference: one of the speakers articulates [ə̞ɤ] ~ [əɤ], while the other demonstrates a more open range, i.e. [ɜɤ] ~ [ɘʊ]. The presence of the latter type realisations „with very little diphthongal movement and minimal lip rounding" confirms Wells's prediction that this type „is due to remain the predominant RP variant for some time yet". In word-final position, as in *tomorrow, ago* and

no, the second element is weakened to [ə˞]. In one instance this results in a monophthongal

realisation, where the vowel is also lengthened [ə̞ːˑ]. Cruttenden (1994: 125) classifies such

pronunciations as Refined RP (Wells's U-RP), but says that a reduction to a monophthong in

such a context is „considered as substandard by RP speakers". Tokens where the vowel was

followed by a dark /l/ were not included in the analysis, as in the case of EE.

MOUTH

The first element ranges from front, slightly raised (though less so than in Cockney) to

front retracted. Thus we have realisations of the type [æ̞ʊ] ~ [aʊ̯] ~ [aɔ]. In one instance, the

first element is a vowel between back and central. The second element is a back rounded

vowel, apart from one instance of [ɑ̟ʏ̯] (in *eyebrows*), where slight unrounding is noticeable.

3.3.2 Consonants

GLOTTALING

Only 8.3 % tokens exhibit glottaling but the figure rises to 15% when incidental material

(words other than the target responses) is included. This is not attributed to speakers being off

their guard or stylistic variation, but follows from the presence of a greater number of tokens

where /t/ is preceded by another consonant. In the RP data, glottaling is said to be limited to

contexts such as before an obstruent, word finally, and word internally, as in *Great Britain, sit*

down, and *boots* respectively, or before a (syllabic) nasal, as in *Britain, eaten* and *lightning.*

Such usage in RP is not new, being described by Cruttenden (1994: 156) as occurring „before

all non-syllabic consonants" and „sometimes to be heard for /t/ before syllabic /n/ as in *cotton,*

Eton". In an earlier description of the accent, Jones (1960: 151), who says that „some speakers

of received English pronounce like this, especially when m, n, r, j or w follows".

Since no glottaling is found elsewhere. RP in this respect differs from EE, whose

speakers tend to glottalise consonants more in high frequency pronouns (cf. *it*) then elsewhere.

As regards the realisation of syllable final /t/ itself, my two informants differ. One has little or no aspiration and tends to avoid the preglottalised variant, while the other has slightly aspirated [t]s and uses more [ʔt].

STR-CLUSTER
No realisations of /s/ as [ʃ] are present.

TH-FRONTING

Strikingly, one of the speakers uses a voiceless labiodental fricative [f] in *nothing* and *mouth*, this realisation being also present in his more informal speech. Elsewhere, as in *mother* or *other* he consistently pronounces [ð]. The other speaker has dental fricatives, with the possible exception of *mouth,* where the sound gives an auditory impression of a dental fricative with a labial gesture [ðᵛ]. Possibly, *th*-fronting is beginning to seep into RP. Tentatively, one could take the presence of such realisations as an argument for intrinsically linguistic rather than socially motivated nature of this change. Alternatively, they could be treated as speaker's idiosyncratic characteristic.

L-VOCALIZATION

A third (34.3%) of vocalised tokens allows for a number of observations. Thus, this is a much lower figure than in the case of EE, where a vocoid is the most common realisation of dark /l/. At the same time, the figure seems quite high when we consider RP descriptions. While Jones (1960) makes no mention of this realisation, Wells (1982: 295) writes that it is „occasionally met with in RP, particularly in the environment of a preceding labial". Cruttenden (1994) shares this view, adding that it is „somewhat less usual" when following other consonants. It could be inferred that *l*-vocalisation is increasingly accepted as an RP feature since it is extending to more contexts. In my sample, *l*-vocalisation does not appear to be limited to a particular environment. One of the speakers largely fits the above descriptions. Out of 33 tokens, 7 are vocalised *l*s, including 2 before labials (cf. *almost, always), and* one

after a rounded vowel (cf. *coal, mole*), the remaining instances being *tail, milk* and *ill.* The other informant vocalises 50% of the tokens (16 out of 32).

Interestingly, the extent of *l*-vocalisation seems to be an idiosyncratic characteristic. As can be seen, the two speakers clearly differ, one using twice as many vocalised tokens as the other. In this respect, they are not unlike the speakers of EE, where however, the extent of this pronunciation is larger. My EE informants tend to have a high degree of *l*-vocalisation, two (both MC females) using only vocalised forms. The two unusual EE informants (both MC speakers from Surrey) use this feature in less than a half of the words.

YOD-DROPPING
(see the section on Cockney above, 3.2.2)

3.4 Estuary English

3.4.1 Vowels

FLEECE

According to Rosewarne (1994b), /iː/ in the EE accent is realised as a diphthong of the type [əi]. In RP, two realisations are possible, a monophthong [iː] and a diphthongal variant [ɪi], the latter being more usual (Cruttenden 1994: 97). However, a glide with a lower or centralised starting point falls outside reported RP usage.

In the EE data, different types of realisations occur. These are [iː] and [ɪi], which are RP as well as old regional variants. The EE data have a few instances of [i̡], the realisation also present in the SED data. However, a diphthongal realisation with a lowered and centralised onset, of the type [əi], which is said to be characteristic of EE, is in fact a Cockney variant, which also appears among other SED realisations. In the contemporary data the [əi] variant constitutes only a quarter of the tokens, while the remaining data points mainly consist

of the two prevalent variants [iː] and [ɪi].

TRAP

RP has all three variants, from the open vowel [a] to [æ] and [ɛ]. The last of these is not a feature of mainstream-RP, but characterises U-RP. A decision was therefore made to classify the first two as RP, excluding closer [ɛ] realisations. Incidentally, U-RP shares the close realisation [ɛ] with Cockney. The fact that the top and bottom of the social scale have certain features of pronunciation in common can be taken as a reflection of linguistic conservatism of the two groups.

In the EE data all the three realisations are present. Interestingly, the pattern seems different from that of the SED. Buckinghamshire speakers prevailingly use the two closer [æ] and [ɛ] variants, while the 1950s open realisation [a], characteristic of the county's speech, constitutes about one fifth of the tokens. This realisation is also sporadically present in Essex and Kent, whereas Surrey has a more open range, between [æ] and [a], with the former variant prevailing. As regards closer realisations of the vowel, in the region of open-mid and slightly more open, of the type [ɛ] ~ [ɛ̞], they are found in all the four counties. Such variants dominate in Kent, where they constitute over a half of the data points. They are also frequent in Essex, but rare in Surrey. Thus, Rosewarne's remark about the closer quality of the vowel seems impressionistically accurate, although only one instance of a closer and diphthongal realisation [ɛ^ɪ] is found. Interestingly, in *ladder* and *handle* the otherwise prevailing variant [æ] is hardly present, the vowel having either an open realisation of the type [a] ~ [a̰] or an open mid variant [ɛ].

STRUT

The present EE data allow us to make a number of interesting observations. There is a

wide range of realisations, from back unrounded [ʌ] and back rounded [ɒ] to realisations which, representing the front of the central region, are not as front as Cardinal 4 [a], of the type [ɐ̟]. The majority of tokens, however, have central realisations, thus resembling the present day RP. Back rounded and unrounded tokens, of the type [ʌ] ~ [ʌ̣], constitute about one fifth of the data points, where rounded realisations are marginal. It is reasonable to assume that these are surviving older dialectal pronunciations which bear no relation to U-RP.

As regards the front realisations, of the type [ɐ̞] ~ [ɐ̟], they, like the very back ones, constitute approximately one fifth of the data. This fact has a number of implications. First, it appears that the claims about the fronting of /ʌ/ in RP are true of EE as well. The vowel indeed appears to be gradually progressing into the central region, if we assume that back realisations represent an earlier stage, which is corroborated by the SED symbol [ʌ]. The number of tokens exhibiting most fronting, i.e. [ɐ̟], is small and such realisations are not consistently used by any speaker, but constitute part of their realisational ranges. The fronted tokens are now found in all the four counties.

Interestingly, most of the fronted tokens in the present data are found in Buckinghamshire, where they constitute about a half of all the pronunciations. They are present in the other three counties, but only in a small proportion of the tokens. Two Buckinghamshire females and a Kent WC female exhibit most fronting. The data thus partly supports Rosewarne's impressionistic observation about the „æ-like" quality of this vowel. The remark is really true of Buckinghamshire, which stands out against the other three counties.

THOUGHT

The informants from Buckinghamshire and Kent used prevailingly diphthongal

realisations, while Essex and Surrey preferred monophthongal variants. A wide variety of realisations characterise the quality of the starting point and the direction of the glide. Closer qualities, in the region of close-mid, are generally present before dark or vocalised /l/. Also, closer qualities with a close back rounded offset [oʊ] prevail in closed syllables, as in *horse* or *board,* while open syllables tend to have more open realisations in the region of open-mid and halfway between open-mid and close-mid, thus producing the type [ɔə] ~ [ɔ̞ə]. The data agree with Wells's (1982: 310) observation about the THOUGHT split in London, where the direction of the glide depends on the phonological environment. It is closing [oʊ] in checked syllables, but centring, of the type [ɔə] ~ [oɐ], in open ones.

Interestingly, no realisations of the former type were a feature of the rural speech of the Home Counties in the 1950s, as closed syllables tended to have monophthongal realisations.

GOOSE

The EE data indicate that the majority of the vowel realisations are found in the central region, between close and close-mid, thus representing the type [ʉ] ~ [ɨ] ~ [ɵ] ~[ɘə]. A small number of tokens are front vowels, of the type [ʏ] ~ [əʏ] ~ [ʏⁱ], usually rounded. Interestingly, in the word *roof,* four informants have a front unrounded vowel realised as [ɪ], while a quarter of all tokens have back realisations. Within each region (i.e. front, central and back) monophthongal and diphthongal realisations are present.

As regards the progress of the vowel into the front region, the counties fall into two groups. In Buckinghamshire and Kent, about half of the tokens have central realisations and the remaining data points are equally distributed between front and back regions. In Essex and Surrey front tokens are sporadic. Speakers in Surrey prevailingly use central realisations, while Essex informants appear to exhibit a more back range, between [ʉ] and [ʊu], using both

variants in similar proportions. Females exhibit most fronting, and hardly any back realisations. The converse appears to be true of male speakers.

FACE

The majority of the tokens have an onset in the region of open-mid, of the type [ɛɪ]~ [ɛ�জɪ]. Such realisations prevail in Buckinghamshire, Kent and Surrey. Essex has a slightly closer range, between [ɛɪ] and [ɛ̞ɪ]. Variants with a more open starting point, of the type [æɪ], are also present in the data, mainly in the speech of the informants from Kent. More open starting point [aɪ] is not found. Consequently, Rosewarne's claim concerning a possible homophony of *say* and *sigh* is not confirmed. Generally, the realisations have a slightly more open onset than the RP realisation of the vowel.

PRICE

The onset ranges from front [aɪ] ~ [a̠ɪ] to back unrounded or rounded [ɑɪ] ~ [ɒ̜ɪ] ~ [ɒɪ]. Buckinghamshire speakers appear to have mainly back onsets, while other counties demonstrate a wider range of sounds.

MOUTH

A variety of realisations are present. The onset ranges between front open to halfway between open and open-mid [aʊ]~ [æʊ]. Some tokens have a fronted offset [aʏ] ~ [æʏ]. Tokens with a fronted offset appear in all the counties.

GOAT

The onset quality ranges between central and low [əʊ] ~ [ɐʊ]. Two Essex speakers have realisations where rounding is present in both onset and offset [oʊ]. A large number of tokens have fronted offsets, representing realisations of the type [əʏ] ~ [ɐʏ].

Buckinghamshire speakers prevailingly use variants with a fronted offset and such realisations are also frequent in Kent. A few monophthongal realisations, [ɐ] or [ɔ̞], are also present in the data.

3.4.2 Consonants

GLOTTALING

Word-internal, intervocalic glottaling is generally not present. Only four instances are found, two in *forty* and *butter,* both uttered by a female speaker from Buckinghamshire. The two remaining instances are elicited from a male informant from the same county and occur in the gerund *cutting* and the phrase *whatever you like*. Intervocalic glottaling before a word boundary is more frequent in expressions like *eat it, shut it* or *get your hair cut*. The high frequency pronoun *it* is usually realised as the glottal stop. Glottal realisations are also favoured before a nasal in two items, *Britain* and *lightning*.

STR-CLUSTER

The pronunciation of this cluster appears to be an idiosyncratic matter. Nine out of the sixteen speakers consistently use an RP-like pronunciation of the cluster in all the four tokens. Two informants, both WC males, from Kent and Buckinghamshire, equally consistently use a retroflex variant, while the remaining five use both. What complicates the issue, however, is the fact that the quality of the fricative was changed throughout and an unambiguous classification proved difficult in a number of cases.

The SED recorded no instances of the *str*-cluster with /s/ having a *S*-like quality in any of the Home Counties chosen for the present study, nor was it recorded in the two localities within Greater London, Harmondsworth and Hackney. In Goudhurst (Kent) one instance of the *str*-cluster pronounced with a retroflex quality was found in the noun *stranger*. The retroflex pronunciation of that cluster was a feature of rural speech in the West Country in the 1950s.

TH-FRONTING

The three types of realisations found included dental fricative [ð], labiodental fricative [f] or [v] and intermediate realisations represented by the dental fricative with a labial gesture, i.e. [ð^v]. Two female speakers, from Essex and Surrey, consistently used dental realisations. Other informants used two or all the three variants.

L-VOCALISATION

The majority of tokens have a vocalic realisation, usually as back rounded vocoids, between close-mid and close [o] ~ [ʊ]. Some tokens have the diphthongal realisation [o^ʊ]. Both dark and clear variants of /l/ in the data are rare. The non-vocalic realisations of /l/ prevail *pull* and *ill*. Interestingly, all the four Essex speakers have a clear allophone of /l/ in *pull*.

YOD-DROPPING

Only three speakers pronounced yod in the noun *suit*, while in *new* yod was present in nine instances. Half of the tokens contained yod in *Tuesday*.

Summary of the EE data is adduced in Table 3 below.

TABLE 3

Estuary English data. Prevailing vocalic and consonantal realisations in the localities investigated for the variables examined in the present study.

	Bucks	Essex	Kent	Surrey
FLEECE	[ɪi]~[i]			
TRAP	[a] ~[æ]~[ɛ̞]	[æ]~[ɛ̞]		[a] ~ [æ]
STRUT	[ɐ̟] ~ [ɐ]	[ʌ̟]		
THOUGHT	[ɔ⁹]	[ɔ]	[ɔ⁹]	[ɔ]
GOOSE	[ʉ] ~ [ʉ̶] ~ [ʏ]	[ʉ̶] ~ [ʉ]	[ʉ] ~ [ʉ̶] ~ [ʏ]	[ʉ̶]
FACE	[ɛɪ]	[ɛɪ] ~ [ɛ̞ɪ]	[ɛɪ]	
PRICE	[ɑɪ]	[a̠ɪ] ~ [ɑ̟ɪ]		
MOUTH	[aʏ]	[æʊ] ~ [æʏ] [aʊ] ~ [aʏ]		
GOAT	[əʏ]	[əʏ] ~ [əʊ]	[əʏ]	[əʏ] ~ [əʊ]
GLOTTALING	[ʔ]	[t]	[ʔ]	[t]
STR-CLUSTER	[str] ~ [ʃtr]			
TH-FRONTING	[ð] ~ [v]			
L-VOCALISATION	[ɫ] ~ [ʊ]	[ʊ]		[ɫ] ~ [ʊ]
YOD DROPPING	yod		no yod	yod

CHAPTER FOUR

THE ANALYSIS OF THE DATA

4.1 Statistical analysis

The aim of the analysis, which made use of complete sets of the data, was to examine possible differences between counties, classes and genders. The analysis only considered lexical items elicited from all the speakers in a given subset. Consequently, although the number of data points for all the speakers within a given subset was the same, it varied between the subsets. For example, the comparison of l-vocalisation included 28 tokens per speaker in MC (Middle Class), but 27 tokens in WC (Working Class). At this point all the speakers were included in the analysis. For all my analyses the significance level (α) was set at .01.

4.2 Method

Each variable was divided into two or three discrete classes, the term „classes" being here used to denote „realisations of vowels and consonants", but not „social classes". The phonetic classes comprise standard forms, EE variants, and forms not recognised as either RP or EE. Each data subset was tested for speaker homogeneity. In most cases, when the classes were combined, they belonged to the same sociolinguistic category, for example, both were RP variants. Where different sociolinguistic categories were combined, the difference was not considered relevant to the purpose and was intended to reflect new forms.

For example, for GOAT, the RP forms of the type [əʊ] were combined with the non-standard [ʌʊ], which has a lowered onset. However, regardless of the quality of the onset,

such forms show no fronting of the offset. Thus, together they contrast with the realisations of the types [əY] and [ʌY]. For this variable, the analysis was focused on the fronting of the offset. Realisations of this type were not reported in the SED or recognised as characteristic of EE.

4.3 Coding scheme

The data were divided into three categories: realisations recognised as standard RP, realisations recognised as Estuary English and other realisations. RP was understood here as 'Mainstream' RP (classification taken from Wells 1982), i.e. what is popularly known as the BBC accent. Realisations characteristic of other varieties of RP have been disregarded. The last category covered realisations which have not been recognised as falling within either of the first two categories. Also, it covered realisations which were difficult to classify in auditory analysis.

Each category was assigned a number: RP realisations were class 100, realisations recognised as EE were class 200, all other realisations were class 400. Within each class a further subdivision was made, depending on the number of realisations. For example, the STRUT vowel can be realised in RP as either a front open monophthong, slightly closer than Cardinal 4, of the type [a], or as a monophthong halfway between open and open-mid, with the quality of [æ]. Consequently, realisations of the type [a] were coded as 101, realisations of the type [æ] were coded as 102.

The class numbers are consistent throughout the coding scheme, i.e. class 100 always indicates phonetic realisations recognised as RP, while particular numbers indicate a different realisation depending on a given variable. For example, for the FLEECE vowel, 101 indicates a front close monophthong, of the type [i], for the THOUGHT vowel, 101 indicates a back, rounded monophthong of the type [ɔː].

In a way, imposing categories on a continuum of phonetic realisations resembles creating dialect boundaries, as in both cases we are dealing with gradual transition. Although dialect boundaries are „elusive to the point of non-existence" (Francis 1980: 1), despite the lack of clear cut-off points, dialects exist. Consequently, the categories in the present study reflect this somewhat artificial division. Being sociophonetic, they represent only the distinctions relevant to assigning a realisation to a given accent variety. For the purposes of statistical analysis the subcategories were collapsed, while separate categories were later combined for chi-squared tests. The complete coding scheme is presented below.

TABLE 1

Data coding scheme

Variable	Code	Realisation type	Description
FLEECE	101	[iː]	monophthong: front unrounded, high
	102	[ɪi]	diphthong: front retracted , lax onset
	201	[əi]	diphthong: centralised onset
TRAP	101	[a]	monophthong: front unrounded, open
	102	[æ]	monophthong: front unrounded, approximately halfway between open and open-mid
	201	[ɛ] ~ [ɛⁱ]	vowel (possibly diphthongal), front unrounded, in the region of open-mid,
STRUT	101	[Ä] ~ [ɐ]	vowel: open, unrounded, between back and central
	201	[ɐ̟] ~ [ɐ̟̟]	vowel: open unrounded, front of central region
	401	[ʌ] ~ [ɒ]	vowel: back, possibly rounded, open

THOUGHT	101	[ɔː]	monophthong: back
	201	[ɔə]~ [oʊ]	diphthongal realisations: a centring or closing offglide
GOOSE	101	[ʊu] ~ [ʉ̞]	possibly diphthongal, back rounded,
	201	[ʉ] ~ [ɨ]	diphthongal or monophthongal: central, rounded or unrounded, between close and close-mid,
	401	[ʏ] ~ [əʏ]	diphthongal or monophthongal: front rounded, between close and close-mid,
FACE	101	[e̝ɪ] ~[ɛ̝ɪ]	front unrounded onset, between close mid and open mid
	401	[ɛ̝ɪ] ~ [æɪ]	onset lower than open-mid
	201	[ɛɪ]	onset in the region of open-mid
PRICE	101	[aɪ] ~ [ɑɪ]	front retracted onset
	201	[ɑɪ] ~ [ɒɪ]	back onset, possibly rounded
GOAT	101	[əʊ] ~ [ɵ̞ʊ]	central onset, back rounded offset
	201	[ɐʊ] ~ [ʌʊ]	lowered onset
	401	[ɐʏ] ~ [ɔʏ]	fronted offset
MOUTH	101	[aʊ] ~ [ɑ̟ʊ]	onset between front retracted and back centralised, back rounded offset
	201	[æʊ]	raised onset, halfway between open and open-mid, back rounded offset
	401	[æʏ] ~ [aʏ]	onset as in RP or dialects, fronted offset
GLOTTALING	101	t	„bare" /t/
	102	ʔt	preglottallised /t/
	201	ʔ	glottal stop
STR-CLUSTER	101	str	-

	201	str/ʃtr	auditory difficulties
	202	ʃtr	-
TH-FRONTING	101	ð θ	dental fricative
	401	ðᵛ θᵛ	dental fricative with a labial gesture
	402	v	labiodental fricative
L-VOCALISATION	101	ɫ	dark (velarised) /l/
	201	[ʊ] ~ [oᵘ]	back, usually rounded vowel, in the region of close and close-mid
	401	l	clear (palatalised) /l/
YOD-DROPPING	101	j	presence of /j/
	201	no yod	absence of /j/

4.4 Chi-square analysis

In each subset the two most extreme informants' pronunciations were compared using a 2x2 table. For example, the data from an informant who consistently used RP realisations were compared to those from the informant who consistently used non-RP forms. As a consequence, if the difference between them was not significant, all informants within a set formed a homogeneous group. For 2x2 tables Fisher's exact test was used.

Where $p \leq .01$, the extreme informant was excluded from the set and the procedure was repeated until a homogenous set of data was obtained. In a number of cases two or three speakers were excluded from a set of eight. In three cases a subset of informants clearly split into two groups. Further analyses were then carried out on the two alternative sets of data, which are described in the sections below.

For all other tables, which contain comparisons of the counties, genders, and social classes, with two or more linguistic classes involved, the chi-square was used. A standard practice was followed which requires theoretical frequencies to be equal or above 5 for a chi-square test to be reliable.

TABLE 2.

Summary of the significance of the variables analysed

Variable	County	Gender	Class
FLEECE	-	0	0
TRAP	*	0	0
STRUT	*	*	0
THOUGHT	*	*	0
GOOSE	*	*	*
FACE	*	0	*
PRICE	0	0	0
GOAT	*	*	0
MOUTH	0	0	0
GLOTTALING	*	*	0
STR-CLUSTER	0	0	0
TH-FRONTING	0	*	0
L-VOCALISATION	*	*	0
YOD-DROPPING	0	0	0
Effects	8	7	2

Where:
*   Significant
0   No difference
-     No test possible

As shown in the table, variables differ in their level of significance. Five variables show no effect in any of the analyses, by county, gender or class. Two variables show a single effect: TRAP is significant by county and TH-FRONTING shows a gender difference. Five

variables (STRUT, THOUGHT, GOOSE, GOAT, GLOTTALING and L-VOCALISATION) show two-level effects, all of which are significant by county and gender. FACE shows class but not gender difference and one variable, GOOSE, shows a three-level effect, by county, class, and gender. All the variables are described and discussed below, in order of significance.

4.5 No effect variables

4.5.1 Vowels

FLEECE

The corpus used for the comparison between the counties consisted of 60 tokens. The data were divided into three classes, labelled as 101, 102 and 201. Because three theoretical frequencies fell below 5 and combining of classes was not possible, the chi-square test was not run. No significant difference was found between genders [χ^2 (1) = .88, p>.01] or social classes [χ^2 (1) = 5.51, p>.01].

The above shows that the claim about EE quality of this vowel being a diphthong with a centralised onset is not confirmed. Although such realisations are present, they constitute only a quarter of the data, i.e. 15 out of 60 tokens. The three types of realisations, RP [iː], d [ɪi], and the non-standard [əɪ], appear in virtually equal proportions in each of the four counties, which is also true of gender and class data sets.

The SED data reveal that the 1950s realisations of the type [əɪ], claimed now to be a feature of EE, were only characteristic of the speech of Little Baddow in Essex, being simultaneously absent from the other three localities which are investigated in the present study.

PRICE

The data consisted of 64 tokens for the comparison between the genders and social classes. The chi-square test revealed no difference between the genders [χ^2 (1) = 3.19, p>.01], social classes [χ^2 (1) = 1.14, p>.01], and counties [χ^2 (3) = 5.39, p>.01] as regards the use of realisations with front [aɪ] ~ [a̱ɪ] or back [ɑɪ] ~ [ɑ̨ɪ] ~ [ɒɪ] onsets.

MOUTH

The data included 72 tokens used for the purposes of comparison between the counties (16 speakers). For the chi-square test, classes 101 [aʊ] and 201 [æʊ] were combined, since the analysis focused on the offset fronting, no concern being given to the quality of the onset. The differences between the counties were not significant, with [χ^2 (3) = .55, p>.01].

The data consisted of 64 tokens used in the comparison between the genders and social classes. The chi-square test revealed no difference between the genders, with [χ^2 (1) = .59, p>.01] or social classes, with [χ^2 (1) = .26, p>.01]. This variable was expected to form a pattern similar to that of GOAT as regards the fronting of the second element. Possibly, the inconclusive result could be attributed to a small number of data points.

The SED data show that the variant now recognised as EE was a feature of the speech of all the four Home Counties in the 1950s.

4. 5. 2 Consonants

STR-CLUSTER

The speech of all the sixteen informants was analysed according to the three variables. Only four tokens per speaker have been recorded, which resulted in lower theoretical frequencies, whereas classes 201 and 202 were combined. The comparative material from the four counties consisted of 60 words. The results of the chi-square test [χ^2 (3)= 11.19, p>.01] showed lack of differences between the counties.

Comparisons between male and female speakers as well as the two social classes included 56 tokens, respectively. The calculated chi-square values showed no difference between genders [χ^2 (1) = 1.75, p>.01] or social classes [χ^2 (1)= .00, p>.01].

YOD-DROPPING

The corpus for the comparison between the counties consisted of 60 tokens. Slightly over a half, 32 out of 60 data points, had no yod. Buckinghamshire, Essex and Surrey have the two variants in equal proportions. Kent stands out, with 10 out of 12 tokens having no yod, this difference being, however, not significant [χ^2 (3) = 5.59, p>.01]. Also statistically insignificant were differences involving the gender [χ^2 (1) = 2.97, p>.01] and social classes [χ^2 (1) = 3.18, p>.01]. WC speakers had more yod-dropping (65.5%, 21 out of 32 tokens) than MC informants (41.6%, 10 out of 24 tokens). Male informants had more yod-dropping (68.7%, i.e. 22 out of 32 tokens) than females (45.8%, i.e. 11 out of 24 tokens).

The SED data for those four words show that Buckinghamshire, Surrey, and Kent had no yod in all the tokens (one instance was found in Essex).

4.6 One-level statistical significance

4.6.1 Vowels

TRAP

The summary of findings is adduced in the table below.

TABLE 3

Percentages for use of closer qualities in TRAP in the four localities.

	Tokens analysed	% of closer qualities [ɛ]
Bucks n=4	36	27.8
Essex n=4	32	43.8
Kent n=4	28	57.1
Surrey n=4	36	13.0

n = number of informants

The corpus for county comparison consisted of 132 tokens (16 informants). For the chi-square test, [a] and [æ] were combined because the analysis focused on tokens with a closer quality. The difference between the counties was significant, with [χ^2 (3) = 15.13, $p<.01$]. When Surrey is excluded, the difference between the other three counties becomes not significant, with [χ^2 (2) = 5.13, $p>.01$].

The comparisons of genders and classes with 112 tokens each (all speakers in both) revealed that 43.7% females used the closer quality tokens more than males (31.3%) but the difference was not significant, cf. [χ^2 (1) = 1.85, $p>.01$]. The difference between classes was not significant either, with [χ^2 (1) = .91, $p>.01$]. The WC speakers used closer realisations slightly more (39%) than MC (30.1%).

4.6.2 Consonants

TH-FRONTING

The summary of findings is given as a set of three tables which non-standard variants data by county (table 4), gender (table 5), and social class (table 6).

TABLE 4

Percentage of non-standard variants of /ð/ ~ /θ/ in the four localities

	Tokens analysed	% of [ð] ~ [θ]	% of [ðᵛ] ~ [θᵛ]	% of [v] ~ [f]
Bucks n=4	24	58.3	12.5	29.2
Essex n=3	21	71.4	19.1	9.5
Kent n=4	20	40.0	25.0	35.0
Surrey n=3	18	83.3	11.2	5.5

The data set for comparison between the counties contained 83 tokens (14 speakers). The three classes, i.e. dental fricative [ð] ~ [θ], forms difficult to assign to either of the two categories on a solely auditory basis and the labiodental realisations [f] or [v] were kept separate for the chi-square test. The distinction between the two non-standard variants was considered of interest as it might indicate the gradual character of the change.

An MC male, the only consistent user of non-standard forms, was excluded from the Essex set and, similarly, a WC male was excluded from the Surrey set. As in the case of the Essex data, the outstanding speaker exhibited only non-standard forms. The chi-square test showed no significant difference between the four counties, with the calculated value [χ^2 (6) = 10.53, $p>.01$].

TABLE 5

Percentage of non-standard variants of /ð/ ~ /θ/ by gender

	Tokens analysed	% of [ðᵛ] ~ [θᵛ]	% of [v] ~ [f]
Females n=8	40	15.0	15.0
Males n=8	48	25.0	41.6

A comparison between females and males involved 88 tokens (16 speakers). Male speakers used substantially more non-standard, labiodental realisations (41.6%) than females speakers (15%), this difference being significant, with $[\chi^2 (2) = 12.19, p > .01]$.

TABLE 6

Percentage of non-standard variants of /ð/ ~ /θ/ by social class

	Tokens analysed	% of [ð^v] ~ [θ^v]	% of [v] ~ [f]
MC n=7	35	40.0	23.0
WC n=6	42	20.0	14.0

A comparison between social classes included data from seven MC speakers (an Essex male excluded) and six WC speakers (a Buckinghamshire male and a Surrey female excluded). The chi-square test showed no difference between MC and WC speakers, with $[\chi^2 (2) = 6.94, p > .01]$. Although the difference was not significant, it is worth pointing out that WC speakers were slightly ahead as regards labiodental realisations (40%), while using 23% of the intermediate variant. Simultaneously, MC speakers used labiodental and intermediate variants in similar proportions of 20% and 14% respectively.

The SED survey recorded labiodental realisations in the speech of neither the Home Counties nor the two London localities, Harmondsworth and Hackney. The current data suggest that such pronunciations are not a characteristic feature of a county, but are to a similar extent present in all the four localities.

4.7 Two-level statistical significance

4.7.1 Vowels

STRUT

The summary of findings is adduced below in table 7 (fronted realisations of STRUT) and table 8 (distribution by gender).

TABLE 7

Percentage of the fronted realisations

of STRUT in the four localities

	Tokens analysed	% of fronted variants [ɐ̟]
Bucks n=3	36	50.0
Essex n=4	56	7.1
Kent n=4	52	19.2
Surrey n=4	56	10.7

The data set for comparison between the counties for this variable contained 200 tokens (15 speakers). A male MC speaker was excluded from the analysis of the Buckinghamshire data.

The data had been divided into three levels, 101, 201 and 401, where code 101 indicates standard forms i.e. RP type realisations, which are central and back vowels, of the type [ɐ] ~ [ʌ̟]. Code 201 indicates very back, possibly rounded realisations and 401 indicates fronted [ɐ̟] tokens. For the chi-square test, classes 201 and 401 were combined since the analysis focuses on the vowel fronting. Of interest for the present study is therefore only the distinction between realisations in the front region as opposed to non-front, i.e. central and

back ones.

The chi-square test showed a significant county effect, with the value of $[\chi^2 (3) = 30.1,$ $p<.01]$. With a half of fronted tokens (50.0%), Buckinghamshire stands out against the other three counties. Indeed, the difference between Essex, Kent and Surrey was not significant, with the value of $[\chi^2 (1) = 3.85, p>.01]$.

TABLE 8

Percentage of STRUT-variants by gender

	Tokens analysed	% of fronted [ɐ̟] variants
Females n=7	91	26.3
Males n=8	104	11.5

The corpus included 195 tokens (15 informants). A WC female speaker from Buckinghamshire was excluded. Females used slightly over of quarter of fronted tokens (26.3%), a percentage more than twice higher than that of male speakers (11.5%). The difference proved significant, with $[\chi^2 (1) = 7.1, p<.01]$.

Ultimately, the analysis embraced 187 tokens and 15 speakers, to the exclusion of one Buckinghamshire female WC speaker. WC speakers used slightly more fronted realisations (20.8%) than MC speakers (16.7%), the difference being not significant, with the value of $[\chi^2 (1) = .54, p>.01]$.

THOUGHT

The results of the analysis of THOUGHT-forms are presented in table 9 (counties) and 10 (gender).

TABLE 9

Percentage use of variants of diphthongal realisations of THOUGHT in the four localities.

	Tokens analysed	% of diphthongal variants
Bucks n=4	40	67.5
Essex n=4	32	34.0
Kent n=4	28	70.8
Surrey n=4	36	37.5

All 180 tokens and 16 speakers were included in the county comparison study. It was found that the counties fall into two groups, Buckinghamshire and Kent using prevailingly diphthongal realisations, Essex and Surrey slightly over a third. Also within the groups the counties show high similarity. The chi-square test showed the differences between the four counties to be significant with the value $[\chi^2 (3) = 20.37, p<.01]$. Simultaneously, the similarity of both subsets was confirmed: for Bucks and Kent $[\chi^2 (1) = .11, p>.01]$ whereas for Essex and Surrey $[\chi^2 (1) = .11, p>.01]$.

TABLE 10

Percentage of diphthongal variants of THOUGHT by gender

	Tokens analysed	% of diphthongal variants
Females n=8	80	60.0
Males n=7	77	37.6

The data of 157 tokens (15 speakers) were analysed. While females used prevailingly diphthongal realisations, males preferred monophthongal ones. The difference between the

genders was significant with the value [χ^2 (1) = 7.83, $p<.01$].

168 tokens and all 16 speakers were included in the comparison of the social classes. Both MC and WC speakers used the two variants in equal proportions. In fact, the chi-square test showed no difference between the social classes, with the value of [χ^2 (1) = .05, $p>.01$].

FACE

The data on the realisations of the vowel in FACE-words are adduced in table 11 (counties) and 12 (social classes).

TABLE 11

Percentage of lowered variants in the four localities

	Tokens analysed	% of tokens with a lowered onset
Bucks n=4	28	92.8
Essex n=3	21	38.0
Kent n=4	24	87.5
Surrey n=4	28	67.8

The data of 101 tokens and 15 speakers were analysed. A WC male speaker was excluded from the Essex set. The chi-square test showed a significant difference between the counties, with the value [χ^2 (3) = 21.65, $p<.01$]. The difference after the exclusion of Essex was still significant, with the value [χ^2 (2) = 12.14, $p<.01$].

In the comparison between genders 88 tokens and all 16 speakers data were analysed. Male speakers used more of the realisations with a lowered onset (82.5%) than female speakers, who used 70.8%. However, this difference was not significant, with the value [χ^2 (1) = 1.63, $p<.01$].

TABLE 12

Percentage of FACE variants with a lowered onset by class

	Tokens analysed	% of tokens with a lowered onset
MC n=8	48	58.3
WC n=8	48	95.8

The data of 96 tokens and 16 speakers were analysed. MC speakers use closer and more open realisations in almost equal proportions (58.3% of the latter type), while WC speakers use almost exclusively realisations with a more open onset. The chi-square test showed the difference between classes as significant, with the value $[\chi^2 (1) = 19.11, p<.01]$.

GOAT

The relevant data are adduced in table 13 (counties) and table 14 (gender).

TABLE 13

Percentage of fronted variants of GOAT in the four localities.

	Tokens analysed	% of tokens with a fronted offset
Bucks n=3	27	88.9
Essex n=4	32	34.4
Kent n=4	28	57.1
Surrey n=4	36	44.5

The total of 123 tokens (15 speakers) were analysed. One MC male speaker was excluded from the Buckinghamshire set. The data was divided into three classes, 101, 201 and

401, where 101 indicates standard forms i.e. RP type realisations, 201 indicates realisations with the first element lowered, 401 indicates realisations with the fronted offset. Because the analysis focused on the offset fronting, 101 and 201 were combined for all chi-square classes, and thus no concern was given to the quality of the onset. The difference between the counties was significant, with $[\chi^2(3) = 19.65, p<.01]$.

Buckinghamshire, with its 88.9%, exhibits most tokens having a fronted offset. Thus it contrasts with the other three counties, which form a homogeneous group in which differences are smaller than the distinction between each of these counties and Buckinghamshire. The chi-square test revealed the differences between Kent, Essex and Surrey not to be significant, with the value of $[\chi^2(2) = 3.13, p>.01]$.

TABLE 14

Percentage of variants of GOAT by gender

	Tokens analysed	% of tokens with a fronted offset
Females n=7	56	67.9
Males n=8	56	39.9

The comparison between genders included 112 tokens and 15 speakers. A Surrey MC female was excluded. Female speakers used over two thirds of the realisations with a fronted onset (67.9%), while male speakers used less than a half of such variants (39.3%). The chi-square test confirmed that this difference was significant, with the value of $[\chi^2(1) = 9.85, p<.01]$.

The comparison of the two social classes included 97 tokens. Such small number was due to the fact that three speakers, two MC females from Kent and Buckinghamshire, respectively, and one WC female from Buckinghamshire were excluded. MC speakers display

fronting in almost a third of the tokens (29.2%), which is substantially less in comparison with WC speakers, who use this variant in slightly over a half of cases (53.0%). The difference was not significant, with $[\chi^2(1) = 5.45, \ p < .01]$.

4.7.2 Consonants

GLOTTALING

The data on glottaling in EE are presented in table 15 (counties) and 16 (gender).

TABLE 15

Percentage of glottaling in the four localities: EE data

	Tokens analysed	% of glottalled tokens [ʔ]
Bucks n=4	104	43.2
Essex n=3	72	8.3
Kent n=4	46F 46m.	56.5 19.5
Surrey n=4	104	21.1

The study involved 326 tokens and 15 speakers. A WC female speaker was excluded from the Essex set because she had 37.5% of the tokens glottalled (9 out of 24), i.e. more than the other three speakers who had 1, 2 and 3 tokens out of 24, respectively. The data were divided into three classes: 101 [t], 102 [ʔt] and 201[ʔ]. For the chi-square test, classes 101 and 102 were combined since the analysis focused on glottaling. The distinction between preglottallised and 'bare' [t] was considered of no interest to the present study.

Kent informants fall into two distinct groups, embracing female and male speakers. The former have substantially more glottaling (15 and 11 out of 23 tokens respectively) than the latter (5 and 4 tokens out of 23). Consequently, two alternative comparisons between the counties and two analyses were made, including a single set of Kent informants at the time. In

both cases a significant county effect on glottaling was demonstrated. For the analysis with female informants the value was $[\chi^2 (3) = 43.77, p<.01]$, and for male informants, $[\chi^2 (3) = 38.3, p<.01]$.

Buckinghamshire was excluded and the chi-square tests run on the three remaining counties. Again, two alternative sets of data were considered, with male and female Kent speakers. For the three counties, including Kent females, the difference was still significant, with the value of $[\chi^2 (2) = 36.47, p<.01]$. However, when Kent males are included, chi-square shows no difference between the three counties, with the value of $[\chi^2 (2) = 5.39, p>.01]$.

The three counties are fairly uniform with respect to glottaling. Kent scores indicate that the change is led by female speakers, although the county has generally more glottaling than Essex or Surrey. Another argument in favour of such view is that in Essex the speaker with most glottaling was a WC female. Similarly, in Buckinghamshire, the highest score was achieved by a WC female (16 out of 26 tokens - 61%). However, this did not surface as all the Buckinghamshire informants had generally more glottaling than was found in the other three counties.

TABLE 16

Percentage of variants of glottaling by gender

	Tokens analysed	% of glottalled tokens [?]
Females n=5	105	46.6
Males n=8	192	27.6

The study investigated 297 tokens and 13 speakers' data. The three excluded females (2 from Surrey and an Essex MC speaker) had a much lower percentage of glottal tokens than the rest of the group. The comparison between genders shows that female speakers have 46.6% of glottalled tokens, whereas male speakers only 27.6%. This difference turned out to

be significant, as $[\chi^2 (1) = 10.94, p<.01]$.

In the comparison between the social classes involved 297 tokens and 13 speakers. The two excluded MC informants who came from Essex had a lower incidence of glottaling (1 and 2 tokens out of 24 respectively) in comparison with the other speakers. The Kent female, excluded from the WC set, had a high incidence of the feature. On the whole, WC speakers used a slightly higher percentage of glottalled tokens (29.8%) than MC informants (24.8%), but the difference turned out not to be significant, with $[\chi^2 (1) = 0.96, p>.01]$.

L-VOCALISATION

The data were divided into three classes, 101 (dark [l]), 201 (vocalised [l]), and 401 (clear [l]). For the chi-square test, classes 101 and 401 were combined. The analysis focused on the extent of *l*-vocalisation alone. Consequently the distinction between clear and dark [l] is of no interest to the present study.

TABLE 17

Percentage of vocalised tokens by county

	Tokens analysed	% of vocalised tokens
Bucks n=4	112	69.9
Essex n=3	99	90.9
Kent n=4	112	93.8
Surrey n=4	128	40.3MC 77.4WC

The data of 15 informants were analysed. A male MC speaker with a low incidence of vocalisation was excluded from the Essex set. In Surrey, MC speakers had fewer vocalised tokens (40.3%) than WC speakers (77.4%). Consequently, the chi-square tests for county comparison were run on two alternative sets of data, including a single set of Surrey

informants at the time. For the analysis with WC speakers the difference was significant with the value of $[\chi^2 (3) = 28.78, p<.01]$. For the analysis with MC speakers the difference was also significant, with the value $[\chi^2 (2) = 80.05, p<.01]$, which shows that MC speakers account for the difference to a larger extent.

Surrey was excluded and the chi-square tests were run on the other three counties. The difference was still significant, with the value $[\chi^2 (2)=29.33, p<.01]$. The percentages of vocalised tokens for Essex and Kent amounted to 90.9% and 93.8% respectively. The chi-square test confirmed their similarity, with $[\chi^2 (1) = 0.61, p>.01]$. However, Buckinghamshire and Essex differed, with $[\chi^2 (1) = 14.64, p<.01]$.

TABLE 18

Percentage of vocalised tokens by gender

	Tokens analysed	% of vocalised tokens
Females n=8	208	95.1K+E 55.7B+S
Males n=7	189	82.5

The comparison between the genders involved 397 tokens and 15 speakers. A single Surrey MC male speaker was excluded. Females split into two groups. Buckinghamshire and Surrey females (A) had vocalised and non-vocalised realisations in roughly equal proportions (58 out 104 tokens were vocalised; 55.7%), while Essex and Kent females (B) had prevailingly vocalised tokens (99 out of 104; 95.1%). The chi-square tests were run on the two alternative sets. In both analyses the difference between the genders was significant. For (A), $[\chi^2 (1) = 24.41, p<.01]$ and for (B), $[\chi^2 (1) = 9.51, p<.01]$.

The corpus for the comparison of the two social classes consisted of 329 tokens (13 speakers). A Buckinghamshire female, who had fewer vocalised tokens (12 out of 27) than

the remaining informants, was excluded from the WC set. Of the three male speakers excluded from the MC set two were from Surrey and one from Essex. MC speakers used slightly more (89.2%) vocalised tokens than WC speakers (84.1%), this difference being not significant, with the value [$\chi^2(1) = 1.81$, $p<.01$].

4.8 Three-level statistical significance

The GOOSE-vowel is the only variable which shows a three-way effect, i.e. the differences between the counties, social classes and genders as significant. The phonetic data were divided into three classes, with front, central, and back realisations to reveal their distribution. Table 18 presents a general picture, i.e. the percentages of each variant across speakers. These data are the same as for comparison by county.

TABLE 19

Percentage of back, central, and front realisations of the GOOSE-vowel across speakers.

	Tokens analysed	% of front variants	% of central variants	% of back variants
n=15	**176**	14.2	61.4	24.4

Averaging out across the counties, the prevalence of the central realisations of GOOSE-words. While a quarter of tokens still remain back, about one fifth of them are already in the front region. Below follows a presentation of the data split into counties, genders, and classes. Three broad categories are presented in each case, as they allow us to trace the progress of the vowel into the front region. No distinction however is made between monophthongal and diphthongal realisations.

TABLE 20

Percentage of front, central and back realisations of GOOSE in the four localities

	Tokens analysed	% of front tokens	% of central tokens	% of back tokens
Bucks n=4	48	22.9	58.3	18.7
Essex n=3	36	8.3	44.4	47.2
Kent n=4	44	20.5	56.8	22.7
Surrey n=4	48	4.2	81.3	14.5

The data set for comparison between the counties involved 176 tokens and 15 speakers. A WC female speaker, who exhibited most fronting, was excluded from the Essex set. The chi-square test showed a significant county effect on the distribution of the three variants, with the value $[\chi^2 (6) = 23.29, p<.01]$. After Buckinghamshire was excluded, the difference between the three remaining counties was still significant, with the value $[\chi^2 (4) = 19.31, p<.01]$.

Buckinghamshire and Kent have most front tokens (22.9% and 20.5% respectively). They also show resemblance in the distribution of the other two variants, having similar proportions of back and central vowels the latter prevailing in both counties, with strikingly similar percentages. In Surrey, central realisations also prevail, but their proportion is significantly higher (81.3%). Surrey has slightly less back tokens than Buckinghamshire or Kent, but the percentage is not substantially different (14.5%). Surrey, however, differs from the two in the extent of fronting, with only 4.2% of front vowels.

Essex shows little fronting (8.3%), in this respect closely resembling Surrey. But while in the other three counties central realisations dominate, Essex has an almost equal proportion of back (47.2%) and central (44.4%) vowels.

TABLE 21

Percentage of variants of front, central, and back realisations of GOOSE by genders

	Tokens analysed	% of front tokens	% of central tokens	% of back tokens
Females n=7	77	25.9	71.4	2.6
Males n=8	96	5.2	52.0	42.7

The analysis covered 173 tokens and 15 speakers' data. An Essex WC female speaker was excluded, as she had substantially more front realisations. The chi-square test confirmed the difference between the genders to be highly significant, with the value $[\chi^2 (2) = 43.04, p<.01]$.

For female speakers, central vowels are the main variant, with almost three quarters (71.4%) of those realisations, which is more than for male speakers (slightly over a half; 52.0%). However, the prevailing use of central vowels is the only indication of similarity between the genders. In general, female speakers use realisations relatively more front than male speakers. The former use over a quarter of front vowels and have clearly moved away from back, RP-type realisations (only 2.6%), while male speakers' use is divided almost equally between back (42%) and central (52%) realisations. Very few front tokens are found in this group (5.2%).

TABLE 22

Percentage of front, central, and back realisations of GOOSE by class

	Tokens analysed	% of front tokens	% of central tokens	% of back tokens
MC n=8	88	10.2	56.8	32.9
WC n=7	91	17.6	69.2	13.1

The analysis covered 15 speakers and 179 tokens. For MC informants, $p = .214$,

against p =.014 for WC informants, after an Essex female speaker was excluded. The chi-square test confirmed the difference between the classes as significant, with the value [χ^2 (2) = 18.08, p<.01].

The figures for the two social classes reveal that WC speakers are leading the change. With 17.6% of front realisations they do not substantially differ in that respect from MC speakers, who have 10.2%. However, they use realisations more central (69.2%) than MC informants (56.8%) On the whole, MC speakers have prevailingly central-to-front realisations and are clearly moving away from the back ones (only a third of back RP-type realisations).

4.9 Glottaling and *l*-vocalisation, or is EE really halfway between RP and Cockney?

GLOTTALING

Table 23 (RP, EE, and Cockney) illustrates the present-day incidence of glottaling in the three accents. Table 24 (1950, 1998 data) adduces the SED data of the 1950s, confronted with the present survey data for the same localities.

TABLE 23

Percentage of glottaling in RP, EE, and Cockney

	Tokens analysed	% of [ʔ] realisations
RP n=2	48	8.3
Estuary English n=16	335	32.2
Cockney n=2	54	85.2

The figures in the above table are based on the data from 2 RP speakers, 2 Cockney

speakers and 15 EE speakers. For RP and Cockney, only comparable word lists are analysed, i.e. lexical items elicited from both speakers within each set. For EE data, the lists are comparable within each county. However, homogeneity of speakers within Kent was disregarded so that both females and males are included to average out across speakers.

Rosewarne (1984) states that „an Estuary English speaker uses fewer glottal stops for t (...) than a „London" speaker, but more than an RP speaker", a claim indeed supported by the present data. Also, EE seems to bear a closer resemblance to RP rather than Cockney in this respect. However, one should bear in mind that this is an oversimplification of the issue. EE is not a homogeneous entity, and the incidence of glottaling as well as of other features differ from county to county. For example, Essex is not unlike RP in this respect. Table 24 below presents a more detailed picture.

TABLE 24

Percentage of glottaling in the four localities (1950s and 1998)

	SED county	SED locality	EE locality
Bucks	65.5	89.2	43.2
Essex	18.1	16.6	8.3
Kent	8.5	7.1	38.0
Surrey	11.0	0.0	21.1

The table presents the percentage of glottalled tokens in the four counties in the 1950s (the SED) and 1998 (the present study). The 1950s and 1998 word lists are not identical and therefore not strictly comparable. Also, the number of informants differs, which is true of the four present data sets as well as the SED data. This reflects the fact that the number of localities on the survey was different for each county.

In the SED only one or two informants per locality were interviewed. Moreover, it has to be borne in mind that the informants selected were not guaranteed to be representative. Consequently, this data is included for the sake of illustration. It is to be treated as a guideline, an indication of trends. Data for the whole counties as well as the localities in question is shown to give a broader picture.

The pattern in the present data is not unlike that of the 1950s. In Essex and Surrey we observe an increase of roughly 10%. In a number of cases a similar difference between two samples compared in the analysis of the present data, proved not significant. Consequently, one could tentatively say that in those two counties there has been little or no change as regards the incidence of glottaling. On the other hand, Kent appears to be affected since taking all the four speakers into account, 38 % of all the tokens are glottalled, as compared to 8.5% in the 1950s. With those figures in mind, it could be assumed that we are witnessing an increase in the incidence of glottaling.

The increase becomes more apparent when we look at speech discrepancy between male and female speakers in the present data. Male speakers do not substantially differ in the incidence of the feature from the 1950s interviewees and a difference of 10% could be assigned to chance rather than be interpreted as an indication of increased glottaling in Kent. The increase is clearly observable if we look at female speakers (56.5%) because such a difference between 1950s and the current data is unlikely to be incidental. Moreover, this discrepancy indicates that females are taking lead in the change. The fact that the outstanding informant in Essex is a WC female speaker lends support to the claim by virtue of having a significantly higher percentage of glottalled tokens than the other speakers. Similarly, in the Buckinghamshire data the informant with a higher percentage of the feature is also a WC female speaker. Here, however, the discrepancy between her and other speakers is not evident, this being due to the fact that in the present data Buckinghamshire speakers have on

the whole more glottalled tokens.

This brings us to Buckinghamshire in the 1950s. The county stands out against the three others counties with its much higher proportion of glottalled tokens. Even bearing in mind the above limitation of analysis, the difference between Bucks and the remaining three counties is unlikely to be due to chance. Another argument in favour of such interpretation is that a pattern not dissimilar to the 1950s is discernible in the present data, and its significance was confirmed by statistical analysis. Thus, the present data show no uniformity between the counties either. In comparison to Essex and Surrey, Buckinghamshire clearly exhibits more glottaling. Its lower percentage (43.2%), as opposed to 65.5% of the 1950s data, might be an indication of decreased glottaling, which, however, is a matter of conjecture.

L-VOCALISATION

The two tables below contain the data on *l*-vocalisation in RP, EE, and Cockney (table 25) and the SED data of the 1950s, confronted with the present survey data (table 26).

TABLE 25

Percentage of vocalised tokens in RP, EE, and Cockney

	Tokens analysed	% of vocalised tokens
RP n=2	64	34.3
Estuary English n=16	447	77.4
Cockney n=2	50	92.0

These data reflect the pronunciation of 2 RP, 2 Cockney and 16 EE speakers. Both Surrey MC and WC speakers are included.

TABLE 26

Percentage of vocalised tokens in the four localities in the 1950s and 1998

	SED county	SED locality	Estuary locality
Bucks	3.5	3.5	69.9
Essex	9.5	30.7	90.9
Kent	12.2	50.0	93.8
Surrey	35.0	39.5	40.3MC 77.4WC

The table presents the percentage of vocalised tokens in the four counties in the 1950s and in the present study. Like in the case of the glottaling data, the 1950s figures are based on the SED. Bearing in mind the methodological limitations mentioned above, one can nevertheless make a number of observations. Generally, the incidence of *l*-vocalisation has increased in all the four counties, but Surrey shows the smallest increase. Interestingly, the split into two groups gives a clear indication that WC speakers are leading the change. The MC speakers' data, on the other hand, closely resemble the 1950s data.

As seen from in the SED data above, the Kent and Essex localities are not representative of the respective counties as they have a higher incidence of *l*-vocalisation than the counties as a whole. In the present data, the two Kent and Essex localities show the highest incidence of vocalised tokens. Whether we are dealing with the greatest increase here would be a matter of speculation, since no contemporary data from other localities are available. Interestingly, the 1950s data show the that Buckinghamshire locality was representative. At present, Buckinghamshire, with 69.6%, follows Kent and Essex.

4.10 Discussion

The results of the statistical analysis presented above throw light on the patterns of

variation and change as well as the involvement of social factors in linguistic change. Five of the variables analysed revealed no differences between genders, social classes or counties. Whether this is due to their stability cannot be said because for lack of sufficient amount of data these results should be treated with caution. The surprising outcome is the fact that the MOUTH-vowel fell into this category, as it was expected to show behaviour analogous to the GOAT-vowel. For the remaining four variables, FLEECE and PRICE vowels, str-cluster and yod dropping, variation is probably only idiosyncratic.

4.10.1 Role of gender in sound change

Sharper differences can be observed between the genders, as eight variables showed statistically significant differences. Five out of six changes showing gender lead (as opposed to gender differentiation), are introduced by females. The role of young women in sound change has been noted by Milroy (1982), Labov (1990) and Chambers (1992). Clearly, changes such as vowel fronting in GOOSE, GOAT and STRUT are led by female speakers. This is further supported by the fact that the analyses were carried out on homogeneous groups, with the most extreme informants excluded. In the case of these variables, the females were even more ahead with the advancement of the changes. For GOOSE vowel, the two most progressive informants were Essex and Buckinghamshire WC females. The Buckinghamshire female was excluded from the other two comparisons for this vowel, i.e. those by county and by class because in both sets of data she stood out, with fronting most advanced in her speech. Similarly, the Essex female informant was excluded from the class comparison.

It would be a mistake to assume that class does have a significant effect within the gender category. For the other two variables, fronting is led both by females from both social classes. Thus, in STRUT, both Buckinghamshire females prevailingly use fronted tokens, which sets them apart from the other female informants. Within the county, the female lead is

shown even more clearly because of the data split into two groups, with males exhibiting little fronting. For GOAT, onset fronting is most advanced in three females: two Buckinghamshire speakers and a Kent MC informant.

The glottaling data also indicate that females are taking the lead. Females use glottal variants almost half of the time, while for males this variant constitutes slightly less than a third of all tokens. Female lead is clearly corroborated by the Kent data, where male and female speakers do not form a homogeneous group. The split results from the fact that females have a significantly higher incidence of glottaling. With respect to this variable, the speech of males closely resembles the 1950s pattern, with little glottaling. Thus, historical comparison of the two points in time only shows the direction of change; i.e. it reveals that glottaling is on the increase. Looking at gender differences within the group, it becomes clear that the change should be interpreted as one led by females rather than a change in the locality.

The present findings provide further evidence that young females are leading in the use of glottal variants of syllable non-initial /t/. Female preference for this variant was reported in a number of sociolinguistic studies (Mees 1987, Holmes 1994, Docherty *et al* 1995, 1997). In addition, glottaling is increasingly associated with young, middle class women. This, as Holmes (1997) comments, indicates that its sociolinguistic significance is changing and the glottal replacement losing its stigma (cf. also Trudgill 1988). Further, Docherty *et al* (1997) refer to a number of studies where the glottal stop is preferred by males, but simultaneously they point out that the data need to be closely examined since in most studies no distinction is made between glottal and preglottallised variants.

The THOUGHT-vowel reveals a significant difference between the genders, with females showing a preference (60%) for a diphthongal realisation over monophthongal ones, the diphthongal variant constituting a third of the tokens in the male speech. Such variants

were already present in the Home Counties speech in the 1950s.

L-vocalisation is an interesting case. The difference between the genders proved to be statistically significant, yet the result should be treated with caution. For both genders vocalised /l/ is the prevailing variant. In comparison with the SED data, where the incidence did not exceed 50%, a strong increase can be observed and the change towards *l*-vocalisation appears to near completion. It cannot be said that either gender is leading the change. Male speakers are on the whole behind Kent and Essex females, yet ahead of Buckinghamshire and Surrey females. Therefore *l*-vocalisation appears to be affecting different areas at a different pace. Indeed, a comparison between the counties reveals that Surrey speakers remain conservative. Its MC speech shows an identical incidence of *l*-vocalisation as the 1950s data. Again, a split between MC and WC speakers might indicate that the latter group is taking lead. With 69.9% of vocalised tokens Buckinghamshire falls behind Kent and Essex, yet the relative increase is comparable in the two counties.

The last of the changes showing gender significance is *th*-fronting. It is also the only change where male speakers are ahead as regards the usage of the new variant. Male speakers prevailingly used the non-standard realisations (66.0%), while for females they constituted a third of the tokens. Also, in the male speech the labiodental variants were more common than dental realisations with a labial gesture. Assuming the gradual character of this change, males are clearly a step ahead.

Th-fronting is another London feature spreading rapidly in all directions. The change has been reported for other urban centres by Wakelin (1977) for Leeds, Kerswill & Williams (1994) for Milton Keynes, Trudgill (1988) for Norwich (where they were absent in 1968) and Milroy (1996) for Derby. This is explained by its multiple causation, both linguistic and attitudinal. Trudgill (1988) attributes it both to the phonological markedness of dental fricatives and the covert prestige of WC London accent. Milroy (1996) adopts a similar stand,

remarking that social causes are a likely trigger. The quickened speed is also attributed to the influence of the media.

While not negating the involvement of social factors, the present study lends support to the linguistically motivated nature of this change. Since labiodental variants are a stereotypical feature of a broad London accent, it follows that they should be well established in the speech of Londoners. Yet my female Cockney informant had all the three variants in almost equal proportions, i.e. 3 standard [ð], 2 intermediate variants [ðᵛ] and 3 clearly labiodental realisations [f]. Admittedly, the male informant consistently used a labiodental articulation, which is consistent with the observation about the male role in the introduction of this innovation. Also, non-standard realisations were present in one of the RP speakers again appearing in voiceless realisations. It is unlikely that the adolescent's adoption of the variant was motivated by the covert prestige of the Cockney accent, due to his social status. More importantly, these non-standard forms seemed to be beyond the level of awareness. Similarly, my MC male informant from Essex who had the feature well established in his speech, did not make any efforts towards „speaking proper" in the formal word-list task. He used labiodental and intermediate variants, with the exception of *weather*, a lower frequency lexical item.

On the other hand the *th*-fronting data and the lead of women in all the other changes in the study fit in with Eckert (1997) who presents the conclusions from Trudgill's (1974) and Labov's (1990) studies where explanations are given for each gender's lead in a different type of sound changes. Labov states that women fall behind in the use of variants which are sufficiently well established to be stigmatised, while they lead in changes limited to the local community. This would explain women's slow adoption of the new, labiodental variants of (th). Eckert does not believe that, because, he claims, female lead in changes can be sought in prestige, understood as overt prestige orientation resulting from their powerless position in society, as accounted for in Trudgill's (1974) data. The adoption of the glottal stop by young

females is not an overt reflection of the strategy for "upward mobility" (Eckert 1977: 215) since this variant is not the standard. However, as it has acquired new, redefined prestige (Holmes 1997) it might in turn be treated as a model. Holmes attributes its rapid adoption in New Zealand due to the perception of this variant as "young RP".

4.10.2 "A classless dialect?"

Contrary to expectations, class proved not to be a good indicator of change. Only two variables show a statistically significant difference between the social classes. These are the GOOSE-vowel, a variable which shows a three-way significance and somewhat surprisingly the FACE-vowel, which also shows significant county differences. In GOOSE, WC speakers lead the move towards front realisations, while in FACE, they use almost exclusively non RP type realisations with a lowered onset (95.8%). Unlike for the former variable, such usage is not an indication of a change, but could be interpreted as a survival of old local dialect forms. Pronunciations with the [ɛɪ] ~ [ëɪ] type onset were a feature of all the four localities investigated, as corroborated by the SED evidence. Admittedly, in a number of other variables, WC speakers appear to be ahead in using new variants, yet these differences were not significant. The explanation accounting for the lack of class differentiation in the data can be twofold. Possibly, the coming down of class barriers, impressionistically observed in a number of popular articles might be finding its linguistic reflection. The present findings would then confirm the classless character of EE. Alternatively, the result can be attributed to the youngest group being peer rather than society oriented (Kerswill & Williams 1997). Consequently, class divisions of the adult society are less important than peer pressure.

4.10.3 "...is sweeping southern Britain?"
As the analysis shows, eight variables show county significance, i.e. a lack of uniformity between the four localities investigated. For five of the variables, the counties are grouped into two sets, Buckinghamshire and Kent vs. Essex and Surrey. This is true both for the realisations which came about as a result of

sound changes as well as variables, for whose different realisational variants preference is shown depending on the county.

The first set is most affected by vowel fronting, as exemplified by GOOSE and GOAT. Interestingly, in the case of GOOSE the incidence of front, central, and back variants is virtually identical in the two counties, with the majority of realisations in the central region, but already a fifth of the words pronounced with a front vowel. For GOAT, Buckinghamshire speakers prevailingly use tokens with a fronted offset, Kent speakers closely following. Buckinghamshire also has a half of fronted realisations of the STRUT vowel. Here, the county stands out against the other three.

No plausible explanation can be provided for such grouping of the counties geographically apart. The adolescents from the Buckinghamshire and Kent are children of London parents. Tentatively, their front realisations of the STRUT-vowel could be attributed to the influence of their parents' speech. However, this does not explain the leading role of the two counties in two other moves towards fronted realisations. On the other hand, offset fronting might be easier to account for in the case of Buckinghamshire, since such variants were already present in the SED data. They were observed for the MOUTH-vowel, but were almost absent from the GOAT-vowel, while the present data show here more fronted realisations.

Buckinghamshire and Kent also favour diphthongal variants of THOUGHT, while such realisations constitute only a third of the tokens in Essex and Surrey. The result as to whether this is a shift in preference or a change is inconclusive since both monophthongal and diphthongal pronunciations were recorded in the SED data. However, two main differences between the present data and the 1950s can be observed. Rhoticity in words such as *horse, door*, variably present in 1950s rural Buckinghamshire is completely absent from the present data. Also, more closer qualities of the vowel of the type [ǫ] are now also present alongside

more open ones [ɔ̞] in all the four localities.

As regards the TRAP-vowel, the former, 1950s realisational differences between the four localities are less sharp now. The whole range [a̠] ~ [æ] ~ [ɛ̞] is present in each locality, without a prevalence of one variant, with the exception of Surrey, which has few closer realisations. A certain levelling tendency can then be observed, as 1950s Buckinghamshire had an opener range, while Essex was characterised by closer variants, recognised as EE (Rosewarne 1994b).

All the four localities use more open variants of FACE [ɛɪ], the difference being that in Buckinghamshire and Kent this is the prevailing realisation, other, closer ones being marginal, while Essex has a slightly wider range, including closer realisations [ẹɪ], like in RP. The usage of open-mid realisations of FACE indicates the stability of this realisation, as such variant was dominant in the 1950s in all the four localities, as the SED shows. Variants with a more open onset of the type [ɛ̞ɪ]~ [æɪ] are sporadic in the present data, thus not supporting Rosewarne's (1994b) claims about the EE quality of this vowel.

Glottaling and *l*-vocalisation, the two phonetic characteristics which spring to mind when characterising EE were touched on in the previous sections. It is also worth emphasising that glottaling was in fact a feature of rural Buckinghamshire, and its presence in the current speech cannot be attributed to the general increase in glottaling. As said before, glottaling essentially reveals a pattern very similar to the 1950s, while *l*-vocalisation has substantially increased in the Southeast, a shift to vocalised variants being almost complete in Essex and Kent, while Surrey remains more conservative.

New changes are *str-* and *th*-fronting which were not observed in the SED. The latter appears to be affecting all counties uniformly, while the former is probably the speaker's idiosyncrasy.

4.10.4 EE, RP, and Cockney

As shown above, EE is in a sense a variety between RP and Cockney as regards the incidence of glottaling and *l*-vocalisation. Such statement, however, is an oversimplification of the issue as geographical differentiation must not be ignored. Thus, Essex speakers show an incidence of glottaling identical as RP speakers, while in the case of *l*-vocalisation, Kent and Essex informants closely resemble Cockney speech in quantitative terms. Also, it has to be remembered that the difference between EE, RP and Cockney lies in the contexts where glottaling is allowed. Even this limitation is shifting, however, with glottaling in RP extending into more contexts (Wells 1998c) and the analogous development in British urban varieties. The source of those changes is generally attributed to Cockney.

However, it appears that in other respects London is not a source of influence on the speech of the Home Counties. Back vowel fronting, as exemplified by the offsets of MOUTH and GOAT is advanced in EE, while no such tendency is present in the Cockney data. Interestingly, as regards GOOSE-fronting, Cockney appears to be lagging behind Estuary English, with most of the Londoners' two vowels having a central or central-retracted realisation.

In the case of other EE realisations, such as lowering of the onset of FACE, of the type [æɪ] or GOAT [ʌʊ], Cockney clearly is not the source of influence either as it has in both cases a less open starting point. In fact, it bears closer resemblance to RP.

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General conclusions

The present study is a contribution to the problem of Estuary English. Examination of the phonetic make up of the variety revealed that the extent of geographical variability alone allows us to conclude that we are dealing with a number of distinct accents, although the levelling tendencies, reported elsewhere (cf. Kerswill 1994; Cheshire, Edwards and Whittle 1993, Watt 1998) appear to be at work. These tendencies, as Altendorf (1998) notes, are taking place in dialect-dialect as well dialect-standard dimensions. Indeed, RP is gradually incorporating features which previously fell into the scope of non-standard accents (cf. Windsor-Lewis 1990, Wells 1994a). The RP data from the present study also corroborate such claims.

The regional accents of the Southeast indeed reveal a weaker presence of old regional variants. At the same time, Estuary English appears to be a part of more general changes, such as increase in glottaling and GOOSE-fronting, which are taking place in varieties of English world-wide. At the same time, changes recognised as Estuary English are clearly not happening. An example can be the vowel of PRICE whose realisations resemble both old local pronunciations and the present-day standard, with no shifting tendencies present.

Interestingly, Estuary English appears not to be affected by Cockney. The link between the accent of the capital and the rest of the Southeast, implied in most definitions, is disproved by the present data. Indeed, typically Cockney features are present in Estuary English speech, yet the picture is complicated by the multiple causation of linguistic change. Currently, those variants are no longer uniquely Cockney or Estuary English.

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APPENDIX 1

THE QUESTIONNAIRE

1. **Cold** makes you shiver. What makes you sweat?

2. What do you call the evil being that lives in hell, has horns and a tail?

3. What is the animal that goes 'squeak' that cats are fond of catching?

4. What do you call the small animal with leathery wings that is active at night?

5. What happens to water at 100 °C?

6. "Granny Smith's" are _____ ?

7. What is the dirt that covers the carpet and the furniture when you don't hoover?

8. What is the name of the bird which has large eyes, hunts at night and says 'too-whit too-whoo'?

9. Look both ways before you cross _____

10. A boy who has the same parents as you is your _____

11. If your tea is too hot, you blow on it to _____

12. I saw a couple of my friends _____ the people who filled the hall.

13. To make a parcel, you need brown paper and a bit of _____ to tie it up.

14. What is the yellow, spreadable stuff that you make from milk?

15. Someone who is very fit and sporting and must always be doing something, is very

_____

16. When you refuse, you say _____ ·

17. You go to the hairdresser's to _____

18. When someone breathes loudly while sleeping, what does this person do?

19. On the 1st of April you make a person an April _____

20. What is the name of the animal that gives milk?

21. You enter the house through _____

22. The young ones of a cat are _____

23. What is the opposite of 'warm'?

24. When something goes off, it goes _____?

25. A room has four _____

26. The members of the family are mother, father and _____ .

27. And if there's only one?

28. What are wedding rings made of?

29. What are the various parts of the day: morning, _____, evening, night.

30. Shoes that cover not only your feet, but also a part of the legs are called _____

31. She ate the _____ cake, there was nothing left!

32. Brown bread is also known as _____ bread.

33. When you share out cards at the start of a game, you _____ them

34. The children of your aunt and uncle are your _____

35. A person is rich when they have a lot of _____

36. The day after Monday is _____

37. What is the name of the parts of the legs that you stand on?

38. What number comes after seven?

39. When I **have** an apple I _____ it.

40. When you **have had** an apple you _____ it?

41. What do you say to visitors when you put food on the table and you want them to have it?

42. When you want to have a swim, where do you go?

43. You cut an apple in half, you give one half to your friend and you take the _____

44. Manx cats have no _____

45. If someone has eggs for breakfast **every day**, you say they _____ have eggs.

46. Your mother's brother is your_____

47. I don't want to have my hair cut **short**, I just want to have a _____

48. The number that comes before three is _____

49. To make food taste better, you may add pepper and _____

50. What is the colour of the sky?

51. GB stands for _____

52. If an object is fragile, it says on the package: _____ with care.

53. It won't even take a week, just a _____ days, I don't know how many, though.

54. A person whom you don't know is a _____ to you.

55. If you are being blamed for something you haven't done, you say 'It's not my _____'

56. There's _____ to life than just work!

57. What comes out of a chimney?

58. The place where you cook is called kitchen, the place where you sleep is a _____

59. What do you carry your shopping in?

60. Children may be of either sex: they are either boys or _____

61. What do you call a large animal that you can ride on?

62. What do you call the animal that throws up small mounds of earth in the fields?

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63. If something had never been worn and you just got it from the shop, what would you say it was?

64. If you are asked whether you take milk in your tea, you might answer: Yes, but not much, only _____

65. I stopped borrowing **my sister's** computer, because now I have my _____

66. On the entrance door there's sometimes a label saying 'push' or _____

67. Sometimes you don't drink straight out of a can, but use a _____ to suck the liquid up.

68. Hair can be wavy, curly or just _____

69. What colour is milk?

70. What is the name of the long green vegetable that you cut up and put in salads?

71. When you put gum into your mouth what do you do with it?

72. What is this part of the body called?

73. When someone's not well, they are _____

74. How would you emphasise that you really like a T-shirt? It's _____ a nice T-shirt!

75. Your parents are your _____ and your _____

76. What does the teacher write on during the lesson?

77. What do you say when you offer someone a chair?

78. A man who has lost his hair is _____

79. You can use a hairbrush or a _____ to tidy your hair.

80. The bank is closed now, you'll have to wait _____ Monday.

81. What is this part of your leg called?

82. What do you use a knife for?

83. What is the animal that goes miaow?

84. What covers the top of the building?

85. What is the grey powder left after tobacco or coal has been burnt?

86. Open your _____ wide and say 'aaah'.

87. There's **yesterday**, there's **today** and there's _____

88. What is the name of 1 January ?

89. What do you put in tea or coffee?

90. - Do I have to wear a skirt?

- No, you can also wear _____

91. Vegetarians don't eat _____

92. You boil water for tea in a _____

93. When something is boring you can say it's _____

94. What do you call these short hairs above your eyes?

95. When snow melts, what do you say it does?

96. This product contains no animal _____, only vegetable oils.

97. When someone's had too much beer you say they are _____

98. If the door blew open on a cold day, you would get up and _____

99. What do you put on your feet?

100. If somebody has **nearly** finished, they have _____ finished it.

101. What do you use to climb up onto the roof of the house, for instance?

102. What number comes after three?

103. And after thirty nine?

104. What do you put on crumpets?

105. What do you call the part of the room that all the furniture and carpet goes on top of?

106. What do you call jacket and trousers when they match?

107. If something happened seven days back from now you'd say: It happened a week _____

108. I am a young person, but my grandmother is _____

109. Can I have a bottle of mineral _____

110. What is the month after March?

111. What do miners get out of the ground?

112. A boy is his parents' son, a girl is their _____

113. After school you go back _____?

114. Before we hear thunder, we see _____

115. When you take **everything** out of your bag, what is left?

116. A place where you are educated is called _____

117. I didn't manage, but at least I _____

THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993, corrected 1996)

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k g	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	N		
Trill	B			r					R		
Tap or Flap				ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	L			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

Clicks		Voiced implosives		Ejectives	
⊙	Bilabial	ɓ	Bilabial	ʼ	Examples:
ǀ	Dental	ɗ	Dental/alveolar	pʼ	Bilabial
ǃ	(Post)alveolar	ʄ	Palatal	tʼ	Dental/alveolar
ǂ	Palatoalveolar	ɠ	Velar	kʼ	Velar
ǁ	Alveolar lateral	ʛ	Uvular	sʼ	Alveolar fricative

OTHER SYMBOLS

ʍ	Voiceless labial-velar fricative	ɕ ʑ	Alveolo-palatal fricatives
w	Voiced labial-velar approximant	ɺ	Alveolar lateral flap
ɥ	Voiced labial-palatal approximant	ɧ	Simultaneous ʃ and x
ʜ	Voiceless epiglottal fricative		Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary.
ʢ	Voiced epiglottal fricative		
ʡ	Epiglottal plosive	k͡p t͡s	

VOWELS

Front   Central   Back

Close   i • y ———— ɨ • ʉ ———— ɯ • u

Close-mid   e • ø —— ɘ • ɵ —— ɤ • o

Open-mid   ɛ • œ — ɜ • ɞ — ʌ • ɔ

Open   a • ɶ ———— ɑ • ɒ

Where symbols appear in pairs, the one to the right represents a rounded vowel.

DIACRITICS

Diacritics may be placed above a symbol with a descender, e.g. ŋ̊

̥	Voiceless	n̥ d̥	̤	Breathy voiced	b̤ a̤	̪	Dental t̪ d̪
̬	Voiced	s̬ t̬	̰	Creaky voiced	b̰ a̰	̺	Apical t̺ d̺
ʰ	Aspirated	tʰ dʰ	̼	Linguolabial	t̼ d̼	̻	Laminal t̻ d̻
̹	More rounded	ɔ̹	ʷ	Labialized	tʷ dʷ	̃	Nasalized ẽ
̜	Less rounded	ɔ̜	ʲ	Palatalized	tʲ dʲ	ⁿ	Nasal release dⁿ
̟	Advanced	u̟	ˠ	Velarized	tˠ dˠ	ˡ	Lateral release dˡ
̠	Retracted	e̠	ˤ	Pharyngealized	tˤ dˤ	̚	No audible release d̚
̈	Centralized	ë	̴	Velarized or pharyngealized	ɫ		
̽	Mid-centralized	e̽	̝	Raised	e̝	(ɹ̝ = voiced alveolar fricative)	
̩	Syllabic	n̩	̞	Lowered	e̞	(β̞ = voiced bilabial approximant)	
̯	Non-syllabic	e̯	̘	Advanced Tongue Root	e̘		
˞	Rhoticity	ɚ a˞	̙	Retracted Tongue Root	e̙		

SUPRASEGMENTALS

ˈ	Primary stress
ˌ	Secondary stress
	ˌfoʊnəˈtɪʃən
ː	Long eː
ˑ	Half-long eˑ
̆	Extra-short ĕ
ǀ	Minor (foot) group
ǁ	Major (intonation) group
.	Syllable break ɹi.ækt
‿	Linking (absence of a break)

TONES AND WORD ACCENTS

LEVEL			CONTOUR		
e̋ or ˥	Extra high	ě or ˇ	Rising		
é ˦	High	ê	Falling		
ē ˧	Mid	e᷄	High rising		
è ˨	Low	e᷅	Low rising		
ȅ ˩	Extra low	e᷈	Rising-falling		
ꜜ	Downstep	↗	Global rise		
ꜛ	Upstep	↘	Global fall		

APPENDIX 3
PHONETIC TRANSCRIPTIONS

For the sake of clarity, one county is presented at a time. A minus sign indicates that the item was not elicited. Incidental material is not included. Sequences /vowel+l/ are not presented for the vocalic variables, since they were excluded from the analysis.

	BUCKINGHAMSHIRE			
	MC		WC	
	FEMALE	MALE	FEMALE	MALE
FLEECE				
deal	ɪi	iᴛ	i	iᴛ
eat	i	ʔi-	i	ʔi
eaten	—	—	—	ɪi
feet	i	ɪi	ɪi	ʔi
heat	—	—	—	—
wholemeal	—	—	—	ʔi
meat	ɪi	t̯ᴛᴛ i	ɪi	ɪi
TRAP				
active	—	æ	æ	—
ankle	ɛ	æ	æ⊥	æ
apples	æ	ɑ⊥	ɑ⊥	æᴛ
ash	ɛᴛ	æ	æ	ɑæ'
bad	—	ɑ	—	ɑ'
bag	ɛ	æ'	æ'	æ⊥
bat	—	æᴛ	—	—
cat	ʲæ	æᴛ	æᴛ	ɛ

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fat	æ⊥	æ	æ	ɑ⊥
handle	ɛ	ɑ⊥	ɑ⊥	ɛ
ladder	ɛ⟙	ɑ	æ⊥	ɑ⊥
STRUT				
butter	ʋ⟙	ʌ₊	ʋ₊	ɑ,
butter1	ʋ	ʌ₊	ʋ₊	—
brother	ʋ	ə⟙	ʋ₊	ʌ₊
cousins	ʋ₊	ʌ₊⊥	ʋ₊₊	ʌ₊
cucumber	ʌ₊⟙	ə₋	ʌ₊	ʋ
cut	ʋ₊	ʋ₊	ʋ₊	ʋ₊
drunk	ɑ	ɑ	ɑ	ʋ
dust	ʋ₊₊	ʌ₊⊥	ʋ⟙	ʌ₊
dull	—	ʌ⊥	—	—
mother	ʋ₊	ʌ₊	ʌ₊	ʌ₊
money	ʋ₊	ʋ	ʋ₊	ʌ₊
nothing	ʋ₊	ʌ₊	ʋ₊	ɑ
other	ʋ	ʌ	ʋ₊	ʌ₊
shut it	ʋ₊	—	ʋ	—
uncle	ʋ₊	ʌ₊	ʋ₊	ʌ₊
THOUGHT				
door	ɔ²ᶜ₊₊	ɔ²ᶜ⊥	ɔ²ᶜ₊₊	ɔ²ᶜ₊₊
floor	ɔ²ᶜ₊	ɔᶜ⊥	ɔᶜ²	ɔᶜ²
four	ɔ²ᵒ⟙	ɔ²ᶜ₊	ɔᶜ²	ɔᶜ²

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more	ɔ̟	ọ̗ˀ	—	ọ̗ˀ
snore	ɔ̟ˀ	ɔ̟ˀ	ɔˀ	ɔ̟
daughter	ɔ̟	ọ̗	ɔ̞	ọ̗
water	ɔ̞̞	ɔ̞̞	ọ̗ˀ	oˀ
water 1	ɔᵛ	o̗	ɔ̞ˀ	—
forty	ɔˀ̞	ọˀ̗	ɔ̞̞ˀ	ọ̗ˀ
horse	ɔ̞ᵛ	oᵛ	ọ̗ˀ	o̗ˀ
board	ɔ̟	o̗	o̗ˀ	o̗̗ˀ
GOOSE				
blue	ʏ	θᵛ	ɘʏ	ʏ₋
boots	ɘʏ	t̗	ɘ̞	ɘt̗
shoes	t̗ᵞ	ɮ̠	t̗̗	ɮ̟ᵞ
suit	t̗̗	ɮ̗̗	ɘʏ	ɮ̗̗ᵗ̗
roof	t̗	t̗̗	t̗̄	ɘᵛ̗
cucumber	t̠ ̗	ɮ̠ ̗	t̟	ɮ̠
afternoon	tᵞ̗̗	t̗ᵛ̗̗	ɘʏ	ɘɮ
Tuesday	ɘ	ɮ̠	ɘ	ɮ
chew	ɘ̞̞	ɮ̠	ɘ̞̞	ɮ̗
new	ɮ̗	ɮ	ɘᵞ̗̗	ɵ̠ʏ
FACE				
april	ɛḬ	ɛI	ɛ̗I	ɛI̠
day	ɛI̠	ɛI̠	ɛ̗I	æ̟I
eight	I̠ɛ	ɛ̗Ḭ	I̗ɛ	æ̟I

great	ɛɪ	ɛ̰ɪ	ɛɪ	ɛ̰ɪ
straight	ɛ̰ɪ	ɛɪ	ɛɪ	ɛ̰ɪ
stranger	ɛɪ	ɛ ɪ	ɛɪ	ɛɪ
tail	ɛɪ	ɛɪ	ɛɪ	æ̰ɪ
Tuesday	ɛɪ	ɛɪ	ɛɪ	æ̰ɪ
ate	ɛ̰ɪ	æ̈ɪ	ɛɪ	–
PRICE				
eyebrows	ɑ̰ɪ	ɒ̰ɪ	ɑɪ	ʋɑɪ
child	ɑɪ	ɑθ	ɑɪ	–
lightning	ʋ̰ɪ	ɑ̰ɪ	ɑɪ	ʋ̰ɪ
tried	ɑɪ	ʋ̰ɑɪ	ʋ̰ɪ	ʋɑɪ
white	ɑɪ	ʋ̰ɪ	ʋ̰ɪ	ʋɑ̰
GOAT				
ago	əɤ	ə̰ɤ	əɤ	ɤ̰
almost	ə̰	əʊ	ə̰ɤ	ɜ̰ʊ
comb	ə̈	əʊ	ʔ̰ɤ	əʊ
home	ə̰ɤ	əʊ	əɤ	ɔ̰̈ɤ
no	ə̰ɤ	ɔ̰ʊ	ə̰ɤ	ɔ̰̈ɤ
own	əɤ̈	ɔʊ	ə̰ɤ̈	ɔ̈ʊ
road	ʋ̰ɤ	əʊ	ə̰ɤ	ɔ̈ɤ
smoke	əɤ	əʊ	ə̰ɤ	ɔ̈ɤ
tomorrow	əɤ	ə	əɤ	ə̰
MOUTH				

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cow	æɔ	æʊ	æʊ	æɣ
eyebrows	ʊɣ	aɤ̞	əö	ə̣ö
mouse	ʌɔ	ʌʊ̞	—	əɔ
mouth	æɔ̞	æɔ	æʊ	æɣ
trousers	əɣ	əɔ̞	əɣ	əʊ
GLOTTALIN				
bat	ʔt	ʔt	ʔ	ʔt
boots	ʔ	ʔ	ʔ	ʔ
butter	tˢ	t	tˢ	tˀ
butter 1	ʔt	tʰ	ʔ	ʔ
cat	ʔtʰ	ʔt	ʔt	ʔt
cut	ʔ	ʔt	ʔt	ʔ
haircut	ʔt	ʔ	ʔ	ʔ
daughter	tˢ	t	tʰ	tʰ
eat it	ʔt ʔ	ʔt ʔ	ʔ ʔ	ʔt ʔ
ate/~~eaten~~ it	t ʔ	ʔt ʔ	ʔt ʔ	tʰ ʔ
eight	ʔ	ʔt	ʔ	ʔt
fat	ʔt	ʔ	ʔ	ʔt
feet	ʔ tʰ	ʔtʰ	ʔ	ʔ
fault	ʔtʰ	t	ʔt	t
forty	t	t	ʔ	t
Great Britain	ʔ tˀ	ʔ t	ʔ ʔ	ʔ ʔ
hot	ʔ	ʔt	ʔ	ʔ

kettle	ʔtʰ	ʔtʰ	ʔt	ʔt
lightning	ʔ	ʔ	ʔ	ʔ
little	ʔtʰ	ʔt	ʔt	–
meat	ʔ	ʔt	ʔt	ʔt
salt	tʰ	t	tʰ	tʰ
shut it	ʔ ʔ	–	ʔ ʔ	–
sit down	ʔ	ʔ	–	ʔ
suit	ʔt	t	ʔ	ʔt
straight	ʔ	ʔ	ʔ	ʔ
water	tʰ	tʰ	t̃	tʰ
water 1	tʰ	ʔt	ʔtʰ	–
white	ʔ	ʔt	ʔt	ʔt
STR CLUSTER				
straight	ʃ	s	s	ʃ
stranger	s	s	s	ʃ
straw	ʃ	s	s	ʃ
string	sʃ	s	s	ʃ
TH-FRONT				
brother	ð	ð	ð̌	ð
father	v	ð	ð̌	ð
mother	ð	ð	ð	ð
mouth	θ	f	f	θ

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nothing	f	θ	f	θ
other	∨	ʃ	∨	ʃᵛ
L-VOCALISAT				
ankle	t	ot	Oᵘ	ʒᵛ
apples	t	℧ᵛ	t	O₊
april	O	O	O²	O
boils	ʒ	—	t	℧
child	t	O₋	t	—
uncle	℧ᵗ	℧₊₋	t	℧
children	℧	t	t	℧₎
deal	O℧₋	t	t	t
devil	Ö	O℧₊	℧ᵛ₊	Ö
pool	θ℧	·℧	θᴸ	θᴸ
girls	t	t	ʒ	O꜀
handle	℧℧	℧℧	t	℧ᵗ
fool	℧	℧	ℓ	℧ℓ
ill	Oʒ	t	ℓ	O²
kettle	℧℧₊	θ℧	℧₋₋	℧
little	℧₋	t	t	—
school	℧	℧	℧ℓ	℧ℓ
milk	ℳ —	℧	℧	℧₋
owl	℧	℧	℧	℧ʒ
dull	—	t	—	—

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	MC FEMALE	MC MALE	WC FEMALE	WC MALE
almost	ʊ	ʊ	ʊ	oʊ
always	ʊ	ʊ	ʊ	ʊ
bald	O	ʊ	oᵗ	ʊ
fault	ʊ	ʊ	ʊ	oʊ
walls	ʊ	ʊ	ʊ	ʊ
cold	ʊ	ʊ	ʊ	ʊ
coal	ʊ	ʊ	l	ʊ
gold	ʊ	ʊ	ʊ	ʊ '
mole	ʊ	ʊ	l	l
old	ʊ	ʊ '	ʊ	ʊ
shoulders	Y	Y	ʊl	ʊ
salt	ʊ	ʊ	ʊ	ʊ
pull	ʊ	l	l	l
tail	ʊ	ʊ	oʊ	oʊ
till	—	—	t	ʊ
YOD				
new	j	j	∅	∅
New (Year)	—	j	∅	∅
suit	j	j	∅	∅
Tuesday	j	j	j	j

	ESSEX			
	MC		WC	
	FEMALE	MALE	FEMALE	MALE
FLEECE				

deal	$i\,^i$	$i\,_\top$	$i\,_{\top\top}$	$i\,_\top$
eat	i	i	$\text{I}\,i$	$\tau\,i$
eaten	—	–	—	—
feet	i	$^?i$	$\text{I}\,i$	$\text{I}\,i$
heat	—	—	$\partial_\perp i$	$\text{I}\,i$
wholemeal	$?i$	$\text{I}_\perp$	$\text{I}^?$	—
meat	$i\,_\top$	$i\,_\top$	$\text{I}\,i$	$?i$
TRAP				
active	$æ$	$æ_\perp$	—	–
ankle	$æ$	ε	$æ_\perp$	ε
apples	$æ$	$æ_{\perp\perp}$	ε	$æ$
ash	$æ$	$æ$	$æ$	$æ$
bad	$æ_\top^?$	$æ_\perp$	—	—
bag	$æ'$	ε'	$æ'$	$æ_\perp$
bat	$æ$	$\partial_\perp$	—	$æ$
cat	$^\partial æ$	ε	$æ$	$æ$
fat	$æ$	∂	$æ$	$æ_\perp$
handle	ε	∂	ε	$\varepsilon_\top$
ladder	ε'	∂	ε	ε
STRUT				
butter	$ʔ$	$\wedge$	$ʔ$	$\wedge$
butter1	$ʔ_{\top\perp\perp}$	$\wedge_\top$	$ʔ_-$	$\wedge$
brother	$ʔ_-$	$\wedge_+$	$\wedge_+$	$\wedge$

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cousins	∧	ʋ	∧	∧
cucumber	∧	∧	ʋ	∧
cut	∧ ʋ	∧	ʋ	ʋ
drunk	∧	∧	ʋ	∧
dust	ʋ	∧	ʋ	∧
dull	—	∧	ʋ	—
mother	∧	∧	ʋ	∧
money	ʋ	ʋ	ʋ	∧
nothing	∧	∧	∧	∧
other	∧	∧	ʋ	∧
shut it	—	∧	—	—
uncle	ʋ	∧	∧	∧
THOUGHT				
door	Ɔ	Ɔ O	Ɔ	Ɔ
floor	Ɔ³	Ɔ	Ɔ	O
four	Ɔ²	Ɔ	Ɔ	O
more	Ɔ	Ɔ²	O	Ɔ
snore	O²	Ɔ	O²	O
daughter	Ɔ	Ɔ	O	O
water	O	Ɔ	Ɔ	O
water 1	Ɔ	Ɔ	—	O
forty	Ɔ²	Ɔ²	Ɔ²	O²
horse	Ɔ	Ɔ	Ɔ	O

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board	ʊ̣	ɔ˞	ɔ̣˞	ɔ
GOOSE				
blue	ʉ̣	u̲	ɘɪ	ʉ̲
boots	ʏt	ʉ	ʏ	ɘu̲
shoes	ʉ	u̲	ʏ	u̲
suit	t	u̲	tɪ	u̲
roof	ɪ̣	ʉ	ɪ	ʉ
cucumber	ṭ	ʉ̲	ɘθ̣	ʉᵘ
afternoon	ɘʏ	ᵊʉ̲ᵘ	ʏ̣	ʉ̲
Tuesday	θ̣ᵊ	ʊ̲	θ	ʉ̣
chew	ʉ̣	ʉ	ʏᵘ	ᵊʉ̲
new	θᵗ	ʉ	θᵊ	θᵊ
pool	θᵗ	ʊ̲ᵘ	θᵊ	θᵊ
FACE				
april	ɛ̣ɭ	ɛ̣ɪ	ɛ̣ɪ	ɛ̣ɪ
day	æ̣ɪ	æ̣ɪ	æɪ	æɪ
eight	ɛ̣ɪ	ɛ̣ɪ	ɛ̣ɪ	ɛɪ
great	ɛ̣ɪ	ɛ̣ɪ	e̲ɪ	æ̣ɪ
straight	ɐ̣ɪ	ɛ̣ɪ	ɛɾ	ɛ̣ɪ
stranger	ɛɪ	ɛ̣ɪ	æ̣ɪ	–
tail	ɛ̣ɭ	ɛɪ	ɛ̣ɪ	ɛɭ
Tuesday	ɛ̣ɪ	ɛ̣ɪ	æɪ	ɛɪ
ate	ɛɪ	–	–	–

PRICE				
eyebrows	aɪ	aɪ	aɪ	ɑɪ
child	aɪ	aɪ	aɪ	ʋ
lightning	aɪ	aɪ	aɪ	ʋɪ
tried	aɪ	aɪ	aɪ	ʋɪ
white	aɪ	aɪ	aɪ	aɪ
GOAT				
ago	əʊ	əʊ	ʋ	əʊ
almost	o	ʋ	ʋ	oʊ
comb	ʋ	ʋ	əʊ	oʊ
home	oʊ	ʋ	əʊ	oʊ
no	əʊ	əʊ	əʊ	oʊ
own	əʊ	oʊ	—	oʊ
road	əʊ	əʊ	ʒʊ	oʊ
smoke	əʏ	əʊ	əʏ	oʊ
tomorrow	əʏ	əʊ	əʏ	ə
MOUTH				
cow	æʊ	aɔ	aɔ	æɔ
eyebrows	aʊ	aɔ	aɔ	aʊ
mouse	æɔ	—	aɔ	æɔ
mouth	æə	æə	æɔ	æɔ
trousers	aɔ	aɔ	aə	aʋ
GLOTTALIN				

bat	ʔtʰ	tʰ	‒	ʔ
boots	ʔt	ʔt	ʔ	ʔt
butter	tʰ	t	tʰ	tʰ
butter 1	t	t	t	t
cat	ʔt	tʰ	ʔtʰ	ʔtʰ
cut	t	tʰ	ʔ	t
haircut	ʔ	ʔtʰ	ʔ	ʔtʰ
daughter	t	t	t	tʰ
eat it	ʔtʰ	t tʰ	t ʔ	t ʔ
ate/eaten it	t	t˧ tʰ	t ʔ	tˢ ʔ
eight	ʔtʰ	tʰ	ʔt	ʔt
fat	ʔtʰ	tʰ	ʔ	ʔ
feet	ʔtʰ	tʰ	ʔ	ʔtʰ
fault	ʔtʰ	ʔtʰ	ʔtʰ	ʔtʰ
forty	t	ʔt	t	tʰ
Great Britain	ʔ tʰ	ʔ t	ʔ ʔ	ʔ tʰ
hot	tʰ	ʔtʰ	‒	‒
kettle	t	ʔt	ʔt	ʔt
lightning	ʔt	ʔt	ʔ	ʔ
little	ʔtʰ	‒	ʔt	ʔtʰ
meat	ʔtʰ	ʔtʰ	ʔt	ʔtʰ
salt	ʔtʰ	ʔtʰ	ʔ	tʰ
shut it	‒	t tʰ	‒	‒

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sit down	ʔ	—	ʔ	—
suit	ʔtˡ	ʔ tˡ	ʔtˡ	tˡ
straight	ʔtˡ	ʔ tˡ	ʔtˡ	ʔt
water	t	t	t	t
water 1	tˡ	tˡ	—	tˢ
white	ʔtˡ	ʔtˡˡ	ʔ	ʔtˡ
STR CLUSTER				
straight	ʃ	ʃ	ʃ	ʃ
stranger	ʃ	ʃ	ʃ	ʃ
straw	ʃ	ʃ	ʃ	ʃ
string	ʃ	ʃ	ʃ	ʃ
TH-FRONTING				
brother	ð	v	ðˇ	v
father	ð	v	ð	v
mother	ð	ðˇ	ð	ð
mouth	θ	θˇ	θ	θˇ
nothing	θ	θˇ	θ	θˇ
other	ð	v	ð	ðʍ
L-VOCALISAT				
ankle	ʊˡ	ʊˡ	o	o
apples	o	ʊˡ	ɔ̟	oˡ

april				
boils				
child				
uncle				
children				
deal				
devil				
pool				
girls				
handle				
fool				
ill				
kettle				
little				
school				
milk				
owl				
dull				
almost				
always				
bald				
fault				
walls				

cold	ʊ	ʊ	ʊ	ʊ
coal	ʊ⊥	l	ʊ	ʊ
gold	ʊ	ʊ	ʊ	ʊ
mole	ʊ	ʊ	ʊ	l
old	ʊ	ʊ	ʊ	l
shoulders	ʊ	ʊ	ʊ	ʊ
salt	ɔʊ	ʊ	—	ʊ
pull	ʊ	l	l	l
tail	ʊ	o	o	o
till	—	ʊ	—	ʊ
YOD				
new	j	j	∅	∅
New (Year)	—	—	—	—
suit	j	j	∅	∅
Tuesday	j	j	j	∅

	KENT			
	MC		WC	
	FEMALE	MALE	FEMALE	MALE
FLEECE				
deal	iᴛ	iᴛ	iᴛ	iᴛ
eat	əˌi	əi	əi	ɪi
eaten	—	əi	—	—
feet	ɪi	ɪi	əi	ɪi

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heat	—	i	$\mathrm{I}i$	$\mathrm{I}_{\mathrm{T}}i$
wholemeal	—	$i\partial_{\perp}$	ι_{T}	$\mathrm{\mathcal{E}}i$
meat	$\tilde{n}i$	i_{T}	$\tilde{n}i$	$\mathrm{I}i$
TRAP				
active	$\mathrm{æ}$	$\mathrm{æ}$	$\mathrm{æ}$	—
ankle	$\mathcal{E}$	$\partial_{\perp\perp}$	$\mathrm{æ}_{\perp\perp}$	$\mathcal{E}_{\mathrm{T}}$
apples	$\mathrm{æ}_{\perp\vdash}$	$\mathrm{æ}_{\mathrm{T}}$	$\mathrm{æ}$	$\mathrm{æ}$
ash	—	$\mathrm{æ}$	$\mathrm{æ}$	$\mathrm{æ}_{\perp}$
bad	—	∂	—	$\mathrm{æ}$
bag	$\mathrm{æ}_{\perp}$	$\mathrm{æ}_{\mathrm{T}}$	$\mathrm{æ}$	$\mathrm{æ}$
bat	–	$\mathrm{æ}$	$\mathrm{æ}$	–
cat	$\mathrm{æ}$	$\mathrm{æ}_{\mathrm{T}}$	$\mathrm{æ}$	$\mathcal{E}$
fat	$\mathrm{æ}$	$\mathrm{æ}_{\mathrm{T}}$	—	$\mathcal{E}_{\mathrm{T}}$
handle	$\mathcal{E}$	$\partial_{\perp}$	$\mathcal{E}$	$\mathcal{E}$
ladder	$\mathrm{æ}_{\perp}$	$\partial_{\perp}$	$\mathcal{E}_{\mathrm{T}}$	$\mathcal{E}_{\mathrm{T}}$
STRUT				
butter	$\mathrm{\mathfrak{v}}_{\mathrm{T}}$	$\wedge_{+}$	$\mathrm{\mathfrak{v}}$	$\mathrm{\mathfrak{v}}$
butter1	—	$\mathrm{\mathfrak{v}}_{+}$	$\mathrm{\mathfrak{v}}$	$\mathrm{\mathfrak{v}}_{\mathrm{T}}$
brother	$\mathrm{\mathfrak{v}}$	$\wedge$	$\mathrm{\mathfrak{v}}$	$\mathrm{\mathfrak{v}}$
cousins	$\mathrm{\mathfrak{v}}_{+}$	$\wedge_{+}$	$\mathrm{\mathfrak{v}}_{\ast}$	$\mathrm{\mathfrak{v}}_{+}$
cucumber	$\wedge$	$\wedge$	$\wedge$	$\mathrm{\mathfrak{v}}_{\perp-}$
cut	$\mathrm{\mathfrak{v}}_{\mathrm{T}}$	$\underline{\mathfrak{v}}$	$\mathrm{\mathfrak{v}}_{+}$	$\mathrm{\mathfrak{v}}$
drunk	$\wedge_{\scriptscriptstyle\circ}$	$\mathrm{\mathfrak{v}}$	$\wedge_{\scriptscriptstyle\circ}$	$\wedge_{+}$

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dust	ℛ	∧₊ᵓ	∧₊	∧ᵧ
dull	—	—.	—	∧ᵓ
mother	∧	∧ᴛ	∧	∧
money	ℛ	∧	∧	ℛ₊
nothing	ℛ̲	∨	∧ᵓ	∧ᵓ
other	ℛ	∧ᵓ	∧	∧
shut it	ℛ	∧	—	—
uncle	∧₊₊	∧ᵓ	ℛ₊₊	ℛ
THOUGHT				
door	ᓂℛ	ᓂₜₜℂ	ᓂℛₜ	ᓂℛ
floor	ᓂₜₜℂ	Oᴛʳ	ᓂℂℛₜ	ᓂₜₜ
four	ᓂℛℂ	Oʳ	Oᴛᵊ	ᓂᵊ
more	ℂᵊₜ	Oᵊ	Oℛ	ᓂᵊ
snore	ᓂᵊₜₜℂ	Oᴛ	O	ᓂₜₜℂ
daughter	Oᵛ₊ᵢ	Oᴛᵘ	ᓂℂᵛ₊	ᓂᵛℂ
water	Oᵛ	O	ᓂᵛ	Oᵛ
water 1	Oᵛᴛ	Oᵛ	Oᴛᵛ	Oᵛ
forty	Oᵘᴛ	Oₗ	Oᴛᴛᵛ	Oᵘ
horse	Oᴛᵘ	ᓂᵊₓₜℂ	Oᵛ	Oᴛ
board	Oᵛ	Oᴛᴛ	Oᵛ	O
GOOSE				
blue	ꓱꓲ	ꭣ	ꓱ	ꭣ
boots	Υꓲ	ꭣ	Υ	ᴜ

shoes	ɘI	ʉ	ɘY	ʉ
suit	t	ʉ	YI	t
roof	ʔʉ	ʉ	øY	I
cucumber	t	ʉ	ʉ	θ
afternoon	tu	ʉ	θʉ	ʔθ
Tuesday	—	t	ɘθ	θ
chew	ɘ	ʊ	θ	YI
new	ʔθ	ʉY	ʉ	tY
FACE				
april	ɛI	ɛI	ɛI	ɛI
day	—	ɛI	æɛI	ɛI
eight	æI	ɛI	æI	ɛI
great	ɛI	ɛI	æI	ɛI
straight	æI	ɛI	æI	ɛI
stranger	ɛI	ɛI	ɛI	ɛI
tail	æI	æI	æI	æI
Tuesday	—	I	æI	ɛI
ate	—	—	—	—
PRICE				
eyebrows	əI	aI	aI	ʌI
child	əI	ɒʳ	aI	əI
lightning	aI	əI	aI	əI
tried	aI	ɒI	ɒa	—

white	aɪ	aɪ	ɒɪ	aʊ
GOAT				
ago	ə̩ʏ	—	oʊ	əʏ
almost	ɐʏ	əʊ	oʊ	—
comb	əʊ̨	ɐ	əʊ	ɐʏ
home	ɐʏ	ɔ	ə̨ʊ	ʌʊ
no	ɐʏ	əʊ	ɐʊ	əʏ
own	ɐʏ	əʊ	ɐʊ	əʊ
road	ɐʏ	ʌʊ	əʊ	əʏ
smoke	ə̩ʏ	əʊ	ɐ̩ʏ	ə⁺ʊ
tomorrow	əʏ	ə̞ᴛᴛ	ə̞ᴛ	ᵊʏ
MOUTH				
cow	æɔ̞	æɔ̨	æ̨ɔ̞ᴛ	æɔ̞⁺ᴛ
eyebrows	æ̞ʏ̩ᴛ⁺ᴌ	a̠ɤ̞⁺ɔ	a̠ʏ	a̠ɔ̞⁺ᴛ
mouse	æɔ̞ᴛᴄ	æa̠	æə	æ̞ᴛ
mouth	æɔ̞ᴛ⁺ᴌ	æ̞ᴛə	æ˙	æə
trousers	æᴛɤᴛ⁺ᴛ	aʊ̨ᴛ	æᴛɔ̞ᴛ	a̠̞ᴛ a̠ᴛ
GLOTTALIN				
bat	—	ʔtʰ	ʔ	—
boots	ʔ	ʔt	ʔ	ʔ
butter	t	t	t	tʰ
butter 1	–	t	t	t
cat	ʔ	tʰ	ʔ	tˢ

cut	ʔ	tʰ	ʔ	tˢ
haircut	ʔ	ʔtˀ	–	ʔ
daughter	tˢ	t	t	tʰ
eat it	ʔtˀ	t ʔ	t ʔ	tˢ ʔ
ate/eaten it	tʰ	t	t ʔ	t ʔ
eight	ʔ	tʰ	ʔ	ʔt
fat	ʔ	ʔ	–	ʔtʰ
feet	ʔ	ʔ	ʔ	ʔ
fault	ʔ	tʰ	ʔ	ʔtʰ
forty	tˢ	tʰ	t	t
Great Britain	ʔ t	ʔ tˀ	ʔ ʔ	ʔ t
hot	ʔ	–	–	ʔ
kettle	ʔt	t	t	ʔt
lightning	ʔ	ʔ	ʔ	ʔ
little	ʔtʰ	ʔt	t	t
meat	ʔ	tʰ	ʔ	ʔtʰ
salt	ʔ	tʰ	ʔ	ʔtʰ
shut it	t ʔ	t ʔ	–	–
sit down	ʔ	t	–	–
suit	ʔ	tʰ	ʔ	ʔt
straight	ʔt	ʔt	ʔt	ʔt
water	tˢ	tʰ	t	tʰ
water 1	t	–	–	tˢ

white	ʔtᵘ	tˢ	ʔ	ʔtˀ
STR CLUSTER				
straight	s ʃ	ʃ	s	ʃ
stranger	ʃ	ʃ	s	ʃ
straw	s	ʃ	s	ʃ
string	s ʃ	s	s	ʃ
TH-FRONTING				
brother	ð ˇ	ð	ð	ˇ
father	–	ð ˇ	ð	ð ˇ
mother	ˇ	ð	ð	ˇ
mouth	θ	θ f	f	f
nothing	θ	θ ˇ	θ	f
other	ˇ	ð	ð ˇ	ˇ
L-VOCALISAT				
ankle	ɒ ᵘ	ʊ	ɒ	ɒ
apples	ɔ ɪ	ɒ ɪ	ɒ ᵘ	t
april	ɒ	ɒ	ɒ	ɒ
boils	–	ɔ ᵛ	ɒ ᵛ	ɒ ᵛ
child	ɔ ᵛ	ɒ	ɒ	t
uncle	ʊ ᵘ	u	ɋ	ɒ ɪ
children	ɤ	t	ʊ	ʊ

deal	ɒ	ɒ₊	ʊ	t
devil	ɒ	ʊ	ʊ	ʊ
pool	u	ʊ	ʊ	ʊ
girls	ɒ	ɒ	ʊ	ʊ
handle	ɒʊ	ʊu	ɒ	ɒʊ
fool	u	ʊ₊ᴛ	ʊ	ɒ
ill	ʊ	ʊt	ɒt	ɒ
kettle	ɒʊ	ʊ	ʊ	ɒ
little	ʊ	ʊ	ʊ	t
school	u	u	u	ʊ
milk	ʊ	ɒ	–	ɒ
owl	ʊ₊ᴛ	ʊ	ɤ₊ɔ	ɒ₊
dull	–	–	–	ɒ
almost	ʊ	ɒ₊ʟ	ʊ	–
always	ʊ	ɒᴛ	ʊ	ʊ
bald	ʊ	ʊ	ʊ	ɒː
fault	ɤ	ʊ	ʊ	ʊ
walls	ɒʊ	ʊ	ʊ	ʊ
cold	ʊ	ʊ	ɒː	ʊ₊ᴛᴛ
coal	ʊ	ʊ	ʊ	ʊ
gold	ʊ	ʊ	ʊ	ʊ
mole	–	ʊ	ʊ	ʊ
old	ʊ	ʊ	ʊ	ʊ

shoulders	ʊ	ʊ	ʊ	ʊ
salt	ʊ	ʊ	ʊ	ʊ̞
pull	ʊ	ʊ	ʊ	ʊ
tail	o	o	t	o
till	oʊ	ʊ	o̞	o̞ʊ
YOD				
new	ø	ø̈	j	ø
New (Year)	—	–	–	-
suit	ø	ø	ø	ø
Tuesday	—	ø	j	ø

	SURREY			
	MC		WC	
	FEMALE	MALE	FEMALE	MALE
FLEECE				
deal	ə̇i	ə̇i	i̇ə	i̇ᴛ
eat	i̇	ɪi̇	i̇	i̠̇
eaten	—	ɪi̇	i̇ᴛ	i̇
feet	ɪi̇	—	i̠̇ᴛ	i̇
heat	—	—	ə̇i	ɪi̇
wholemeal	i̇ᴛə	i̇ᴛ	—	ti̇
meat	i̇	ə̇	ə̇ᵢ	ɪi̇
TRAP				
active	æ	—	—	æ
ankle	æ	ɛᴸ	æᴛ	ɛ

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apples	æ_T	æ	æ_⊥	ə_⊥
ash	æ	æ	æ	æ_⊥
bad	ə_⊥	—	—	—
bag	æ·	æ_T	æ_T	æ·
bat	æ	ə	æ_⊥	⊢
cat	ˊj æ	ɛ	æ_⊥	j æ̃
fat	æ	ə	ɛ_TT	æ
handle	æ_T	æ_⊥	æ̶_⊥ ɛ	ə_⊥
ladder	æ_T	æ	ə_⊥	ə
STRUT				
butter	ʋ	ʋ	ʋ_+	ʋ_+
butter1	ʋ	ʌ_+	ʋ_+	ʋ
brother	ʋ	ʋ	ʋ	ʋ
cousins	ʋ_+	ʋ	ʋ_+	ʋ
cucumber	ʌ_+	ʋ_⊥	ʌ_+	ʌ_+
cut	ʋ_+	ʋ	ʋ_+T	ʋ_+T
drunk	ʌ_ɔ	ʌ_ɔ	ʌ_+⊥	ʌ_+⊥
dust	ʋ_⊥	ʌ_+	ʋ_+T	ʋ_+
dull	—	—	—	—
mother	ʌ_T	ʌ	ʌ_+	ʋ_+
money	ʌ_ɔ	ʋ_+	ʌ_+	ʌ
nothing	ʋ̲	ʌ_ɔ	ʌ_+	ʋ
other	ʌ_+	ʌ_+	ʋ	ʋ_+

shut it				—
uncle				
THOUGHT				
door				
floor				
four				
more				
snore				
daughter				
water				
water 1				
forty				
horse				
board				
GOOSE				
blue				
boots				
shoes				
suit				
roof				
cucumber				
afternoon				
Tuesday				

chew	ʉᵘ	ʉ	ʉ_ττ	ʉ_ττ
new	ɘʉᵘ_ᵧ	ʉ_ᵧ	ɘʉ_τ	t̢
FACE				
april	æ₊ I	εI	ε̧I	εI
day	æI	—	—	æ̧I
eight	ε̧I	ε̧I	æ̧I	εI
great	εI	εI	ε̧I	εI
straight	ε̧I	ε̧I	ε̧I	εI
stranger	ε̧I	ε̧I	ε̧I	εI
tail	ε̧I	æ̧I	εI	æ̧I
Tuesday	ε̧I	ε̧I	æ̧I	ε̧I
ate	e	—	—	—
PRICE				
eyebrows	ɑ̄I	ɑI	ɑI	ɑI
child	ɑ̄I	ɑP	ɑI	ɑθ
lightning	ɑI	Λ̃P	ɑĪ	ʊ₊I
tried	ɑI	ʊI	ɑI	ɑ₊I
white	ʊ₊ᵢI	ɑI	ɑI	ʊI
GOAT				
ago	ɜʊ	ɘʊ	ʊ̧Y	ɘY
almost	ɘ₊ʊ	O̧	ɘ₊Y	ɘY
comb	ɘʊ	ɘʊ	ɘY	ɘY
home	Ö̧ʊ	ɜ̧ʊ	ɘY	ʊ̧Y

no				
own				
road				
smoke				
tomorrow				
cold				
coal				
MOUTH				
cow				
eyebrows				
mouse				
mouth				
trousers				
GLOTTALIN				
bat				
boots				
butter				
butter 1				
cat				
cut				
haircut				
daughter				
eat it				

ate/eaten it	ʔt	t	ʔtʰ t	ʔ ʔ
eight	ʔtʰ	ʔt	ʔt	ʔtʰ
fat	ʔtˀ	ʔt	ʔt	ʔ
feet	ʔt	–	ʔt	ʔtʰ
fault	ʔt	t	ʔt	ʔtʰ
forty	t	t	t	t
Great Britain	ʔ t	ʔ ʔ	ʔ tˢ	ʔ t
hot	–	–	–	–
kettle	ʔt	t	ʔtˢ	ʔt
lightning	ʔt	ʔt	ʔtˀ	ʔ
little	–	ʔt	–	ʔt
meat	ʔtʰ	ʔtʰ	ʔtʰ	ʔtʰ
salt	ʔt	tʰ	ʔt	ʔtʰ
shut it	t ʔ	t ʔ	ʔt ʔt	–
sit down	–	t	–	ʔ
suit	ʔtʰ	ʔtˀ	ʔt	ʔtʰ
straight	ʔtʰ	ʔt	ʔtʰ	ʔ
water	t	t	t	tʰ
water 1	tʰ	tʰ	ʔt	t
white	ʔt	ʔtʰ	ʔtˀ	ʔt
STR CLUSTER				
straight	sˢ	s	s	s

stranger	S	S	S	S
straw	S	S	S	S
string	S	S	S	S
TH-FRONTING				
brother	∫ˇ	∨	∫	∨
father	∫	∫	∫	∫ˇ
mother	∫	∫	∫	∨
mouth	θ	θ	θ	f
nothing	θ	θ	θ	f
other	∫	∫	∫	∨
L-VOCALISAT				
ankle	oᵘ	ot	ʊ	o
apples	t	ȶ	ot	ʊ
april	t	o	ʊ	o
boils	t	t	ʊʊ	ʊ
child	t	t	ʊ₇	o
uncle	o₊ʳ	ᵊɣɔ	ʊ₊	ʊ
children	ʊ·	t	ʊᵘ	ʊ⁴
deal	ot	oʊ	ɔ₊ʊ	o₊ᵘᵢ
devil	t	ʊᵘ	ɔ	o₊ʊ
pool	ɯ	t	ʊ	ʊ
girls	o₊	ʋ	o₇	o₊

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handle	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
fool	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
ill	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
kettle	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
little	—	*(symbol)*	*(symbol)*	*(symbol)*
school	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
milk	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
owl	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
dull	—	—	—	—
almost	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
always	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
bald	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
fault	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
walls	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
cold	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
coal	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
gold	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
mole	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
old	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
shoulders	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
salt	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
pull	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*
tail	*(symbol)*	*(symbol)*	*(symbol)*	*(symbol)*

till	t	oʊ	ι	—
YOD				
new	j	j	j	j
New (Year)	—	—	—	—
suit	∅	∅	∅	∅
Tuesday	∅	∅	j	∅

	RP and COCKNEY			
	RP		**COCKNEY**	
	SPEAKER 1	SPEAKER 2	FEMALE	MALE
FLEECE				
deal	ι	ιᵊ	—	ι̠ₜₜ
eat	ι	ι	ι	ιj
eaten	—	—	—	—
feet	ι̇ₜₜ	ι	ᵊι	ᵊ⊥ι
heat	—	—	—	—
wholemeal	—	—	ιᵊ	—
meat	ι	Iι	ᵊι	ₜI̱ι
TRAP				
active	—	æ	—	—
ankle	æₜ	ᵊæ	ε	ε
apples	ᵊ⊥	ᵊ⊥ₜ	ε	—
ash	æ̱ₜₜ	æₜ	æ ₜ	æ ₜ
bad	—	—	—	—

bag	æ̞ˑ	æ̞	æ̞̞	æ
bat	æ	–	–	æ
cat	ʲɑ	ɑ̞	ʲæ	æ̞
fat	–	æ̞ˑ	æ̞	–
handle	ɑ	ɑ	ɛ̞	ɛ̞̞
ladder	ɑ	ɛ̞	ɛ	ɛ
STRUT				
butter	ʌ̞	ʊ	ɑ̲	ʌ₊
butter1	–	ʊ₊	ɑ̞	ʊ̲
brother	ʌ₊)	ʊ̲	ʊ	ʊ,
cousins	ʌ₊	ʊ	ɑ̲̞	ʊ₊
cucumber	ə	ʊ₊	ʊ̞,	ʌ̞
cut	ʊ̲	ʊ₊	ɑ̞	ʊ₊
drunk	ʊ₊	ʊ	ʊ,	ʊ,
dust	ʌ̞₊	ʊ₊	ɑ̲	–
dull	–	ʊ₊	–	–
mother	ʌ	ʌ₊₊	ʌ̞	ʌ₊)
money	ʌ₊	ʊ	ɑ̲	ʊ₊
nothing	ʌ₊	ʌ	ə,	ʊ₊
other	ʌ̞	ʊ̲	ʊ	ʌ₊₊
shut it	ʌ̞	–	–	ʊ₊
uncle	ʌ̞,	ʊ	ɑ̲	ʊ₊
THOUGHT				

door	$O_\top$	$\mathcal{O}_{\!+\!\perp}$	$\mathcal{O}_\perp$	$\mathcal{O}_\perp$
floor	$O_{\top\top}$	$\mathcal{O}_+$	$\mathcal{O}_+$	$O_{\top\top}$
four	$O_\top$	$\mathcal{O}_+^{\,a}$	$\mathcal{O}_\perp$	$O_{\top\top}^{\,a}$
more	$O_\top$	$\mathcal{O}_\perp^{\,a}$	$\mathcal{O}_\perp$	$O_{\top\top}$
snore	$O^{\,a}$	$O_\top$	$\mathcal{O}_\perp$	$\mathcal{O}_{\!+\!\perp}$
daughter	—	$O_\top$	O	$O_\top$
water	$O_\top$	$\mathcal{O}_+$	$O_\top^{\,\upsilon}$	υ
water 1	O	—	$O^{\,\upsilon}$	—
forty	$O_{\top\top}^{\,a}$	O	$O_\top$	$O_{\top\top}$
horse	$O_{\top\top}$	$O_{\top\top}$	$O^{\,\upsilon}$	$\mathcal{O}_{\!+\!+}^{\,\upsilon}$
board	$O_\top$	$\mathcal{O}_{\!+\!\perp}^{\,a}$	$O^{\,\upsilon}$	υ
GOOSE				
blue	u_+	H^{u}	$\theta_\top^{\,\upsilon}$	θ
boots	$u_{(+\!+}$	$t\mathrm{H}$	Υ^{H}	$\theta^{\,\upsilon}$
shoes	$\underline{\mathrm{H}}$	t^{H}	$\theta^{\,\upsilon}$	H
suit	$u_{+\!+}$	$t^{\,i}$	$\vartheta^{\,\upsilon}$	$\underline{\mathrm{H}}$
roof	$u_{+\!+}$	t	Υ	υ_+
cucumber	$u_{+\!+}$	H	$\mathrm{H}_{+\!+}$	υ
afternoon	$\underline{\mathrm{H}}$	$t^{\,\upsilon}$	$\vartheta^{\,\upsilon}$	$\underline{\mathrm{H}}$
Tuesday	υ_+	υ_+	$\underline{\mathrm{H}}$	H
chew	$\upsilon_\perp$	t	υ	$\upsilon_{(+\!+}$
new	$\underline{\mathrm{H}}^{\mathrm{H}}$	H	$\upsilon_+\upsilon$	υ
FACE				

april	eᴛ ɪ	eᴛ ɪ	ɛ˕ ɪ	ɛ˕ ɪ
day	eᴛ ɪ	eᴛ ɪ	–	ɛ˕ ɪ
eight	e̲ ɪ	e̲ᴛᴛ ɪ	eᴛ ɪ	e̲ᴛ ɪ
great	e̲ ɪ	e̲ᴛᴛ ɪ	eᴛ ɪ	e̲ᴛ ɪ
straight	e̲ ɪ	ɛ˕˕ ɪ	eᴛ ɪ	ɛ̲˕ ɪ
stranger	e̲ ˕	ɛ˕˕ ɪ	eᴛ ɪ	ɛ˕
tail	eᴛ ɪ	ɛ˕ ɪ	eᴛ ɪ	ɛ ɪ
Tuesday	eᴛᴛ ɪ	ɛ˕ ɪ	eᴛ ɪ	ɪ
ate	–	ɛ	–	eᴛ
PRICE				
eyebrows	ɑ̃˕ ɪ	ə̲˕ ɪ	əɪ	ə̲ ɪ
child	ʌ̟ᴛᴛ ɪ	ə̲˕ ɪ	–	əc
lightning	ʌ̟ᴛᴛ ɪ	ə̲ ɪ	ə̲ ɪ	ɑ̲ˌ ɪ
tried	ɕᴛ ɪ	ɑˌ˕ ɪ	aɪ	ɑˌ ɪ
white	ʋˌ̟˕ ɪ	ɑˌ˕ ɪ	əɪ	æ '
GOAT				
ago	ˌə̲ ˸	əʳ	əʊ	əʊ
almost	ə̟ ˕	ə̟˕ ̆	ɘʸ	–
comb	ə̟ ʊ	ɕ ʊ	ʒ ̆	ɕ ʊ
home	ə̟ ʸ	ə ʊ	ʒ ʸ	ʒ ʊ
no	ə ʊ	ə ɪ	ə ʊ	ɔ̟˕ ʊ
own	ə˕ ʊ	ʒ ʸ	ʒ ʊ	ɕ ʊ
road	ə˕ ʳ	ɞ ʊ	ə˕ ʊ	ə̟ ʊ

smoke	ə̞ʊ̯	ʚʊ	ə̞ʊ	əʊ
tomorrow	əˠ	əˇ	əᵊ	əᴛ
MOUTH		−		
cow	a̞ᴑᴛ	−	æʊ	aɔ
eyebrows	a̞ʊ	a̞ɔ	aʊ	aᴵᴛ
mouse	−	aɔ	æⁱ:	æᴛʊ
mouth	aɔ	æɔ	æᴵᴛ:	a:
trousers	aʊ	æʊᴛ	æᴵ	aθ
GLOTTALIN				
bat	ʔt	−	−	ʔ
boots	ʔ⁽ᵗ⁾	ʔt	ʔ	ʔ
butter	t	ʔtʰ	ʔ	ʔ
butter 1	−	ʔtʰ	ʔ	ʔ
cat	−	ʔtʰ	ʔ	ʔ
cut	t intervocalic	tʰ intervocalic	ʔ intervocalic	ʔ
haircut	t	ʔ	ʔ	ʔ
daughter	−	t	ʔ	ʔ
eat it	t t	ʔt t	ʔ ʔ	ʔ ʔ
ate/eaten it	ʔ EATEN	t ʔt	−	ʔ ʔ
eight	ʔtʰ	tˢ	ʔ	ʔtˀ
fat	−	ʔtʰ	ʔ	−
feet	ʔtʰ	(ʔ)tˢ	ʔ	ʔt underarticulated
fault	t	t	ʔ	ʔ

forty	t	t	ʔ	ḭ
Great Britain	ʔ t	ʔ ʔtˈ	ʔ ʔ	ʔ ʔ
hot	t	tˢ	ʔ	ʔt
kettle	t	tˢ	ʔ tˢ	ʔ
lightning	ʔ	ʔt	ʔ	ʔ
little	t	ʔtˢ	ʔ ʔ	ʔ ʔ
meat	tˡ	ʔtˢ	ʔ	ʔ
salt	t	t	ʔ	ʔtʰ
shut it	ʔt t	—	—	ʔ ʔ
sit down	ʔ	—	—	—
suit	ʔt	ʔt	ʔ	ʔt
straight	tˡ	tˢ	ʔ	ʔ
water	t	tˡ	ʔtˢ	ʔ
water 1	t	ʔt	ʔ	ʔ
white	ʔt	ʔt	ʔ	ʔ
STR CLUSTER				
straight	s	s	s	ʃ
stranger	sˈ	s	s	ʃ
straw	s	s	ʃ	ʃ
string	s	s	—	s
TH-FRONTING				
brother	ð	ð	ð̌	v

father				
mother				
mouth				
nothing				
other				
L-VOCALISAT				
ankle				
apples				—
april				
boils				—
child			—	
uncle				
children			—	—
deal			—	
devil	L _ (V)			
pool				
girls				
handle				
fool				
ill				
kettle				
little				
school	t (trace)			

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milk				
owl				
dull				
almost				
always				
bald				
fault				
walls				
cold				
coal				
gold				
mole				
old				
shoulders				
salt				
pull				
tail				
till				
YOD				
new				
New (Year)				
suit				
Tuesday				

APPENDIX 4
RAW DATA

BY COUNTY

1. FLEECE

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	2	1	2	1	1	1	4	3	1	1	1	2	2	2	2	0
102	2	1	2	1	3	2	0	0	1	3	1	1	0	1	0	1
201	0	2	0	2	0	1	0	1	2	0	2	1	1	0	1	2

2. TRAP

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	2	3	0	5	0	0	0	3	0	0	0	5	1	4	3	2
102	5	3	4	4	5	3	6	1	3	2	1	1	6	4	6	5
201	2	3	5	0	3	5	2	4	3	4	5	0	2	1	0	2

3. STRUT

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	2	7	4	9	12	3	7	8	4	8	10	6	8	6	7	10
401	1	3	1	2	1	11	4	6	3	3	1	7	6	6	4	3
201	9	2	7	1	1	0	3	0	6	2	2	0	0	2	3	1

4. THOUGHT

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	2	2	4	5	7	9	6	7	2	5	2	5	5	9	7	9
201	8	8	6	5	4	2	5	4	10	7	10	7	7	3	5	3

5. GOOSE

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	0	2	1	6	0	7	0	10	0	1	0	9	0	2	1	4
201	6	7	9	6	4	5	9	2	7	8	8	2	11	10	10	8
401	6	3	2	0	8	0	3	0	4	2	3	0	1	0	1	0

6. FACE

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	1	0	1	0	2	0	6	5	0	0	1	2	1	0	4	4
401	6	4	6	7	2	4	0	1	2	5	2	3	4	6	2	2
201	0	3	0	0	3	3	1	1	4	1	3	1	2	1	1	1

7. PRICE

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	2	0	0	1	5	0	3	3	0	2	2	1	3	1	3	2
201	2	4	4	3	0	5	2	2	4	2	2	3	2	4	2	3

8. MOUTH

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	1	2	0	1	0	1	.1	2	0	1	0	0	0	2	3	1
401	2	2	2	1	1	1	2	2	3	2	1	3	1	1	1	4
201	1	0	2	2	3	2	1	0	2	2	4	2	4	2	1	0

9. GOAT

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	0	2	0	7	3	7	4	4	3	1	0	3	2	1	7	6
401	9	6	9	2	4	1	3	3	2	4	7	3	5	6	2	3
201	0	1	0	0	1	0	1	1	2	2	0	1	2	2	0	0

10. GLOTTALING

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	6	9	10	9	7	10	12	10	1	8	5	3	14	8	14	9
102	4	6	6	9	8	11	10	13	7	10	7	16	9	8	8	12
201	16	11	10	8	9	3	2	1	15	5	11	4	3	10	4	5

11. STR CLUSTER

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	4	0	1	4	3	1	3	3	4	0	1	1	4	4	2	4

201	0	0	1	0	0	1	0	0	0	0	2	0	0	0	2	0
202	0	4	2	0	0	1	0	0	0	4	1	3	0	0	0	0

12. TH-FRONTING

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	1	5	4	4	6	2	7	0	3	0	2	2	6	0	5	4
401	2	1	0	0	1	3	0	3	2	0	1	2	0	1	1	1
402	3	0	2	2	0	2	0	4	0	5	2	1	0	5	0	1

13. L-VOCALISATION

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	7	2	6	6	1	0	0	1	2	4	0	1	7	1	11	10
401	8	4	1	0	3	5	0	7	0	0	0	0	2	4	8	8
201	13	22	21	22	29	28	33	25	26	24	28	27	22	26	12	13

14. YOD DROPPING

	Buckinghamshire				Essex				Surrey				Kent			
	WC		MC		WC		MC		WC		MC		WC		MC	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
101	2	0	4	3	1	0	4	4	2	0	0	0	3	2	2	1
201	2	4	0	1	3	4	0	0	1	3	3	3	1	2	2	3

BY GENDER

1. FLEECE

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	2	4	1	2	2	1	1	3	1	3	2	0	1	1	1	2
102	2	0	1	1	2	3	1	0	0	0	0	1	1	1	2	1
201	0	0	2	1	0	0	2	1	2	0	1	2	1	1	0	0

2. TRAP

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	0	0	0	3	2	0	0	0	4	3	6	1	3	0	0	4
102	2	4	1	3	2	3	3	4	4	1	2	5	2	3	3	3
201	4	2	5	0	2	3	3	2	0	4	0	2	3	5	5	1

3. STRUT

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	4	7	10	6	2	11	4	8	10	7	6	9	8	3	8	5
401	1	4	1	4	1	1	6	0	2	6	7	3	3	10	3	2
201	8	2	2	3	10	1	3	5	1	0	0	1	2	0	2	6

4. THOUGHT

| | FEMALES | | | | | | | | MALES | | | | | | | |
| | MC | | | | WC | | | | MC | | | | WC | | | |
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	4	5	2	6	2	7	2	4	6	7	5	8	2	9	5	8
201	6	5	8	4	8	3	8	6	5	4	6	3	9	2	6	3

5. GOOSE

| | FEMALES | | | | | | | | MALES | | | | | | | |
| | MC | | | | WC | | | | MC | | | | WC | | | |
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	0	0	1	0	0	0	0	6	10	9	4	2	7	1	2
201	8	8	8	9	5	3	7	10	6	2	3	8	7	5	9	10
401	2	3	3	1	6	8	4	1	0	0	0	0	3	0	2	0

6. FACE

| | FEMALES | | | | | | | | MALES | | | | | | | |
| | MC | | | | WC | | | | MC | | | | WC | | | |
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	5	1	3	1	2	0	1	0	4	1	2	0	0	0	0
401	5	1	2	2	5	3	2	4	5	1	3	2	3	3	4	4
201	0	0	3	1	0	1	4	4	0	0	1	0	2	2	1	1

7. PRICE

| | FEMALES | | | | | | | | MALES | | | | | | | |
| | MC | | | | WC | | | | MC | | | | WC | | | |
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	3	2	3	2	5	0	3	1	2	1	1	0	0	1	0

201	4	2	3	2	3	0	5	2	2	1	2	2	3	3	2	3

8. GOAT

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	0	4	0	6	0	3	5	1	6	4	3	6	1	6	1	1
401	8	3	8	2	8	4	2	5	1	3	3	1	5	1	4	4
201	0	1	0	0	0	1	1	2	0	0	1	0	1	0	2	2

9. MOUTH

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	0	1	0	3	1	0	0	0	1	2	0	1	2	1	1	1
401	1	2	1	2	2	1	2	1	1	2	2	3	2	1	2	1
201	3	1	3	1	1	3	2	3	2	0	2	0	0	2	1	2

10. GLOTTALING

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	7	12	4	13	6	7	1	13	6	10	3	8	8	10	8	7
102	7	8	7	6	5	6	6	5	9	12	16	10	6	9	10	7
201	7	1	10	2	10	8	14	3	9	2	5	6	10	5	6	10

11. STR CLUSTER

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	4	1	2	4	4	4	4	3	3	1	3	0	1	0	3
201	1	0	2	2	0	0	0	0	0	0	0	0	0	1	0	0
202	2	0	1	0	0	0	0	0	0	0	2	0	3	1	3	0

12. TH-FRONTING

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	4	5	2	4	1	4	3	5	4	0	2	4	5	1	0	0
401	0	0	1	1	1	1	2	0	0	3	2	1	1	3	1	1
402	1	0	2	0	3	0	0	0	2	3	2	1	0	2	5	5

13. L-VOCALISATION

	FEMALES								MALES							
	MC				WC				MC				WC			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	6	0	0	9	8	1	1	7	6	1	1	6	2	0	3	1
401	1	0	0	8	6	3	0	1	0	6	0	8	4	4	0	5
201	19	26	26	9	12	22	25	18	21	26	26	13	21	23	24	21

14. YOD DROPPING

	FEMALES		MALES	
	MC	WC	MC	WC

	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	3	3	0	2	1	0	2	2	3	4	0	1	0	0	0	2
201	0	0	3	1	2	3	1	1	1	0	4	3	4	4	4	2

BY SOCIAL CLASS

1. FLEECE

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	3	1	2	1	3	2	0	2	1	1	3	1	1	1	3
102	2	0	0	0	0	0	0	1	2	3	1	0	1	2	3	1
201	0	0	2	1	2	0	1	2	0	0	2	1	2	1	1	0

2. TRAP

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	0	0	0	3	4	3	6	1	2	0	0	0	2	0	0	4
102	3	5	2	4	3	0	.1	4	3	4	4	5	2	3	3	2
201	4	2	5	0	0	4	0	2	2	3	3	2	3	4	4	1

3. STRUT

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	4	6	9	6	9	6	6	8	2	11	4	8	8	3	8	5
401	1	4	1	3	2	6	6	3	1	1	6	0	3	10	3	2
201	7	2	2	3	1	0	0	1	10	1	3	5	2	0	2	6

4. THOUGHT

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	4	7	2	7	7	8	5	9	2	7	2	4	2	8	5	8
201	8	5	10	5	5	4	7	3	8	3	8	6	8	2	5	2

5. GOOSE

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	0	0	1	5	9	9	4	0	0	0	0	2	7	1	2
201	8	8	8	9	6	2	2	7	6	4	8	11	7	5	9	10
401	2	3	3	1	0	0	0	0	6	8	4	1	3	0	2	0

6. FACE

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	5	1	3	0	5	2	3	0	2	0	0	0	0	0	0
401	5	1	2	2	6	1	3	2	6	2	1	4	3	4	5	5
201	0	0	3	1	0	0	1	1	0	2	5	2	3	2	1	1

7. PRICE

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	3	2	3	2	3	1	2	1	3	0	2	0	0	1	0
201	4	2	3	2	3	2	4	3	2	0	3	1	3	3	2	3

8. GOAT

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	0	4	0	6	7	4	4	6	0	3	4	1	1	6	0	1
401	8	3	8	2	1	3	3	2	7	3	2	4	6	1	5	4
201	0	1	0	0	0	1	1	0	0	1	1	2	0	0	2	2

9. MOUTH

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	0	1	0	2	1	2	0	1	1	0	0	0	2	1	1	1
401	2	2	1	1	1	2	2	3	2	1	2	1	2	1	2	1
201	2	1	3	1	2	0	2	0	1	3	2	3	0	2	1	2

10. GLOTTALING

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	8	11	4	12	6	9	2	8	6	7	1	13	7	10	8	9
102	6	9	8	7	9	11	15	10	5	7	7	7	7	10	10	7
201	7	1	9	2	6	1	4	3	12	9	15	3	9	3	5	7

11. STR-CLUSTER

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	1	4	1	2	4	4	1	4	3	3	3	3	0	1	0	3

201	1	0	2	2	0	0	0	0	0	0	0	0	0	1	0	0
202	2	0	1	0	0	0	3	0	0	0	0	0	3	1	3	0

12. TH-FRONTING

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	4	5	2	4	3	0	2	3	2	6	5	7	6	2	0	0
401	0	0	1	1	0	3	2	1	2	1	2	0	1	3	1	1
402	1	0	2	0	2	2	1	1	3	0	0	0	0	2	6	6

13. L-VOCALISATION

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	6	0	0	8	6	1	1	5	8	1	1	7	2	0	3	1
401	1	0	0	11	1	7	0	9	7	2	0	1	4	4	0	4
201	21	28	28	9	21	20	27	14	12	24	26	19	21	23	24	22

14. YOD DROPPING

	MC								WC							
	FEMALE				MALE				FEMALE				MALE			
	B	E	K	S	B	E	K	S	B	E	K	S	B	E	K	S
101	3	3	0	2	2	3	0	1	2	1	3	3	0	0	0	2
201	0	0	3	1	1	0	3	2	2	3	1	1	4	4	4	2