

INTER- AND INTRA-SPEAKER VARIATION IN LIVERPOOL ENGLISH: A SOCIOPHONETIC STUDY

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Trinity Term 2002

Thesis submitted for the degree of Doctor of Philosophy

ABSTRACT

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This thesis presents experiments and interviews which investigate pronunciation variation in the Liverpool accents of young speakers. Experiment One investigates inter-speaker variation, Experiment Two investigates intra-speaker variation, and Experiment Three investigates both inter- and intra-speaker variation.

These three experiments are conducted from a sociophonetic perspective, with controlled elicitation of natural speech and acoustic analysis of speech data. The experimental investigations are complemented by interviews, which incorporate the perceptions and opinions of speakers of Liverpool English into the study.

The study makes several contributions to the field of sociolinguistic research. It provides a new examination of Liverpool English. Experiment One is specifically designed to explore one of its most complex and ill-defined phonetic features, the realisation of plosives as affricates or fricatives. In addition to this phonetic investigation, Experiment One also examines sociolinguistic variation in this feature, and shows that speakers' individual attributes (such as their social networks and their plans for the future) are as relevant to variation as their socio-economic status.

The study also makes important methodological contributions. Instrumental phonetic techniques and standards are successfully applied to sociolinguistic investigation conducted in the field. An interdisciplinary approach, bringing together qualitative interviews and sociophonetic experiments, is adopted. A new quiz-questionnaire technique for data collection, which should prove useful for many kinds of future sociolinguistic research, is developed for Experiment Three.

Finally, Experiment Three tests many accounts and models of intra-speaker variation. Speakers are shown to vary their pronunciation as the speech situation varies, but not all the seven phonetic variables investigated show the same patterns of variation. Speakers vary their pronunciation according to audience, and also according to topic. Speakers with a high level of ambition vary their pronunciation of certain phonetic variables more than those with a lower level of ambition, and female speakers vary their pronunciation more than male speakers.

ACKNOWLEDGEMENTS

First of all, I owe many thanks to John Coleman, my supervisor. Thanks also to Andrew Slater for technical support, to Wiesner Vos for help with statistical analyses, and to all in the Oxford University Phonetics Laboratory. In Liverpool, I am grateful to my subjects, to the teachers and youth workers who allowed me to recruit them and conduct my experiments in their schools and centres, and to many friends and family in the city, especially my grandmother Molly McTegart. I have been aided and inspired by my communication with many sociolinguists, in particular Will Allen, Mary Bucholtz, Nik Coupland, Penny Eckert, Paul Foulkes, Barbara Johnstone, Paul Kerswill, Carmen Llamas, Emma Moore, Clive Upton and Dom Watt.

I have received financial support from OUPL, the University Chest and Merton College. Continuing and completing this thesis was possible only thanks to a hardship grant awarded by Merton College, and to the various people who have given me part-time employment over the past years. Friends and family have given all the other support I needed. Thanks in particular to my parents; to the MCWBC 2nd VIII; to Mel, Holly, Rob, Ellie and most of all Marc.

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PSEUDONYMS

Altogether, fifty-two young Liverpudlians were interviewed and/or acted as experiment subjects for this study. Informants who were experiment subjects are not referred to by name, but where they were also interviewed and those interviews discussed, they have been given gender-appropriate pseudonyms.

In chapter four, I report the findings of an experiment, carried out at two schools (X and Y) with sixteen female subjects, who are not named. Chapter five reports an initial interview with a male informant, Andrew, and supplementary interviews with other Liverpudlian interviewees, who are not named. Chapter six gives details of an experiment and interviews with two other informants, Brian and Carl. "Andrew", "Brian" and "Carl" are pseudonyms. In chapter seven, the largest experiment in the project involved twenty-four subjects, male and female, who are not given pseudonyms but numbered. Subjects 1-10 are young men, and 11-24 are young women. Further information about the subjects is given in the relevant chapters.

The names of the districts of Liverpool mentioned are real.

CHAPTER 1

INTER- AND INTRA-SPEAKER VARIATION IN LIVERPOOL ENGLISH

- 1.1 Introduction**
- 1.2 Background and scope of the study**
- 1.3 Location of the study**
- 1.4 Methodology of the study**
- 1.5 Overview of the study**

1.1 Introduction

This is a study of accent variation. Experiments and interviews are conducted to investigate variation both between and within the Liverpool accents of individual speakers. Experiment One investigates inter-speaker variation, Experiment Two investigates intra-speaker variation, and Experiment Three investigates both inter- and intra-speaker variation. These three experiments are conducted from a sociophonetic perspective, with controlled elicitation of natural speech and acoustic analysis of speech data. The experimental investigations are complemented by interviews, which incorporate the perceptions and opinions of speakers of Liverpool English into the study.

The study makes several contributions to the field of sociolinguistic research. First, it provides a new examination of Liverpool English. Experiment One is specifically designed to explore one of its most complex and ill-defined phonetic features, the realisation of plosives as affricates or fricatives. In addition to this phonetic exploration, Experiment One also examines sociolinguistic variation in this feature.

Second, the study makes important methodological contributions. Instrumental phonetic techniques and standards are successfully applied to sociolinguistic investigation conducted in the field. An interdisciplinary approach, bringing together qualitative interviews and sociophonetic experiments, is adopted. A new quiz-questionnaire technique for data collection, which should prove useful for many kinds of future sociolinguistic research, is developed for Experiment Three.

Finally, in its analysis of intra-speaker variation, the study contributes answers to many research questions, including the following:

- Do individual speakers vary their accents?
- Under what conditions and in what situations do speakers vary their accents?
- What motivates speakers to vary their accents?
- Are some phonetic features within a speaker's accent more variable than other features?
- Do some speakers vary their accents more than others?

This introductory chapter provides a summary of the study and the various pieces of original research which it comprises. In section 1.2, the background to the study is explained and the overall scope of the study, which is somewhat interdisciplinary in nature, is defined. Section 1.3 justifies the location of the study, and section 1.4 describes the methods used to carry out the investigations. Section 1.5 is an overview of the study, setting out the research questions which are at its centre.

1.2 Background and scope of the study

Sociolinguists usually study inter-speaker variation, investigating how pronunciation (or syntax or vocabulary) varies between groups of speakers and testing hypotheses that a certain group will produce a certain variable in a different way to a certain other group. This study investigates inter-speaker variation too. In Experiment One, variation in a single phonetic feature is investigated, and Experiment Three explores inter-speaker variation in accent variability (rather than in accent itself).

However, individual speakers also vary their own speech under different circumstances. Such variation is generally seen as "noise" in sociolinguistic investigations, which are usually designed to keep intra-speaker variation to a minimum by keeping factors such as the premises, interviewer and tasks constant. The latter experiments in this study, which set out to investigate intra-speaker variation, do precisely the opposite.

I first noticed the phenomenon of individual speakers varying their accent while speaking to me while I was interviewing young people in Liverpool in 1995 (for another project). The variation seemed to depend on the topic. One young woman, for instance, spoke with a much stronger accent when discussing her plans for the weekend than when conversation turned to her intentions to go to university. Indeed, as the topic shifted, she made a self-conscious correction of her own pronunciation of the word *university* towards a more standard Southern British English version, with the antepenultimate vowel further back, and the final /t/ less affricated in the "corrected" version (see chapter three for an overview of phonetic features of Liverpool English).

This process of intra-speaker variation is variously called accommodation (Coupland 1984), register variation (Biber and Finegan 1994), performance (Schilling-Estes 1998) or style-shifting (Coupland 1985). Rather than having one single accent, speakers may exhibit a range of styles or registers according to the circumstances in which they are placed. Variation in a single accent may be observed along an acrolectal-basilectal spectrum (from a strong accent to a more modified form), or there may be variation between two or more accents within a speaker's repertoire.

Chapter two reviews several accounts and models of such intra-speaker variation, and examines dimensions within which accent can vary both between and within speakers. The researchers whose work is discussed in section 2.1 approach intra-speaker variation from different perspectives. Some, such as Giles and Coupland (sections 2.1.1 and 2.1.3) are social psychologists working on questions of identity and language variation. Others are more "traditional" sociolinguists, such as Douglas-Cowie (section 2.1.2) and Schilling-Estes (section 2.1.7), while others are linguists working more on theory than experiment (e.g. Biber in section 2.1.5 and Myers-Scotton in section 2.1.6). The range of disciplines represented here is reflected in the interdisciplinary approach that I take in this study.

In the latter half of the chapter, section 2.2, key factors which could be used as dependent variables in experiments, such as sex, age and social class, are discussed. Relevant findings of other linguists' research are reported, and accounts are given of a wide variety of studies, ideas and theoretical positions. Concepts which might explain intra-speaker variation, such as life modes, loyalty, salience and individuality, are also considered, and the relevant literature is discussed and evaluated.

The study can be broken down into three disciplinary components. These three components are experimental phonetic techniques, sociolinguistic investigation and qualitative methods such as are used in anthropological and social-psychological studies. This variety of techniques is used to find out as much as possible about inter- and intra-speaker variation in a study that is both rigorous and sensitive. Generally, the techniques are complementary, but in some cases, they must be balanced with one another. For instance, if the experimental phonetic component were carried to its logical conclusion, it would dictate that experiments should be conducted in the laboratory, since that is where the best possible recordings are made. However, this would compromise the sociolinguistic component, which requires natural speech which takes place within the community under investigation. The methodology which allows for the achievement of both these aims, through a policy of "taking the lab to the people" and conducting experiments in the field, is introduced in section 1.4 below.

Sociophonetics is an emerging discipline which brings together sociolinguistic investigation and experimental phonetic techniques. In his manifesto for sociophonetics, Thomas (2002:189) compares the strengths and weaknesses of sociolinguistics and experimental phonetics, and suggests that each discipline has weaknesses that the other can address:

Experimental phoneticians seldom use naturalistic data. They often use small samples of speakers and usually examine subjects' behaviour in laboratories. As sociolinguists know well, subjects' linguistic behaviour in a formal setting like a laboratory is not always representative of their ordinary linguistic behaviour ... At the same time, sociolinguists too often do not examine closely the phonetic details of the variables they study ... Avoiding instrumental analysis can sometimes lead to erroneous phonetic descriptions and also undoubtedly causes sociolinguists to miss many important variables.

In all three experiments, this study uses instrumental analysis to analyse naturalistic data and gain insight into inter- and intra-speaker variation, demonstrating the

effectiveness of a sociophonetic approach. "Taking the lab to the people" is particularly useful in the study's investigation of intra-speaker variation. This variation might well not occur in laboratory conditions, where the inhibiting surroundings and formal structure of the experimental tasks could militate against natural speech processes like accommodation. Intra-speaker variation can be considered as the presentation of a persona, and in order to observe changes in this presentation, and to trigger shifts, the experimental tasks need to be interactive (see section 1.4 for more on the methodology of the study). However, although the experiment design needs to be interactive, it also needs to be controlled, if the findings are to be meaningful and comparable across subjects.

There has been a significant amount of excellent sociophonetic work carried out on British urban dialects in the last ten years. Reports of much of this work are collected in Foulkes and Docherty (1999), which discusses accent studies in the British Isles. Contributors to the volume were asked to do 'two things; first provide a description of the phonetic features of a particular accent, and then discuss methodological and/or theoretical implications of their data' (Foulkes and Docherty 1999:1). This study is positioned firmly within the same area of sociolinguistic research, and therefore I fulfil the same objectives in this thesis. Chapter three achieves the first of the two objectives by providing a description of Liverpool English, as a resource and as a background to the subsequent chapters which report my own specific research. In addition, Experiment One (chapter four) is designed to explore more closely one particular problematic phonetic feature of Liverpool English. The second objective, which concerns the methodological and theoretical implications of the data, is addressed throughout the study.

The sociophonetic approach taken by the study effectively links the experimental phonetic and sociolinguistic components of the study. The third disciplinary

component is the use of qualitative methods. These are techniques such as interviews, which are used to incorporate the perceptions of speakers themselves into the study. Much of the prior work which investigates the process by which individual speakers vary the way they speak, and what motivates them to do so, has been conducted from the perspective of social psychology or anthropology. Concepts such as accommodation and accent performance are central to the analysis of intra-speaker variation, and interviews are the best way to access speakers' insights about why they vary their speech.

The interviews conducted for the study investigate what provokes intra-speaker variation, and how much speakers are aware of themselves and others doing it. Matters ranging from speakers' use of their accent as a performance tool to demonstrate their sexuality to the apparent rehabilitation of the Liverpool accent through the growth of telephone sales centres in Merseyside emerged during these discussions. These interviews and the issues which emerge from them are discussed in chapter five.

Factors other than those usually explored in sociolinguistic investigations are cited in the interviews, and are shown to be significant in the experiments. Speaker ambition, sexuality and personality are mentioned more often than sex or social class, and this informs the design of the experiments and the analyses of the data. As with the sociolinguistic and experimental phonetic components, there is the potential for conflict between interviewing speakers and conducting sociophonetic experiments. None of the interviewees in chapter five also serve as experimental subjects, although the subjects of the small Experiment Two are also interviewed in an attempt to correlate stated views and opinions with experimental results (see chapter six). The weakness of interviews and consideration of the non-linguistic factors identified in them (such as the effect of the media, see section 5.4) is that they are not

quantifiable, not "scientific". However, this component of the study provides a base for the quantifiable experiments, finding out which aspects of inter- and intra-speaker variation are meaningful to the speakers themselves and therefore worthy of sociophonetic investigation.

Overall the techniques and approaches of each aspect of the study complement each other, and new discoveries which might not have emerged from a unidimensional study are made. The experimental phonetic methods used give more precise answers to sociolinguistic questions about Liverpool English than prior accounts, while the qualitative interviews and experiment in chapters five and six support and contextualise the quantitative Experiment Three, reported in chapter seven.

The results of the experiments are used to evaluate theories which attempt to account for both inter-speaker variation (e.g. life mode, social network theory) and intra-speaker variation (e.g. accommodation, register, audience design). These theories and models are described and discussed at length in chapter two, which reviews a wide range of relevant literature which falls within the scope of the study.

1.3 Location of the study

Whereas chapter two reviews research on speaker variation in general, chapter three turns to consider work which deals specifically with Liverpool English. Chapter three continues the literature review with a wide-ranging discussion of Liverpool and its accent. First, in section 3.1, some background information about the city and its history, geography, image and people is provided. Then in section 3.2 an overview of the accent is given, and key phonological variables identified. In the final section of the chapter, section 3.3, a thorough review and analysis of prior sociolinguistic work on the accent of Liverpool and the surrounding area is presented.

Why is Liverpool a particularly suitable location for this study, and why is Liverpool English an ideal variety to choose to explore? In some ways, the fact that the subjects come from Liverpool rather than London, Leeds or Los Angeles is not important; they are simply a group of speakers that have been selected for experimentation to test certain general ideas and theories about inter- and intra-speaker variation.

That said, I did not just choose Liverpool at random. First, it is an urban British English which has not received the attention of serious sociolinguistic research since the early seventies (Knowles 1973). The accents of many other British cities, including Newcastle, Sheffield, Derby, Norwich, Glasgow, Edinburgh, Cardiff, [London]Derry and Dublin (Foulkes and Docherty 1999), have undergone more recent consideration, and it must be acknowledged that contemporary sociophonetic work on Liverpool fills a gap. Indeed, the entire north-west of England has been neglected by recent sociophonetic accent studies, and this study goes some way towards rectifying this.

Second, as my mother's home town, Liverpool is very familiar to me. This is particularly important because of my ability to exploit my status as a semi-insider when required, as well as for more mundane matters such as local contacts and connections. I had no difficulty using personal networks to find places to conduct my interviews, and I am able, when required, to speak with a moderately strong Liverpool accent (my usual speech is a more acrolectal variety which approximates Southern British English, although it retains a number of salient Northern features).

Third and most important, the accent of Liverpool is also extremely socially marked, highly recognisable and usually stigmatised. Liverpool English, or "Scouse" as it is known, is an accent about which very few commentators remain neutral (see chapters three and five for further discussion). This makes it an ideal city to choose when exploring intra-speaker variation, because young Liverpudlians have many motivations to style-shift away from their distinguishing accent.

Accent variation can be seen in this context as nothing less than the process of an individual performing the identity which s/he wishes to project. This assessment is explored and qualified in chapter five, but can be summarised thus:

Speakers are in a position to make (indeed cannot avoid making) acts of group-identity through dialect selection. While there is a sense in which group-identities relating to ethnic, national or socio-economic status categories are 'given' or at least predictable by virtue of speakers' actual provenances, it is also true that we have some latitude in identifying ourselves, in presenting ourselves to others, as we wish. It follows that our identities need not be enduring or even consistent, and that we can signal varying identities in an essentially dynamic way, either across or within speaking situations. This view is consistent with Fishman (1977)'s recognition of "modern man's peculiar capacity for multiple loyalties, multiple identities and multiple memberships".

(Coupland 1988: 103-4)

Liverpool is, I argue, an ideal locus for investigation of such individual accent variation, because of the reputation, recognisability and profile that the accent has. It is perhaps not unique in this, but it is certainly among the most recognisable accents of British English. Dittmar, Schlobinski and Wachs (1988:45) describe the urban language variety that they study as 'a famed combination of brash, impudent remarks and humour, quickness of repartee, incisiveness of verbal expression, self-assertive aggressiveness and loud-mouthed bluster'. Although this is actually a description of the *Berliner Schnauze* ['the Berlin gob'], not Liverpool English, it would serve very well as a portrait of the stereotypical language of the Scouser. The description of Berlin speech also illustrates that Liverpool's position and reputation, although unusual in the linguistic landscape of the United Kingdom, is reflected in certain other cities around the world. On this generally positive side, the city dwellers whose verbal creativity is so celebrated have a great deal invested in maintaining their image as Berliners, New Yorkers or Liverpudlians; another aspect which makes Liverpool an excellent environment for studying the complexities of intra-speaker variation.

For Liverpudlians, though, their 'positive reputation for humour and distinctive outlook on life' (Aughton 1990:214) is tempered with many negative aspects. Stereotypically, the Scouser is a rascal, not really to be trusted. In fact, there are two levels of stereotype to be unpicked here. The simple level is the actual stereotype; the way in which Liverpudlians are actually viewed by outsiders. The other level, which is more complicated but also more accessible to investigation, is Liverpudlians' own concept of how outsiders see them. Liverpudlians' awareness, manipulation and/or rejection of the stereotype is explored further in the interviews reported in chapter five.

A sociological study of Liverpool was recently undertaken by the Joseph Rowntree Foundation (Andersen et al. 1999). It included a discussion with young Liverpudlians,

who felt this anti-Liverpool prejudice most keenly. Many of the interviewees specifically discussed attracting negative attention on the basis of their accent, for example when on holiday (Andersen et al. 1999:33), and the report acknowledges language as 'one of the main ways in which power is realised', and notes that "'Liverpool" is constructed to have profoundly negative connotations' (Andersen et al. 1999:45).

Liverpudlians own awareness of this prejudice is perhaps best illustrated by quoting young Liverpudlians themselves. These quotations come from two of the interviews discussed in chapter five below:

[There is] surface admiration, but underneath there's a 'yeah but'. It's like, you wouldn't employ a Scouser, but you'd probably like to go to the pub with one.

There's two sides to the Scouse accent, 'cause they say the Scouse accent's the warmest in the UK ... but when you have the "lad" type accent, you automatically assume 'Oh bugger, let's go check the car's locked'.

The conflict which these statements express is the foundation of the need for young speakers from Liverpool to acquire the ability to vary their speech, and the basis of this study.

1.4 Methodology of the study

A variety of methods are used in the study to investigate inter- and intra-speaker variation. The study takes an interdisciplinary approach, which has already been outlined in section 1.2 above, and uses sociophonetic techniques for experiments. Experimental techniques and standards are used in all the experiments, and high-quality recordings, which yield data suitable for quantitative acoustic analysis, are made in each case. I also adhere to acoustic phonetic techniques for analysis, which is unusual in the field of sociolinguistics. Sociolinguists have traditionally relied upon impressionistic, auditory transcriptions of informants' speech. In Experiment Three, an innovative quiz-questionnaire technique is also developed. This technique makes a significant methodological contribution to sociophonetic study. This section discusses the methods used for each experiment separately, then goes on to consider acoustic analysis and the quiz-questionnaire technique further.

Experiment One, reported in chapter four, investigates one particular phonetic feature of Liverpool English which had not been satisfactorily described in previous studies of the accent (see chapter three). As it is a sociolinguistic investigation, Experiment One is conducted in the field with several (sixteen) subjects. As a phonetic experiment, a large amount of data is collected, high-quality recordings made, and the data acoustically analysed. Three investigations of the data are made. First, the phonetic nature of the feature under scrutiny is investigated, and a better definition than previous studies had offered is arrived at. Second, the feature is used as a variable to explore sociolinguistic variation, since the subjects are divided into two social groups. However, social group membership does not satisfactorily account for the variation found in this one particular feature. In the third investigation, other more individualistic factors, such as social network membership and life mode, are explored.

Experiment One shares its sociophonetic methodology with Experiments Two and Three, which are also conducted in the field and their data acoustically analysed. However, the latter two experiments use a different kind of material for experimental stimuli, and are designed to investigate intra-, not inter-, speaker variation. This requires careful selection of the topic under discussion, and making sure that the experimental tasks are engaging. Experiments Two and Three explore variation in Liverpool English within the speech of individual speakers, tracking how their accent change under certain conditions, and what the triggers for change seem to be.

In Experiment Two (chapter six), which explores intra-speaker variation over time, the subjects are two male speakers of Liverpool English. They read a set passage and are interviewed twice, once when they have just moved away from the city, and again several months later. The changes in several phonetic features of their accent are examined. As before, acoustic phonetic techniques are used to analyse changes in the subjects' accents. These changes are considered alongside their personal opinions and attitudes as revealed by contemporaneous interviews, which are much like the interviews reported in chapter five (see also section 1.2 above).

Experiment Three investigates intra-speaker variation in the same phonetic features which happens instantaneously, motivated by changes in the circumstances under which the speech is taking place. The context of the subjects' speech is varied in a controlled way, to investigate whether and to what degree their accents changed. The two parameters of context variation are topic (what we were discussing) and audience (who was present during the discussion). The method for this experiment is an interactive quiz-questionnaire, discussed in more detail below, which allows for the variation of topic and audience while controlled but naturalistic speech data are being collected.

The methodology used in the entire study is made possible through the use of a combination of high-quality recording equipment under controlled conditions, and novel techniques. I argue that it is both possible and desirable to go out into the field and conduct experiments there, rather than choosing between the rigorous standards of laboratory work and the more natural, spontaneous quality of recordings made in the field. It is not only the use of advanced technology, such as portable DAT and tiny lapel microphones, or the careful selection of quiet premises, which allows for these favourable circumstances under which field recordings are suitable for acoustic analysis. In fact, acoustic analysis can be performed even on average-quality recordings, especially if (as in some of my analyses) it is duration rather than, for example, formant frequency which is being measured.

The majority of sociolinguistic phonetic studies are based on auditory transcriptions of speech made by ear-trained sociolinguists. In these investigations I carry out no such fine-grained transcription, and the vocalic and consonantal articulations under consideration are investigated acoustically, not auditorily. Kerswill and Wright (1990) express serious reservations about the validity of sociolinguists' reliance on phonetic transcription and about the lack of studies involving instrumental techniques. There are a few noble exceptions, for example, Labov, Yaeger and Steiner (1972) and Deser (1990), both of which report spectrographic analyses of vowels. Kerswill and Williams' concern is echoed by Docherty and Foulkes (1999), who point out that there has been an especial dearth of instrumental studies of consonants:

Considering the popularity of formant analysis, it is surprising how few phonetic studies in the variationist literature have touched upon variables other than vowels ... consonantal variables appear to have been almost entirely overlooked.

(Docherty and Foulkes 1999:53)

Thomas (2002:168) agrees, arguing that although 'instrumental phonetic studies have gradually taken up a larger and larger portion of the quantitative sociolinguistic research on phonetic variation ... most instrumental sociolinguistic work has been restricted to a few research issues and methods. It has been concentrated on variation in vowels; variation in consonants, prosody and voice quality has received little acoustic analysis.'

My adherence to acoustic phonetic techniques comes partly from a wish to apply and test a different, sociophonetic methodology, and also as a response to the problems experienced by Knowles (1973) in providing adequate transcriptions for Liverpool English (transcribing Liverpool /t/ was a particular difficulty also noted in Kerswill and Wright 1990:260). Over the last decade, the application of instrumental phonetics to sociolinguistic questions has become a little more evident (Docherty and Foulkes 1999; Scobbie, Hewlett and Turk 1999) but remains an exception to the general rule of the use of transcribed data.

In addition, the careful selection of tasks for experiments is crucial. The shortcoming of much data gathered in the "free conversation" part of many sociolinguistic investigations is that it is uncontrolled. This has the advantage of imposing no restrictions on the informant, so that the speech elicited will be natural and spontaneous, but has the fatal disadvantage, for the purposes of close phonetic analysis, of being totally incomparable between subjects. Since phonotactics, speech rate and lexical content are not specified in such free-ranging speech, even large quantities of data cannot be relied upon to yield meaningful comparisons between incidences of the phonetic variables under investigation. On the other hand, the speech collected in more structured interview tasks such as word lists has the major disadvantage that it is much less like natural speech than the speech collected in free conversation, and lacks the latter's phonotactic and prosodic context. Moreover,

experimental subjects find such tasks boring and repetitive, which also has a negative impact on the representativeness of the speech. The challenge is to find a task for experimental subjects to perform which would guarantee the multiple repetition of the phonetic variables under investigation, preferably occurring within controlled repeated lexical items, but which would not bore them into monotony.

For Experiment Three, therefore, I develop a new, interactive quiz-based technique for interviewing subjects individually and in friendship pairs, which I have called the quiz-questionnaire technique. The subjects enjoy the task and engage with it in an animated way. The questionnaires collect new information about the informant and their friend; the better the informant knew their friend, the higher the score. The questionnaires are partially administered by the subjects themselves, which increases their involvement and interest (as well as, of course, the number of tokens of phonetic variables recorded). To the subjects, the task seems worth doing for its own sake, which directs their attention away from their own speech as well as keeping them from being bored. This methodology is extremely successful. In addition to its usefulness as an elicitation technique, the quiz-questionnaire represents a significant advance towards counteracting the observer effect which is considered such a problem in sociolinguistic work. Of course, the Observer's Paradox cannot be solved, but the principle of working towards creating an experimental environment in which subjects are engaged, uninhibited and unselfconscious is sound.

The development of my quiz-questionnaire methodology forms one of the main contributions this thesis makes to the field of sociolinguistic study. It is a flexible technique which could be applied to a wide range of different experimental situations and has many advantages over other techniques such as reading passages, word lists, free conversation or map tasks (evaluated further in chapter seven). Its use for

general sociolinguistic investigations can readily be imagined. In Experiment Three, moreover, it provides a useful insight into intra-speaker variation, and the dimensions of accommodation and performance, by incorporating changes in audience and topic into the design.

1.5 Overview of the study

This section provides an overview of the experiments and interviews which make up this study of inter- and intra-speaker variation in Liverpool English, and poses the questions to which the study provides answers.

Experiment One was conducted with sixteen female subjects in Liverpool. It investigates inter-speaker variation in the pronunciation of stop consonants in Liverpool English. Definition of this phonetic feature has caused problems for sociolinguists (see Knowles 1973 and chapters three and four), so the first question is: what is the feature? What is actually going on phonetically to produce Liverpool's distinctive lenited stops? Acoustic analysis of the data allows these questions to be answered with reference to duration of closure and friction, comparing Liverpool stops to fricatives and stop-fricative clusters. The phonetic questions having been dealt with, the next questions are those which forms the basis of traditional sociolinguistic inquiry: does one group of speakers pronounce this feature differently from another group? Is the difference statistically significant?

Experiment One also addresses questions about methodology, which relate to section 1.4. Can sociolinguistic variation be effectively studied with acoustic analysis? Can high-quality recordings be made in the field rather than the laboratory? In addition, questions about the relevance in sociolinguistics of studying variation according to the socio-economic status of the subjects are raised, with models of social network and life mode also proving significant (section 4.3.3).

The interviews reported in chapter five present a new set of research questions. The focus of the study shifts from inter- to intra-speaker variation here (although inter-speaker variation is returned to in Experiment Three). Although the fact that speakers

may vary their realisation of certain phonetic features according to audience and topic has been noted before (and several such studies are reviewed in chapter two), little investigation has been carried out on whether all speakers do this to the same degree, whether all features are equally variable, and which precise circumstances trigger this kind of accommodation.

The interview section of the study asks: are speakers aware of variation in their own speech and the speech of others? Why do they think such variation occurs? What factors do they think are instrumental in this variation? How meaningful are the accounts and models proposed to account for intra-speaker variation (chapter two) to speakers? Experiment Two (chapter six) takes up many of these questions. This is a small-scale longitudinal experiment with two eighteen-year-old male subjects, and it asks: how do speakers' accents vary over time, after they have moved to a new city? Of the seven phonetic variables investigated, are all equally subject to variation, or are some more "fixed" than others? Can subjects' intra-speaker variation be connected to what they say in a discussion of intra-speaker variation?

Experiment Three asks several questions and tests various hypotheses. It is the largest experiment of this study and was carried out in Liverpool, with twenty-four subjects, male and female. It gathers many examples of seven phonetic features of Liverpool English (features which are identified in chapter three and tested in chapter six), that appear to be performed with a degree of variation by speakers. This experiment focuses on intra-speaker variation in Liverpool English, and asks: does it happen? Where (under what circumstances) does it happen? How does it happen? Does the same pattern of variation apply to all phonetic features? Is the same level of variation demonstrated by all speakers? This last question brings the study back to considering inter-speaker variation once more, because it is possible to look at subjects' intra-speaker variation and consider whether some groups of speakers

show different patterns of variation to other speakers. It is inter-speaker variation in accent variability, rather than in accent itself, that is now being investigated; for instance, do female subjects exhibit more intra-speaker variation than male subjects?

Variationist sociolinguistics is 'characterised by studies where empirical data are exploited to yield answers to linguistic questions: advancing linguistic theory, furthering our understanding of the structure of language, and accounting for the dynamics of variation and change' (Foulkes and Docherty 1999:2). Although the experiments reported here are carried out exclusively with speakers of Liverpool English, the results provide insight into questions of inter- and intra-speaker variation not just in Liverpool English, but in speech generally.

CHAPTER 2

REVIEW OF WORK ON INTER- AND INTRA-SPEAKER VARIATION

2.1 Accounts and models of intra-speaker variation

- 2.1.1 Accommodation, convergence and divergence (Giles 1973)**
- 2.1.2 Code-switching and social ambition (Douglas-Cowie 1978)**
- 2.1.3 Style-shift (Coupland 1985)**
- 2.1.4 Audience design (Bell 1984)**
- 2.1.5 Register variation (Biber and Finegan 1994)**
- 2.1.6 Markedness (Myers-Scotton 1998a)**
- 2.1.7 Repertoire, performance and speaker design (Schilling-Estes 1998)**

2.2 Dimensions of inter- and intra-speaker accent variation

- 2.2.1 Sex and gender**
- 2.2.2 Age and adolescence**
- 2.2.3 Social class and ethnic group**
- 2.2.4 Social networks**
- 2.2.5 Life modes and local loyalty**
- 2.2.6 Salience and stereotyping**
- 2.2.7 Identity and individuality**

2.3 Summary

2.1 Accounts and models of intra-speaker variation

This chapter provides a comprehensive review of work on inter- and intra-speaker variation. In this first half of the chapter (section 2.1), work on variation within the accents of individual speakers is reviewed. Such variation is variously referred to as accommodation (Giles 1973), code-switching (Douglas-Cowie 1978), style-shift (Coupland 1985), register variation (Biber and Finegan 1994) or performance (Schilling-Estes 1998). An overview of current approaches to intra-speaker variation (which she calls stylistic variation) can be found in Schilling-Estes (2002), where she argues that 'it is agreed that intra-speaker variation should hold an important place in variationist study ... we cannot hope to achieve a full understanding of the patterning of variation in language, or of language in general, if we do not understand its patterning within individuals' speech as well as across groups of speakers (Schilling-Estes 2002:376).

In this section, selected studies are discussed, and certain theoretical approaches to intra-speaker variation are explained. Outlines and illustrations of some relevant ideas and models used by linguists, anthropologists, sociologists and psychologists to study intra-speaker linguistic variation are provided.

2.1.1 Accommodation, convergence and divergence

Giles (1973) reports the findings of a study which also measured variation in the speech of individuals talking to two different interviewers; one an insider, one an outsider. His informants were controlled for age and gender, and none of them knew either of their interviewers. The group under analysis were seventeen-year-old schoolboys from Bristol. The first interviewer was an educated, older man, who spoke RP; the second was another seventeen-year-old Bristolian schoolboy, whom they did not know. Giles used a concealed microphone and misled the subjects as to the nature of the experiment, drawing attention away from their speech by a false claim that it was about personality assessment with interviewers of different ages. (The methodological problems and legal implications of surreptitious recording are further discussed in the next section, section 2.1.2.)

The findings of the study showed conclusively that the speech of the interviewees converged with that of the second interviewer, who was of the same age and regional background as the interviewees. Giles' hypothesis is that it was important to them to express their solidarity with him. The interviewees were motivated to adapt to the speech characteristics of their interlocutor to evoke social approval and make communication more efficient.

The "accent mobility" model Giles proposed for the phenomenon of interpersonal accent convergence contributed much to the formation of speech accommodation theory (Giles and Powesland 1975). Accommodation is a sociological and psychological term for adaptive behaviour. Speech accommodation theory (SAT) describes the motives and effects of style-shifts in interpersonal encounters, and has over the last thirty years been developed and expanded as a theory, becoming an interdisciplinary model for all kinds of communication, linguistic and non-linguistic.

SAT draws upon the sociopsychologically observed process of perceived similarity in attitudes and beliefs leading to an increased likelihood of mutual support and attraction.

Giles' model was a result of 'critiqueing some aspects of Labov's (1966) very influential paradigm of sociolinguistic research ... It was argued that the formality or informality of context and the criterion of "attention to speech", which was what Labov took to explain situational variation in his interview data, could be reinterpreted, at least in part, as interpersonal accommodation processes' (Giles and Coupland 1991:62). Labov's idea that individual variations in style result solely from the amount of attention paid to speech, and therefore that such changes can be ascribed to events such as feigning switching off the tape-recorder, or asking "danger-of-death" questions, is rejected by other social psychologists and linguists as well. For instance, Bell dismisses it as 'a non-starter' (Bell 1984:149; see also Cheshire 1982 and Coupland 2001) on the grounds that speakers' differing levels of attention paid to their speech cannot account for the stylistic variation observed. The approach is also criticised for failing to credit speakers with any control over their linguistic variation. Furthermore, attention paid to speech is difficult to quantify, and, as Schilling-Estes (2002:382) notes, 'experiments designed to investigate the effects of differing degrees of attention to speech on variation of usage levels for standard vs. vernacular variants have yielded mixed results (e.g. Bell 1984:147-50)'.

Coupland (1981) was an important piece of research on the phenomenon of speech accommodation. He made recordings of Sue, an assistant in a Cardiff travel agency as she spoke to a wide range of clients and colleagues. Coupland observed the ways in which Sue modified her speech to accommodate to each new interlocutor. Although there are naturally some shortcomings with an investigation involving only a

single informant, this particular study has been very influential. Bell (1984:164)

summarises Coupland's findings:

With few exceptions, the assistant's speech to members of each occupational class shifts parallel to the class members' own speech differences. The assistant's pronunciation is, in sum 'almost as good a marker of the occupational status of her interlocutor as that interlocutor's own speech' (Coupland 1981:191). This is striking evidence of a speaker's ability to design her style to fit a community-wide range of addressees.

Coupland himself later remarks that 'speakers are routinely in the business of staging desirable self-identities for inspection and acceptance by others', and elaborates that they 'may be motivated to shift fleetingly between more standard and less standard pronunciations as "competent" and "socially attractive" projected personas become variously salient, appropriate or desirable while speaking' (Coupland 1988:108).

In the Cardiff study, Coupland followed the situational taxonomies of Crystal and Davy (1969) and other researchers, classifying Sue's interactions according to participants, topic and channel (whether the interaction was face-to-face or via the telephone). Four contextual types (listed below) were derived from this taxonomy, and Sue's performance of five linguistic variables of Cardiff English in each context was analysed. Each of the five variables had alternative realisations classed as standard or non-standard. The results show that she exhibited the non-standard version of the variables in 77% of instances in casual, non-work-related conversation with colleagues, and in 56% of instances in work-related conversation with the same colleagues. However, her use of non-standard variables dropped to 34% when speaking to clients, and 32% when speaking to other agents by telephone (Coupland 1988:87; all percentages are averages of the five variables).

Trudgill (1986) attempted to investigate the relationship between patterns of variation in the speech of interviewer as well as interviewees, in his leap to the defence of prior

sociolinguistic research, questioned by Giles' ideas about accommodation and accent mobility. Giles (1973) had suggested that speakers might accommodate to interviewers and therefore render studies circular and invalid. On reanalysing recordings from his Norwich work (1974), Trudgill found rather that he as an interviewer accommodated to his informants' speech, although he did this in a variable manner. He found his production of (t) was quite accommodated to his informants, but his production of (a) stays the same (Trudgill 1986:7-10). His explanation for this modification is that the former is a *marker* (a variable subject to social class and stylistic variation), and the latter is an *indicator* (subject only to social class variation). The terms *marker* and *indicator* are from Labov (1972), who suggests that markers are high in speakers' consciousness as compared to indicators. High awareness of a marker leads to modification of its production in situations where they are monitoring their speech closely. The factor of salience, discussed further in section 2.2.6 below, comes into play here; I would in fact argue the opposite can also apply, that an indicator such as /a:/ (the BATH vowel (Wells 1982)) has very high psychological prominence for speakers, and those wishing to preserve their identity are particularly loath to change them.

Trudgill (1986:5) also suggested that the social psychological work of Giles and others was not linguistically sophisticated in its use of impressionistic methods to assess the degree of accommodation. He looked forward to work which quantifies linguistic accommodation, and provides:

an examination of which features are and are not changed during accommodation, together with explanations for this; a study of whether accommodation is a uniform process, or whether linguistically different types of accommodation take place in the case of different speakers, different situations or different relationships; a study of the limits of accommodation: what are the linguistic (as opposed to social or psychological) constraints on accommodation, and is it possible to accommodate totally to a new variety?

Although his assessment of social psychological studies is, in some cases, excessively harsh (Coupland 1984, for instance, is a rigorous and quantitative study), I agree that proper linguistic analysis is essential. My present study intends to answer many of these questions with reference to the quantifiable experiments I am carrying out, which involve acoustic as well as auditory analysis.

Closely connected to speech accommodation theory are the concepts of convergence and divergence. Coupland argues that the speaker who seeks social approval from the addressee weighs the rewards and costs of accommodating his or her speech to converge. Speakers are said to attempt linguistic convergence towards the speech patterns which they believe to be characteristic of their recipients in order to elicit approval and/or to ensure efficient communication (Coupland 1984:49).

Beebe and Giles (1984:7) provide a concise summary of speech accommodation theory:

SAT was devised to explain some of the motivations underlying certain shifts in people's speech styles during social encounters and some of the social consequences arising from them. More specifically, it originated in order to elucidate the cognitive and affective processes underlying speech convergence and divergence. Convergence has been defined as a linguistic strategy whereby individuals adapt to each other's speech by means of a wide range of linguistic features including speech rates, pause and utterance lengths, pronunciations etc., whereas divergence refers to the manner by which speakers accentuate vocal differences between themselves and others. Central to this framework is the notion that during social interaction, participants are motivated to adjust (or *accommodate*) their speech styles as a means of gaining one or more of the following goals: evoking listener's social approval, attaining communicational efficiency between interactants, and maintaining positive social identities.

This theory of individual speaker variation will be further illustrated with a brief consideration of a few studies which explore convergence and divergence.

Bourhis, Giles and Lambert's international study of speech accommodation 'looks into the social consequences that follow when a speaker accommodates or fails to accommodate his speech style with reference to his interlocutor' (1975:55). The

study investigates attitudes to language, and involves the *matched-guise* technique, originally developed by Lambert, Hodgson, Gardner and Fillenbaum (1960). This is used in perceptual experiments, with the stimulus material being produced by the same person using two different languages or dialects. Stimulus passages are controlled and experimental subjects are asked to listen to a series of supposedly different speakers and make judgements. These judgements, it is claimed, must be entirely based on social stereotypes inferred by the listeners, since the speaker is in fact the same person each time. (Foils are included so that subjects do not perceive that the same speaker appears twice.) Judgements will naturally be influenced by the listeners' own social affiliation. The matched-guise technique is felt by social psychologists to be 'a rigorous and elegant method for eliciting apparently private attitudes, which at least arguably control[s] for extraneous variables' (Giles and Coupland 1991:35). However, there could be potential problems with such a technique if the experimental subjects perceived that the stimuli provider was less than convincing in one of the language varieties s/he produced.

Bourhis, Giles and Lambert (1975) used matched-guise studies to investigate perceptions of code-switching in Quebec and South Wales. In Quebec, French Canadians heard a formal-style Canadian French speaker in conversation either upwardly converging to European French, downwardly diverging to popular-style Canadian French, or showing no accommodation at all. In South Wales, the speaker's accommodation in the same experiment ranged between RP English, English with a mild Welsh accent and strong Welsh accent. Listener-judges in both locations rated speakers' personality on factors such as intelligence, determination, sincerity, ambition, generosity, trustworthiness, self-confidence and humour. Since the recordings were in fact of the same speaker, all these assessments were considered to be the result of social expectations based on language use. Findings included the fact that 'in both cultures it was found that upward convergence was

associated with an increase in perceived intelligence by listeners' (1975:68). Other, similar studies in Anglophone countries showed that such evaluations varied considerably according to which personality traits listener-judges were asked to assess. With five guises of different regional Irish accents, Dublin was judged lowest in terms of competence, but highest in terms of attractiveness (Edwards 1977), while in Australia, competence and attractiveness, but not confidence or integrity, were associated with more "cultivated" speech guises (Berechree and Ball 1979).

An excellent and provocative Welsh study a few years later (Bourhis and Giles 1977) investigated divergence; the other side of the coin. Divergence is a process of accentuating linguistic differences because of a wish not to accommodate to, or be aligned with, an interlocutor:

Accent divergence may be considered as a relatively rarer tactic of accent mobility than convergence and implies that the sender changes pronunciation in a direction opposed to that of the receiver. It may occur when the sender wishes to dissociate himself from identification with certain social and attitudinal values associated with the receiver, but may also be a reaction against certain physical attributes including style of clothing or length of hair.

(Giles 1973:92)

In Bourhis and Giles' study, speakers were placed in a situation where they gradually lost sympathy with their interlocutor, and responded by distancing their speech from his. The English-speaking Welsh subjects were learning Welsh as a second language (the interviews took place in a language laboratory). The RP-speaking interviewer's questions were pre-recorded and played to the interviewees, and their responses taped. Over the course of the interview, the questions reflected an increasingly hostile attitude to the Welsh language. The language-learner subjects felt increasingly threatened by the English-sounding interviewer's remarks about 'the dismal future of Welsh', and they broadened their own Welsh English accents in a distancing and defensive way.

Another study of convergence and divergence investigated the interaction between an elderly Berlin man and two students from other parts of Germany, posing as visitors to the city asking him where they could go to enjoy themselves (Dittmar and Schlobinski 1988). The Berliner shifted to more standard features when he was following the maxim of helping strangers. However, he shifted strongly the other way, towards urban Berlin vernacular, to distinguish himself clearly from the other Germans once they began to suggest that Berlin was a "Las Vegas", with seedy nightclubs and a bad reputation. He foregrounded his local identity and his resistance to such an assessment of his city with marked changes in his intonation, an increase in speech rate and the inclusion of urban Berlin vernacular features, arguing, "et jibt ja **ooch** noch normale" (Dittmar and Schlobinski 1988:165). This translates as "there are normal [people] too". In Standard German, towards which he had shifted elsewhere in the exchange, this would be pronounced "es **gibt** ja **auch** noch normale".

In many of the convergence and divergence studies reported in this section, the assessment of the differences in pronunciation is based not on quantifiable acoustic data or even on systematic auditory analysis, but with the use of listener-judges. This has become the accepted methodology in social psychological investigations, and I am interested to see whether the results showing an accommodation effect will be replicated in my own study, where sociophonetic techniques are employed.

2.1.2 Code-switching and social ambition

Code-switching is the process of changing from one language or language variety to another when the situation demands. An overview of several linguistic and anthropological investigations of code-switching can be found in Foley (1997:333-341). One early and well-known study of code-switching between language varieties was that conducted in Norway by Blom and Gumperz (1972), investigating the use of the national standard Bokmål with the local variety, Ranamål.

Douglas-Cowie (1978) is a study of code-switching among bidialectals in Articlave, a village in County Derry, Ulster, of which the author was a native. The speakers were proficient both in the local dialect and in a more acrolectal, RP-like variety. Douglas-Cowie considered the motivations for code-switching, reasons why it might occur, and which individual speakers were particularly adept code-switchers:

Attention is given to the social factors which promote bidialectalism in villages such as Articlave, to the social situations which determine a bidialectal's choice of linguistic code, and to the varying abilities of different social groups to switch or maintain the switch from non-standard to more standard speech varieties.

(Douglas-Cowie 1978:37)

The most interesting finding from her experiments was that social ambition was a much better indicator than social status of which code speakers would use.

To begin with, ten adult informants representing a social cross-section of the village community were invited in pairs to Douglas-Cowie's house, served tea and cakes and were covertly recorded chatting to one another for two hours. A hidden microphone was 'placed in a hole and surrounded with flowers in a specially made coffee table' (1978:40). In the second phase of the investigation, Experiment Two, which was carried out in the same surroundings and circumstances, informants

attended singly, and spoke instead to an English outsider with an RP accent. Douglas-Cowie made an impressionistic comparison of the two recordings, using various variables to assess speakers' levels of code-switching; some phonetic (mostly vowels) and some lexical (e.g. use of *yes* versus *aye*). She concludes that 'a comparison of informants' treatment in Experiments One and Two of certain major linguistic variables in Articlave shows that the presence of the English outsider very often initiates a switch to more standard speech codes' (1978:40), and furthermore that 'certain topics of conversation, in particular the discussion of occupation and education, can reinforce informants' tendencies to switch to more standard linguistic codes in Experiment Two' (1978:43). For Douglas-Cowie, then, topic is a significant factor as well as audience in her assessment of code-switching.

Douglas-Cowie found no obvious relation between the linguistic indices of her informants to their social status in terms of education or occupation. She noted however that many Articlave villagers were socially ambitious, and 'decided to test the hypothesis that villagers' linguistic behaviour may be more clearly linked to their social aspirations than to their achievements' (1978:47). Informants were asked to rank one another on how keen they were to get on in the world: very keen, keen, quite keen or not keen. Douglas-Cowie notes that 'no one found much difficulty answering this question ... there was a striking amount of agreement' (1978:47), and she observed a very good correlation between peer-rated levels of social ambition and use of standardised speech in Experiment Two.

Douglas-Cowie shows the importance of social ambition in the speech behaviour of members of this particular community. It seems to be the primary motivation for the situational changes in performance that she observes. The speech of her informants in Experiment Two echoes one of the findings of Labov's 1966 New York study, that 'a speaker's social aspirations more accurately predicted the prestige value of their

spoken language than their currently measured socio-economic position' (Giles and Coupland 1991).

Two serious criticisms can be made of Douglas-Cowie's research. These concern her experimental technique and the report of her study respectively. Firstly, the use of hidden microphones to make covert recordings of informants without permission is unacceptable, in that it violates the principles of informed consent and subjects' right to privacy which ought to form part of any ethically legitimate study (see e.g. the guidelines laid out in BAAL (1994)). The actual legality of making and using surreptitious recordings for such research is also doubtful. The legal position in the U.S.A. has been explored (Larmouth, Murray and Murray 1992; Murray and Murray 1996). It appears from these explorations that American sociolinguists would not be breaking the law if they made covert recordings. For their colleagues in the UK, the position is less clear, but both the 1998 Data Protection Act (under which recorded speech could be viewed as "sensitive personal data") and the 1998 Human Rights Act (especially Article 8, which deals with privacy) would seem to prohibit recording and storing people's speech without their consent (HMSO 1998).

The practice of obtaining *post factum* consent from informants for recordings made for linguistic research does occur, but is increasingly regarded as methodologically unsound. For example, Coates (1996) reports the fury of her friends on being told that she had been surreptitiously recording their conversations for nearly a year, and her subsequent recognition that 'recording people talking without their consent is a gross violation of their rights' (1996:5). These concerns are not so much of a problem for linguists subsequently considering the findings of studies like Douglas-Cowie (1978) and Giles (1973; section 2.1.1 above), but any replication of their methods is clearly ruled out.

The second criticism is of Douglas-Cowie's reporting of her study. In the only published presentation, Douglas-Cowie fails to tell us the sex of her ten informants. Tantalisingly, pronoun use in the article indicates the sex of six of them, while stereotypical assumptions about jobs (i.e. that in rural Ireland in the 1970s a mechanic is likely to be male, and a shop assistant female) and that close friends are same-sex suggest the sex of most – but not all – of the others. It is frustrating that the sex of informants is not given, because in other studies it is a significant factor, and in this case there seems to be a marked effect; namely that those whose social ambition exceeds their educational status are all female. Also, no conclusions can be drawn about the effect of the interlocutor's sex, which was matched to speaker only in Experiment One. (Informants attended Experiment One in same-sex pairs, but the English interviewer for Experiment Two was male.)

There may also be a methodological flaw in comparing informants' free-ranging talk with friends and with the English outsider. Levels of formality and topics of conversation are likely to be quite different in these two speech situations, and linguistic disparities may be attributable to this rather than directly to any audience effect. In comparison, this was controlled for in Giles (1973) study, discussed in section 2.1.1 above; none of his informants knew either of their interlocutors. The need to control this sort of variation led me to structure my own experiment in a more balanced way, so that both topic and utterance could be controlled. This was achieved with the structured questionnaire technique developed for Experiment Three, reported in chapter 7 below.

2.1.3 Style-shift

Style-shifting by individual speakers was more or less ignored in early sociolinguistic studies such as Labov (1972); with no variation in audience, stylistic variation in Martha's Vineyard seemed to be less evident than it might have been in a study with more than one interviewer. As for topic-related shift, Labov conceded that 'sometimes the conversation will take a livelier tone, or a more formal aspect, but the percentage of centralised forms is not significantly affected' (Labov 1972:21). This 'empirical, unidimensional approach ... involving attention paid to speech' is criticised by Rickford and McNair-Knox (1994:235), who consider, like Coupland and others (see 2.2 above), that a model which considers style as audience accommodation is likely to be more promising.

Rickford and McNair-Knox (1994) is a quantitative study of addressee- and topic-influenced style-shift by a single speaker. The subject, given the pseudonym Foxy Boston, was an eighteen-year-old African-American woman living in Palo Alto, California. Two interviews were carried out, both in the subject's home, but with different interviewers. The first interview was conducted by McNair-Knox, a forty-one-year-old African-American woman whom Foxy knew well, both from the local community and from several other sociolinguistic interviews which she had conducted with her over the previous five years. The second interview was carried out by a twenty-five-year-old white woman, who was a stranger to Foxy. The findings showed that Foxy's language use was more standard in the second interview; specifically, that she used fewer of the grammatical forms associated with African-American Vernacular English (AAVE) such as zero copula or invariant 'be'.

Although this study seems to provide evidence for style-shift according to interlocutor, and allows its authors to argue in favour of a model based on audience

accommodation as outlined above, its design is somewhat flawed. A distinction should be drawn between "audience" and "addressee/interviewer", as speakers may style-shift to accommodate not only to their interviewer but to others who may be able to hear them (see Bell 1994, discussed in section 2.1.4 below), and interviews of this nature are not always carried out in one-to-one situations. Indeed, McNair-Knox notes that her sixteen-year-old daughter accompanied her to the interviews and 'served primarily as co-interviewee and peer for Foxy' (1994:236). As McNair-Knox's daughter does not seem to have attended Foxy's second interview, this presents a serious confounding factor for this study. The changes in Foxy's linguistic behaviour cannot be confidently ascribed to her accommodation to McNair-Knox as an interviewer; they might well be due to the participation of a third party changing the dynamic of the interview. It is possible that a young woman being interviewed by an older woman would behave differently if another young woman was present, whatever the relationships between those participants were.

Furthermore, it is difficult to glean much more from the results than the unremarkable observation that this individual speaker was motivated to shift her speech more towards her own particular vernacular (AAVE) while addressing one interviewer than the other. It is suggested that, as users of AAVE are a group defined in terms of ethnicity, it is the differing ethnic identity of the interviewers which motivates this shift in style, but other differences exist between the two interviewers which cannot be ruled out. Although all participants were female, there was a considerable age difference between McNair-Knox, who was a generation older than Foxy, and the second interviewer, who was only seven years Foxy's senior. More significantly, Foxy knew McNair-Knox well, whereas she had never even met the second interviewer. Might the effects observed not have been as much a result of this unfamiliarity with her addressee as with the differences in the ethnicity of the participants?

I am not questioning here the importance of demonstrating one's identity in speech situations through a linguistic strategy, and I agree with the social psychological perspective that a speaker's identity needs, which connect with the context of the communication, will have a strong influence on the kind of speech s/he will produce. My criticism of Rickford and McNair-Knox's study is that the context and other participants which motivate style-shift are not well-controlled in their experiment, and therefore that the results presented here are not only weakened but obscured.¹

Coupland (1985) offers an interesting study of style-shift in an individual speaker who is especially concerned with issues of performance and audience perception; a radio presenter in Cardiff. This is particularly relevant to my work not only because it deals with variability in the speech of an individual, but also because Cardiff English is, like Liverpool English, an urban accent with little overt prestige: 'Cardiff English attracts predominantly negative evaluations in the same way as many other urban British dialects' (Coupland 1985:158). Moreover, the variability is focused around certain key phonological features which are presented as unassailable marks of local identity. In Liverpool, I propose that these include the vowels in "bath" and "bird" and, in particular, the lenition of voiceless stops, especially word-finally (see chapter 4 below). In Cardiff, the predominant distinctive feature is the vowel which occurs three times in the title of the radio programme itself, "Hark, Hark the Lark". As Coupland states, this is 'Cardiff English's central stereotypical feature – the variable (a:) equivalent to RP /ɑ:/, which Cardiff English sometimes realises considerably more fronted and close than the RP phoneme' (1985:158). Not only is this particular feature prominently displayed in the show's title, it is also reinforced during the programme, which is punctuated with the presenter's catchword "Remarkable!" and

¹ Rickford and McNair-Knox's failure to control for interviewer characteristics is also noted in Cukor-Avila and Bailey (2001)

by 'a distinctive jingle – a sung fanfare of the words "Hark, hark the lark in Cardiff Arms Park" with an [æ:] vowel quality predominating throughout' (1985:158). This use of these set phrases resembles the "hoi toide" examples in Schilling-Estes' work on Okracoke English; see section 2.1.7 below.

2.1.4 Audience design

Bell's (1984) model for style-shift by individual speakers based on audience design has been generally acclaimed and widely accepted by sociolinguists (see e.g. the review in Wolfram and Schilling-Estes 1998:227-231). The audience design model incorporates and extends the SAT principle that speakers alter their speech in accordance with their audience to express solidarity (or distance, in the case of divergent accommodation). Bell (1984) proposes that all intra-speaker variation, from style-shift to bilingual code-switching, is essentially the result of speakers responding to their audience. 'Speakers design their style primarily for and in response to their audience' (Bell 2001:143). It is important to appreciate that "audience" does not just refer to the speaker's immediate addressee, but also to other audience participants, whom Bell classifies as auditors, overhearers and eavesdroppers. Each of these audience members can have an effect on a speaker's performed style, with the effect diminishing with their level of participation in the interaction.

Bell (1984) discusses various studies which include a controlled change in addressee as one of the research parameters as evidence for his theory. Some of these use a set-up of interviewer versus peer as addressee, in a similar way to Experiment Three in this study (reported in chapter seven below). Examples of this technique include Douglas-Cowie (1978; see section 2.1.2 above) and Bickerton (1980), who recorded a Hawai'ian informant in conversations and interviews both with a peer and with an outsider (Bickerton himself).

Bell also discusses various studies which have reported topic-related shift with no change in audience (e.g. Coupland 1981). He mentions particularly the research done by Blom and Gumperz (1972) in the bidialectal community of Hemnesberget, Norway, who found that a change in topic could trigger a switch from local to

standard dialect. These might seem to present a problem to a theory which claims that style-shift is motivated only by audience, but Bell argues that non-audience factors like topic and setting derive their effect by psychological association with addressee types. That is to say, any effect which seems to be due to some factor other than audience (such as topic) is in fact because that factor calls up an association with audience in the speaker's mind. Wolfram and Schilling-Estes (1998:228) provide an example:

Non-personal factors such as topic and setting may also affect style-shifting under the audience design model, but these derive from audience-based considerations. For example, when speakers discuss a topic such as education, they may commonly shift into more standard speech, but this is because this topic is associated with a certain type of audience – namely, a high-status, standard-speaking audience – rather than because of the nature of the topic *per se*.

Bell considers shifts in style to be either responsive to a situational change, or a strategy used to initiate a redefinition of the speech situation. He calls such initiative style shifts *referee design*; there is divergence from the addressee and towards an absent referee group with whom the speaker wishes to be identified. Referee design was seen as a less significant component, an add-on derived from audience design, in Bell's original formulation (1984). More recently, Bell (2001:165) has repositioned referee design as a 'complementary and coexistent dimension of style', operating concurrently with audience design, rather than 'treating referee design as occasional or exceptional'.

2.1.5 Register variation

Biber (1995:1) talks about a single speaker using different linguistic forms on different occasions in rather different terms, using the concept of register:

most of this variation is highly systematic: speakers of a language make choices in pronunciation, morphology, word choice and grammar depending on a number of non-linguistic factors. These factors can include the speaker's purpose in communication, the relationship between speaker and hearer, the production circumstances, and various demographic affiliations that a speaker can have. Analysis of the systematic patterns of variation associated with these factors has led to the recognition of two main kinds of language varieties: *registers*, referring to situationally defined varieties, and *dialects*, referring to varieties associated with different groups of speakers.

Biber observes that register variation is similar to what the anthropologist Dell Hymes calls 'verbal repertoire' (Hymes 1984). He warns that 'there is no general consensus within sociolinguistics concerning the use of *register* and related terms such as *genre* and *style* (Biber 1995:8), but generally adopts Ferguson's theoretical distinction which proposes that register be concerned with a communication situation, and genre with a message type recurring in a society (Ferguson 1994:20-21).

In his analytical framework for register studies, Biber details the situational parameters of register variation (1994:40-41) to specify the characteristics of registers and how they might vary. A simplified version of these parameters is given in figure 2.1 below.

- **communicative characteristics of participants**
single/plural/institutional addressee or addresser;
presence or absence of audience
- **relations between addressor and addressee**
power/solidarity; extent of shared knowledge;
personal relationship (emotional/social)
- **setting**
private/public; domain (work/school/religious/domestic etc.); mass-media;
whether place and time are shared by participants, time of communication
- **channel**
mode (written/spoken/signed);
permanence (recorded/transient, published/unpublished)
- **purposes/intents/goals**
whether communication is factual or imaginative;
intent to persuade/inform/entertain
- **topic/subject**
specific subject; level of discussion (specialised/general/popular)

Figure 2.1 Situational parameters of register variation (Biber 1994)

Changes in any of these situational parameters would, Biber claims, be capable of provoking variation in an individual's speech register. However, it is not just different situations that motivate shifts in style. Blom and Gumperz (1972) famously drew a distinction between situational and metaphorical codeswitching which is equally applicable to style-shift.

Motivated stylistic choices may be normative, if the switch in linguistic code accompanies a change of topics or participants or a similar redefinition of the situation. This would be regarded as situational code-switching. Alternatively, the

factors which motivate a speech-event may be related to interaction management or identity marking. Blom and Gumperz (1972) termed this second type of switch a metaphorical code-switch. Coupland (1985:155) counsels against being too quick to ascribe a situational explanation to style-shift:

Normative explanations of code- or style-selection should not be carried too far. Firstly it is not situational dimensions or components themselves that determine speech behaviours as much as participants' perceptions of and responses to these dimensions or components ... norms are rarely to be seen as absolute prescriptions/proscriptions of language usage; rather they set up background expectations against which, often in *contrast* to which, social actors weave their meanings through language choices.

Another aspect of Biber's approach to register variation which has received some criticism is the suggestion that variation according to socio-economic group is derived from stylistic variation, rather than vice versa:

According to this view, the reason that members of different social classes speak different language varieties is that they have access to, and typically utilise, registers with different characteristics ... It does not seem possible to account for Bell's observation that the degree of stylistic variation for a given variant is usually less than the degree of social class variation ... A more serious problem with Finegan and Biber's claim that elaborated forms are associated with prestige social classes and economical forms with non-prestige social groups is that this view sounds dangerously similar to the notion that speakers of low prestige varieties such as African American Vernacular English possess an impoverished communication system, incapable of expressing elaborate sentiments, subtle nuances or even straightforward logical thought.

(Wolfram and Schilling-Estes 1998:235)

I think that this criticism of Biber's derivation of social variation from stylistic variation is valid; a progression of stylistic variation from socio-economic group seems equally likely, although this may ultimately be a chicken-and-egg argument. However, I feel that the last 'problem' discussed by Wolfram and Schilling-Estes above seems to be based on a rather contorted view of Biber's model and is unfairly harsh in its near-accusation of racism.

2.1.6 Markedness

The markedness model, expounded by Myers-Scotton (1993, 1998a, 1998b) explores how the construct of *markedness* relates to speakers' choice of code or language variety. A code is held to be *unmarked* when choosing it is predicted by the context, 'maintaining the community's *status quo*' (Myers-Scotton 1998a:6), and *marked* when it challenges the community's expectations. Speakers make rationally based choices about which code to choose, based on the social and psychological associations of each variety, expecting that addressees will understand the intention behind their choice. Unmarked choices support, and are supported by, social norms; by selecting an unmarked form a speaker avoids the risk of social embarrassment or group disapproval. Myers-Scotton argues that cognitively processing a marked choice requires more effort from the addressee because, by making the marked choice, the speaker is asking for a new set of pragmatic rights and obligations to be negotiated in the interaction. Furthermore, a speaker making a code selection is, according to Myers-Scotton, making a cost-benefit analysis of the rewards and risks associated with each possible choice. 'Under the markedness model, the goal of speakers is to enhance rewards and minimize costs ... to optimise' (1998b:19).

Myers-Scotton (1998a) includes accounts of various speaker variation studies presented within a markedness model framework. Areas under consideration include style-switching between local standard English and 'home style' English in the Southern U.S. (Mishoe 1998), marked choices in supervisor-worker discourse in a car factory in Michigan (Bernsten 1998) and the use of marked language choices by African-American drag queens (Barrett 1998). This last study is most interesting, and quite relevant to some of the secondary interviews I conducted in Liverpool in which several young men spoke of conflicts between masculine speech norms for groups of gay men and for the community as a whole. These interviews are discussed further

in section 5.1.2 below. In his study, Barrett (1998:139) convincingly demonstrates 'how African-American drag queens use both unmarked and marked choices as rhetorical devices ... to highlight the instability of social categories related to gender, ethnicity, class and sexuality'. There are three main speech styles recurrent in the speech of African-American drag queens; an AAVE style, a gay male style (see Barrett 1997) and a style based on stereotypes of white women's speech 'which indexes their identity as drag queens ... including stereotypical notions of femininity and glamour' (1998:145; see e.g. Lakoff 1975). Switching between these three styles is generally an unmarked process for these speakers, who wish to signal their identity with all three groups, but they may also make marked choices on-stage to add emphasis, draw attention to speech, to unsettle the audience or to make a joke.

The markedness model is related by Myers-Scotton to other theories of strategy in style shift such as accommodation (section 2.1.1 above), audience design (section 2.1.4 above) or politeness (Brown and Levinson 1987). All these approaches 'accord to language users the ability to make choices regarding the varieties they employ, choices that involve cognitive calculations about their potential effect' (Myers-Scotton 1998b:19). She draws an important distinction between her theory and the social context models traditional in Labovian sociolinguistics. 'In those models, the social context factors are correlated with linguistic choices ... under the markedness model, what social context factors do is determine not choices but only the speaker's opportunity set, that is, those varieties the speaker is able to use' (1998b:34). This is a concept in some ways connected to that of repertoire, considered in the following section.

2.1.7 Repertoire, performance and speaker design

The concepts of linguistic repertoire and performance provide other possible motivations for variation in the speech of individuals. They recall Coupland's proposal (1988:xi) that dialect variation be viewed 'not only as a correlate of social differentiation in the community, but as a semiotic resource, offering communicators another dimension of meaning-potential to be manipulated'.

In an investigation of "self-conscious" speech, Schilling-Estes (1998) describes a style that she calls *performance speech*; a register which she associates with speakers' attempt to display for others a certain language or language variety. She discovered during fieldwork on the endangered dialect of Ocracoke in North Carolina that performance speech was a common occurrence:

We encountered a number of speakers who purposely "put on" their unusual dialect for the benefit of tourists and prying sociolinguists, even though these speakers may not sound all that unusual in normal conversation. These speakers have even developed several rote phrases which highlight a number of the features of the traditional Ocracoke dialect. For example, one classic phrase, "It's high tide on the sound side" showcases the well-known island /ay/ vowel (which sounds similar to [ɔɪ]).

(Wolfram and Schilling-Estes 1998:222)

This performance of language by speakers in a way that they do not habitually speak is in some ways reminiscent of the secondary level of accent repertoire posited by Giles in his discussion of Blom and Gumperz (1972). Blom and Gumperz had 'assumed that individuals possess a speech repertoire from which they can select speech forms depending on the nature of situational constraints' (Giles 1973:88). The primary level, which relates to shifts along a continuum from standard to broad regional accent, was his main concern with reference to accent mobility (the focus of the paper). However, Giles also talked about a secondary level, consisting 'largely of

those accents which an individual can effectively mimic, but commonly only uses for entertainment and amusement' (1973:89).

These mimicked accents can be alien to speakers' own social background, or can (as in the case of Coupland's Cardiff local radio presenter, discussed above in section 2.1.3) be exaggerated performances of one of the speakers' own codes. If the code being used is one that is foreign to the speaker, this may be mockery, but is often done to establish identity or solidarity with another social group; consider for instance Rampton's work on *crossing* in the Midlands of England, where he investigated 'the use of Panjabi by young people of Anglo and Afro-Caribbean descent, the use of Creole by Anglos and Panjabis, and the use of Indian English by all three' (Rampton 1995:4). Where individuals are of multiple backgrounds or ethnicities, the emphasising of one aspect of the identity and the playing down of others can be another sort of performance (see for example Bucholtz 1995 on *mulatta* and *mestiza* linguistic behaviour, or Mendoza-Denton 1997 on California schoolgirls with Mexican or *Chicana* identities). Liverpool English is certainly an accent much-mimicked by outsiders, and I have encountered many performance-type situations in which Liverpudlian speakers with a habitually relatively mild accent have been motivated to shift into "broad Scouse".

Some studies discussed in this section (such as Coupland 1985, Schilling-Estes 1998) and elsewhere in this chapter (Mendoza-Denton 1997; Eckert 2000) have been interpreted as developing the concept of the audience design concept (discussed in section 2.1.4 above) into something more like a speaker design model:

Under speaker design approaches, stylistic variation is viewed not as a reactive phenomenon but as a resource in the active creation, presentation and re-creation of speaker identity ... Speaker design models are firmly rooted in social; constructionist approaches, in that language and society are viewed as co-constitutive: the linguistic feature and patterns speakers use are not mere reflections of static identity ... but rather are resources speakers use to shape and re-shape social structures such as class and gender groups, as well as their positioning with respect to these structures and with respect to one another.

(Schilling-Estes 2002:388)

A speaker design approach regards speakers as agents and initiators rather than simply respondents, with speakers having the ability to use repertoire and performance to position themselves as they choose in the discourse taking place.

Coupland (2001:200) argues for the agency and control of the speaker, rather than just of his or her audience, in these acts of accommodation:

It is equally likely that the designing of acts of linguistic display [are] geared to the speaker's *self*-perceptions, projecting various versions of his or her social and personal identity ... In just the way that we might admit to designing our dress and appearance for our own benefit (albeit monitored through the perceptions of others), so we can think of our speech-style choices as being oriented to our own self-evaluations.

Schilling-Estes (2002:392) raises an important question about speaker design approaches. '[Can] the interpretations gleaned through close-up analysis of individual initiative shifts can be generalised in any way to the larger community?' This question can be broadened out to ask whether the consideration of intra-speaker variation (as reviewed in the above sections), can tell us anything about inter-speaker variation (considered in the sections below). As Schilling-Estes (2002:392) argues, in properly conducted studies, it is indeed possible to make such connections:

It should be pointed out that the micro-level studies of stylistic variation are almost always complemented by macro-level ethnographic and sociolinguistic analyses since (1) we would be hard pressed to get at speaker meaning without a thorough ethnographic understanding of individual and group meanings in the community under study, and (2) individual stylistic choices are never made in a social vacuum but are always being measured against group styles (and group patterns of stylistic variation), at the same time that group styles are being shaped by individual language use (Eckert 2000).

2.2 Dimensions of inter- and intra-speaker accent variation

The first half of this review chapter, section 2.1 above, has assessed different ways of looking at intra-speaker variation. Models and approaches reviewed include speech accommodation theory, code-switching, style-shift, audience design, register variation, markedness and repertoire/performance. This second half of the chapter, section 2.2, is concerned with more general dimensions of linguistic variation, especially those factors which bear particular relevance to my study. This variation, which includes social groupings like sex, age and social networks, is more commonly considered in terms of variation between speakers rather than within the speech of an individual, although intra-subject variation in these dimensions is also possible (only occasionally in the case of gender, more commonly in the case of social group, and inevitably in the case of age). As Schilling-Estes (2002:376) puts it, 'since intra-speaker variation lies at the intersection of the individual and the communal, a better understanding of its patterns will lend valuable insight into how the two spheres interrelate – that is, how individuals internalise broad-based community language patterns and how these patterns are shaped and re-shaped by individuals in everyday conversational interaction.'

The sections which follow aim to consider social factors which are important in variation between (and also within) speakers. Prior work which has focused on these various dimensions is discussed and evaluated. Attention is also paid to interactions between the dimensions under consideration.

2.2.1 Sex and gender

For all the studies of individual speaker variation discussed in section 2.1 above, no firm conclusions about the effect of gender can be drawn. This is either because there was only a single participant (Coupland 1984, 1985), because all participants were of the same sex (Giles 1973, Rickford and MacNair-Knox 1994), or because their sex was not reported (Douglas-Cowie 1973, Bourhis, Giles and Lambert 1975). These were investigations with relatively small numbers of speakers, and exploring gender-related differences was not the researchers' first priority. However, it is clear that some of the posited motivations for a speaker to vary his or her linguistic behaviour (such as accommodation) might operate differently according to the individual's gender. Furthermore, the gender of the addressee, and whether it matches that of the speaker, might also be significant; possible effects of the interviewer's gender are considered below.

I will begin by reviewing some relevant studies of gender-related language differences and the explanations which have been put forward for these, particularly the concept of covert prestige and its relationship to masculinity (there is a fuller review of this topic in James 1996). Next, I will consider the possibility of effects related to the gender of the fieldworker. Finally I will discuss the problems which arise from the experimental use of a simple, binary conception of gender directly correlated with the biological sex of the participants in a speech event.

Perhaps because gender is regarded as such a clear and oppositional difference between people, straightforward gender-related differences in phonological variables have rarely formed the central topic of sociolinguistic investigation, although they have of course been noted in research (e.g. Labov 1966, Trudgill 1974, Horvath 1985) whose primary focus is variation according to class (see section 2.2.3 below).

There was some older folk linguistic work on "women's language", but it was underpinned by a fundamentally sexist ideology with a flawed concept of men's language as normal and women's as deviant (see Cameron 1985:57 for further critique). This work was also arguably based on flawed interpretations; for instance, the stereotypical characterisation of Anglophone women's voices as having a wider pitch range than men is not supported by the data (for this and further examples, see Henton 1989). The effect of gender continues to have been observed in more recent sociolinguistic work (Wodak and Benke 1997) and it has been shown to be 'a powerfully differentiating factor in almost every case of stable social stratification and change in progress that has been studied' (Labov 2001:262).

Labov (2001) surveys numerous studies and notes several principles governing the linguistic behaviour of women. These are: that women show a lower rate of stigmatised variants and a higher rate of prestige variants for stable sociolinguistic variables than men; that women adopt prestige forms at a higher rate than men in cases of change from above; and that in linguistic change from below, women use higher frequencies of innovative forms than men do. Labov juxtaposes these principles to formulate what he calls a gender paradox; that 'women conform more closely than men to sociolinguistic norms that are overtly prescribed, but conform less than men when they are not' (Labov 2001:293).

The claim that women are more linguistically conservative than men has been repeated for decades, and has been challenged (Smith 1979:117) with the contention that this could be accounted for simply by the fact that female interviewees would accommodate less to the male researchers who carried out the studies than would the male interviewees. Despite this argument, female linguistic conservatism is generally believed in by sociolinguists and, as Walters (1989:111) notes, continues to be observed in the increasing amount of interviews carried out by female

researchers. Nonetheless, many of the interviews in the older canonical studies are felt to reflect a masculine bias. Romaine (1999) gives the example of Labov (1966), who asked women about words for childhood games while asking men about terms for girls and even female sex organs. She argues that female informants' comparative formality and use of more prestigious language than men in these interview circumstances was hardly surprising, given that 'it is not likely that a discussion of hopscotch would establish the same kind of rapport between a male interviewer and a female interviewee as talk about obscene language would between men' (Romaine 1999:175).

The phenomenon of over-reporting (Labov 1966, Trudgill 1972), where women asked to assess their own speech overestimate their use of a prestigious feature, is seen as further evidence of female linguistic conformity and insecurity. This disparity between the accent that these women perform when observed and the speech that they believe (or claim) they perform suggests a lack of either honesty or self-awareness, or a greater linguistic flexibility. If the latter explanation holds any water, then female speakers would be expected to show more changeability than male subjects in the experiment I conduct with both male and female speakers (reported in chapter seven below).

The hypothesis that women control a wider range of speech resources than (Cheshire 1982), and are more likely than men to accommodate to a more standard or prestigious code, is supported by studies which observe innovative linguistic behaviour among women competent in more than one code. Gal (1978) describes the choice made by young women living along the Austro-Hungarian border to reject local Hungarian dialect use in favour of German, and suggests the basis for this is the women's wish to move in wider circles than the Hungarian peasant social networks. Female Mexican-American university students in Texas choose English

over Spanish in more situations than male students (Solé 1976). Again, Solé claims that this difference in preference occurs because the women perceive more rewards for assimilating to the dominant (English-speaking) culture than the men do.

Women's tendency to use a higher rate of prestigious linguistic forms than men do is sometimes accounted for in terms of female status-consciousness (e.g. Trudgill 1972). Trudgill argues that women are felt to be more status-conscious than men, to set a higher store in appearances, to hold a less secure social position and, because of their role in raising children, to be more aware of the significance of sociolinguistic variables. It is even suggested that women avoid non-prestigious forms because their use connotes sexual looseness (Gordon 1997), and the belief that women are more socially ambitious is also often cited (Togebay 1978).

The other main area of explanation for disparity between men's and women's language is the covert prestige (Labov 1966) which is attached to working-class speech. The solidarity expressed by the use of working class speech is felt to be less central for women, who 'do not experience the same pressure as men to adhere to vernacular norms' (Cameron and Coates 1985:144). Furthermore, it has often been observed that 'working class speech appears in our society to have connotations of masculinity' (Trudgill 1983:168). Although it has been demonstrated on occasion that younger female informants also attach covert prestige to working class speech forms (Trudgill 1983:183), the association between working-class speech patterns and masculinity has been established on both sides of the Atlantic (Labov 1966, 1972; Trudgill 1972).

One of the most interesting studies which indicates covert prestige attached to the use of working-class speech forms by male speakers is Eisikovits (1981), which compared the speech of working class adolescents in Sydney when talking to peers

and when talking to the middle-class adult female interviewer. While the girls' speech converged towards the interviewer's, the boys actually used more stigmatised features with her than with their peers. This behaviour was felt to symbolise a rejection of the authority of the interviewer by the boys, and also a certain level of "performance" (see Schilling-Estes 1998, discussed in section 2.1.7 above). Male speakers' fondness for overtly stigmatised working-class norms is connected to their wish to appear masculine. I will return to the question of masculinity and femininity below after my consideration of effects related to the gender of the fieldworker.

Eisikovits' findings might have been different had the interviewer been male. Walters (1989) used male and female native speaker interviewers in his work in Tunisia, and observed changes in the linguistic behaviour of both interviewees and interviewers which related to the interviewer's gender. He argued that the gender and speech of the interviewer should not be ignored.

On the specific question of effects related to the gender of the interviewer, not much research has been carried out. Jahr (1979) argues that the interviewer's syntax was influenced by both the sex and the syntax of his interviewees, while Wald and Shopen (1981:239) observe that, in Canberra English, both men and women use higher status pronunciations when talking to women. However, of particular note (more for its methodology than its findings) is Edwards' (1988) study of British Black women in the West Midlands, which found no statistically significant effect of sex on language behaviour. As with Walters (1989), the problems which arose during the course of the interview process were illuminating. Edwards had assumed that the presence of a Black fieldworker would trigger Patois (vernacular Black British English) speech. The female fieldworker had no trouble eliciting Patois from women, but was less successful with men, especially those she did not know, and a second, male, Black fieldworker had to be recruited. With the sex of conversational group

members carefully controlled, Edwards found no gender-correlated difference in the linguistic behaviour of her informants, with differences instead being linked primarily to social networks (see section 2.2.4 below).

Gender is not a completely binary system, nor does an individual's gender necessarily align with his or her sex. In investigating people's performance of speech in society, it is the social dimension of gender (not the biological one of sex) that linguists should be interested in. Some recent interdisciplinary work on speech has begun to acknowledge gender as performed, not innate, behaviour (Butler 1990, 1993). For instance, Coates (1999) describes the trajectory of the construction of feminine identity in the speech of adolescent girls, while Delph-Janiurek (1999:137) concludes that, since 'speakers stylise their voices to some extent in order to cohere with gendered norms ... voices should be regarded as a form of "drag"'.

However, sociolinguistic researchers continue to divide their informants into male and female even as they acknowledge that it is gender rather than sex which is the key differentiating factor. In other words, although it is not maleness or femaleness which is expected to map onto differing linguistic behaviour but masculinity or femininity, these are assumed to correlate exactly and so the distinction is ignored. Indeed, I have used this approach myself in Experiment Three (the only one of my experiments with both male and female subjects). This approach has been challenged with arguments against this over-simplistic sociolinguistic approach to gender issues (Meyerhoff 1996; Bing and Bergvall 1996) but remains prevalent.

Although it would seem that masculinity and femininity are more desirable parameters to measure than maleness and femaleness, there have been problems with this approach in the field of social psychology. Older "sex-difference" methods of measuring masculinity and femininity consisted of various exercises such as word

association tasks and opinion questionnaires (such as yes-no responses to questions like 'would you like to be a florist?') intended to distinguish women from men. These techniques are discussed in Constantinople 1973 and Smith 1985:94, where they are criticised for adopting a definition of masculinity-femininity based on the implicit assumption that sex stereotypes reflect sex differences, and for their implicit bipolarity. "Self-categorisation" methods followed (Bem 1974; Berzins, Welling and Wetter 1978) which used questionnaires to establish how much an individual has internalised society's sex-typed standards of desirable behaviour of men and women by indicating how well certain characteristics (e.g. gentleness for women, athleticism for men) applied to themselves. However, these methods too have been criticised accordingly both for being based on stereotypes (Smith 1985:104) and for their continued reliance on setting up a binary, dichotomous system of gender difference (Bing and Bergvall 1996:17).

Masculinity has long been a central factor in discussions of covert prestige. The non-standard forms are covertly prestigious because of the "macho" status which their use confers on (male) speakers. Femininity has been less explored, although one interesting finding was that of Elyan, Smith, Giles and Bourhis (1978) who report a listener-judge study comparing women speaking RP and Lancashire English. The RP speakers were rated higher in femininity, competence and prestige, while the Lancashire speakers were heard as more likeable and sincere, and less aggressive. These findings are generally in line with other similar social-psychological studies comparing RP with a non-standard accent (some of these are discussed above in 2.2), but the listeners' assessment of RP-speaking women as more feminine is surprising, especially set against their assessment of the same group as more aggressive-sounding.

Lastly, ideas of femininity and masculinity are very much entwined with sexuality. Failure to behave in what is considered to be a heterosexual manner compromises a woman's femininity and (more widely studied) a man's masculinity (Cameron 1997; Armstrong 1997). Consideration of the dimension of sexuality is a possible way of exploring differences between maleness and masculinity; masculinity being particularly important in its relationship with working-class speech and covert prestige. The straightforward equation of masculinity with men, which regards (for example) the use of non-standard features as a solidarity-building, covertly prestigious act for all men, is beginning to be challenged in particular by those working in the field of queer linguistics (see Jacobs 1996, Kulick 2000). I explore the dimension of sexuality in response to interview discussions in chapter five (see section 5.3 below).

2.2.2 Age and adolescence

Most studies of sociolinguistic variation divide up the speech community under consideration according to age, whether to attempt an apparent-time analysis of language change, to investigate possible age-grading effects (see Bailey 2002) or simply to stratify the sample of speakers. Of particular interest in many recent studies, and of particular relevance to my own, is the stage of life between childhood and adulthood, the age of adolescence.

Many sociolinguistic studies of adolescence also show interesting findings related to gender, so there is an overlap with the factor discussed in the preceding section. For example, Cheshire (1982) reports not only that teenaged children in Reading use fewer non-standard forms at school than when interviewed in adventure playgrounds, but also that the difference between the speech in the two settings was greater for girls than for boys. Age in general is a significant factor in linguistic variation, not only because of the apparent-time effect in situations where there is linguistic change but also where age-difference between interviewers and interviewees becomes an issue (Eisikovits 1981; Rickford and McNair-Knox 1994 criticised in section 2.2.1 above).

Work specifically with adolescent speakers is often intended to explore the process of how speakers develop and refine their repertoires for interaction in different social and cultural contexts as they move from childhood to adulthood. Both individual identity and social group membership will strongly influence linguistic behaviour, and both are under construction during the teenage years. The precise age at which the ability to style-shift is developed is somewhat debated; Labov (1964) considers that this process does not begin until secondary school-age, and that a full stylistic repertoire is not usually acquired until speakers have left school and have begun to move in wider social circles. Wolfram (1969:15) seems to more or less agree with

this, separating his Detroit informants into pre-adolescents (aged between ten and twelve) and teenagers (aged between fourteen and seventeen): 'the pre-adolescents were chosen to represent a stage at which language acquisition is no longer a factor but conscious awareness of the social consequences of linguistic behaviour is minimal. The teenagers represent a stage at which there is an increasing awareness of social consequences of speech'. This claim is countered by Mees (1983:10), whose observations of school children in Cardiff led her to state that 'typically, individuals are much less linguistically flexible after the age of puberty than before', but supported by Macaulay's (1977) empirical work in Glasgow; he found that speakers did not begin to use Standard English consistently in formal situations until they were fifteen.

In another Scottish city, however, earlier development of social perception and style shift was observed: 'many of these eleven-year-old boys in Edinburgh can at least begin to explain what the functions of social and stylistic variation are. Some have experience in using the possibilities offered to assume through their speech different identities in different situations' (Reid 1978:171). As well as conducting a paradigmatic sociolinguistic investigation, Reid elicited comments from his young male subjects about language use, which showed a sophisticated comprehension of the forces at work:

"Some girls, when they talk to their teacher they talk sort of posh, and when they talk to their pals, they just talk normal" ... "perhaps you'd change when you got out with your friends, and when you went in the house with your parents" ... "especially when their mother's with them, ken, they just gie them a wee flick to tell them to talk nice"

(Reid 1978:169)

Although some studies have shown the continuing influence of parents' dialect model through the teenage years (Deser 1990), the role of school in the speech behaviour of adolescent informants is centrally important. The styles deemed acceptable in the

classroom and the schoolyard may differ both from each other and from an individual's home speech. Processes of accommodation to different audiences and settings in a school environment can be seen. Adger (1998) contemplates register shifting through dialect variants; looking particularly at how young speakers replace African-American Vernacular English dialect features with standard ones during instructional discourse. The pattern she observes indicates that dialect appropriateness at school is linked not only to setting or to addressee, but also to *footing*. (Adger 1998:151). Footing is 'the alignment we take up to ourselves and others present' (Goffman 1981:128). The variations in the language performance of individual speakers are ascribed not only to accommodation but also to how the speakers wish to signal their relation to other group members and also to the academic task at hand. Specifically, Standard English variants are used in taking up a position claiming authority; these young speakers feel that they have to "sound white" to achieve respect from peers and teachers in the classroom setting.

As well as being a place for instruction and the imposition of linguistic norms from above, school is also the locus for the creation of a social structure. Important work on adolescents which highlights this is that of Eckert in a Detroit school she calls Belten High (Eckert 2000). Her categorisation of her teenaged informants into two opposed social categories, "jocks" and "burnouts", with differing attitudes to school and the community, offer both gender and class-based alternatives in the student social order. These two groups are 'the very means by which socio-economic class is constructed in and for the adolescent population. The jocks and burnouts constitute middle class and working class cultures respectively ... and serve as trajectories to adulthood' (Eckert 2000:2). Adolescence is, Eckert argues, a crucial life stage for the study of linguistic variation because of adolescents' focus on identity-construction and innovation, and because of the social transition from a family- to a peer-based order.

2.2.3 Social class and ethnic group

Social constructions of gender also interact with constructions of class. For instance, Edwards (1979) reports that adults presented with tape recordings of working-class and middle-class children of both sexes made consistent errors, judging that middle-class boys were girls, and working-class girls were boys. Also, just as class interacts with gender, and gender with sexuality, so does sexuality with class: Coates (1986) reports a Cockney grandmother claiming her grandson would be labelled a "queer" if he talked with a "la-di-dah" accent.

Socio-economic class is one of the most commonly used variables in sociolinguistic studies ever since Labov's New York study (1966). A stratified model with a hierarchical structure is typically adopted and seen as primary. Indeed, class has become 'the central social variable in sociolinguistic research, in that results obtained from work on other variables (particularly gender) are interpreted in terms of social class or the closely associated notion of prestige' (Milroy and Milroy 1997:55).

As other social variables are explored, the significance of socio-economic status in language variation is increasingly called into question. Bernstein (1993) performed a multivariate analysis on telephone surveys conducted on a representative population sample for the Texas poll. The demographic variables known for each participant were sex, ethnicity, age, education, income, length of residency, region and ruralness. She worked out the relative effects of each demographic variable in explaining several phonological variables which occurred. Education and income (recognised as correlates of socio-economic class) were not significant; much of the variability was accounted for with reference to age, gender and ethnicity.

In the United Kingdom, too, class has been argued to be secondary to gender as a variable. Crinson (1997) looked at the careful speech of adolescents in Tyneside, interviewing twenty-four teenaged subjects. He found that, in formal speech, there was a bigger difference between boys and girls than between children of different social classes. The informants' social background, in fact, was not statistically significant at all in the formal talk he was investigating.

Only one of the experiments conducted for this study (Experiment One, the lenition experiment reported in chapter four) divides subjects into groups according to school, which is shown in that chapter to correlate with socio-economic group. In the other experiments and interviews, however, I dispensed with this variable and focused instead on gathering information about the individual speakers, their networks, loyalties and identities.

Many studies of sociolinguistic variation in English conducted in the USA focus on variation according to ethnic group (see Fought 2002 for an overview), while much of the research carried out in the UK prioritises variation according to social class (although of course many studies in both countries consider both variables). This transatlantic difference may partly reflect the different ways in which our societies are socially stratified. In this study of Liverpool English, I have not considered ethnicity as a variable. Not all of my experimental subjects were of European descent, but they and their parents were all born and raised in Liverpool. The focus of my research is inter- and intra-speaker variation based on regional and individual identity, rather than identity based specifically on ethnic group.

2.2.4 Social networks

Social network was developed as a quantitative speaker variable by Milroy during her study of inner-city Belfast (Milroy 1980). Rather than being based on an individual speakers' membership of a certain gender, age group or social class, network scores are based on the relationships that the speaker has with other members of the speech community. This methodology involves assessing the density and multiplicity of the social networks with which an individual is connected. In Belfast, five criteria such as kinship ties with neighbours, or work colleagues also being neighbours or friends were measured (Milroy 1980). Among adolescent boys in Reading, the intensity of the individuals' participation in the network was measured in terms of clothing style, carrying of weapons, swearing and participation in petty crime (Cheshire 1982:101), while an Austrian village network was assessed on a sixteen-point scale based on kinship, proximity, occupation and associations (Lippi-Green 1989:218).

Milroy argues that these networks of friends, family, work colleagues and neighbours impel speakers to speak the way they normally would in their presence. This occurs for two reasons:

One important reason for the language/network link has been pointed out by linguists and psychologists many times: that is a highly focused set of vernacular norms is able to symbolise solidarity and loyalty to a set of values of a non-institutional kind. Another reason is the capacity of a close knit network to exercise control over its members so as to ensure they maintain this set of norms in a highly focused form.

(Milroy 1980:194)

This second reason is why social network is a key factor in Experiment One (chapter 4 below). Adolescent social networks are often particularly close-knit, and their norm-enforcement mechanisms are especially potent. Milroy (1980:60) reports an incident

with a young informant who was being recorded in the presence of his friends, which shows the effect of peer-group pressure. In the first recording, he shifted his speech to a markedly less vernacular style, and was mocked by the others. On the next occasion, he fulfilled his obligation to the group and readopted their norms.

Network theory has been criticised by linguists who contend that the research which advances it as an explanation for the variable production of linguistic data is inadequately measured and treats 'the networkness of individuals as a categorical variable, frequently with dichotomous values' where 'continuous measures of network density or frequency of interaction' might be preferable (Murray 1993:161). Even this critic concedes, however, that there 'might still be a baby in the bathwater' (Murray 1993:172), and his reservations are connected with claims for social network theory which he feels are exaggerated, rather than the underlying concepts behind it.

The social network factor interacts with gender as well as with age. In traditional western working-class communities such as those studied by Milroy (1980), men may be in closer-knit networks because they work with other men in groups from the same community (e.g. as dockers or miners) while women work either in the home or in more isolating jobs. This would have been the likely situation in Liverpool when Knowles' (1973) work was carried out, but I would question whether it is the case now. Increased female employment, the decline of the industries which had employed the men and more widespread male unemployment have changed the situation, and the generalisation that men's networks are denser may no longer hold. However, strong social networks do sometimes correlate with increased use of non-standard features by women. For example, Thomas (1989) found that older women in a Welsh village had both the highest rate of non-standard speech and the strongest social networks.

2.2.5 Life modes and local loyalty

The concept of "life modes" was initially proposed by Danish sociologist Højrup (1983) and first employed in sociolinguistics as an alternative to a class-based analysis by Milroy and Milroy (1993). Lippi-Green (1989) and Marshall (2000) found social network theory (see previous section 2.2.4) insufficient to explain or predict linguistic behaviour, particularly in more rural communities. Pedersen had observed that, at least in rural communities, 'linguistic groups are not automatically isomorphic with social groups, nor with groups arrived at through network analysis' (Pedersen 1994:113), and she developed the use of life mode as a tool for sociolinguistic analysis (Pedersen 1994; Marshall 2000).

Life mode is centred around an individual's mental orientation to his/her community or communities. Pedersen (1994:87) claimed that 'urbanisation has greater significance than social stratification when it comes to the choice of a linguistic register'. ("Urbanisation" here is a state of mind and a pattern of behaviour rather than a simple matter of geographical location.) This model is based on, and accounts chiefly for, mental or physical movement from rural to urban areas. Life modes are dominated by either a rural or an urban orientation, and the informants who have rural-dominated life modes generally have higher dialect scores than those with matching network scores but with more urban-dominated life modes (Pedersen 1994).

The impressionistic findings supporting life mode analysis reported in Pedersen (1994) were supported in a quantitative study of a rural community in Aberdeenshire (Marshall 2000). This study correlated variation in dialect phonology, morphology and lexical recognition with social factors of life mode, attitude to dialect, level of national pride, and social network, as well as more traditional factors of sex, age and class.

Life mode orientation and social network scores were determined using a questionnaire. The life mode section of the questionnaire asked the rural informants how strongly they agreed or disagreed with statements such as "When I am in Aberdeen, I feel at home and unstressed by the crowds and traffic" or "I would love to move away from this area to the city" (Marshall 2000:153). The conclusion of this study was that this factor alone was a reliable predictor of dialect maintenance in this particular community, and that:

while social network strength indices have been shown to correlate highly with dialect maintenance in some urban areas, such as Belfast (Milroy 1980), the picture may be more complicated ... at least for rural communities, there is no correlation between network indices and dialect maintenance. An individual's free choice in matters such as degree of integration into local social networks and dialect use must be an important factor.

(Marshall 2000:173)

Although these studies have focused on rural areas and speakers' differing loyalties to the countryside and the city, they may have some relevance to urban sociolinguistic studies too. An individual may feel a strong allegiance to the place they grew up in, whether that is a tiny village or a huge city, or may be more outward-looking, identifying more on a regional, national or even global level; and this loyalty will play out in linguistic behaviour.

In British English, convergence towards regional (not local) standards has been observed. Speech which possessed regional standard status was found to be more favourably received than other varieties, either local or national, by Edwards and Jacobsen (1987:369):

This is in distinction to typical findings involving a more straightforward dichotomy between standard and non-standard speech where the former is usually associated with high status and competence, but tends to be seen less favourably than non-standard forms on the so-called solidarity dimensions of integrity and attractiveness.

Supra-local change in particular phonetic features such as glottalisation have been noted, with Milroy, Milroy and Hartley (1994:1) appealing for 'the simplistic opposition between standard and non-standard [to] be superseded by an approach that recognises gradations in terms of local and non-local'. Williams and Kerswill (1999) call this process of reduction in differences between regional varieties "dialect levelling", and Watt (2002:44) reports a Tyneside speaker's recognition of levelling processes in her/his assessment of her/his own speech: "'I don't speak with a Geordie accent, I speak, like, the Northern accent'". It remains an open question whether adherence to supra-local norms should be interpreted as disloyalty to local standards, or as loyalty to a larger construct; regional rather than parochial.

Local loyalty has been shown to be a significant factor in sociolinguistic investigations. In a study of the spread of the Northern Cities Vowel Shift in rural Michigan (Ito and Preston 1998), one teenaged informant who expressed less local loyalty and a keenness to move away from the area was considerably more advanced in the shift than another (of the same age, sex and socio-economic group) who had less wish to dissociate herself from the local small-town environment. Bailey observed in his analysis of data from a Texas telephone poll that informants who rated Texas as an excellent or good place to live were much more likely to use a monophthong for /ai/ than those who rate it as only fair or poor. He argues that this particular variable has become a shibboleth, a marker of Texas identity (Bailey 1991:128).

2.2.6 Salience and stereotyping

The evaluation of speakers by audiences according to stereotypes has an impact on several of the factors already discussed above. Speakers are aware of the positive and negative stereotypes relating to people from their area of the country and, if this is not the way in which they wish to be perceived, they may be spurred consciously to change their linguistic behaviour. Such changes, however, must be balanced against issues of local loyalty (section 2.2.5 above) and personal identity (section 2.2.7 below), and speakers rarely wish to give up the positive connotations of their local identity in the process of shedding the negative ones:

while Tynesiders may resent the caricature of the 'canny Geordie' which has entered the British mindset as a recognisable stereotype, they are unlikely to forgo the well-deserved reputation for warmth, friendliness, hospitality, straightforwardness, honesty and unpretentiousness on which they pride themselves.

(Watt 1998:288)

There are many stereotypes surrounding different accents of English. Speakers with RP-type accents have been shown to attract personality impressions of greater general competence than the speakers of non-standard regional accents (Strongman and Woosely 1967; Cheyne 1970). Competence, in turn, correlates with various desirable factors such as ambition, leadership, self-confidence, intelligence, 'even good looks and height' (Coupland 1988:105). On the other hand, although non-standard regional accents connote less status and competence, they are also considered 'to reflect greater integrity and attractiveness' (Edwards 1982:25). Such evaluations of language varieties clearly reflect an awareness of the status and level of prestige attached to those varieties and their speakers. Some linguists and anthropologists frame this process of performance and evaluation as a symbolic economy or a "linguistic market" (Bourdieu and Boltanski 1975; Eckert 2000),

wherein the self is a commodity being produced for value in the market, where the likelihood of a speaker's verbal offerings being heeded depends on the linguistic variety in which they are encoded (Eckert 2000:13). This is a particularly meaningful analogy, because of the commodification of Liverpool accents in the labour market, and the variable assessment of their value with reference to call centres. (Call centres are discussed further in section 5.5 below.)

Some aspects of an individual's accent seem to be more accessible to him/her than others. These prominent aspects are described by some sociolinguists (e.g. Kerswill and Williams 2000) as *salient*. Salience is 'a property of a linguistic item or feature that makes it in some way perceptually and cognitively prominent' (Kerswill and Williams 2000:63). Trudgill (1986, discussed in section 2.1.1 above) introduces the concept of salience in the context of dialectology, and suggests that the reasons speakers are more aware of some variables than others include a greater awareness of overtly stigmatised forms (especially where the high-status variant tallies with orthography, as with (ng) or (h) variables), of forms involved in linguistic change, of variables with radically different forms and of variables involved in the maintenance of phonological contrast. Kerswill and Williams (2000) criticise some aspects of Trudgill's model of salience, concluding that 'it is in the end sociodemographic and other language-external factors that account for the salience of a particular feature' (Kerswill and Williams 2000:63).

Trudgill (1986) suggests that those features of which a speaker is particularly aware are those most subject to change because of their psychological prominence. I would argue, however, that these psychologically prominent features can also be precisely the ones that speakers most consciously wish to "hold on to". The assignment of stigma and prestige to linguistic variables is complex, and in some cases it is can be just these highly salient features or shibboleths which are retained when an accent

undergoes a general change. Winifred Robinson, a well-known BBC radio presenter from Liverpool, declared in a recent interview that she could 'do standard English' but chose 'not to say "barth"'. I suppose now I speak a sort of posh Scouse ... but I'm still allowed over the threshold in Liverpool' (Allott 2000:26). This quotation encapsulates one of the social dilemmas that accommodation to a different set of norms than those of their family or peers can create for speakers; that of acceptance, or being 'allowed back over the threshold'. I would argue that, in the case of Liverpool, the main shibboleth is the [a] vowel in *bath*, which was the only phonological feature specifically cited by my interviewees as the one thing they would never change about their speech (see e.g. Carl in chapter six), noting that this would attract particular opprobrium. In the speech of Texans, discussed in section 2.2.6 above, the monophthongisation of /ai/ operates as a linguistic touchstone in a similar manner to /a/ in Liverpool (Bailey 1991; Bernstein 1993; Johnstone 1999).

2.2.7 Identity and individuality

Although speakers of non-standard varieties may adopt the stereotyped view of the majority about their accent, this does not lead to a large-scale defection from these varieties (Edwards 1985:149). The factors of loyalty and solidarity explored in sections 2.2.4 and 2.2.5 above go some way towards explaining this. For example, when questioning Norwich informants about their speech, Trudgill (1972:184) found that, although many initially stated that they 'did not speak properly, and would like to do so, admitted if pressed, that they perhaps would not *really* like to, and that they would almost certainly be considered foolish, arrogant or disloyal by their friends and family if they did'.

This is fundamentally a question of identity. Identity is understood to mean the active negotiation of an individual's relationship with larger social constructs, 'neither attribute nor possession but an individual and collective-level process of semiosis' (Mendoza-Denton 2002). In their work on language, identity and ethnicity, Le Page and Tabouret-Keller (1985:181) argue that speech acts are acts of identity projection:

the individual creates for himself the patterns of his linguistic behaviour so as to resemble those of the group or groups with which from time to time he wishes to be identified, or so as to be unlike those from whom he wishes to be distinguished.

Issues of individual identity present a problem to sociolinguists who wish to explain variation entirely in terms of tractable variables such as class, gender and ethnicity. Johnstone (2000a:414) criticises this deterministic approach for operationalising 'individuals as bundles of demographic facts' and sometimes treating correlation as if it were causation, providing a framework within which 'linguistically idiosyncratic speakers are invariably deviant' (Johnstone 1996:14).

Dorian (1994) challenges the assumption that linguistic heterogeneity necessarily reflects social heterogeneity. Patterns of variation in the Gaelic-speaking communities she studies are idiosyncratic and individualistic:

[even] exceptionally homogenous single-village populations show well-established patterns of intra-village and inter-speaker variation that do not correlate with such familiar social factors as socio-economic status, sex, social network or style, and only in a limited number of cases with age.

(Dorian 1994:631)

Has Dorian simply failed to identify the relevant social cause of the variation she observes, or is the variation determined solely by individualism on the part of the speakers? Dorian argues for the latter, drawing parallels between her own work and other investigations of individuality in language use in isolated areas, including work on Appalachian English in the Ozarks (Christian, Wolfram and Dube 1998) and Nahuatl Mexicano (Hill and Hill 1986).

Johnstone's excellent work on the linguistic individual is supported by Le Page's view of language as 'essentially idiosyncratic' (Le Page and Tabouret-Keller 1975:2) and by the work of linguistic anthropologists such as Sapir (1921, 1949) and especially Hymes, who argues that individual differences should be given 'foundational status' in the consideration of the study of language (Hymes 1979:35, cited by Johnstone 2000a:410). These individual differences may stem from the speaker's linguistic history or background (where s/he was born, where her/his parents come from, the places s/he has lived) or may be part of the expression of her/his personality. Johnstone appeals for a sociolinguistic hypothesis which thinks of a speaker's linguistic system as a repertoire of resources based on shared norms from which personal identity can be forged (Johnstone 1996:vii-x). Variability between speakers, and even within the same speaker, would then be seen as a legitimate and necessary expression of idiosyncrasy; 'doing things differently from others is how we

express selfhood, and expressing selfhood is both an important function of talk and a prerequisite for successful talk' (Johnstone 1996:128).

Into the experiments and interviews described in the chapters which follow, due consideration of idiosyncrasy and individuality, along with all the other key dimensions of speaker variation identified in previous sections above, has been incorporated. A wish to include this kind of identity-related information has particularly motivated the design of the three experiments.

2.3 Summary

This chapter has offered a comprehensive review of scholarship which concerns inter- and intra-speaker variation in general. In the first half of the chapter, accounts and models of intra-speaker variation were discussed and evaluated. These accounts and models have shaped my sociophonetic investigations into Liverpool English, reported in the chapters which follow. The notions of accommodation (section 2.1.1 above) and audience design (section 2.1.4 above) are particularly important to the investigative aims of Experiments Two and Three, reported in chapters six and seven below, which examine change within individual speakers' accents. Additionally, accounts of style-shift and of performance or speaker design (sections 2.1.3 and 2.1.7 above) underpin the motivation for the interviews and wider discussion presented in chapters three and five below.

In the second half of this chapter, factors which affect inter-speaker variation are reviewed. Some, like social class and gender, are widely accepted by sociolinguists to be significant dimensions of linguistic variation. Others, like life modes and individuality, are only more recently beginning to be explored. Different dimensions are investigated in different experiments. Experiment One (reported in chapter four below) looks at variation between groups of young speakers from two schools in Liverpool, so the dimensions of social group and network (sections 2.2.3 and 2.2.4 above) are especially pertinent. Experiment Two (chapter six) and the interviews in chapter 5 explore life modes, local loyalties, salience, stereotyping and individual factors (sections 2.2.5-2.2.7 above), and Experiment Three (chapter seven), which has male and female subjects, also investigates the dimension of gender (section 2.2.1 above). Variation according to age is not experimentally tested, as all my subjects are in their late teens, but their adolescence is itself relevant to their linguistic variation, if the accounts in section 2.2.2 are accepted.

All the literature reviewed in this chapter has been general work carried out by sociolinguists, phoneticians, psychologists and linguistic anthropologists on various languages and varieties. None of these has worked specifically on Liverpool English, the variety of English which is the focus of this thesis. The next chapter, chapter three, provides some contextualising information about the particular population which I am studying, and reviews other research which has been conducted on Liverpool English.

CHAPTER 3

LIVERPOOL AND ITS ACCENT

3.1 The city of Liverpool

3.1.1 Background information

3.1.2 Recent history

3.1.3 Liverpudlians on television

3.2 The accent of Liverpool

3.2.1 Overview of the accent

3.2.2 The phonological system and key phonological variables

3.3 Prior studies of Liverpool English

3.3.1 Knowles (1973)

3.3.2 De Lyon (1981)

3.3.3 Newbrook (1982) and Lodge (1978)

3.1 The city of Liverpool

3.1.1 Background information

Liverpool is a large port city in the north-west of England (see figure 3.1 below) in the county of Merseyside. It is situated on the Irish Sea and the north-eastern banks of the River Mersey. Across the Mersey from Liverpool lies The Wirral, a square peninsula of land between the Mersey and the River Dee, part of the border with Wales. The Wirral is part of Merseyside, but not of the city of Liverpool.

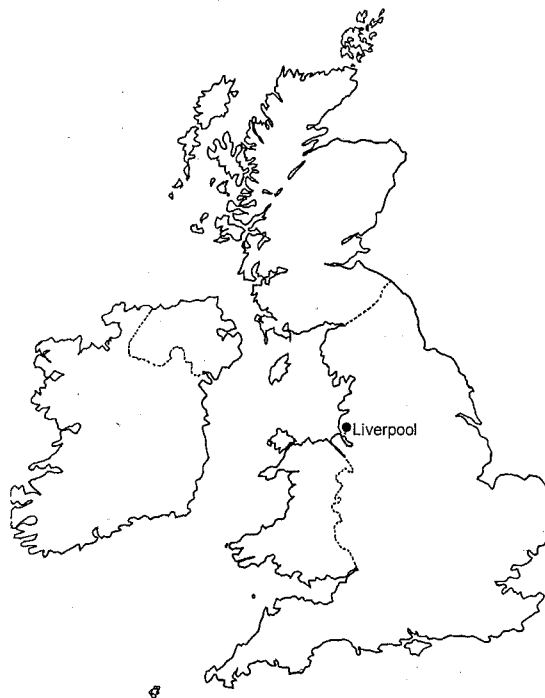


Figure 3.1 The location of Liverpool in the British Isles

Inner-city Liverpool has a population of around half a million people, with a further million living in the surrounding suburbs (based on 1991 census data). Its nearest neighbouring city is Manchester, thirty miles to the east. Before the reorganisation of county boundaries in 1974, and the creation of Merseyside and Greater Manchester as administrative districts, Liverpool was in the county of Lancashire. Across the Mersey, however, Birkenhead and the rest of the Wirral were in Cheshire. In the early

nineteenth century, Lancashire was noted as a prominent county of commerce, manufacturing linen, silk and cotton goods and having, in Liverpool, the second largest and most important port in the United Kingdom (Barclay 1808).

Settlement in the city dates back to the first century CE, and by the thirteenth century Liverpool had developed into a small but prosperous fishing village. The population continued to grow rapidly, especially during the eighteenth and nineteenth centuries with the arrival of large numbers of Irish immigrants. Liverpool developed into a large and important port city. Figure 3.2 shows the growth in the size of Liverpool population between 1650 and 1911, based on census data and, before 1801, estimates (Smith 1953).

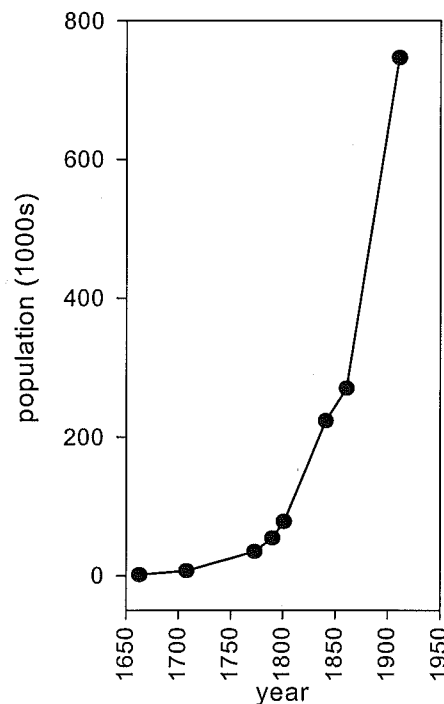


Figure 3.2 Liverpool inner-city population

Later in the 20th century, the numbers living in the inner city fell, but the overall population of the city continued to rise. In 1951 the city's total population was around 140,000 with 80,000 in the inner city; by 1991 the total population had grown to more than 150,000, but with only a third of those (50,000) in the inner city.

Today Liverpool is a major northern city with two universities, two cathedrals and two premier league football clubs. The city has produced many famous painters, poets, sportspeople, comedians, writers, politicians, actors and, of course, musicians. People who come from Liverpool are known as Liverpudlians or Scousers (the latter term is a reference to the local accent and dish, see section 3.2 below).

The population is ethnically quite diverse, with large Black African and Caribbean, Chinese and other south-east Asian communities, but the influence of the earlier immigration from Ireland is still the most apparent. This is particularly true when it comes to the accent of the city:

At the time of the 1861 census, 25 per cent of the city population were Irish immigrants. The resulting dialect is an interesting hybrid: on the phonological level, it remains similar to the dialects of neighbouring Northern towns, but phonetically it has been heavily influenced by Anglo-Irish.

(Knowles 1978:80)

3.1.2 Recent history

Certain events in the recent history of the city have had an enormous effect in shaping attitudes and prejudices about Liverpool and its people. These events are significant not only in how they have affected Liverpudlians directly, but also in how their reporting has altered the perception of the city by people from the rest of the country. Negative associations drawn between Liverpudlians and some of these recent events can be a strong factor in motivating speakers, especially speakers moving away from the city such as those discussed in chapter five below, to lose the accent which identifies them as quickly as possible. Not everything which has taken place in Liverpool or involving Liverpudlians over the last few decades has been bad, of course, but it is true to say that more positive signs of regeneration such as the Tall Ships Race, the International Garden Festival and the redevelopment of the Albert Dock have received much less coverage and are less well-known outside Liverpool than other, less happy events.

Liverpool has seen decades of industrial action, from the protests of factory workers in the 1970s to the dockers' strikes in the late 1990s (Dye 1998). Severe damage was caused to both the image and the finances of the city by the corrupt council under the control of Derek Hatton and the Militant Tendency in the 1980s (Aughton 1990:207). In the Toxteth riots of 1981, fuelled by widespread unemployment and institutional racism, CS gas was deployed for the first time in mainland Britain as 'Merseyside police found themselves in a running battle with hundreds of youths' (Aughton 1990:208). In 1985, the collapse of a wall at the Heysel stadium following violence between Liverpool supporters and rival Juventus fans led to the deaths of thirty-nine Italian and Belgian spectators, and to the banning of all English football clubs from European competition for five years, with Liverpool FC receiving an extra two year ban. All these events certainly contributed to a general impression of

Liverpudlians as lawless and potentially violent, and of the city as a run-down, crime-ridden 'working-class-only zone' (Grant 1999).

Although these events are barely remembered by my interviewees and experimental subjects, all of whom are teenagers, they know all about them, and know first-hand the effect they have had on their city's reputation. More recently, two tragic events have had a particular bearing on people's negative impressions of Liverpool and its citizens, especially its young citizens. They are the Hillsborough disaster of 1989 and the murder of Jamie Bulger in 1993, and are important in this study not so much for the details of each case, but for the way in which newspaper and television reporting of them illustrates common contemporary views of Liverpool and Liverpudlians.

During the FA Cup semi-final between Liverpool FC and Nottingham Forest FC on April 15th 1989 at the Hillsborough Stadium in Sheffield, ninety-six Liverpool fans were killed as their stand became overcrowded and they were crushed against the perimeter fence. The police response was slow and poorly coordinated, with some officers believing that the Liverpool fans were attempting to invade the pitch rather than escape from the stand. Besides those who died of asphyxiation, hundreds more were physically or mentally injured. The aftermath of this tragedy caused yet further distress in Liverpool, as many press reports drew bogus links between Heysel and Hillsborough, and blamed drunkenness and hooliganism on the part of the fans for the disaster, although the Home Office inquiry rejected these accusations, citing only 'lack of police control' (Taylor 1990).

Nonetheless, the Liverpool fans were widely portrayed in the press as wild animals who had brought their fate upon themselves. *The Sun* newspaper's reporting was particularly vile; their front page headline the next day accused Liverpool fans of picking the pockets of dying victims, and urinating on police officers. The boycott of

the popular tabloid following this false account of the tragedy continues in Liverpool to this day (Taylor 1990; Scraton 1999). Evidence of falsification of police witness statements and other attempts to conceal incompetent and prejudicial behaviour has also emerged (Scraton 1999), and many Liverpudlians still feel that justice has not been done to the survivors and victims' families.

In February 1993, two ten-year-old boys abducted a two-year-old named Jamie Bulger from a shopping centre in Bootle and murdered him. The pair were tried in an adult court, their names and photographs published, and they were sentenced to life imprisonment. In 1999 the European Court of Human Rights concluded that the highly charged atmosphere surrounding the trial had led to an unfair judgement, and the case returned to the news in 2001 as the young men were released. As well as discussion of the release, press coverage frequently included the victim's mother's vehement opposition to any measures intended to protect the young men's identities after they came out of prison (Keating 2001) and the victim's father's pledge at the time of the trial to "hunt down" the boys who murdered his son (Perry 2000).

Even back in 1993, when this shocking case was first being written about, much of the reporting had a distinctively anti-Liverpool flavour:

[Liverpudlians are] angry that the Bulger case was represented as somehow indicative of Liverpool's social breakdown ... One *Times* headline asked, "As Jamie Bulger was led to his death, what were the people of Liverpool doing?" Where was the city's fabled community conscience when it was needed, the paper asked? Liverpool had been indicted for not even living up to the values it tried to sell to the rest of the country.

(Grant 1999)

Years later, in the media discussion surrounding the young men's release, attacks were made not only on the individuals involved but were extended, in some cases, to everyone from their city. The *Guardian* columnist quoted below argues that Bulger's

mother's vindictiveness and 'commitment to keeping her wounds open' was not merely the behaviour of a tormented individual, but the product of her being a Liverpudlian, and having the (supposedly) classic Liverpudlian habit of nursing resentments *ad nauseam*:

Scousers' propensity to linger over every misfortune until another comes to replace it makes them uniquely suited to the demands of the Bulger mourning marathon ... As long as there's still a drop of righteous indignation to be squeezed from this unfortunate affair, people such as the radio DJ who broke down on hearing the news that [the murderers] were to be freed will be on hand to mop it up. He will do this because he is part of a community that excels in finding ways of feeling good about itself that don't involve any real effort. Being the perennial victims of a pair of notorious murderers is a much easier route to the moral superiority that every Scouser sees as their birthright than the more irksome alternative - actually doing something good.

(Raven 2001)

Inflammatory pieces like this one were met with angry reactions via the paper's letters page, but throughout the press, negative commentary and articles of this sort greatly outweighed any positive coverage.

Both Hillsborough and the Bulger murder were horrifying events in their own right, and have deeply affected the consciousness of Liverpudlians. Furthermore, some of the commentary on these events implied that Britain should not really be too surprised if people from Liverpool behaved like yobs or criminals. In the case of the last piece of journalism, Liverpudlians are portrayed as loathsome whingers.

I argue that this kind of stereotype-reinforcing reportage must cause enormous damage to a city and its reputation. I also ask whether it would not affect the behaviour, including the speech, of those who have come from Liverpool but who do not wish to be associated with such negative attributes. It is significant to note that the accent has scored particularly badly in various studies of language attitudes (Trudgill 1983; Watson-Smyth 1997); this linking of the stereotype to the accent is discussed further in section 3.2 and in chapter five below.

3.1.3 Liverpudlians on television

Stereotypes of Liverpudlians are created not only through coverage of news events but also by television dramas and by well-known Liverpudlian celebrities. A Catholic priest from inner-city Liverpool, asked by *The Guardian* (Grant 1999) to reflect on how the negative stereotype of the Scouser was brought about, moves directly from discussing news coverage to discussing television drama, connecting the two:

"[In 1989] To the rest of the country, we became like animals in a zoo. I couldn't read the Sun now, after Hillsborough - to imply that our grief for the victims was phoney . . . The *Boys from the Blackstuff* was a remarkable play," he continues, "but it left behind an image of a sad, depressed city, and *Bread* built on that to show us as dole-scroungers. In the end, it became a lie."

In the same article, the author (also from Liverpool) writes of the considerable shift in the image of the Liverpudlian since the time of the Beatles' celebrity in the sixties.

The references she makes to shell-suits and Cilla Black allude to television representations of Liverpudlians, which have grown increasingly negative:

What could beat being a teenager in Liverpool in the sixties? We knew we belonged to a world-class city ...[but] when I returned [to the UK in the 1980s], I felt as if part of my identity had been surgically excised: it was not that I'd stopped feeling that I was a Scouser, rather that what a Scouser now represented had shrunk to the narrowest possible seam ... In London, people said that I couldn't be from Liverpool because I didn't talk like Cilla Black or wear a shell-suit. What happened? How did what I thought of as the best place in Britain turn into what everyone else thought was the worst?

A brief overview of key television programmes and personalities relevant to the formation of the Liverpool stereotype is provided in this section.

A very large number of comedians have come out of Liverpool. This group includes traditional variety performers Ken Dodd and Jimmy Tarbuck, television presenters Keith Chegwin and Lily Savage, alternative stand-up comedian Alexei Sayle, more old-fashioned comedians Freddie Starr and Stan Boardman, and comic actors Ricky Tomlinson (*The Royle Family*) and Craig Charles (*Red Dwarf*). All of these

comedians include references to Liverpool and to being Liverpudlian in their performances. Another extremely famous Liverpudlian is Cilla Black, whose career has moved from success as a pop singer in the sixties to presenting two popular television programmes on London Weekend Television. Cilla is probably the most famous Liverpudlian on television. Her programmes, *Surprise Surprise* and *Blind Date*, were first made in the mid-eighties and continue to be broadcast today. Although her Liverpool accent is much modified, her catchphrase "a lorra lorra laughs" showcases a distinctive phonetic feature of the accent (see Coupland 1985 and section 2.1.3 above) and forms a central part of her Liverpudlian TV persona.

Several British television dramas have also been instrumental in creating the stereotype of the Scouser. Central to this creation were *The Liver Birds* (BBC 1969-1979), *Boys from the Blackstuff* (BBC 1982), *Brookside* (Channel Four 1982-date) and *Bread* (BBC 1986-1991).

Carla Lane was the scriptwriter responsible for both *The Liver Birds*, a situation comedy concerning two single women sharing a flat in Liverpool, and *Bread*. *Bread* in particular contributed to the stereotype of Liverpudlians, especially Liverpudlian men, as no-good scroungers; it was a sitcom about an unemployed and rather crooked family. The younger male characters in *Bread* seem, along with certain members of the cast of *Brookside*, to have been part of the inspiration for comedian Harry Enfield's "Scouser" characters; tracksuited caricatures of stupid and belligerent individuals with criminal tendencies, whining voices, ridiculous perms, and the catchphrases "Calm down" and "Eh? Eh?". These characters are still used as cultural reference points when Liverpudlians are under discussion; see section 5.4 below.

Boys from the Blackstuff was a critically-acclaimed series of five television plays written by Liverpool playwright Alan Bleasdale. It chronicled the disparate and

sometimes dissolute attempts of five former members of a tarmac gang to find work in a city hit hard by mounting unemployment and depression. Several contemporary television critics recognised the centrality of Liverpool to Bleasdale's realist vision. *The Scotsman's* critic, Stanley Eveling, wrote that 'Liverpool itself is the central character' (13/11/82), while in *The Observer* (14/11/82) 'Julian Barnes estimated that *Boys from the Blackstuff* "told us more about Merseyside than half a dozen documentaries"' (Millington and Nelson 1986:159). Of all the television programmes discussed here, *Boys from the Blackstuff* probably did the most to work against, rather than reinforce, the media stereotype of Liverpool and Liverpudlians:

Audience familiarity with the changing mythologies of Liverpool – largely created by the media – arguably contributes to the attraction of the series ... the imagery of *Boys from the Blackstuff* not only counters any sentimental view of Liverpool as a city of endlessly resilient jokers who always come up smiling, but also militates against the antagonistic media emphasis upon dole scroungers and Toxteth rioters.

(Millington and Nelson 1986:171)

Brookside is a soap drama set in and around a housing estate in Liverpool. It began transmission in 1982 on the brand-new television channel Channel Four, and by the mid eighties was their most popular programme. It is written by Phil Redmond, who had already had success with the secondary school soap opera *Grange Hill* (BBC 1978-date). It is noted for its characters and (increasingly preposterous) storylines, and is shown on three evenings each week. Today, *Brookside* offers the most obvious representation of Liverpudlians on television; it was mentioned by many of the Liverpudlians I interviewed (see chapter five) as instrumental in forming British people's stereotypes about Liverpool. Like the coverage of the city's recent history summarised in section 3.1.2 above, portrayals of Liverpudlians on television contribute both to the impressions others have of Liverpool, and the impression Liverpudlians have of themselves.

3.2 The accent of Liverpool

3.2.1 Overview of the accent

The Liverpool accent is one of the best known and most easily recognisable accents of English in the British Isles. The term "Scouse" is frequently used as a term for the dialect of the city, both by its inhabitants and by outsiders, and Liverpoolians are often known as Scousers. This is a reference both to the accent and to a local lamb stew dish of the same name, which is what the word "Scouse" originally meant.

Because the Liverpool accent is not overtly prestigious, some people resist the use of the term Scouse because it could be perceived as derogatory, but in my experience it is a term with which most Liverpoolians are comfortable. However, it is sometimes more precisely used in Liverpool to refer only to the basilectal accent of the inner city. Many Liverpoolians, especially those from the suburbs, draw a distinction between a Liverpool accent, which they admit to having, and a Scouse accent, which they feel is urban and undesirable and to which they attach certain negative connotations (see discussion in section 3.1.2 above).

The Liverpool accent has a high profile, and most speakers of British English (whether or not they come from Liverpool) seem to be aware of the associations that a Liverpool accent has, even though they may not agree on the desirability of those associations. Speaking with a Liverpool accent is not generally considered prestigious, and the accent of the city is regarded by many as coarse or ill-educated, scoring very badly in studies determining speakers' and listeners' attitudes to accents of British English (Trudgill 1983:218). More recently, market research into attitudes to regional accents among British company directors (Aziz Corporation 2000) concluded that 'businessmen who speak with a Liverpool accent are considered the

least likely to be successful, with only 8% of respondents believing them to be fairly or very successful, and 22% considering them less successful than average'. The same survey showed much more favourable assessments of north-eastern and Scottish accents.

Such studies operate on the assumption that evaluations of language varieties are 'expressions of social convention and preference which, in turn, reflect an awareness of the status and prestige accorded to the speakers of these varieties', rather than 'aesthetic or linguistic qualities *per se*' (Edwards 1982:21). Nevertheless, the social importance of using a non-prestigious variety to express solidarity with a group, or status within it, should not be underestimated. The use of a set of non-standard norms is able to symbolise loyalty to a set of values of a non-institutional kind, and a close knit network can exercise control over its members to ensure they maintain this set of norms in a highly focused form (Milroy 1980:194, see section 2.8.4 above).

The Survey of English Dialects (Orton et al. 1962-1971; henceforth SED) gives a useful historical perspective on the accent of the north-west, although the SED material should be used with caution in relation to Liverpool (and cities generally), since the researchers used only informants in rural locations. The nearest SED location to Liverpool was in Halewood, about ten miles south-east of the city, where fieldworker Stanley Ellis interviewed three men in 1954. The informants were two retired farmworkers aged seventy-eight and eighty-one, and a retired blacksmith aged sixty-five. A brief examination of their SED responses (Orton et al. 1962-71) shows that their dialects include a range of phonological features shared with other informants from the north-west (e.g. [a] in *last*) but no phonological features which might be regarded as more Liverpool-specific (see section 3.2.2 below). For instance, the vowel /ɜ:/ as in *bird*, which in contemporary Liverpool English is usually realised

[ɛ:], was produced instead as [ɜ'] in *thirty*, [ɔ] in *first* and *third*, and [ɒ] in *Thursday* by a single SED informant from the Merseyside village of Halewood.

Twenty years after those elderly informants were interviewed, Knowles (1973:14) observed that the influence of the Liverpool accent was reaching far beyond the boundaries of the city. His analysis of the situation as it was then still seems correct, and the effect of spreading has continued over the last decades:

Scouse ... has influenced middle and working class speech throughout Merseyside, and is spreading beyond its former boundaries. It is spreading north to Southport, north-east to Maghull, Lydiate and Ormskirk, east to St. Helens and south-east beyond Halewood to Runcorn and Widnes. Over the water it has ousted the traditional dialect of Wirral, particularly on the Mersey bank down to Ellesmere Port and beyond. It is also having influence across Chester and Wrexham into North Wales.

The accent is not spreading quite so vigorously eastwards into Lancashire, but this is largely because of the influence of Manchester, the large city which lies nearby, to the east of Liverpool. Although it shares many features with the accents of Lancashire, there are various important differences between Liverpool and other north-western accents. For example, it has a diphthong in *face* where accents nearby (e.g. in Lancashire) have a monophthong. Indeed, it has been claimed to be 'in a number of ways as linguistically southern as it is northern' (Hughes and Trudgill 1996:15).

There are also certain similarities to Irish English, which can be ascribed to the influences of the high levels of Irish immigration to the city. One of these similarities is the use of voiced and voiceless dental stop variables for fricatives /ð/ and /θ/.

However, unlike Irish English, Liverpool English is non-rhotic. These differences result in a distinctive and unusual accent of English.

In Liverpool English, there is often said to be no contrast between pairs of words such as *hair* and *her*, and the voiceless stop consonants are 'very heavily aspirated so that *matter* sounds almost like *masser* and *lock* sounds rather like the Scots word *loch*' (Trudgill 1990:69). This particular feature of aspiration/affrication of stops is explored in more detail in the experiment described in chapter 4 below. Knowles (1978:80) illustrates the accent by using word-pairs such as *mud/good*, *scarce/curse*, *singer/finger* and *book/Luke*. In a traditional, basilectal Liverpool accent, these words would rhyme with each other, but in each case the first member of each pair is subject to modification towards a more standard form by those speaking with a more acrolectal form of the accent.

In addition to these segmental features, Liverpool English also has distinctive intonation patterns, such as a skipping-down tone on yes-no questions which would have a rising tone in RP (Knowles 1978:88). Wells (1982:373) even proposes that 'it is perhaps its prosodic characteristics which most clearly mark out Scouse from other northern accents'. However, a wide-ranging investigation into the intonation pattern of various urban British accents, including Liverpool English, is being undertaken in the forthcoming Intonation Variation in English ("IViE") project (see Grabe 2002 and Grabe and Post 2002 for an initial overview), for which I conducted the fieldwork in Liverpool. I have decided to await the results of the IViE analysis rather than to examine any intonational features of Liverpool English in this thesis.

3.2.2 The phonological system and key phonological variables

Descriptions of the phonological system of Liverpool are included in Knowles (1973), Wells (1982:371) and Hughes and Trudgill (1996:92). Phonological, syntactic and lexical data from the SED (Orton et al. 1962-71) were presented in map form by Upton, Sanderson and Widdowson (1987), and those maps updated to reflect new administrative boundary changes (including the creation of the county of Merseyside) in Upton and Widdowson (1996), although of course these maps still merely reflect the SED data collected from nearby rural informants such as those in Halewood (discussed in section 3.2.1 above).

The vowels of the Liverpool accent are generally northern, with [a] in *bath*, [ʊ] in *strut* and [u:] in *book*, but unlike other Northern accents (except that of Newcastle), the vowel at the end of *city* is [i] (Hughes and Trudgill 1996:93). The SED isogloss between an [ʌ] to the north and an [ɛ] vowel to the south in *buried* sits just north of Liverpool, with Lancashire, Greater Manchester and parts of Cheshire using [ʌ], while Liverpool joins the Midlands and most of the south of England with an [ɛ] (Upton and Widdowson 1996:2). A further vocalic feature of Liverpool English to mention is the merger or lack of contrast between the vowels in *nurse* and *square*: 'the quality of the merged vowel may be central, rounded [ɐ:] or unrounded [ɜ:], or centralised-front [ë: ~ ë:]. The latter two are the characteristically Scouse properties' (Wells 1982:372). As well as /ɜ:/, the unstressed central vowel /ə/ is also quite fronted, and the first element in the diphthong in *goat* can be considerably fronted, to [ëʊ] rather than [ou] or [əʊ].

The consonant system of Liverpool English also includes certain particular idiosyncrasies, as well as other more general northern features. Some of the more general features include that in some lexical items, intervocalic /t/ following a short vowel can be realised as a flap [ɾ] or approximant [ɹ] (*lot of* [ˌlɒrə]; *shut up* [ʃʌʊ'ɹʊp^h]), and that /h/ is often absent word-initially. /ŋ/ is pronounced [ŋ] in the middle of consonant clusters, but usually [ŋg] word-finally (as in *thing*) or before a vowel (*singer*). *-ing* is an exception, often pronounced [ɪŋ] (Hughes and Trudgill 1996:94).

According to Upton and Widdowson (1996:34), Liverpool shares this [ŋg] pronunciation with neighbouring counties Cheshire, Derbyshire, Staffordshire and the West Midlands. The same source indicates that /tj/ and /dj/ in *tune* and *dew* are realised in Liverpool with affricates ([tʃ] and [dʒ]) rather than stop-glide clusters (Upton and Widdowson 1996:48-50).

The following consonant features are more Liverpool-specific. Firstly, /r/ is often realised as a flap [ɾ] rather than as an approximant [ɹ]. The flap appears most frequently in consonant clusters and intervocalically. Secondly, stops (particularly /k/ and /t/, but also /g/, /d/ and /p/) are aspirated, affricated or fricated along a continuum. For example, the voiceless alveolar stop /t/ ranges between [t^h] – [t^s] – [t̪s] – [s] etc., so that *mat* can sound like *mats* or even *mass*. Glottal stops, perhaps because of this alternative non-standard realisation of /t/, are 'noticeably rare' (Wells 1982:371). Lastly, and probably to be attributed to Irish influence, /ð/ may be pronounced as [d̪], and /θ/ as [t̪].

Seven of the variables within the phonological system of Liverpool English are shown in the table below. These four vocalic and three consonantal variables are those

which I use to investigate inter- and intra-speaker variation in Liverpool English in the three experiments described below, in chapters four, six and seven of this study. The "variable" column shows, between diagonal slashes, the symbols that I have chosen to represent each variable. The same symbols are used throughout the thesis.

	variable	RP	as in	ranges between
vocalic	/ə/	[ə]	father, ago	[ə] – [ɛ]
	/ɜ/	[ɜ:]	bird, university, nurse	[ɜ:] – [ɛ:] – [e:]
	/a/	[ɑ:]	grass, castle, bath	[a]/[æ] – [ɑ:]
	/əʊ/	[əʊ]	most, karaoke, goat	[ou] – [ëʊ]
consonantal	/r/	[ɹ]	married, sorry	[ɹ] – [r]
	/k/	[k ^h]	worker, wake up	[k ^h] – [k ^x] – [k ^x] – [x]
	/t/	[t ^h]	cartoon, exciting	[t ^h] – [t ^s] – [t ^s] – [s]

Table 3.i Seven variables in Liverpool English

3.3 Prior Studies of Liverpool English

3.3.1 Knowles (1973)

Knowles (1973) conducted a survey of the speech of Liverpudlians from a working class and a middle class area of the city and to follow the Labovian approach to analyse sociolinguistic variation in the dialect. He wanted to explain as accurately as possible 'what makes a Liverpudlian sound like one the minute he opens his mouth', but soon found that the task of describing the variables was complicated enough, and his thesis became more concerned with phonological matters than with sociolinguistics:

The original intention was to apply some of Labov's methods to Liverpool speech, identifying socially significant variables, and subjecting them to detailed analysis. However, it proved a major problem to identify the variables themselves, and to describe them in a simple and meaningful way... basic problems of linguistic description, which were at first overlooked, became in time the focus of attention. Consequently, although it is hoped that this work will be of interest to sociolinguists, it is not intended to be a contribution to sociolinguistics as such.

(Knowles 1973:1)

Knowles selected one hundred informants by means of a random sample of the electoral register from two wards in the city centre. These were Aigburth and Vauxhall, which (according to Liverpool University's Department of Social Science's analysis of the 1966 census) had respectively the highest and lowest percentages of professional and managerial residents, with 13% in Aigburth and 0.4% in Vauxhall (Knowles 1973:3).

By sampling this way, Knowles hoped to use the ward his informants lived in as an indicator of social class and thereby approximate a cross-section. This method meant that his sample included only speakers over twenty-one (the age of suffrage at the time). He did not concern himself with proportional representation of sex, nor of

ethnicity, claiming that no-one with any local knowledge would attempt to do the latter anyway. The large Chinese and Black British communities of Liverpool were therefore not represented. Some of the randomly selected informants had died or moved, or were medically unfit, or refused to participate, and eventually the total number of useful interviews was forty-seven. Informants were divided by age group in decades, sex, place of birth, religion and social class (class division being extrapolated from electoral ward). He used a questionnaire in a half-hour interview which included tasks such as number, picture and object identification, straightforward questions in the manner of the SED and the elicitation of a short piece of spontaneous speech.

Knowles conducted all the interviews himself and felt that a certain amount of accommodation by him to the way his informants spoke was appropriate:

Every informant was addressed as far as possible in his own vernacular, middle class people in the kind of modified RP heard on Merseyside, and working class people in Scouse. This involved selecting appropriate phonological features, and also a suitable "code", or way of expressing meanings or intentions. After all, one simply cannot expect a docker to take seriously someone he reckons to be putting it on 'all lah-de-dah'."

(Knowles 1973:9)

This process of accommodation by the interviewer according to his perceptions of his addressee has been discussed above (Giles 1973; Trudgill 1986; see section 2.1.1 above). I would question firstly how a researcher could be sure that s/he was entirely adept at making such shifts in performance style, and secondly how this difference between interviews might confound the experiment. For instance, if Knowles was less convincing speaking broad Scouse than he was speaking a more acrolectal version, then interviewees using the former variety might have felt they were being mimicked or patronised, which might have made them defensive. This could then have resulted either in them being reluctant participants in the interview, or in

divergent linguistic behaviour of the sort observed by Bourhis and Giles (1977; see section 2.1.1 above).

Knowles came to the conclusion that, compared with rural dialects with longer histories such as those recorded in the Survey of English Dialects, Liverpool English had very little to study as a dialect in terms of grammatical and lexical peculiarities. He therefore decided to reject a traditional dialect geography approach and resolved to concentrate on matters of phonology:

The dialectologist is largely concerned with the differences between one variety and another. There is a great temptation to exaggerate these differences, and to forget the similarities, to give up describing languages in order to fish for goodies. It would be extremely naïve to imagine that a list of Scouse goodies seriously describes English as spoken in Liverpool, since for every occurrence of a non standard word or construction, there occur thousands of standard forms.... The place to look for really localised speech is in isolated hamlets five miles from the nearest road, not in a centre of world trade. The peculiarities of Scouse are almost entirely phonological. When a Scouser speaks he produces a constant stream of prosodic patterns and segmental features which mark him unmistakably as a Liverpudlian. Our main task will therefore be to compare Scouse phonologically with other varieties of Standard English.

(Knowles 1973:49)

He did not make any recordings but relied on his own transcriptions of his informants' speech. These transcriptions were in the British phonetic tradition of careful eartraining and are very detailed and apparently accurate, but as he conducted his analysis he became less confident that they truly captured all the nuances of the dialect. He came to realise that transcription was a subjective process, with the analyst's work beginning impressionistically using "cardinal" categories, and then becoming systematic as the categories relevant for the dialect emerged. Eventually, he scrapped the transcription work because he felt that 'the precision of calculation does not solve the fundamental problem of phonetic description' (Knowles 1973:283).

The shortcoming of transcription without recording in this way is that the observer is constrained to the limits of the system used for record-making:

There is a reflexivity between observing and record-making in that their categories are mutually reinforcing. This is particularly the case if the notation we employ to reflect our listening is a segmentalised cross-parametric one. Such a notation system (e.g. IPA) can tend to focus our auditory observation as if we were really dealing with punctual phenomena. It is very easy, even for experienced observers, to listen as if the only relevant categories were those enshrined in the symbols and symbol stock: and to fail to notice some feature ... if the notation being employed does not provide a ready way of symbolising [it].

(Kelly and Local 1989:43)

Even a finely detailed transcription can be inadequate if the observer was not listening for some feature or detail whose significance is not realised until afterwards. As Knowles observed, there are always problems with impressionistic transcription and converting data from an auditory to a written medium. He defended this methodology by arguing that a native speaker fieldworker such as himself would have a special insight and would therefore be able to augment his transcriptions with his own intuitions, which seems to me to be a dangerous assumption. Might a researcher with a hypothesis to prove not persuade himself, however subconsciously, of the existence of some convenient feature which was in fact not present? An audiotape recording for possible later analysis would seem to provide an objective check, but none was made. In fact, Knowles was quite scathing about the merits of acoustic instrumental analysis, feeling that it was far better to rely on the native investigator's intuition than on machines; 'a few dozen spectrograms of Scouse would prove precisely nothing to the case' (Knowles 1973:82).

I do not concur with Knowles's low opinion of acoustic analysis, and shall demonstrate that spectrograms (admittedly rather more than a few dozen) will be extremely useful and revealing. Acoustic measurement is generally extremely important in phonetic analysis, and goes a long way towards making up for the

shortcomings of impressionistic transcription which caused Knowles such problems. It has also been convincingly argued by laboratory phonologists (see Pierrehumbert, Beckman and Ladd 2000 for an overview) that precise measurement is as vital to phonological investigation as it is to phonetic investigation, and that proper analysis is necessary in order to ascertain whether the distinction being observed is in fact a categorical, phonological one, or a gradient, phonetic one:

Transcriptions are not a reliable basis for phonological research, since they do not allow the researcher to determine whether the pattern being studied is gradient or not. Objective physical measurements are a more reliable basis for factual generalisations about sound patterns ... laboratory phonology is not one branch of phonological research, but simply the appropriate methodology for all of phonology.

(Myers 2000:267)

I am in agreement with this principle, and have adhered to the use of objective physical measurements rather than impressionistic transcriptions throughout my research.

Knowles concluded that two suprasegmental factors were crucial in the description of the Liverpool dialect: voice quality and articulatory setting. A large part of his thesis is concerned with formulating a model for these two factors, which fall outside the domain of basic phonological analysis:

It is frequently observed that people speaking different dialects actually look different, and appear to be using their speech organs in different ways. The investigation of this 'setting' of the organs is extremely subtle and difficult, but it is an essential part of a dialect description, for the setting is sociolinguistically as important as phonology, if not actually more important ...in extreme cases, as in Scouse, the setting involves a distortion of the vocal tract.

(Knowles 1973:92)

His analysis of articulatory setting was based on the changes he felt himself making as he switched between his own Scouse dialect and his approximation of RP. These changes included a spreading of the lips and an lowering of the velum.

Voice quality is often cited by non-linguists attempting to describe the Liverpool accent; terms like "nasal" are frequently used. The preposterous claim has even been made (e.g. by Honey 1989:55) that the Liverpool accent relates to the prevalence of adenoid problems among the city's inhabitants. Knowles (1973:116) acknowledges the effect of Scouse voice quality, but points out the obvious flaw in the suggestion that it is the result of diseased adenoids:

The Scouse voice quality gives the impression that the speaker has some congestion in the upper respiratory tract, even though it may in fact be perfectly healthy. There might be a historical explanation for this. In nineteenth century Liverpool sanitary conditions are known to have been appalling ... the conditions were ideal for the development of adenoids [*sic*] and respiratory disease. However, we cannot argue that a Scouser's voice quality is due to the environment his ancestors lived in: adenoids and respiratory disease must have been prevalent in every town and city in Britain and Ireland last century, and we must explain why they should have a permanent effect only in Liverpool If there is any connection between respiratory disease and Scouse quality, this is due to a reinterpretation of information in the speech signal.

The latter part of Knowles' thesis is a detailed phonemic analysis of Scouse based on his transcriptions, and includes consideration of all vocalic and consonantal features. However, as his analysis progressed he found traditional phonological categories increasingly unsuitable for his purposes; this was particularly true in the case of the distinction between stop, affricated stop and fricative:

Corresponding to the RP plosives /p b t d k g/, Scouse has an apparent confusion of stops, plosives, affricates, fricatives plus a number of sounds which fit into none of the "cardinal" categories at all. In fact, Scouse makes the distinction of stop and approximant for these consonants at a different place than RP, in that the phases of a "plosive" are controlled in a different way. The Scouse consonants are related to the "cardinal" types in exactly the same way as actual vowels are to the Cardinal vowels; in neither case do phonological distinctions neatly follow boundaries set up in advance for theoretical convenience.

(Knowles 1973:251)

He judged that sixteen (that is, about a third) of his subjects produced alveolar stops with "incomplete closure" in his word list exercise, but claimed that this articulation

was in fact much more widespread: 'most Merseysiders use stops with incomplete closure at least sometimes, and the majority of informants used them even in the slow deliberate style of the questionnaire responses' (Knowles 1973:324). He elicited this articulation in final position in the words *white*, *that*, *short*, *foot* and *sprout*, and medially in *daughter* and *thirteen*.

The phonetic feature which Knowles calls "incomplete /t/" and its voiced counterpart are explored in greater detail in chapter four below.

3.3.2 De Lyon 1981

De Lyon (1981) is an unpublished M.Phil. thesis submitted to the University of Liverpool. The author carried out interviews with twenty-four informants, seven women and seventeen men, of various ages and social classes. The interviews consisted of various speaking styles, from formal word lists to free conversation in the Labovian framework. Her findings are unremarkable, adding no new information to Knowles' work eight years earlier. However, despite such weaknesses, the thesis provides some anecdotal information relevant to my present study, especially from the parts of the interviews in which she asked informants about their attitudes to the Liverpool accent.

A sociolinguistic analysis of her informants' realisation of only three phonological variables, /k/, /εə/ and /ɜ/, is provided. These variables were chosen because they were peculiar to the Liverpool accent and were easy to transcribe from tape recordings. Furthermore, De Lyon notes that Knowles (1973) 'suggested that the pronunciation of these variables had a social significance' (De Lyon 1981:45). The phonemes /εə/ and /ɜ/ share many of the same allophones in a Liverpool accent, and are frequently assessed, both by Liverpool speakers and by sociolinguists, as (potentially) homophonous. Minimal pairs in RP such as *wear* - *were* are, she claims, 'frequently pronounced the same by Liverpudlians' (De Lyon 1981:45). /k/ is assessed in terms of incomplete closure, along the same impressionistic lines as Knowles (1973). She had intended to include consideration of a fourth variable, /əu/ as in *goat*, which is often realised in Liverpool with the first element considerably fronted, but she had insufficient evidence of the variable in her recordings. Nevertheless, she offers the theory that women's realisation of this diphthong is a

hypercorrection from Northern [o:], overshooting the RP [əʊ] to 'produce a first element which is fronted too much' (1981:51). She calls on Trudgill (1974:94) and Labov (1972:141) to support her claim that women, being more status-conscious, are more prone to such hypercorrect forms, although she herself provides no corroborating evidence for this.

De Lyon's conclusions are relatively insubstantial. She repeats some of Knowles' thoughts about the shortcomings of statistical sociolinguistic surveys (he felt that they failed to capture the essence of a Liverpudlian's speech), and laments the difficulty of assigning the traditional social class labels to socially-mobile informants, particularly women. More interesting are the responses she gathered from her informants when she asked them for their thoughts about Liverpool speech, which provide a picture of attitudes held in the city in the late seventies. Two informants said that they generally liked the speech of Liverpudlians, though one of those hoped his accent was 'not a bad one because he wanted to become middle class one day' (De Lyon 1981:30). One felt that some people exaggerated the accent as a prestige feature. No one admitted to liking his own speech, although some said that they didn't notice the way they spoke themselves. One claimed, rather defensively, that he was not ashamed of it. Two men said that their speech varied depending on the situation, and two immigrants to the city said that they had copied the accent when they had first arrived in Liverpool, so as to feel at home there.

Many of the ideas illustrated here by De Lyon's informants are pertinent to my analysis of individual speaker variation. These include: the interaction of speakers' concepts of social class and accent; over-performance of the accent to claim (covert) prestige; situation-dependent variation in speech; and adoption of accent features by outsiders as an integration strategy.

3.3.3 Newbrook (1982) and Lodge (1978)

In 1980, Newbrook conducted interviews with sixty-eight men and women of various ages and social classes from West Wirral for his 1982 Ph.D. thesis. The interviews followed the traditional Labovian pattern for sociolinguistic interviews: biographical questions, a word-list and passage to read, and some free conversation. Informants were also asked to evaluate certain phonological variables and to report on their own usage of those variables. While not strictly a study of Liverpool English, Newbrook's research should be mentioned because of the Wirral's considerable proximity to, and influence by, the city.

The Wirral peninsula lies to the south-west of Liverpool, on the opposite side of the River Mersey. The Wirral is quite separate from the city of Liverpool, although there is a fair amount of movement in both directions. Most major shops and entertainments are located in Liverpool, while older Liverpudlians and those seeking a less urban living environment often relocate "over the water".

The speech of the Wirral is changing, says Newbrook, from being largely similar to that of West Cheshire to becoming increasingly influenced by Liverpool, although it must be emphasised that there are still significant differences in the accents. The socio-economic status of the inhabitants of the Wirral is generally higher, and, as Newbrook notes, the area forms part of Liverpool's "stockbroker belt".

Some key differences between the Liverpool and West Wirral realisation of the variables I am using in the present study are noted. For instance, in the Wirral, /t/ is often either a glottal stop or a glottalised alveolar stop, although 'some affricate/fricative/heavily aspirated Liverpool forms' are also observed (Newbrook 1999:97). Even in the least formal speech-style, /k/ is only lenited in this way in 8% of

cases in the Wirral, with a "normal" RP-like stop prevailing, and the typical Liverpool realisation of intervocalic /r/ with a flap occurs only in 12% of instances.

Newbrook investigated the changes involved in the process he calls "Merseysidisation", and the attitudes of the local speakers to the local dialect. He comments on which variables they mention (some, like /ɜ/ as in *nurse*, were rarely referred to, indicating that this feature was not very salient for these informants), and whether they endorse RP or non-RP norms. Generally the RP norms were favoured, with only the use of [ɑ:] in *bath*, *glass* etc. being generally consciously rejected. He also investigates how the informants themselves produce these variables, and concludes that the process of linguistic assimilation into Merseyside is well under way.

Lodge (1978) reports on the speech of a sixteen year old girl, who attended a comprehensive in Stockport, Greater Manchester. She was one of the informants used in his larger study of colloquial English (Lodge 1984). Lodge observed that her accent seemed to be strongly influenced by the speech of Liverpool. Specifically, she exhibited the same lenition of stop consonants as was evident in the speech of my Liverpool subjects in the experiment reported in the next chapter, who were also teenage girls. Lodge observes of his informant that 'closures in the oral cavity tend to be more weakly articulated. This means that stops and fricatives can be found in different utterances of the same word ... it also means that many of the stop releases are slow giving an affricated sound, e.g. [lɛ^sə] and [lɛ^tsə] for *letter*' (Lodge 1984:29).

This particular "lenited" articulation of stops emerged as one of the more problematic and ill-defined variables of Liverpool English pronunciation. It is also a particularly distinctive feature of a strong Liverpool accent. For these reasons, I selected this

variable for further investigation in Experiment One, which is reported in the next chapter.

CHAPTER 4

EXPERIMENT ONE: INTER-SPEAKER VARIATION IN LENITION

4.1 Lenition of stop consonants

4.2 Method

4.2.1 The subjects

4.2.2 Premises and equipment

4.2.3 Conducting the experiment

4.2.4 Data selection

4.2.5 Data analysis

4.3 Results and statistical analysis

4.3.1 Phonetic analysis

4.3.2 Sociolinguistic analysis

4.3.3 Individual speaker analysis (social network and life mode)

4.4 Assessment of Experiment One

4.1 Lenition of stop consonants

Of all the variables of Liverpool English, detailed in section 3.2 above, one of the most distinctive and ill-defined is the realisation of plosives with either an affricated articulation, or as a fricative. To recap, in Liverpool, /t/ and /d/ are often affricated, thus [tʰɛn], [dʒɒg]. In the broad Liverpool accent other initial plosives, too, may be affricated, thus [kʰɪŋ]; medial and final Scouse (Liverpool) plosives are often phonetically fricatives' (Wells 1984:56). This mode of articulation can occur in all places of articulation but is of particular phonological interest in the alveolar position, where there is the potential of categorial overlap with /s/ or /ts/. This chapter gives details of an experiment designed to investigate inter-speaker variation in the production of this particular variable. The results of the experiment are analysed from a phonetic perspective (section 4.3.1), a sociolinguistic perspective (section 4.3.2) and also by considering and incorporating certain aspects of individual speakers and their attitudes (section 4.3.3).

The mode of articulation under consideration will be described here as lenition. The putative underlying stop can be thought of as being weakened, and articulated as an affricate or fricative, although these articulations are phonetically and phonologically different from the 'true' fricatives and affricates. (It is argued that even 'true' affricates can be analysed as simple, noncontoured stops. Following Jakobson, Fant and Halle (1952), Clements (1998) analyses affricates as stops bearing the feature [+strident]. The fricative noise is regarded as the phonetic implementation of stridency, which differentiates these from "normal" stops.) Lenited stops, although they remain phonologically categorised as stops, are articulated either with only a brief closure followed by a long interval of friction in the release phase, or without any closure at all. Phonetically, they are either affricates or fricatives.

Lenition is a term which I am borrowing from historical and diachronic linguistics, representing a stage through which a segment passes on its way to deletion, but relative strength and weakness can also be seen as phonetic features. 'Strength is equated with resistance to airflow through the vocal tract, and weakness with lack of such resistance' (Lass and Anderson 1975:151). This definition implies that stops are fortis and fricatives are lenis, which is the generally accepted categorisation and the one I am using in this study. This assumption does, however, become problematic when it is argued that affrication of stops can result from greater articulatory effort and is therefore fortition, not lenition. Bauer highlights the inconsistencies in the use of the term lenition, using fricatives and stops as examples:

There is general agreement in the literature that a change from a voiced stop to a voiced fricative is a case of lenition. Examples are given such as the change from intervocalic /t/ in Latin *vita* to intervocalic /d/ in older Spanish *vida*, modern Spanish *vida* with an intervocalic [ð]...Now if strength is equated with resistance to airflow through the vocal tract, then the change from voiced stop to voiced fricative would be expected to be the same as the change from voiceless stop to voiceless fricative. That is, the change of voiceless stop to voiceless fricative would also be expected to be a lenition. And this is precisely what is claimed by some authorities ... For Foley (1977:145), on the other hand, the change from voiceless stop to voiceless fricative in Grimm's law is a strengthening, whilst the same change is described by Lass and Anderson (1975:156) as a weakening.

(Bauer 1988)

Lenition is also a regular synchronic process in Irish and other Celtic languages, also referred to as soft mutation; word-initial stop consonants which have the radical forms /p, t, k, b, d, g/ are lenited to fricatives in Old Irish, with /t/ leniting further to [h] in Modern Irish (Ó Dochartaigh 1980).

Notwithstanding the terminological inconsistencies described here, I am simply using the term lenition to describe the affricated or fricated articulation of stops which is characteristic of Liverpool English, which I am investigating from both a phonetic and a sociolinguistic perspective. For the avoidance of doubt, my adoption of the term

should not be seen as an indication that I am investigating lenition as a process of diachronic phonological change in Liverpool English in this project. However, Honeybone (2001) discusses this possibility, and offers a phonological assessment of this very process.

Although it occurs in all places of articulation, lenition of alveolar stops is of particular interest, because of the presence of homorganic affricates and fricatives in Liverpool phonology. The phonetic aim of Experiment One is to determine to what degree this lenition happens in alveolars, and whether it ever constitutes a neutralisation of /t/ with either /ts/ or /s/, as is suggested by Hughes and Trudgill (1996:93), among others: '/p, t, k/ are heavily aspirated or even affricated ... in final position [they] may be realised as fricatives'. Lenition is often spoken of anecdotally as 'a *t* coming out like an *s*'. A non-Liverpudlian English speaker visiting the city with me in 1999 complained of being quite unable to distinguish singulars from plurals (e.g. *mat* from *mats*), which suggests a neutralisation of /t/ with /ts/ in word-final position. Utterance-finally the effect is even stronger, and misunderstandings can ensue. Two examples of confusion arising from apparent /t~/s/ neutralisation which occurred on my own field trips during the course of this research were "It was a horrible fate", understood as "It was a horrible face", and "Oh, right!" understood as "Oh, rice!"

By looking closely at the realisation of /t/, /d/, /s/, /z/, /ts/ and /dz/ in both word-initial and word-final position, I will determine whether there is really any neutralisation between the categories, and in which environments and for which speakers, if any, this occurs. My hypothesis is that, although there seems to be a much greater similarity between the categories than in other varieties of English, a difference is maintained. Total neutralisation would, I feel, pose too much of a problem to comprehension. Although minimal pairs like *right* and *rice* could perhaps be differentiated by vowel length even if the final consonants were phonetically identical,

I will show that there are systematic differences between lenited stops, affricates and fricatives. It will be evident that stops are lenited, having either considerable friction following closure, or no closure at all, and that this effect is greater for voiceless than for voiced consonants, and greater for consonants in final position than in initial position. Knowles is right when he asserts that 'the endings of *let*, *let's*, *less* do not conveniently contrast as *stop* vs. *affricate* vs. *fricative*' (1973:83); my hypothesis is that the contrast is not, however, neutralised.

As Knowles' work on Liverpool English progressed (1973, discussed in section 3.3.1 above), he found traditional phonological categories increasingly unsuitable for his purposes; this was particularly true in the case of this distinction between stop, affricated stop and fricative (Knowles 1973:282). He describes the Scouse articulation of stops as "lax" and writes in terms of characteristic "incomplete closure" of phonological stops:

In the Scouse type [of plosive], owing to the lax articulation, air is allowed to escape very soon in [the stop] phase before the release proper: this gives the impression that /b d g/ are affricates and /p t k/ aspirated affricates. In many environments the closure is frequently incomplete, so that at no time is the air passage perfectly blocked [...] True fricatives do occur in the velar position, where there is no possibility of confusion with any other consonant.

(Knowles 1973:252)

Knowles proposes here that, while the velar stop /k/ is free to be realised at any point along a stop-fricative continuum, up to and including [x], the realisation of /t/ is constrained by the possibility of categorical confusion with /s/.

Lenited /t/, which Knowles calls "incomplete /t/", and its voiced counterpart are therefore the focus of this experiment, Experiment One. The aim is to produce both a phonetic analysis and a sociolinguistic consideration of the lenition of phonological

stops. The phonetic analysis (presented in section 4.3.1 below) addresses the various questions of realisation and neutralisation described above.

The sociolinguistic analysis (in section 4.3.2 below) considers lenition as a sociolinguistic variable, comparing the groups of subjects by school. This analysis of inter-speaker variation tests the hypothesis that degree and frequency of the non-standard variable lenition will be greater in speakers from groups with lower socio-economic status, as would be predicted by prior sociolinguistic studies (Labov 1972; Trudgill 1974). Prior studies of Liverpool English (Knowles 1973; De Lyon 1981) would generally support this hypothesis, although both researchers were somewhat distracted from straightforward sociolinguistic analysis of features such as lenition by phonetic, descriptive or methodological considerations (see section 3.3.above).

A third analysis of the data collected for Experiment One relates individual speakers' lenition to information gathered in the pre-experiment interviews which reflect speakers' social networks (Milroy 1980) and life mode (Pedersen 1994). The purpose of this third analysis is to see whether inter-speaker variation among my subjects can be linked to differences in their social networks or in their life mode or social orientation. This third analysis is presented in section 4.3.3 below.

4.2 Method

4.2.1 The subjects

Sixteen subjects took part in Experiment One. Each subject was first interviewed, and then participated in the experimental task. They were all female sixth-form students (sixteen or seventeen years old) from two state comprehensive schools in south central Liverpool, identified here as X and Y. All the subjects had been born and raised in Liverpool, and their parents were also Liverpoolians. Adolescent subjects were chosen because they are typically particularly aware of the linguistic norms set by their peer group, more so than those of their teachers or parents; but are at the same time increasingly aware of the social implications and consequences of speaking a certain way as they approach adulthood.

Only female subjects were interviewed; this reduced the number of experimental variables in what was a relatively small data set. I chose to use only female rather than only male informants for several reasons. I had more access to women subjects, having already established connections with school Y (which is single-sex). I also felt that, as a female interviewer, I would be better able to establish a rapport with female subjects than male subjects. Needless to say, the sociolinguistic practice of using only male informants with the justification that they exhibit more non-standard language than women, and yet presuming to extend the results to the entire speech community being studied, has been rightly discredited (Bergvall, Bing and Freed 1996:55).

In sociolinguistic studies of adults (e.g. Trudgill 1974), social class membership is commonly determined by looking at factors such as occupation, education and family income. Obviously, some of these criteria are not appropriate for young women who are not in full-time employment and have not yet completed their education. Previous

studies involving schoolchildren (Macaulay 1977, Reid 1978) have relied on father's occupation alone as a measure of social status; 'certainly, in the case of schoolchildren, father's occupation is probably the best single (and perhaps the only available) measure' (Romaine 1984:74).

But while father's occupation is undoubtedly a useful indicator of a family's socio-economic status, there is a major problem with using this measure. As must have been the case even in the seventies when the above-mentioned studies were being conducted, and certainly was in this study, many of the subjects are effectively fatherless. Many knew so little about their fathers that they were unable to provide a description of his occupation. Some subjects have two or more people who have played a paternal role; in such cases should fieldworkers ask about the occupation of the biological father or the stepfather who now lives with the subject? Male unemployment and underemployment are also significant; for many of my subjects, their mothers were the main earners in the household, whether there was a father resident or not; additionally, many father figures seemed to have had many and various jobs, or none at all. These complications make a simple classification of "father's occupation" very difficult; and additionally, it seems unacceptably rude and intrusive to expect young informants to discuss the personal details of their family set-up.

Information from the 1991 census was useful here. Pupils at school X came from the electoral ward of Picton, those at school Y came mostly from Childwall (with a few from Allerton and Woolton, whose census data are similar). 1991 census data show 21.1% total unemployment in Picton, compared with 9.1% in Childwall. Housing is 58.4% owner-occupied in Picton, where 61.1% of households have no car; meanwhile in Childwall 81.4% of housing is owner-occupied, and only 29.6% of households are without a car. Levels of post A-level qualifications are 9.3% in Picton,

16.7% in Childwall. As a clear division in socio-economic status (parents' occupation(s), housing etc.) between the subjects from the two schools was confirmed in the interviews and in the relevant census data, it was decided to rely solely on which school the subjects attended. It should however be borne in mind that there are differences between the two schools which do not directly relate to socio-economic status; in particular, that school Y only admits Roman Catholic pupils.

4.2.2 Premises and equipment

The interviews took place in the subjects' respective schools. In each school, the staff were cooperative in finding relatively small and quiet rooms in which to conduct the interviews and experiments. The equipment consisted of an AKG C451E condenser microphone connected to a Sony TCD-D10 DAT recorder to record the subjects' speech in both the interview and the experiment sections, and a Compaq Armada 1592DT laptop computer to present the experimental stimuli.

4.2.3 Conducting the experiment

The investigation was to be conducted from two perspectives; a phonetic analysis of lenition in stops, affricates and fricatives as realised by all the subjects, and a sociolinguistic consideration of variation between two groups of speakers, which included the gathering of information which would permit a consideration of variation according to social network and life mode. This approach is intended to give results which are both sociolinguistically relevant and robust from the point of view of experimental phonetics.

First, subjects were asked in a brief interview section about their parents' place of birth and language use (any connections with Ireland, or incidence of Irish Gaelic, for instance, would be important in consideration of a subject's lenition), their own social orientation and networks and a few other questions about families, friends and work. The interviews were all conducted by me. I consider myself to be a "semi-insider" raised in the south of England, with a Liverpoolian mother and the capacity to accommodate to the Liverpool accents of members of my extended family network. The interviews were simply orthographically transcribed, not acoustically analysed; although the data collected here were vital to the experiment, the focus of the acoustic analysis was to be the second, experimental part of the interview, which was much more controlled.

The second, experimental part of the interview consisted of a reading task. Monosyllabic words from a set of one hundred and eleven (shown in table 4.i below) were presented within a carrier phrase as stimuli to be read aloud. The inter-stimulus interval was 2.5 seconds. In each case, the nonsensical carrier phrase "happy — in the — again" was displayed on the computer screen, with a word filling each slot. This yielded two words with each repetition, bookended by vowels for ease of

analysis. The carrier phrase was repeated one hundred and eleven times, with each word appearing twice per run, in the two positions. All of the one hundred and eleven words included were English nouns, so the sentence was always syntactically well formed: "happy boss in the seat again", "happy soup in the cars again" etc. Each subject performed the task four times with the selection of words being randomised in order to neutralise effects of fatigue or recognition. That is, there were four runs which each consisted of all one hundred and eleven words twice, in a different randomised order, and each subject did the four runs in a different order.

final → ↓ initial	p	b	t	d	k	g	s	z	θ	ts	dz
p	pipe	pub	part	pad	peak	pig	pass	pause	path	parts	pads
b	beep	bib	boat	board	book	bag	boss	booze	bath	boats	boards
t	tape	tab	tight	tide	talk	tag	toss	tease	teeth	tights	tides
d	dip	dab	date	deed	dock	dog	dice	doze	death	dates	deeds
k	cope	cub	coat	card	cake	keg	kiss	cars	Cath	coats	cards
g	gap	garb	gate	god	geek	gag	goose	gaze	goth	gates	gods
s	soup	sob	seat	seed	sock	sag	sauce	size	south	seats	seeds
z	zen	zone	zest	zoo	zoom	zinc	zing	zeal	zilch	zonk	zips
θ	thorn	thin	theme	thigh	thief	them	third	thirst	thaw	thong	thumb
ð			that				this	those			

Knowles' words: white short foot sprout smoke snake neck black clock

Table 4.i Set of 111 words elicited in Experiment One

Nine of these monosyllabic words used were the nine used by Knowles (1973) to elicit voiceless stops from his subjects: *white*, *short*, *foot*, *sprout*, *smoke*, *snake*, *neck*, *black* and *clock*. None of these begins with the consonants under investigation (plosives and fricatives not in clusters) but they were included in case a *post hoc* comparison with Knowles' results was required. The remaining one hundred and two words, which all appear in table 4.i above, have a CVC or CVCs structure. Words were chosen which begin and/or end with the plosives /p, b, t, d, k, g/, the fricatives /s, z, θ, ð/ and the stop-fricative clusters /ts/ and /dz/. /ð/ does not begin or end many CVC words, so this set is small. There are no (non-foreign) CVC words which begin with /ts/ or /dz/, so these are only included word-finally. All the words which end in /ts/ and /dz/ are the plurals of the words in the /t/- and /d/-final sets. The small number of words with initial /z/ and /θ/ means that not enough words exist which end in the desired consonants, so the set of words with these consonants initially (shaded grey in table 4.i above) all end with other consonants.

4.2.4 Data selection

The one hundred and eleven words were all recorded eight times in the carrier phrase by each subject. However, some stimuli were excluded from analysis. The original set of one hundred and eleven words included labials and velars. The lenition of phonological stops in alveolar position seemed more interesting than that of stops in labial and velar position (although the latter was widely evident) because, unlike / ϕ / and / β / or / x / and / γ /, / s / and / z / are phonemes of Liverpool English. Analysis was therefore restricted to the words containing / t / and / d /, with fricatives / s / and / z / and stop-fricative clusters / ts / and / dz / for comparison. From the set of one hundred and eleven words above, those which neither began nor ended with an alveolar consonant (thirty-one in total) were eliminated, as were Knowles' nine words and also the three which began with / θ /, *that*, *this* and *those*. These last were omitted because there had been a number of intonationally odd pronunciations of these words, especially of *that*; probably because the words were not interpreted as nouns and stressed accordingly.

Once these words were omitted from the set, then, I was left with sixty-eight words, of which eighteen contained alveolar consonants both initially and finally (see table 4.ii.a below), and fifty contained alveolar consonants either initially or finally (see table 4.ii.b below). Within the set of sixty-eight words, there are seven examples of each of / t /, / d /, / s /, / z /, / ts / and / dz / finally, and eleven examples of each of / t /, / d /, / s / and / z / initially (/ ts / and / dz / not being present in initial position). This meant there were eighty-six target consonants appearing twice in each run for each subject.

a.	final →	t	d	s	z	ts	dz
	↓ initial						
	t	tight	tide	toss	tease	tights	tides
	d	date	deed	dice	doze	dates	deeds
	s	seat	seed	sauce	size	seats	seeds
b.		t	d	s	z	ts	dz
	initial only	tape	dip	soup	zen, zone	-	-
		tab	dab	sob	zinc, zing		
		talk	dock	sock	zest, zoo		
		tag	dog	sag	zips, zonk		
		teeth	death	south	zeal, zilch		
				zoom			
	final only	part	pad	pass	pause	parts	pads
		boat	board	boss	booze	boats	boards
		coat	card	kiss	cars	coats	cards
		gate	god	goose	gaze	gates	gods

Table 4.ii Set of 68 words containing alveolars selected for analysis

- a. alveolars both initially and finally
b. alveolars either initially or finally

After I listened through the recordings prior to beginning the analysis, two further processes of data selection took place. First, although each subject performed the run four times, some of the recordings had unacceptably high levels of background noise. For this reason, and because the acoustic analysis was extremely time-consuming, only two out of the four runs were analysed for each subject.

Second, I observed a potential problem in the experiment design. Having two slots in the carrier phrase meant that each word appeared twice in each run. This was done with the intention of increasing the amount of data available for analysis. However, effects of different intonational stress according to sentence position which may in

turn lead to differing levels of lenition meant that comparison between the two sets of words would be inappropriate. For this reason, only the sixty-eight words which appeared in the first slot in the carrier phrase in each run were selected for analysis.

4.2.5 Data analysis

The recordings of the reading task were transferred to a Silicon Graphics Indy computer with a digitisation sampling rate of 16 kHz and 16-bit quantisation. Then the recordings were divided into separate files. Each of these files contained one recording of one subject reading one sentence. There were two thousand one hundred and seventy-six files in total (sixteen subjects x sixty-eight words x two runs).

The sentence tokens were analysed one by one using *ESPS/waves* signal processing software (Entropic Research Laboratory Inc., Washington DC). A script was developed in-house by Andrew Slater which displayed the waveform and a wide-band spectrogram, time-aligned and ganged together so that a cursor line appeared at the same time-point in both windows. The user was then prompted to mark out the closure interval for the consonant at the beginning of the word manually, using the mouse to set cursor lines at the start and end of the closure interval. Next, the friction interval for the same consonant was marked out in the same way.

Visual criteria were most important in determining the start and end points of the closure and friction intervals, although auditory checking was also part of the process. The signal quality of the sound recordings was rather poor, with a certain amount of background noise. Nevertheless, closure could be seen on the spectrogram as white space, and friction as high frequency noise (see Figure 4.1 below for illustration). The interval of friction was deemed to begin once the interval of closure was over, which meant that aspiration, such as occurs in RP-type aspirated voiceless stops, would also be counted, although the interval would not be of a comparable length.

The same procedure followed for the intervals of closure and friction in the consonant at the end of the word. The script saved the measurements of the duration of each of the four intervals, and also the start and end time-points of each interval so that the file could be re-examined if necessary. These data were automatically logged in a text file. For /t/ and /d/ both closure duration and friction duration were measured, although the former was sometimes zero. For /ts/ and /dz/ both measurements were also taken. For /s/ and /z/ there was no closure to measure so a value of zero was recorded. This was allowed for in the script, which included a 'skip' option in the user prompt. This feature was also used to avoid making unnecessary measurements of closure and friction duration in the non-alveolar consonants which occur in the words listed in table 4.ii (b) above.

Figure 4.1 on the next page shows waveforms and spectrograms for one subject's utterance of the sentence "happy dice in the card again". Figures 4.1a and b show the entire phrase, while figures 4.1c and d are zoomed in, showing the section including the word *dice*. The consonants being analysed fall in the word *dice*. The measurement script presented the user with a waveform and spectrogram synchronised on the screen in this way, and the user could then zoom in and out until the measurements could accurately be made. The closure and friction intervals of the initial and final consonants were measured between cursors, and the start and end points are approximately as follows: closure for /d/ begins around 39.18 ms and continues until around 39.23 ms (time is shown on the x axis), when friction begins and continues until around 39.26 ms. There is no closure for /s/, and the friction interval stretches from approximately 39.45 ms to 39.55 ms.

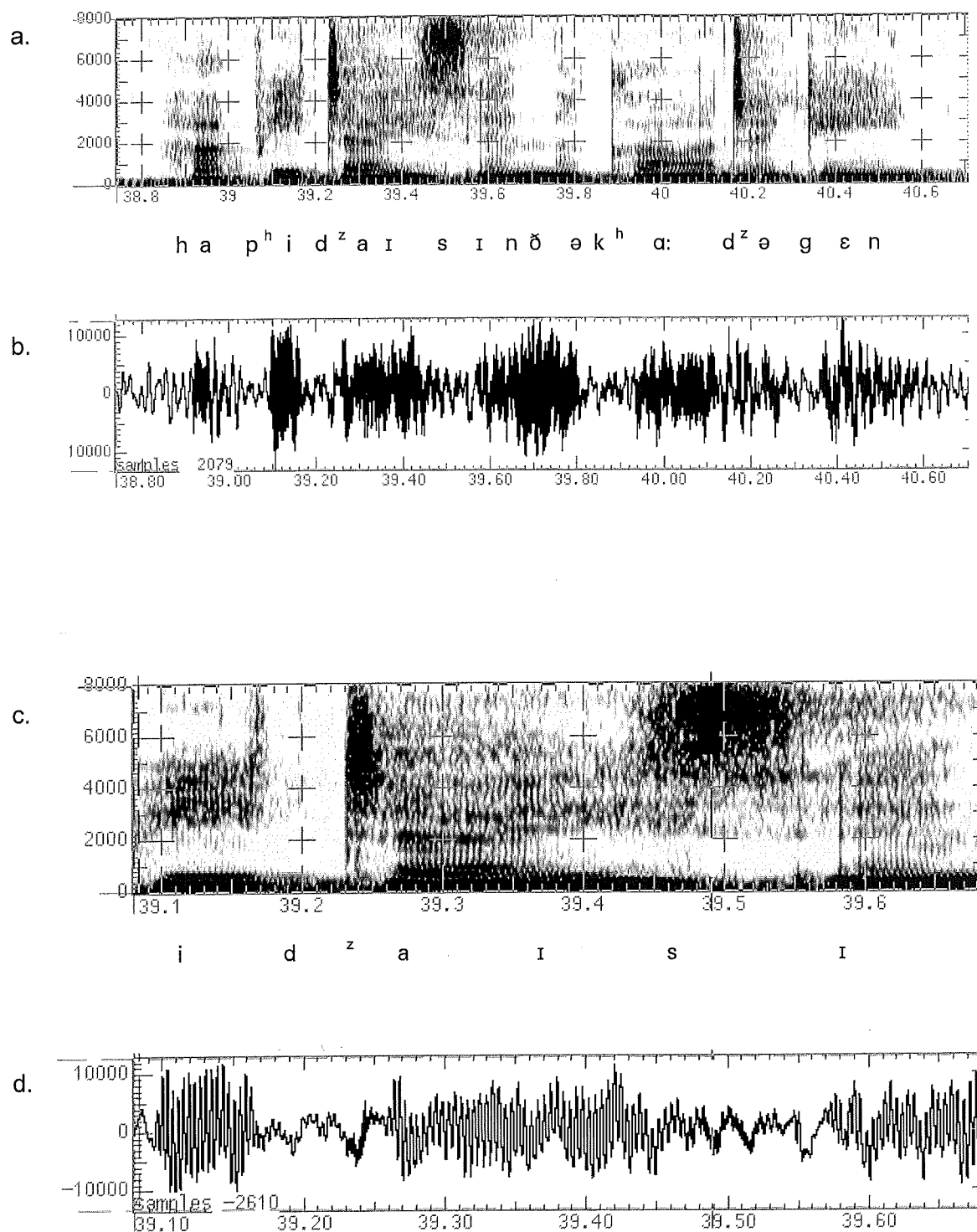


Figure 4.1 "Happy dice in the card again"

- a. wide-band spectrogram (with IPA transcription below)
- b. waveform, aligned with figure 4.1a
- c. "-y dice i-" zoomed in section: wide-band spectrogram
- d. "-y dice i-" zoomed in section: waveform, aligned with figure 4.1c

Once the measurements were made, *Excel*, *SPSS* and *S-Plus* software were used for management, presentation and statistical analysis of the data. For each of the two thousand one hundred and seventy-six files, sorted by subject and run, the following information was recorded: the word, the consonant or consonant cluster (/t/, /d/, /s/, /z/, /ts/ or /dz/) which the measurement was for, the position (initial or final), the closure duration and the friction duration. For each consonant or consonant cluster the proportional duration of friction (PDF) was also calculated. This figure indicates what proportion of the consonant or consonant cluster was friction, expressed as a percentage of the total closure and friction duration: $PDF = 100f/(c+f)$. The higher the number, the more of the consonant was friction. For the fricatives, PDF is 100% as the closure duration is zero. A score of 100% was also found in a large number of the lenited stops, where there was no measurable closure at all. If any stops had no friction at all, the PDF would be infinite; but this only occurred in the case of a small number of glottal realisations of /t/, which were excluded from analysis (but see section 7.2.3 below for further discussion and exploration of glottalling in Liverpool English). PDF is perhaps a better general measure of lenition than simple friction duration, because it reflects the relationship between the closure and friction intervals and is independent of speech rate.

The interval of friction in the phonological stops which are the focus of this study is a reflection of the degree to which those stops are lenited. That is, the greater the friction portion, the more lenition is exhibited. A range of lenition in the articulation of /t/, and likewise for /d/, is therefore being proposed, from a stop [t^h] which is lightly aspirated (like an RP stop) with a brief period of friction following the closure phase, through the affricated realisation [t^s] or [t^ɕ] with a relatively longer interval of friction, to the fricative realisation [s], with 100% friction.

The phonological stops were then compared to phonological fricatives and stop-fricative clusters. First, the mean duration of friction in /t/ was compared with the mean duration of /s/ by the same speaker, and likewise for the voiced consonants. Second, the PDF (duration of friction proportional to closure) of /t/ was compared to that of the stop-fricative cluster /ts/ for the same speaker, and likewise for the voiced equivalent. Together these analyses provide an assessment of the degree of friction, and therefore the degree of lenition, of /t/ and /d/ in the context of the Liverpool accent, to establish whether stops are in fact partially or absolutely neutralised with fricatives or affricates.

As well as this phonetic analysis, a sociolinguistic analysis was conducted, considering variation in the lenition of stops between the two schools. This was to investigate whether lenition varies according to social group. Additionally, a consideration of individual speaker attributes connected to network and life mode (see section 2.8 above) were considered, with an assessment of whether these factors are reflected in the lenition data.

4.3 Results and statistical analysis

4.3.1 Phonetic analysis

In these analyses, the lenited stops are compared with fricatives and with stop-fricative clusters. First, lenited stops were compared with fricatives. The friction durations in /t/ and /d/ are compared with the durations of the fricatives /s/ and /z/ respectively, in word-initial and word-final position. These results are shown in table 4.iii and illustrated in figures 4.2 and 4.3 below. These boxplots show duration of friction in milliseconds on the y axis. The (lenited) stop is plotted to the left of the homorganic fricative. The shaded boxes show the range of durations between the twenty-fifth and seventy-fifth percentiles, the central bar the median duration, the capped bars the tenth and ninetieth percentiles, and outliers as dots. The distributions were not normal, so the data were statistically analysed using independent sample *t*-tests. Every difference between /t/ and /s/ was significant to $p < .001$.

	initial	final
/t/	93.6 ms	105.1 ms
/s/	150.5 ms	147.1 ms
/d/	45.5 ms	65.8 ms
/z/	114.4 ms	102.8 ms

Table 4.iii Mean friction duration (all subjects)

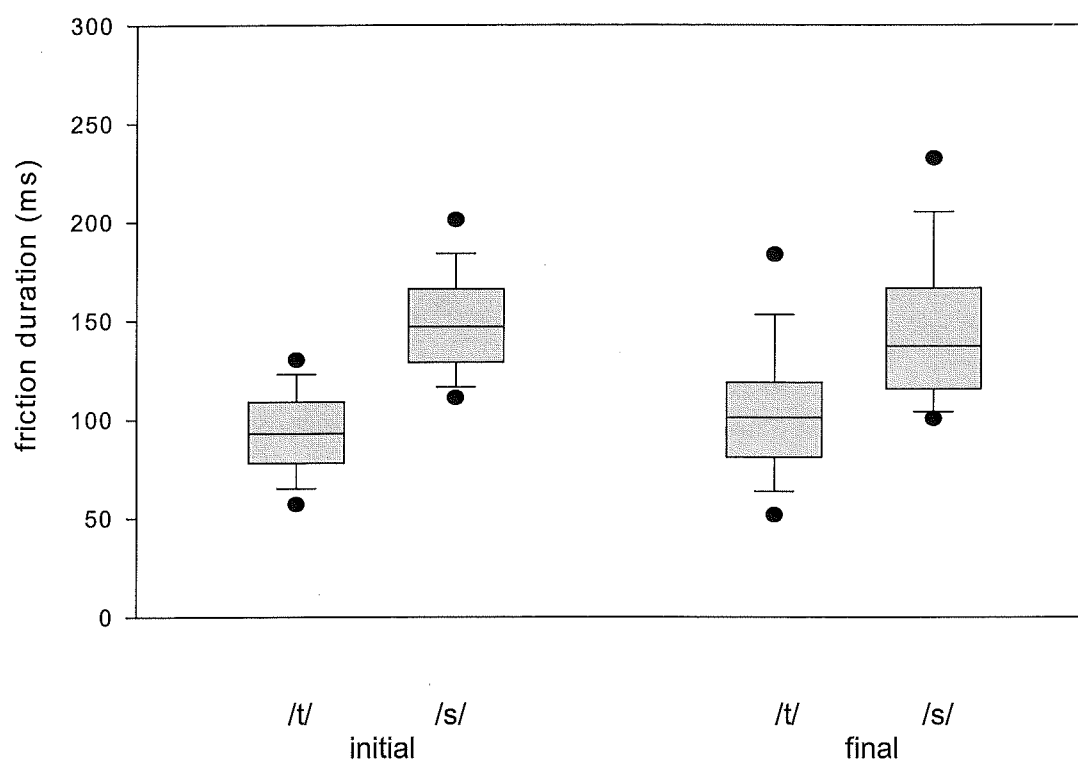


Figure 4.2 Voiceless stops compared with voiceless fricatives

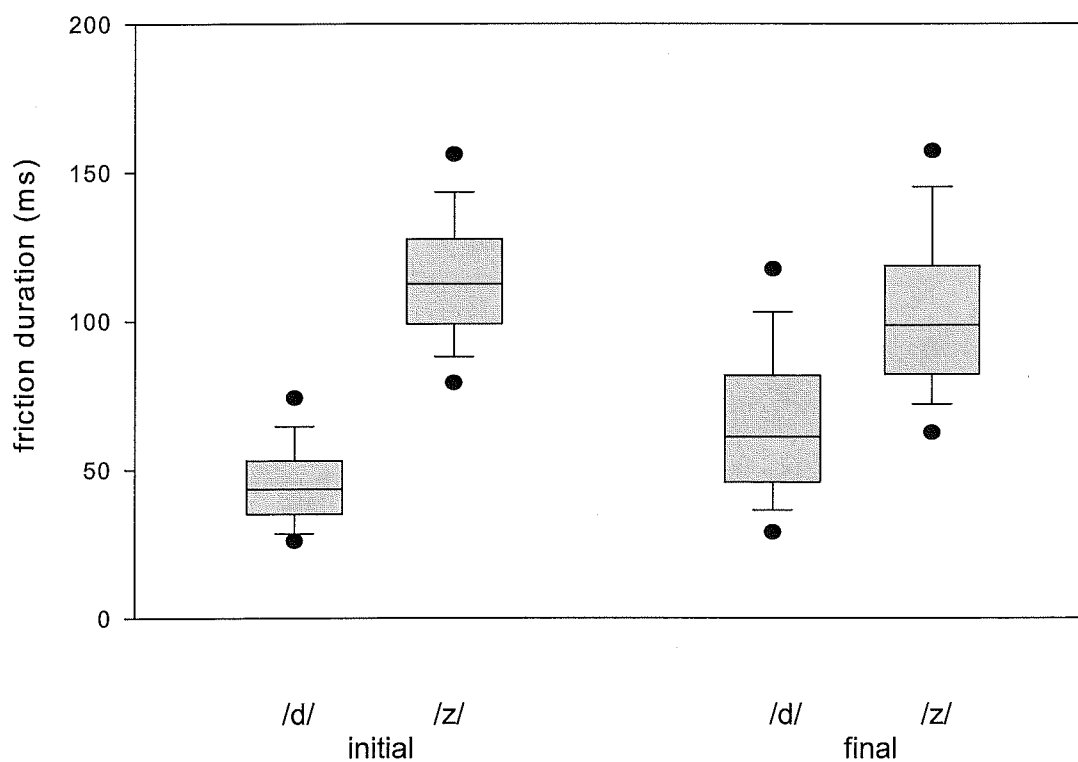


Figure 4.3 Voiced stops compared with voiced fricatives

In every case, fricatives are consistently longer than the friction portion of lenited stops. The difference is smaller in final position than in initial position; that is, lenited stops have a longer friction duration in final position. There is also less difference for voiceless than for voiced stops. So the friction duration for /t/ in final position is the nearest to approaching that of /s/, but is still significantly different (every difference was significant to $p < .001$ in independent sample t -tests). This difference is robust.

Even when data for individuals, which is not presented here, was statistically analysed using sixty-four t -tests (voiced and voiceless, initially and finally, for each of sixteen subjects), only three of the comparisons had a p -value of more than .05 (preventing the rejection of the null hypothesis that the medians of the two groups are equal). In each of these three cases, the t -test concerned was for voiceless consonants in final position. So for a few subjects in a few cases, word-final /t/ is lenited to such a degree that the friction duration merges with that of /s/, but once the data for all subjects are pooled, this neutralisation effect completely disappears.

These results effectively refute the suggestion that there is neutralisation in production between lenited stops and fricatives in Liverpool English (see Hughes and Trudgill 1996:93, also Trudgill 1990 and Wells 1984). Speakers maintain a significant difference in duration of friction between fricatives and lenited stops.

In the second analysis, the possibility of absolute neutralisation between stops and stop-fricative clusters, which is also suggested in the literature referred to above and elsewhere, was assessed. Stops were compared with stop-fricative clusters, the phonetic affricates /ts/ and /dz/. The proportional measure PDF is more informative than absolute duration here, because it reflects both the closure and the friction intervals. The PDFs for the lenited stops /t/ and /d/ are compared to the PDFs of /ts/

and /dz/ respectively. These consonants were compared only in final position, as stop-fricative clusters only occur in that position.

/t/	81.3%
/ts/	63.6%
/d/	63.9%
/dz/	63.1%

Table 4.iv Mean proportional duration of friction (all subjects)

Figure 4.4 and 4.5 show the distributions of PDF for voiceless consonants in final position on the y axis. Data for the lenited stop is plotted on the left, the corresponding stop-fricative cluster on the right. As before, the grey box shows the range between the twenty-fifth and seventy-fifth percentiles, the central bar the median, the tenth and ninetieth percentiles on the whisker bars, and outliers appear as dots.

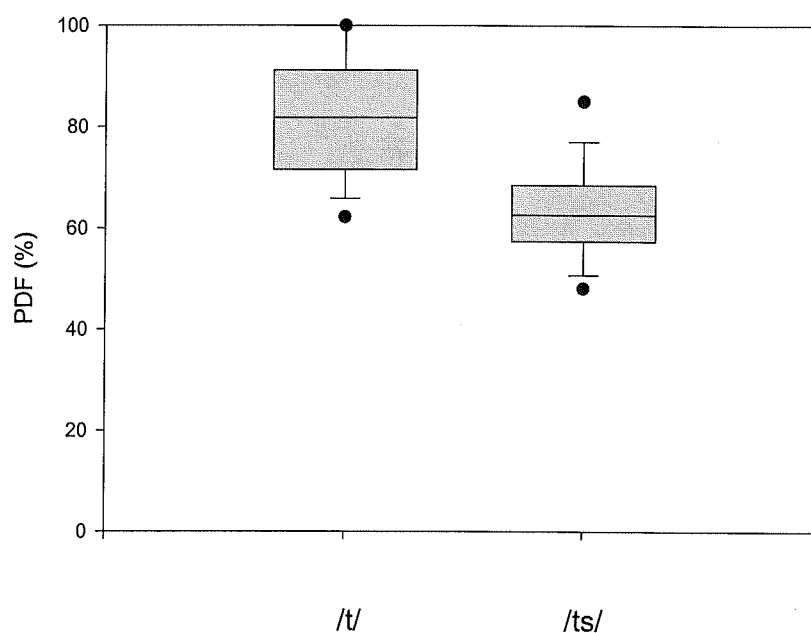


Figure 4.4 Voiceless stops compared with stop-fricative clusters

For voiceless consonants, shown in figure 4.4 above, there is a clear separation between the PDFs for the lenited stops and the stop-fricative clusters (results are significant to $p < .001$). Note that for /t/ the PDF ranges right up to 100%, which indicates lenition of /t/ to the phonetic realisation [s], that is, no closure at all. It is interesting that the PDF for /t/ is actually greater than that for /ts/; this means that there is a longer proportional duration of friction in a segment which is phonologically a stop than there is in a cluster containing a fricative. However, from the perspective of establishing whether absolute neutralisation takes place, it does not matter which is greater: just the fact that they are significantly different shows there is no neutralisation. This is contrary to claims that affricated (lenited) /t/ merges with /ts/ in Liverpool English (Hughes and Trudgill 1996; Knowles 1973).

The case is not quite so clear for the voiced stop and stop-fricative cluster, illustrated in figure 4.5:

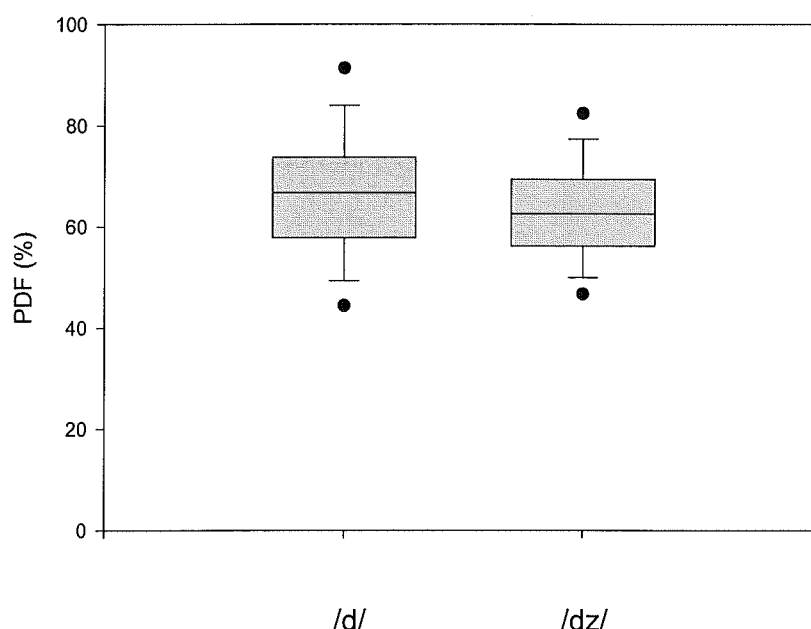


Figure 4.5 Voiced stops compared with stop-fricative clusters

The trend seems to be the same as for the voiceless consonants, with the mean PDF being greater for /d/ than for /dz/, although the data are spread more widely.

However, the PDF distributions are not significantly different to $p < 0.05$. This means that the null hypothesis cannot be rejected and that, in terms of PDF, /d/ does seem to be neutralised with /dz/. (This effect was also evident in the statistical analysis of data for individual subjects; with thirteen out of sixteen having p -values exceeding 0.05 for the comparison between PDFs of /d/ and /dz/). This does not necessarily indicate absolute neutralisation though, just that the proportion of closure to friction for /d/ and /dz/ is more or less the same. A *post hoc* analysis of the absolute friction durations of /d/ and /dz/ shows that the latter has, in fact, a significantly greater duration of friction than the former ($p < .001$).

To summarise the results of the phonetic aspect of this experiment, then, there is no evidence for absolute neutralisation between categories for stops and fricatives in any word-position in terms of duration of friction, either for /t/ and /s/ or /d/ and /z/. Neutralisation between voiceless stops and stop-fricative clusters is also not indicated. Results for /d/ and /dz/ are less clear-cut, and there is evidence for partial neutralisation between these categories based on the PDF data, although the friction duration data do differentiate them. This is a surprising finding, as there are fewer claims made for a neutralisation of voiced consonants than for voiceless ones, but my evidence indicates that the opposite is more of a possibility.

The finding that PDF is substantially greater for lenited /t/ than it is in the cluster /ts/ (see table 4.iv above) has no bearing on the question of absolute neutralisation, but is in itself an interesting discovery. There is a longer proportional duration of friction in a segment which is phonologically a stop than there is in a stop plus a fricative:

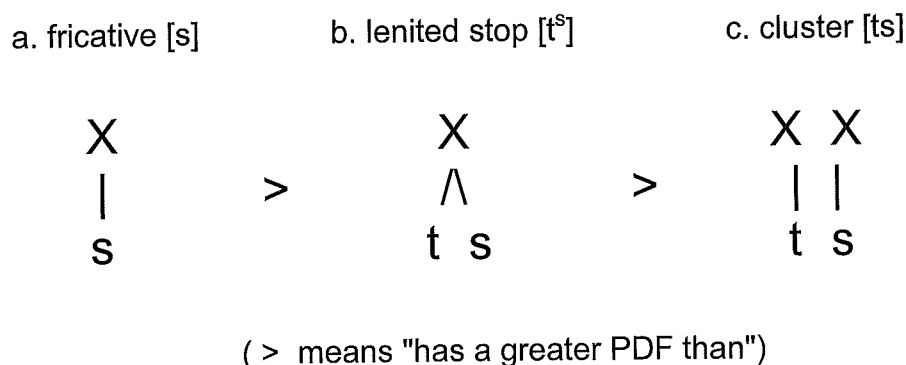


Figure 4.6 Relative PDFs

The friction portion of the lenited stop (figure 4.6b) is greater than that of the stop-fricative clusters, even though the latter is generally analysed as biphonemic. This is a consistent finding for all speakers, and becomes significant in my consideration of the sociolinguistic aspect of the study below.

This finding also presents something of a challenge to certain autosegmental theories of phonology which posit the relation of a timing tier to a segmental tier. This challenge depends on what the content of the X-tier, timing tier or CV tier is felt to be. Specifically, does X (or C or V) encode something that occupies a unit of time, or is it a completely abstract and internally variable element?

Some phonologists certainly propose a durational implementation of the timing tier:

The elements of the CV tier are interpreted as corresponding to the *timing units* of speech production at the sub-syllabic level. Thus a single C represents a single unit of timing, while a sequence CC represents a double timing unit.

(Clements and Keyser 1983:34, emphasis in the original)

Various single-to-many associations between tiers are then used to account for phenomena such as heavy and light syllables, compensatory lengthening, and affricates. Lahiri and Hankamer (1988:327) adopt a similar position, claiming that 'the

autosegmental representation of the difference [between geminate and non-geminate consonants] in terms of a timing difference is vindicated, and we have an acoustic correlate for the timing measure'. In her consideration of gestural versus autosegmental phonology, in which the question of timing is central to her argument, Steriade (1990:394) concludes that 'units of phonological representation are ... elements endowed with internal duration'. If this is so, two of those units should surely have a longer duration than only one of the two units. This expectation which is not borne out by the data illustrated in figure 4.6 above. However, more analysis and experimentation would be necessary to take this challenge further.

4.3.2 Sociolinguistic analysis

The third and fourth analyses compare the subjects divided by school, and address the sociolinguistic aspect of the study. The schools which my subjects attended are an indicator of social group (see section 4.2.1 above), so a comparison of the data divided up by school will indicate whether lenition varies according to social group. Traditional models of sociolinguistic variation (Labov 1972; Trudgill 1974) would suggest that a non-standard feature such as lenition would be exhibited more by the subjects from school X than by those from school Y, since the former group have a lower socio-economic status than the latter. These two analyses determine whether this is in fact the case.

Durations of friction for /t/, /d/, /s/ and /z/ in initial and final position were compared by school. Mean friction durations are given in milliseconds, and independent variables *t*-tests were conducted to determine whether differences between schools were significant.

	position	mean friction duration (ms)		t-test
		school X	school Y	
/t/	initial	93.0	94.2	$p = .629$ <i>n.s.</i>
	final	107.0	103.6	$p = .561$ <i>n.s.</i>
/d/	initial	45.8	45.2	$p = .712$ <i>n.s.</i>
	final	71.0	61.3	$p = .012$
/s/	initial	163.9	137.3	$p = .000$
	final	156.5	137.6	$p = .001$
/z/	initial	123.1	105.6	$p < .001$
	final	112.2	93.3	$p < .001$

Table 4.v Friction duration by school

Figure 4.7 illustrates the findings on duration of friction for stops and fricatives by school:

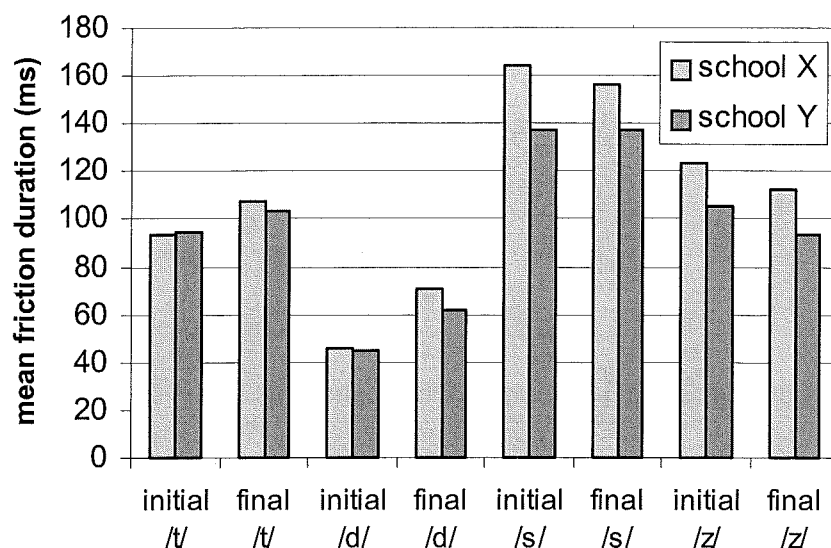


Figure 4.7 Mean friction duration by school

There is a significant difference in friction duration between the two schools for both fricatives in both positions, with fricatives spoken by subjects from School X having a consistently longer duration than those spoken by subjects from School Y. The experimental task (section 4.2.3 above) controlled the subjects' speech rate, so these differences in duration cannot be connected to any differences in overall speech rate. Fricative duration, then, seems to be firmly correlated with social group; a new discovery for Liverpool English. However, simple duration of fricatives is not a feature directly related to lenition. These segments are phonetically and phonologically fricatives; the results do indicate a sociolinguistic difference between the two groups in the realisation of fricatives, but this does not contribute directly to our consideration of lenition of stop consonants.

There is also a significant difference between the schools for the duration of friction in final /d/. However, /d/ in initial position and /t/ both initially and finally show similar friction durations for both schools. It seems that duration of friction in /t/ is more or less equal in both social groups in this analysis, and there is no socially correlated variation in this feature. /d/ does exhibit a difference: subjects from school X have a significantly longer friction interval than those from school Y for this segment, in final position.

Lenition of alveolar stops is evident to some degree in all the speakers studied. It appears to be a prominent feature of Liverpudlians' speech generally. However, although lenition is evident in both groups, there are significant differences in the degree to which it occurs. As is shown in table 4.v above, the friction duration of /d/ in final position is significantly greater in the speech of subjects from School X. Since lenition is a non-standard feature, and the School X group have a lower socio-economic status than the School Y group, this finding is in line with traditional models of sociolinguistic variation (Labov 1972; Trudgill 1974), which expect speakers of a lower social status to exhibit non-standard features to a greater degree. The significant difference in duration of fricatives between the two school groups is also a significant finding from this analysis.

Next, proportional duration of friction for /t/, /d/, /ts/ and /dz/ was compared by school. Since this sociolinguistic analysis is comparing schools, not stops with stop-fricative clusters across all subjects (as in the phonetic analysis in section 4.3.1 above), the PDFs for /t/ and /d/ in initial position were included as well as those for /t/, /d/, /ts/ and /dz/ in final position. Table 4.vi shows the mean PDFs for each school, and figure 4.8 illustrates the findings on proportional duration of friction for stops and stop-fricative clusters. Independent-variables *t*-tests were conducted to determine whether differences between schools were significant.

	mean PDF (%)		<i>t</i> -test
	school X	school Y	
initial /t/	70.5	77.6	$p < .001$
final /t/	79.0	83.3	$p = .016$
(final) /ts/	61.7	65.6	$p = .010$
initial /d/	47.5	54.8	$p < .001$
final /d/	64.9	67.6	$p = .164$ <i>n.s.</i>
(final) /dz/	61.2	65.0	$p = .008$

Table 4.vi Proportional duration of friction (by school)

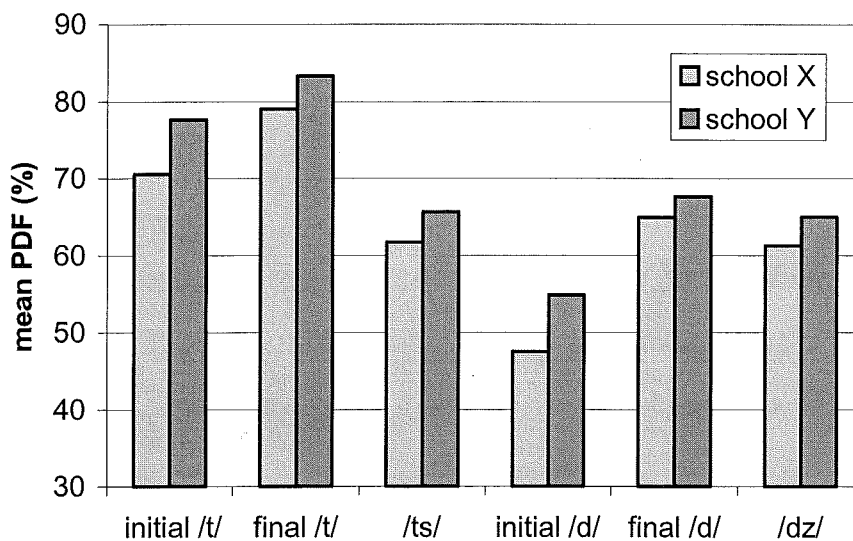


Figure 4.8 Mean PDF by school

In all cases, PDF is greater in the speech of subjects from School Y than School X. This difference is statistically significant in all cases except for /d/ in final position. These findings are initially rather surprising, since the subjects from School X, with

lower socio-economic status, might be expected to show greater lenition (of which PDF is a measure), than those from School Y. However, at least in terms of PDF, precisely the opposite is the case. In /t/ in both positions, and /d/ initially, the School Y subjects have a greater duration of friction proportional to the duration of the whole consonant.

The fricative part of the stop-fricative clusters is also consistently relatively longer for subjects from school Y than subjects from School X. Lengthening of the friction makes stop-fricative clusters more like lenited stops. Speakers who lengthen the [s] in [ts], which is shorter than the [s] in [t^s], come closer to neutralisation. For those results which are significantly different, the school Y subjects have consistently higher PDFs than the school X subjects. This means that the clusters spoken by the group with higher socio-economic status are more like lenited stops and nearer to being neutralised. The speakers from school X, with lower socio-economic status, keep the categories distinct and avoid neutralisation.

If the feature of lenition originated in the speech of the working class, and was later adopted by other speakers until it became a general feature of the accent, this might provide an explanation for the difference between the speakers in this analysis. The school X informants have the system illustrated in figure 4.6 above, where PDF is greatest for fricatives not in a cluster, then for lenited stops, and least for stop-fricative clusters. The speakers from school Y have the same system, but with less difference between the categories. Absolute neutralisation between categories is not evident at all, but the speakers from School Y come closer to incomplete neutralisation by having a lesser distinction in duration of friction.

A further observation, made possible by the inclusion of the PDFs for stops in initial as well as final position in this analysis, relates to the difference in patterns of PDF

between voiced and voiceless consonants. For both voiceless and voiced consonants, the PDF is greatest for the stop in final position. For voiceless consonants, both schools have a greater PDF for initial /t/ than for /ts/, but for voiced consonants, both schools have a greater PDF for /dz/ than for initial /d/. This finding relates back to the discussion of /dz/ and neutralisation in section 4.3.1 above.

4.3.3 Individual speaker analysis (social network and life mode)

In their pre-experiment interviews, I asked the subjects various questions about their families and friends, about any links with Ireland, and about their own plans to stay in or leave Liverpool when they left school. It seems potentially interesting to see whether such attributes might account for some of the patterns in the results. In part, this is a way of testing some of the ideas about social network (Milroy 1980), life mode (Pedersen 1994; Marshall 2000) and individuality (Johnstone 1996, 2000a) discussed in section 2.2 above. The interview questions which are most relevant to these ideas are listed in Figure 4.9 below.

- A Are all or most of the subject's schoolfriends also her neighbours?
- B Are all or most of the subject's friends also at school with her?
- C Does the subject describe herself as Roman Catholic?
- D Does the subject claim Irish connections?
- E Does the subject's extended family (grandparents, cousins etc.) live in Liverpool?
- F Does the subject see extended family members often (at least weekly)?
- G Does the subject intend to remain living in Liverpool after leaving school?

Figure 4.9 Selected interview questions

Rather than analysing each individual, I looked in particular at those who buck the trends apparent for the group in their responses to these questions. This will allow me to test whether individuals with notably different social networks or life modes from the rest of the group are more linguistically idiosyncratic as well. The sixteen subjects' responses to the questions listed above are summarised in table 4.vii below.

school	subject	question (questions are listed in figure 4.9 above)						
		A	B	C	D	E	F	G
X	1	y	y	y	n	y	y	y
	2	y	y	n	n	y	n	y
	3	y	n	n	n	y	n	y
	4	y	n	n	n	y	y	n
	5	y	n	n	n	y	n	y
	6	y	y	n	y	y	y	y
	7	y	y	n	n	y	n	y
	8	y	y	n	n	y	n	y
Y	9	y	n	y	n	y	y	y
	10	y	y	y	y	y	y	y
	11	y	y	y	y	y	y	y
	12	y	y	y	y	y	y	y
	13	y	y	y	y	y	y	n
	14	y	y	y	y	y	y	y
	15	y	y	y	y	y	y	y
	16	y	y	y	y	y	y	y

Table 4.vii Individual subject responses to selected interview questions

All of the subjects had schoolfriends who were neighbours (question A), and had extended family members living in the city (question E), indicating fairly dense and multiplex social networks (Milroy 1980) for all subjects. Some trends were closely correlated with school. These included the related questions of whether or not subjects were Roman Catholic, and whether or not they claimed Irish connections (questions C and D); as school Y is a Catholic comprehensive, these answers are unremarkable. The dimension of religion has not itself been shown to be a source of linguistic variation, but subjects from different faith backgrounds will of course have different sorts of social networks, family backgrounds and possibly life modes as well, all of which could have an impact on their linguistic behaviour (see section 2.2 above for a review of the relevant literature).

It is notable that, although all subjects had many extended family members living in Liverpool, less than half of those from school X saw those relatives at least once a

week, whereas all of those from school Y did (question F). This may be a result of Roman Catholic family networks being generally not only larger but also closer-knit (or at least, reporting themselves as such); note that the only subject from school X who said she was Roman Catholic also answered "yes" to question F.

The responses which appear more independent of group membership, and which will be explored further here, are those to questions B, F and G. Firstly, question B asks whether most of the subject's friends are also at school with her. Do subjects 3, 4, 5, and 9, who answered "no" to question B, exhibit different linguistic behaviour to their peers with more school-based social networks? The social network model suggests that if their networks are looser and less multiplex, they may experience less norm-enforcement by their peers. If this is the case, their performance of their accent (or, in this snapshot, of the single variable of lenition) may be less strong than the rest of the group. However, if the outside-school networks of which these subjects are members enforce a more basilectal norm than the school-based group, the performance of the subject's accent may be stronger than the average. The phonetic variation in the accents of subjects 3,4,5 and 9 will therefore be used to test whether social network theory (Milroy 1980) is supported by these data.

Secondly, question F asks whether the subject sees extended family members frequently. Do subjects 2, 3, 5, 7, and 8, who answered "no" to this question, have significantly different results to those of the rest of the group? Like question B, this question relates to an issue of social network, and the data can also be used to test the theory.

Lastly, I would ask how the speech of subjects 4 and 13, whose orientation away from Liverpool is reflected in their plans to leave the city (question G), differs from the speech of those who intend to stay? The theory of life mode (Pedersen 1994;

Marshall 2000) would predict that these differently-orientated speakers' accents might be less strong, because their intent to migrate suggests less of a loyalty to Liverpool, and less of an investment in maintaining a Liverpool identity. Therefore, the phonetic variation in the accents of these two subjects, 4 and 13, will be used to consider the applicability of life mode to these data.

Three analyses were carried out, one for each question. In each case, the subjects were divided into two groups according to their answer to the relevant question. The analysis then compared the group consisting of all the subjects who said "no" to the relevant question with all the other subjects (who said "yes"). *t*-tests were carried out to see whether any of the differences between the groups was statistically significant, and the results are shown in table 4.viii below.

		question B	question F	question G
		(subjects in "no" group: 3, 4, 5, 9	2, 3, 5, 7, 8	4, 13)
friction duration	initial /t/	$p = .874$ <i>n.s.</i>	$p = .545$ <i>n.s.</i>	$p = .026$
	final /t/	$p = .295$ <i>n.s.</i>	$p = .129$ <i>n.s.</i>	$p = .910$ <i>n.s.</i>
	initial /d/	$p = .396$ <i>n.s.</i>	$p < .001$	$p = .885$ <i>n.s.</i>
	final /d/	$p = .006$	$p < .001$	$p = .427$ <i>n.s.</i>
PDF	initial /t/	$p = .214$ <i>n.s.</i>	$p = .086$ <i>n.s.</i>	$p = .183$ <i>n.s.</i>
	final /t/	$p = .527$ <i>n.s.</i>	$p = .809$ <i>n.s.</i>	$p = .869$ <i>n.s.</i>
	initial /d/	$p = .124$ <i>n.s.</i>	$p = .825$ <i>n.s.</i>	$p = .019$
	final /d/	$p = .836$ <i>n.s.</i>	$p = .298$ <i>n.s.</i>	$p = .954$ <i>n.s.</i>

Table 4.viii Statistical analysis according to question responses

Although the overall impression is of a majority of non-significant results, for each of the questions there is at least one significant difference in friction duration or PDF between the groups. The analyses of individuals separated by their responses to questions B and F offer some support for social network theory, which would have predicted a significant difference between such individuals. Similarly, the analysis for question G adds a little weight to the argument for taking subjects' life mode or social orientation into account.

However, the findings of this supplementary investigation also indicate that there are interpersonal differences contributing to speech variation that cannot be accessed by means of such a blunt instrument as these brief interview questions. Such variation is perhaps best ascribed not to social networks (section 2.2.4 above) nor to different life modes (section 2.2.5 above) but to individualistic inter-speaker variation (Johnstone 1996, 2000a; section 2.2.7 above). However this theoretical account of such variation is less valuable because it cannot be experimentally proved or disproved.

4.4 Assessment of Experiment One

This experiment was designed to investigate one of the many phonological features associated with Liverpool English, the lenition of stop consonants. The phonetic analysis, described in section 4.3.1 above, compared stops with fricatives and stop-fricative clusters and assessed the validity of certain prior claims about neutralisation between these segments.

In addition to the experimental findings made, Experiment One represented an opportunity to test the viability of my methods. In particular, it was the first experiment I conducted in which laboratory-style methods were applied in the field, making controlled recordings which would be suitable for acoustic rather than simply impressionistic analysis. On the whole, this was a successful test. I learned lessons about the problems of reverberation and background noise, and was to select my premises for Experiments Two and Three with great care. I also recognised that my subjects had found the experimental task of repeating carrier sentences very boring to participate in, and saw that this could be an obstacle to the collection of "natural" speech. I began to reflect on ways to make experimental interactions more stimulating and engaging, while keeping the level of control necessary for effective analysis. This is a problem to which I found an innovative solution, in the methodology I developed for Experiment Three (described in chapter seven).

In the sociolinguistic analysis (section 4.3.2), socially stratified variation in the lenition of stop consonants was observed, although this variation did not always go in the direction that classic sociolinguistic studies might lead us to expect. The students from School Y, who had a higher socio-economic status than those from School X, showed a significantly greater duration of friction proportional to closure in most of their lenited stops. There was also a significant difference between social groups in

the duration of fricatives, with the group further up the socio-economic scale. Not all alveolar stops showed the same pattern. Initial /d/ and /t/ in initial and final position had a higher proportional duration of friction in the speech of those from School Y, while the duration of friction in final /d/ (although not the PDF) was significantly greater in those from School X. This sociolinguistic analysis showed that this phonological variable did not pattern simply in line with socio-economic group, and that investigation of other correlations, with network, life mode and personal characteristics of speakers, might yield interesting results.

The analysis based on questionnaire information about the subjects, which touches on their social networks and life modes (section 4.3.3), indicates that phonological variation can also be correlated with personal data of this sort. This third analysis in particular led me to think more about individuals changing their accent in line with different audiences, topics and expectations. Exploring this kind of speech behaviour further required a shift in the focus of the experiments, from looking at variation between speakers to looking at variation within speakers. There seemed to be two kinds of intra-speaker accent change; change over time, commonly following a geographical move, which is explored in Experiment Two (chapter six), and instantaneous change connected to audience, topic and setting, called *accommodation* by social psychologists and investigated in Experiment Three (chapter seven).

Looking at individuals and their linguistic behaviour requires a more personal approach, since psychological issues of identity and individuality come to the fore. Therefore, to complement the experiments I went on to conduct, I interviewed several young Liverpudlians about their identity, their linguistic behaviour, and their thoughts about a range of related topics. These interviews are not for analysis, but rather represent an attempt to access the insights and perceptions of members of the

speech community under investigation, before going on to explore the phenomena experimentally. The interviews and some of the diverse range of topics which arose during them are discussed in the next chapter.

CHAPTER 5

INTERVIEWS AND DISCUSSION

- 5.1 Interviews and issues arising from them**
- 5.2 The initial interview: Andrew**
- 5.3 Sexuality**
- 5.4 The media**
- 5.5 Call centres**
- 5.6 Assessment of interviews and discussion**

5.1 Interviews and issues arising from them

This chapter considers the attitudes (as expressed in interviews) of some Liverpool English speakers to having a Liverpudlian identity and to their own accents and linguistic behaviour. Altogether, interviews with ten Liverpudlians were conducted. These interviews were carried out after Experiment One (reported in the previous chapter) to find out more about how young Liverpudlians themselves regard their accent, how they feel others react to it, and whether they perceive any changes in their own accent, either with the passage of time or in more instantaneous situations.

Four of these interviews were conducted one-to-one in Oxford, the other six contributors were interviewed in pairs in Liverpool. Unlike the interviews which preceded the three experiments reported in chapters four, six, and seven, the discussions reported here were explicitly on the topic of accent, with the interviewees asked to reflect on their own speech behaviour, on stereotypes of Liverpudlians and Liverpool accents, and on other issues. Also, unlike in the three experiments, here I was interested in what my interviewees had to say rather than the way in which they said it.

The interviewees fall into two groups. The six young men interviewed in Liverpool had less to say about accommodation over time and space since they were fairly young, still in their late teens, and had not moved away from the city. The other four interviewees were Liverpudlians who were also students at Oxford University. These interviewees shared the experience of moving to a new city, and had a broader perspective on the topics which emerged during our discussions. The subjects of Experiment Two also told me what they thought about similar topics; these subjects' interviews are reported in section 6.3 below.

The first interview, with Andrew ("Andrew" is a pseudonym), identified several potential areas for discussion. Extracts from Andrew's interview were used as a resource to stimulate discussion in the later interviews. Certain key issues which emerged from the interviews are explored in more detail in sections 5.3, 5.4 and 5.5 below. These issues were sexuality, the portrayal of Liverpudlians in the media, and the location of telephone call centres in Liverpool, which is seen as emblematic of Liverpool's economic regeneration. The connection between sexuality and accent was particularly addressed in the interviews reported in section 5.3, which were with pairs of young men who attended a gay youth group in Liverpool. Under consideration were the relevance of sexuality to accent performance, and the deployment of parts of a speaker's accent repertoire to call up different associations for his audience, and to perform different parts of his identity. The topics of the media and of call centres emerged more in later interviews (reported in sections 5.4 and 5.5), which were with slightly older Liverpudlians who had moved away from the city to Oxford or London in young adulthood.

Since these interviewees were explicitly asked to reflect upon their language use, their responses will reflect only behaviour of which they are conscious. These interviews are therefore useful chiefly to solicit their input and to obtain a picture of accent use which they perceive to be meaningful, rather than for any kind of quantitative analysis. This approach, with its focus on how speakers perceive accents and the divisions between them in their wider speech community, is influenced by Preston's updating of the linguistic tradition he calls "perceptual dialectology" (Preston 1999). This research involves techniques which investigate speakers' own ideas about the dialects which they and their neighbours employ. Informants are asked to participate in various tasks; to draw maps showing regional speech zones, to assess the degree to which recorded speech which they are played

differs from their own, to identify and describe dialects, and to rank them according to "correctness" and "pleasantness" (Preston 1999:xxxiv).

Perceptual dialectology work in Great Britain has focussed mainly on the production of mental dialect maps, and showed that the primary factors relating to dialect image were the continua of accentedness-standardness and urbanness-pastoralness (Inoue 1999:163). Informants are also invited to participate in open-ended conversations about the vocabulary, grammar and pronunciation used by themselves and others, forming qualitative analyses, and it is this last technique which has influenced the methodology used in the interviews which are reported in this chapter.

I am also mindful of the need to find out whether the explanations researchers suggest for linguistic variation by drawing delineations between groups of speakers are meaningful. Is the delineation 'one that is oriented to by speakers of the group in question ... does the analyst's boundary correspond to the structuring of the local speech community?' (Mendoza-Denton 2002:477). Interviews and discussions seem the best way to access this information.

Qualitative work naturally has its limitations, especially when researchers wish to draw firm comparisons, make statistical analyses and base claims and conclusions on a body of work. Nevertheless, qualitative work also provides a valuable further level of exploration, and provides access to information which would otherwise remain outside the scope of a given study. In this chapter, I have used qualitative interviews to contextualise and reinforce the quantitative work of the rest of the thesis. Proper qualitative sociolinguistic research has its methodological roots in ethnographic techniques (Johnstone 2000b:2), and efforts can be made to ensure that such studies yield valid and reportable results (Johnstone 2000b:4-5).

5.2 The initial interview: Andrew

The first of these interviews discussing accent and attitude was conducted in 1999, with Andrew. Andrew was then nineteen years old, an undergraduate at the University of Oxford who came from a relatively deprived, working-class area of Liverpool, and spoke with a strong Scouse accent. Subsequent interviews used parts of Andrew's interview to provide a point of view to which other interviewees were invited to respond. For this reason, and because his contributions were particularly useful and interesting, extracts from his interview are included here. I am not claiming that he is a spokesperson for all young Liverpudlians, nor should his beliefs about his own linguistic behaviour be held as a completely accurate reflection of that behaviour. Nonetheless, his insights support a number of the ideas discussed in chapter two, particularly those about audience design, performance and accommodation. His comments about his speech variation as a gay man are also of great interest in my consideration of intra-speaker variability, and were the motivation for exploring this topic further with the gay youth group interviews reported in section 5.3 below.

Andrew believed that the Liverpool accent was generally popular. He felt that his distinctive speech had a certain novelty value in Oxford, and even confessed to playing it up a little on his arrival:

When I first came here I was more broad than I was normally because when you get there and everyone's like [posh voice] "oh yes I come from wherever" and then when you hear people speak like that - I think it's an unconscious thing that you just make yourself sound more Scouse because they like it, and almost everyone speaks the same, and it's good to be different, it's not a different bad-different, it's a good, happy sort of everyone-likes-it different.

His accent is a central part of his identity, setting him apart from his peers but also (he feels) contributing to his appeal. Despite this positive assessment, he recognised that his habitual accent has changed considerably since leaving Liverpool to come to

university. He reported a familiar experience, also reported by radio presenter Winifred Robinson (Allott 2000; discussed in section 2.2.6 above) and by Brian, one of my subjects in Experiment Two (reported in chapter six), of attracting censure on his return to Liverpool because of the accommodation his speech had undergone since his move away:

I used to be much much more broad, definitely. I hear my mum and my sisters and they speak sort of like I do but much more broad, and people, when I go back to Liverpool, they say that I don't speak Scouse, and they say that I talk posh. But then, I think it was conscious; I associate everything from Liverpool with the Scouse accent, I know it can be like really friendly and everything, but I sort of associate it with everything that held me back.

This high level of consciousness surrounding the change in his accent which Andrew spoke about is particularly interesting. He discussed in his interview how he saw entire possible lives mapped out for him in Liverpool, perhaps carrying out petty crimes with the local lads, or working on the docks with his uncles, and came to a conclusion. 'Although you never forget where you come from, I just didn't want to be like that, and the way I did it was by bit by bit moving away from it.' His shift in the direction of more standard speech was not only a process of accommodation towards idealised "Oxford" English and the prospects associated with it, but also a disassociation with the Liverpool-based alternative.

Andrew felt that he had 'a total repertoire of accents', and had learned very well the usefulness of being able to shift between the various accents at his disposal. One story that he told concerned a disagreement between him and some prospective students visiting his college from various parts of the country. He reported how he shifted his accent markedly in the RP direction in order to claim authority for himself:

I was arguing with him, but I wanted him to respect me, and I wanted him to see that – 'cause sometimes people come down on a Liverpool accent, so I changed it, I turned it off and it just went totally different because I thought, "Right, you, you've got to be told something here!" I realise it's more effective, when dealing with a certain sort of person, who's not from Liverpool, it's more effective to speak like that to them, it gives me more authority.

He said that he used the same tactic with Liverpool people as well, in particular during discussions with his mother and other members of his family. He believed that talking with a less pronounced Liverpool accent in that situation showed that he had the knowledge to back up his arguments; an example of "upward" divergence to compare with the downward divergence found in Bourhis and Giles (1977), discussed in section 2.1.1 above.

Other situations in which Andrew, who is gay, reported shifts in his accent occurred when he felt threatened in some way, and wished to appear straight or "macho":

When I speak to men at home, I always make sure my voice is lower, because when at school I was told I had an effeminate voice, and got called names for being gay and all that, so ever since then I've made sure that when I spoke to, especially strangers, and in shops and everything in Liverpool, my voice went really low and really Scouse. (...) That's totally because I don't want them to think I'm gay or effeminate in any way. I always lower my voice when I talk to strangers, and when I'm on the phone, and when I talk to men, and that's all because I don't - to be gay, there's, there's a stigma attached to it, at least where I come from, so I don't want them to see me like that, so I make sure that I don't sound like that.

Stereotypical gay male speech is claimed by Barrett (1997) to include the use of gay-specific lexical items, phonologically nonreduced (hypercorrect) forms and a wider pitch range for intonational contours. Gaudio's (1994) experimental work on gay men's intonation offers some support for this last claim (see discussions in Jacobs 1996; Barrett 1997 and Kulick 2000). A gay male identity may also be indexed with non-gay-specific lexical items such as complex colour terms and heavy use of certain adjectives defined by Lakoff (1975) as "women's speech". Speakers can choose to call upon these linguistic resources to signal a gay identity, and are also likely to be practiced in diverging from them where the audience or setting proves less amenable, as Andrew describes above.

What has not hitherto been discussed is the variable production of regional accent under the same circumstances for the same purpose. This possibility, and the connection between accent and sexuality, was considered further with the help of the second set of interviewees and is discussed in section 5.3 below.

5.3 Sexuality

The second set of interviews, conducted in March 2000, were with six gay male teenagers living in Liverpool who shared their insights on the Liverpool accent, and how their sexuality might affect their variable performance of it. These young men attended a gay youth group, held in the same community centre where I conducted the recordings for Experiment Three (reported in chapter seven). I discussed some of Andrew's ideas with four of them to stimulate debate, but mostly just let them chat with each other about accents in general while I recorded their conversation. A few of their relevant comments and remarks which follow up Andrew's discussion of accent and sexuality are reported here.

There was immediate agreement with Andrew's point about exaggerating the accent when under threat. One said, 'Oh yeah. You lay it on thick so as not to be bashed or whatever, like "I am macho, don't mess with me"'. Another agreed that, if he felt intimidated, that not only would he 'tone down the highs and lows', but also that 'deepening the voice as well sometimes works, and strengthening the Scouse part of the accent'. This interviewee pointed out that other young men did this kind of accent hyperperformance to appear more masculine as well, although for other reasons: 'They're Scouse wannabes. It's obviously overdone, ridiculous. It's a pose, they're doing it with their mates, 'cause they all hang around in gangs and they're all basically trying to impress each other. Trying to be hard, trying to look impressive.'

He was quite adamant that young gay men did not engage in the same "trying to look hard" behaviour, unless it was for reasons of self-preservation as outlined above. Another circumstance in which one of the interviewees recognised that he changed his speech was with his family. He was not trying to pass as straight, but more to

'tone down' that part of his identity: 'just so I won't rub it in my mum's face that I'm gay, but it might be just a habit because I only came out last year.'

There was more surprise (and a certain amount of amusement) at Andrew's suggestion that he occasionally exaggerated his accent to enhance his attractiveness or individuality. This reaction might be expected, since these young men all continue to live in and around Liverpool, where such linguistic behaviour would hardly mark a speaker out as exotic. However, more than one of the interviewees also observed that a more masculine-seeming performance might pay dividends within the gay community: 'if he's changing his voice like that he might be using it as an attempt to enhance his pulling power. If you've got a deep sounding voice and that, everyone's going to go "Oh he's all butch and macho".'

Strong working-class accents have clear 'connotations of masculinity' (Trudgill 1983:168). What Andrew is attempting by lowering his voice and reinforcing his accent seems to be a demonstration more of unassailable masculinity than of heterosexuality, although the two are associated by implication (see section 2.2.1 above). This is observed, for instance, in Cameron's (1997) consideration of the talk of a group of young men, in particular their use of the epithet "gay" to denote a deviance that is more a gender deviance than a sexual one. 'Being "gay" means failing to measure up to the group's standards of masculinity or femininity ... applied by the group to men, "gay" refers in particular to insufficiently masculine appearance, clothing and speech' (Cameron 1997:53). Speakers who used the epithet were trying to demonstrate their own masculinity and, by implication, heterosexual orientation. Use of homophobic terminology to condemn non-normative male behaviour such as studying, cooking or being concerned about children is also reported in Armstrong (1997).

In the absence of any published material, I discussed my idea of gay men using their repertoire of accents as a performance resource with two colleagues (Greg Jacobs at York University, Toronto, and Greggor Mattson at the University of California, Berkeley) who are conducting specific research with gay men in the areas of social anthropology and queer linguistics. They both agreed that the idea was plausible and likely, and offered anecdotal support from their own participant-observations. Jacobs (personal communication) reported a thirty-three year old Canadian gay man who described deliberately using what he called a "low-class Italian accent" when he wished to present a more desirable macho persona. Similarly, Mattson (personal communication) cited the "borrowing" of phonological and lexical forms associated with the African-American community by non-African-American speakers wishing to be perceived as "butch".

In conclusion, the dimension of sexuality adds a further potential reason for different individuals to be motivated to style shift or accommodate their language in different ways. Leap (1999) discusses ways in which the socialisation of young gay men influences their speech and lack thereof, and the linguistic strategies which these adolescents develop. The construction of identity through style has also been explored with adolescents with heterosexual identities (Eckert 1996, 2000; Coates 1999), and there is a great deal more anthropological linguistic work which could be done in this area.

5.4 The media

Further interviews were conducted in 2000 and 2001 with three more Liverpudlians, one man and two women, aged in their late teens and early twenties, and resident in Oxford. Topics raised included the process of accent assimilation and the attendant loss of identity involved in migration between cities, which is investigated in Experiment Two (reported in chapter six). However, one topic emerged as the main focus of all of these further interviews. This was the position and portrayal of Liverpool and Liverpudlians in British media and society. I have considered this topic myself in sections 3.1.2 and 3.1.3 above; the interviews reported in this chapter provide an opportunity to see whether Liverpudlians concur.

A sub-section of this area of discussion was the location of telephone call centres in Liverpool, which has been much trumpeted in the media as evidence of a changing perception of Liverpool accents. This was frequently referred to by my interviewees and has also been the object of some attention by sociolinguists (Foulkes and Docherty 1999:3). Call centres are explored further in section 5.5 below. However, the place of Liverpool and Liverpudlians in the national consciousness, and the influence of the media in constructing this, merit a little further consideration first.

The general media stereotype of the Liverpudlian as a shiftless criminal has already been discussed in sections 3.1.2 and 3.1.3 above. This stereotype operates on (at least) two levels. First, there is the way that outsiders actually regard Liverpudlians, fuelled by the generally negative images in the media. Secondly and more insidiously, there is the perception that Liverpudlians themselves have of how they are regarded by outsiders. This is also media-fuelled. A recent sociological survey in Liverpool found that the young people interviewed were quite aware of how they were constructed by the media:

the popular external image of Liverpool was negative and derisory. The young people observed that media representations of Liverpool – at the levels of both news and drama – comprise mythological and ignorant images underpinned by constructions of criminality and fecklessness.

(Andersen et al. 1999:32)

It is this second level of the stereotype, the metastereotype, to which I have access as an interviewer. It would be outside the scope of this study to conduct some kind of nationwide survey on attitudes to those who speak with a Liverpool accent, to access the basic, "real" stereotype. Studies of this sort conducted by others which mention Liverpool (Trudgill 1983; Aziz 2000) seem to be perfectly in line with the metastereotype, so I limit myself to consideration of the metastereotype in this thesis.

Every one of my own interviewees spoke of being maltreated, ignored or thought the worst of because of their accent, and they believed that this was due to media stereotyping of the Scouser. This maltreatment was often, they felt, because people presumed they were stupid or ignorant. On other occasions, they reported being expected to participate in and laugh at jokes told against them. One of these Liverpoolian interviewees reported an exchange which he had in a London pub with a work colleague. An argument developed between them when his colleague told him this joke, and reacted with surprise when my interviewee protested that it was "racist":

'Two Scousers walk into a gay bar, and this guy asks one of them if he'd like a blow job. The Scouser yells, "How dare you?" and smacks the guy in the mouth. His mate says, "What did you do that for?" and the Scouser replies, "Well, what else could I do? He said something to me about a job".'

So Liverpoolians are portrayed as both violent and workshy, and a (peaceful and industrious) Liverpoolian is expected to find this funny and not be offended when told such a joke.

Other kinds of anti-Liverpool prejudice were reported. Interviewees described reference being made to recent unfortunate events in Liverpool (several of which are reviewed in section 3.1.2) and the opinion being expressed by others that no more should be expected of the city and its inhabitants. This kind of openly-expressed prejudice was however, according to one of my interviewees, 'less common than the low-level, indirect stuff'.

One last piece of negative behaviour which two of my interviewees mentioned as being particularly annoying was also brought about by a media stereotype, although on this occasion the medium was television comedy rather than newspapers. This was the habit of others, on hearing my interviewees' Liverpool accents, of breaking into an impression of Harry Enfield's "Scouser" characters (these and other television representations of Liverpudlians are discussed in section 3.1.3 above). Allusion to these characters, and quotation of their catchphrases, as a way to mock Liverpudlians is, according to my interviewees, extremely common. Also common is reference to other television dramas or characters; as one female interviewee put it:

people hear you're a Scouser and sometimes they really do expect you to be this little scally* tart, like our Aveline off *Bread* and Beth Jordache and, er, Jacqui Dixon [both characters from *Brookside*] all rolled into one. God help us! I can't believe that people act the same with people from other cities ...

My interviewees also mentioned seeing occasional evidence of a media backlash to negative portrayals of Liverpool. This backlash indicates the operation of a more complex stereotype, and one which is beginning to be challenged. For example, when a well-known Liverpudlian, Beryl Bainbridge, advocated the general compulsory provision of elocution lessons to the children of the city so as to rid them of their accent (Reynolds 1999), the media response was swift and vigorous in its

* Liverpool slang, short for *scallywag*; used to describe a lovable but essentially good-for-nothing person

condemnation of her comments. The general line in the media commentaries seemed to be that she and others who shared her prejudices were offensively out-of-touch:

What kind of person still believes, as Beryl Bainbridge claims to do, that a Scouse accent makes the speaker sound aggressively thick, instead of sexy? Does anyone apart from Ms Bainbridge seriously think that any person with a Liverpool accent is a member of some sinister underclass with an eye on one's hubcaps and another on one's wallet?

(Knight 1999)

A few weeks later, when Jack Straw (then Home Secretary) made an ill-judged off-the-cuff remark about Scousers being 'always up to something', Liverpool was again staunchly defended. One editorial concluded that 'some of the abuse [of Liverpudlians] is getting beyond mere tedium and as near racism as makes no odds' (Rusbridger 1999); a sentiment with which my interviewees wholeheartedly agreed and which they were glad to see being represented in the national press.

Discussion of regional accents and their evaluation is one of the media's favourite linguistics-related topics. Two of the most commonly reported themes relating to this have been the discussion of "Standard English" and the supposed disadvantages caused by its decline, and the phenomenon dubbed "Estuary English", to which many column-inches have been devoted. A third theme, which is particularly relevant to this study and which was cited by several Liverpudlian interviewees in their discussions, is that of the location and growth of telephone call centres, and how call centre location supposedly reflects a national change in attitudes towards certain regional accents. This is explored in more detail in the following section, section 5.5.

5.5 Call centres

Much recent newspaper reporting which discusses regional accents in general, and Liverpool in particular, has concerned the commercial question of call centres and where they are located. This reporting in turn feeds into the public's general perception of accents; more than one of my interviewees mentioned call centre location in their discussion about speaking with a Liverpool accent. 'Everyone's supposed to love us now; these days you phone up the bank or the insurance and half the time it's a Scouser on the other end.' As Foulkes and Docherty (1999:3) report, 'a recent upsurge in telephone sales and call centres has led to a much wider commercial interest in the features of accents, and in public attitudes to variation'. In a call centre, the employees' appeal to the customers, and therefore their performance, is entirely through their speech, and so the location of call centres in particular cities, employing local people, is interpreted as a sign of that city's accent's popularity. In this section, I explore these reports and assumptions more closely, to find out whether this is an accurate or inaccurate interpretation.

It is reported (Ward 2000) that regional accents are increasingly viewed by employers as commodities. This operates beyond a mere linguistic-economic metaphor; the 'value' of the speaker is held to be assessed differently by auditors according to his or her linguistic assets (see Coulmas 1992 and Eckert 2000, discussed in 2.2.6 above). This view has also been indicated in research by non-linguists into job recruitment and particularly into the telesales market. The linguistic conclusions of this research is often reported in the media. This kind of research is usually performed by consultancies on behalf of the telesales companies themselves (OMIS Research 2000; Aziz Corporation 2000). Tellingly, the source of the news stories which appear is usually the press release made by the company concerned.

In general commercial research which addresses the issue of regional accents, Liverpool has performed predictably badly. For instance, a survey of recruitment consultants found that the 'whiny' accent of the city was regarded by employers as 'particularly negative' (Watson-Smyth 1997). This finding is echoed by the research, mentioned in section 3.2 above, that showed unfavourable assessments of business people with Liverpool accents by company directors (Aziz Corporation 2000). However, investigations which deal specifically with telesales are reported as showing findings which are entirely contrary to this. Why should this be?

According to the media, the telesales business is now booming in Liverpool, with an influx of companies such as Abbey National situating their call centres in Liverpool. Evidence for this boom is given in the fact that the number of Liverpudlians working in call centres had doubled to around 6000 in 1998 (Jones 1998), and two years later (Ward 2000) had risen to over 10,000.

This "boom" is popularly ascribed to the nation's new-found fondness for Liverpool accents. It has even been reported that 'the soft and friendly version of the Scouse accent' had turned Liverpool into 'Britain's favourite location for call centres' (Ward 2000). This last statistic is based on a survey of call centre executives (OMIS 2000), which ranked location factors such as operating costs, workforce availability, premises, grants and local image, and placed Liverpool at number nine in a Europe-wide list of the "best" locations (OMIS 2000:3). It should be noted that the rest of the top ten were all cities in former East Germany. This, if nothing else, ought to indicate the relative importance of operating costs and the workforce's accent to the findings of the survey on which the media reports were based.

Nonetheless, the apparent burgeoning of insurance and direct banking call-centres in Liverpool and other cities with unpopular accents has been generally interpreted as

indicative of a reversal in attitudes to those accents. The regional accent is reported (Jones 1998; Ward 2000) to be newly perceived as warm and friendly rather than untrustworthy, and it is maintained that this perception is reflected in the success of such business ventures. The truth of this seems, to judge from my own interviews, to have become part of public opinion. However, the popular media reports do not tell the whole story; in fact, they are quite misleading.

The growth in the number of Liverpoolians employed in call centres since 1998 is merely in line with general national and global trends of growth in this employment sector. Work in call centres was estimated as 1% of total U.K. employment in 1998 and projected to rise to 2.3% by 2002 (Datamonitor 1998); the total number of call centres in Europe was predicted to grow from 12,750 in 1999 to 28,289 by 2006 (Frost and Sullivan 2000). Although Merseyside could boast 32 call centres in 2000 (3.2% of the U.K. total), much higher concentrations were found in Strathclyde, Lothian, South Glamorgan and Tyne and Wear (Bristow, Munday and Gripaios 2000).

It is not over-cynical to suggest that the appeal of a city such as Liverpool to companies setting up call centres has a great deal more to do with people being prepared to undertake this low-paid work in a city with a high level of unemployment and deprivation than with the perceived new attractiveness of those employee's accents. Indeed, the latter explanation seems to me little more than corporate or media "spin".

Richardson and Marshall (1996:308) report unequivocally that call centre locators are attracted chiefly not by appealing accents but by 'supplies of relatively cheap female clerical labour', and Bristow, Munday and Gripaios (2000) note further that this desire for a large pool of low-cost labour 'makes the former industrialised regions of the

periphery (such as Scotland and the North-East) particularly attractive'. This area of the country undoubtedly encompasses a number of distinctive urban regional accents which have sometimes been negatively evaluated. It is, I argue, totally disingenuous for the call centre companies to suggest that it is these urban accents which drew them to these locations.

It should further be noted that, as a particularly deprived area, Merseyside is one of the European Union's Objective One areas for regeneration, with grants available making it especially attractive to business investors. If the conclusion of the OMIS (2000) survey into call centre location that Liverpool was the "best" location in the UK is accurate, then this clearly means best for employers who wish to maximise profits, not necessarily best for the city and its inhabitants. Extrapolating any kind of shift in the countrywide perception of the accent from this survey's conclusion seems like a deliberate media-friendly misinterpretation.

5.6 Assessment of interviews and discussion

This chapter has considered a range of topics and issues connected to accent. The interviews which are reported here greatly augmented my understanding of the attitude and situation of speakers of Liverpool English. Following these explorations, it seems clear to me, for example, that the argument that location of call centres in Liverpool (section 5.5) indicates a national surge in that accent's popularity holds very little water. Liverpool may be, as the newspaper article (Ward 2000) reported, a 'favourite location for call centres', but it is favoured not by 'Britain', as is claimed, but by the companies themselves, concerned mainly for their profits. On the other hand, media coverage itself (section 5.4) has a hand in creating and changing the stereotypes which surround Liverpool and Liverpudlians, so even a misleading report can be instrumental in creating and altering its reader's attitudes.

The views my interviewees expressed offer support for many of the ideas proposed in the literature reviewed in chapter two above. This applies not only to the accounts and models of intra-speaker variation in section 2.1, such as audience design (section 2.1.4) or performance (section 2.1.7), but also to some of the dimensions of inter-speaker variation based not on large groupings of sex or class but on more personal speaker attributes such as life mode or local loyalty (section 2.2.5). In particular, issues of identity (section 2.2.7) come to the fore.

As well as backing up prior work discussed in previous chapters, the interviews reported here have also informed and inspired my own investigations, especially the two experiments reported in the chapters which follow (chapter six and seven). They have shown that it is both valid and important to complement quantitative analysis with qualitative research in this way, to find out more about the community and the

accent under investigation, and to make sure that the aims and structures of the experiments are meaningful.

CHAPTER 6

EXPERIMENT TWO: LONG-TERM INTRA-SPEAKER VARIATION

6.1 Accent variation over time following relocation

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6.2.1 The subjects

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6.2.3 Conducting the experiment

6.2.4 Data analysis

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6.3.1 Brian

6.3.2 Carl

6.4 Results of Experiment Two

6.4.1 Brian

6.4.2 Carl

6.5 Assessment of Experiment Two

6.1 Accent variation over time following relocation

This chapter reports an experiment which investigates intra-speaker variation over time, looking at long-term processes of accommodation. Experiment Two was a longitudinal study conducted with young Liverpudlian speakers who had relocated to a new city. Specifically, the experiment investigates the change in the speech of two young men over an academic year after they moved from Liverpool to Oxford to attend university.

Having conducted the first interview with Andrew, reported in the previous chapter, there was potential for further exploration of the effect of movement between cities on speakers' behaviour. Many of Andrew's insights stemmed from his experience of moving from Liverpool to Oxford to attend university. These insights relate to how Liverpudlians are perceived in other parts of Britain, and how speakers' growing understanding of that perception affects their behaviour. There are also more straightforward accommodation effects which can be related to geographical relocation. Andrew's insights were reinforced by some of the later interviews also reported in chapter five, which I conducted with Liverpudlians who had moved away from the city.

In particular, I wanted to consider the position of adolescent speakers moving to a new city and a new stage in life when they start university. Therefore, newly-arrived students who, like Andrew, had just come to study at the University of Oxford having been born and educated in Liverpool were identified and invited to participate in a small longitudinal study. An experiment was conducted with them to investigate their accent change over the academic year. Interviews which accompanied the experiment gave a picture of their attitudes and social networks which can be considered in relation to the experimental results.

6.2 Method

6.2.1 The subjects

With the co-operation of the Oxford University Undergraduate Admissions Office and the Liverpool Local Education Authority (LEA), I identified the students who would be coming as undergraduates to the University of Oxford from Liverpool in October 2000. The Liverpool LEA is responsible for the university fees of all students who went to school in central Liverpool, and they kindly agreed to include a letter from me in their summer information mailing to the new students. The letter invited new students who had grown up in Liverpool to make contact with me and arrange an interview as soon as they arrived in Oxford. Of those who replied, two (Brian and Carl) ultimately completed the study. For purposes of comparison with other experiments and interviews reported in this thesis, both of these informants were male, heterosexual, white and aged eighteen at the time of the first interview.

6.2.2 Premises and equipment

The one-to-one interviews were conducted by me in my own home in Oxford, using an Audio-Technica 803b lavalier microphone recorded onto one channel of a Sony DAT recorder. The first interviews took place during freshers' week (the week before the start of the academic year, when the new student subjects had just arrived in Oxford) in October 2000, with the follow-up interviews late the following May, just before the end of the academic year.

Both informants gave consent to their interviews being recorded, but were not told that their speech would be analysed. Unlike in the other interviews reported in this chapter, I was vague about the nature of my research, and told them only that I was interested in young people from Liverpool who moved to a new city. This was intended to make them less self-conscious about their speech, although they were both intelligent and suspicious enough to ask me, by the end of the first interview, if it was really their accent that I was interested in. I did not deny this, but neither did I disclose how their speech was to be analysed. When they were invited back for the second interview, it was presented as a re-recording of the material. However, I suspected that they may have been slightly less naive about the purpose of the research in the second interview than the first.

The second interviews were briefer, and consisted of an unrecorded discussion followed by a repetition of the reading passage. Interviewing the informants twice allowed an acoustic analysis of the reading passage part of the interview to be made, to investigate whether the speakers' accents had changed during their first year at university. These results were then considered alongside the professed attitudes of the speakers.

6.2.3 Conducting the experiment

Subjects were first interviewed in the first week of the academic year, having just arrived in Oxford from Liverpool. The first part of the interview asked about informants' names, ages, families, old school, which college they were at and what they were studying; questions they were very used to answering during their first week at university. This section also included questions about Liverpool and their attitudes to it, including whether they wanted to move back there once they had completed their degrees.

The second part of the interview asked them to read an extract from what I called "a study about young people from Tyneside" aloud, and then to comment on and discuss the ideas put forward. The passage is taken from Watt (1998:100, 124, 228), an urban sociolinguistic study, and discusses the dilemmas of having a Tyneside or "Geordie" identity. It was adapted for use as an experimental stimulus with the permission of the author. The passage is reproduced in figure 6.1 below:

Young people from Tyneside are reluctant to cast themselves as old-fashioned, as old-fashionedness in an urban industrial setting tends to be congruent with poverty. The occupations, lifestyles and pastimes that had traditionally been associated with Tynesiders in the past are unlikely to hold many attractions for Tynesiders of any social class today. However, complete subscription to middle-class values among young working-class people is unlikely, since loyalty to the local community will continue to be a potent force in terms of the shaping of social behaviour. [...]

Many young Tyneside people, it appears, wish to throw off some of the baggage of the perceived parochiality, uncouthness and uneducatedness that has been visited upon them by outsiders for the last two hundred years, and to present themselves as part of a wider, more worldly, more dynamic urban British population. On the other hand, while they may resent the caricature of the 'canny Geordie' which has entered the British mindset as a recognisable stereotype, they are unlikely to forgo the well-deserved reputation for warmth, friendliness, hospitality, straightforwardness, honesty and unpretentiousness on which they pride themselves.

Figure 6.1 Reading passage

I had various motives in selecting this particular passage. Firstly, it contains several tokens of each of the phonological variables that I wanted to compare in the longitudinal part of the study; for example, intervocalic /t/ occurs twenty times, and the diphthong /əʊ/ eleven times. Secondly, it discusses specific and conflicting attitudes which young people might have to their urban background; loyalty versus progressiveness, and the desire to lose the negative aspects of a stereotype while retaining the positive ones. There are clear and obvious parallels between Tyneside and Merseyside in this regard, and I wanted these to emerge in our discussion. By choosing a passage relevant to our discussion rather than one completely unrelated, I may have risked influencing the informants' opinions, but using a passage which raised some pertinent issues seemed a natural and effective way of incorporating these issues into the discussion. I would argue that the fact that the topic of the reading passage was related to our prior discussions (which were also being recorded) reduced the informants' awareness that this was the part where I would be analysing their speech. The passage, although it concerns identity, does not specifically mention accent. Lastly, by choosing (ostensibly) to talk about Tyneside rather than Liverpool, some of the informants' suspicions that they were being singled out for scrutiny were allayed. This section of the interview provided both material for acoustic analysis and a stimulus for discussion.

In the third and final part of the interview, we began by discussing the Tyneside passage. I then played the informants extracts from my original interview with Andrew, telling them that he was a Liverpudlian studying at Oxford. (I had Andrew's permission to use his interview in this way.) The informants were asked what they thought about various controversial statements that he made about his accents and the changes it had undergone since leaving Liverpool (see section 5.2 above), and some discussion of the issues that arose followed.

6.2.4 Data analysis

The recordings were transcribed in standard orthography, and the reading passage portions transferred to a Silicon Graphics Indy computer for analysis at a 16 kHz sampling rate. As in Experiment One, *ESPS/waves* software was used for segmentation, labelling and acoustic analysis. The seven features which underwent acoustic analysis were those identified in section 3.2.2 above as key phonological variables in Liverpool English, and included the lenition feature explored in Experiment One (reported in chapter four). The seven variables are listed in the table below. This table is the same as table 3.i above, but with an additional column which shows the objective acoustic measure of variation for each variable.

	variable	RP	as in	ranges between	acoustic measure
vocalic	/ə/	[ə]	father <u>u</u> , a <u>g</u> o	[ə] – [ɛ]	F2 (frequency)
	/ɜ:/	[ɜ:]	bird, univers <u>u</u> ity, n <u>u</u> rse	[ɜ:] – [ɛ:] – [e:]	
	/ɑ:/	[ɑ:]	gr <u>a</u> ss, c <u>a</u> stle, b <u>a</u> th	[ɑ]/[æ] – [ɑ:]	
	/əʊ/	[əʊ]	m <u>o</u> st, kar <u>a</u> o <u>k</u> e, go <u>a</u> t	[ou] – [ëu]	F2 of first vowel
consonantal	/r/	[ɹ]	mar <u>r</u> ied, sor <u>r</u> y	[ɹ] – [r]	presence/absence of closure
	/k/	[k ^h]	work <u>u</u> r, wak <u>e</u> up	[k ^h] – [k ^x] – [k ^h x] – [x]	presence/absence of closure and duration of friction (i.e. lenition)
	/t/	[t ^h]	cart <u>u</u> oon, exc <u>i</u> ting	[t ^h] – [t ^s] – [t ^h s] – [s]	

Table 6.i Seven variables in Liverpool English

The analysis was carried out with each specific token of each variable being compared with the same occurrence in the same word in the same phrase in each interview). This controls for any phonological contextual effects, and for problems with acoustic analysis of vowels next to nasals, which would show antiformants and might otherwise make comparative measurement difficult. Also, as with Experiments One and Three, the speech rate was checked so that any differences in duration measurements could confidently be assigned to differences at the segment level rather than to a slower rate overall.

The process of measurement involved scrutiny and measurement of spectrograms generated from the acoustic signal, again using *ESPS/waves* signal processing software. Each instance of /t/, /k/, /r/, /ə/, /ɜ/, /a/ and /əʊ/ was inspected. In the case of the stop consonants, the intervals of closure and friction for each one were measured. The procedure for /t/ and /k/ was exactly the same as for Experiment One, described in section 4.2.5 above. For /r/, the presence or absence of closure was simply noted.

In the case of the vowels, the whole stretch of the vowel was marked out on the spectrogram by me while listening to and checking with the recording, and these start and end points were used as inputs to the program which carried out the analysis.

The rest of the process was automated with a Perl script prepared in-house by Andrew Slater. The *ESPS* formant program was used to estimate formant frequencies with linear predicative coding (Markel and Gray 1976), using the autocorrelation method, a 49 ms window and a step size of 5 ms. In the case of the monophthongs /ə/, /ɜ/ and /a/, the measurement was taken at the midpoint of the vowel; for /əʊ/, where it is the first half of the diphthong which is most subject to

fronting in Liverpool English, it was taken from the point one-quarter of the way into the marked section.

Certain differences in source characteristics between male and female subjects' speech meant that minor adjustments to the Perl script had to be made in order to optimise the accuracy of the results when checked against non-automatic analysis of formant frequencies. For instance, the most accurate results for male speakers were acquired when the script was tracking five formants, whereas for female speakers, tracking four formants worked best. In each case, the frequencies of the first three formants were exported to a text file for subsequent analysis.

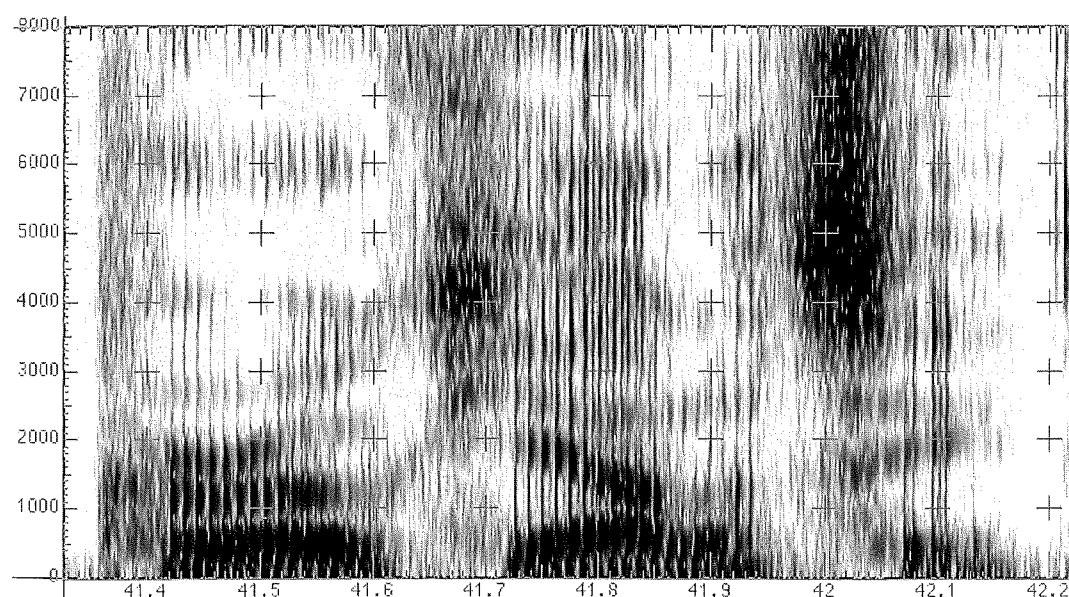


Figure 6.2 Wide-band spectrogram: "parochiality" [pʰəˌdʊxɪˈæləˈtɪː]

Figure 6.2 above shows the wide-band spectrogram for the word *parochiality*, uttered by Brian in his first interview. This is an example of the spectrograms used during the inspection and measurement process. /r/ occurs at around 41.5 ms, and there is no

closure evident. The lenition of the phonological stops /k/ and /t/ is clear from the long stretches of high-frequency noise visible on the spectrogram. The friction interval for /k/ stretches between 41.64 ms and 41.72 ms, and the friction interval for /t/ between 41.97 ms and 42.06 ms. Of the vocalic variables being investigated, the *parochiality* example above shows two tokens of /ə/ and also the diphthong /əu/ (between 41.52 ms and 41.61 ms).

6.3 Subject profiles and interview quotations

A profile of each experimental subject is provided, along with quotation from his first interview which illustrate his feelings and attitudes. Extracts from interviews are edited for clarity and length, but I have included some lengthy quotations because they provide valuable insight into the complex attitudes held by young people from Liverpool, relevant to this entire thesis. Many of these attitudes reflect those expressed by my other non-subject interviewees (see chapter five above). These interviews were partly motivated by a wish to correlate subjects' attitudes with the linguistic behaviour they displayed.

6.3.1 Brian

Brian comes from the south of Liverpool. He attended a comprehensive school; the same one as many of the subjects in the study reported in chapter six below. He had chosen to come to Oxford 'because it's supposed to be the best', and didn't think he was likely to move back to Liverpool after graduating. He was proud of having come to Oxford from a comprehensive school, although said he was 'careful not to make an issue' out of it. His feelings about the city and its inhabitants were ambivalent:

It's a very small place, Liverpool. It's big, but it's small in mind. I have to say, after I came back from abroad I did feel that it was very small, I got on much better with the people who'd gone to university and come back than with people who hadn't left Liverpool.

He felt that the Watt passage was fairly accurate in its observations about young people and class, and added some interesting comments about Liverpudlians' use of the stereotype of the Scouser. He argued that 'people do consciously mould, when they leave, they make themselves more like the stereotype, and pin their colours to the [Liverpool] mast':

People do play up to it. Liverpool sees itself first of all as the place with this sense of humour, so people make stupid jokes, and mutter to themselves about the Scouse sense of humour. They're always at it. And you just think, well you know, it wasn't a very good joke. Young people do it in a different way, they play up more to either class or social group stereotypes more than Liverpool stereotypes. People'll be the gangster, or they'll be into a certain type of music, and they'll play up to that stereotype more than a Liverpool sort of thing.

In considering general attitudes to Liverpool, Brian called it 'a loveable rogue of a city', and reflected that the superficial approval of Liverpudlian's energy, humour and emotion masked an underlying contempt. 'That's the sort of surface admiration, but underneath there's a "yeah but"'. It's like, you wouldn't employ a Scouser, but you'd probably like to go to the pub with one. That's the impression I get.' Brian also offered

a critique of the positive reputation that Liverpool has for community spirit, feeling that Liverpudlians' great affection for their fellow Scousers sometimes blinded them to their obvious faults: 'it's just sort of perverse. Just because they're from Liverpool, it doesn't mean they're saints, you know?'

After listening to the interview with Andrew, Brian had some further observations to make. He said that he too felt he used different accents for different people. He talked about over-performing ('I did once, for one of my interviews, lay it on a bit thick') as well as converging to more standard pronunciations. He would be wary of changing his speech too quickly ('it's the most obvious sign of trying to ingratiate yourself') but felt that the ideal situation would be to be able to accommodate without getting caught out. He feels that his own accent has become less strong as he has progressed through school, noting that his friends with strong Scouse accents did not get into the higher ability sets. He even says that maybe, deep down, he is prejudiced about the way people speak, and would not be overly disappointed if he simply didn't have his Liverpool accent any more, seeing it as a hindrance to his future career:

I wouldn't make a deliberate effort to get rid of it, certainly not now, but I mean, if I was to go into politics, which I have semi-intentions of doing, I know, I think it's pretty obvious – people wouldn't vote for a Scouser. Call centres are all in Scotland and Newcastle because they have trustworthy, friendly open accents, whereas you very rarely get a Scouse person at the other end of the phone when you're ringing a call centre. I genuinely think people instinctively don't trust the Scouse accent, so if I was to go into anything which involved people skills, I know that my accent would probably drift away. It's sad that it has to, I suppose.

As we can see from the evidence presented in section 5.5 above, his "call centre" argument is not quite accurate, or at least not up-to-date. What I find most interesting about Brian is the way in which he accepts the prejudice that Liverpudlians suffer, acknowledging the need to shed his own accent if he is to "get on". He has clearly considered the subject and come to the conclusion that being identified with

Liverpool is, overall, a negative attribute. He adopted this critical position throughout our interview.

6.3.2 Carl

Carl comes from inner-city Liverpool, and also went to a comprehensive school. His entire family still lives in Liverpool and, unlike Brian, he said he would probably be moving back there after graduating.

He was less forthcoming than Brian, but agreed that the Watt passage reflected the situation in Liverpool as well as in Newcastle. He felt that Liverpudlians who changed their accents ought to be more loyal and 'more concerned about what their friends think and what their family think'. He said, disapprovingly, that he had noticed the speech of 'people who come down here, and when they come back up you pick up the change in the speech that they've made'.

Carl felt that people tended to remember the bad things about the city rather than the good things. He characterised the stereotypical Liverpudlian as 'a thieving Scouser. Somebody who drinks a lot, is prone to violence. But there's the other side, friendliness, community spirit. Associations with the Irish as well, being a port. We have Protestants and Catholics side by side as well without any problems.' Carl was clearly proud of his Liverpool background and connections, in a less constrained way than Brian was.

As a newly-arrived student, Carl reported there being 'a lack of accents around' in his Oxford college. He talked about having peers comment on the strength of his accent while telephoning his mother, and that it was 'a conversation point':

[*sarcastically*] Let's not forget the witty jokes, that I've heard about two hundred times this week. "What do you call a Scouser in a suit? The defendant." Yeah, great. "Why does the River Mersey run through Liverpool? 'Cause if it walked it'd get mugged." Stuff like that. Amusing stuff.

He also said that he would anticipate a certain amount of inevitable modification in his strong Liverpool accent over the coming years in Oxford, although he felt that overall it would 'probably still stay there whatever I do. Some things'll never change.

It's "bath" [baθ].'

6.4 Results of Experiment Two

There were only two subjects for this experiment, and the claims that can be made based on the results are somewhat limited. Some of the findings presented below do not show statistical significance, although several do. However, considered in conjunction with the profiles in section 6.3 above, the results do offer an impression of the processes of accent variation over time following relocation. Results of the acoustic analysis comparing each subject's first interview with his second are presented. For each subject, first vowels and then consonants are discussed.

6.4.1 Brian

Impressionistically, Brian's accent sounded moderately strong and typical of his social background in both interviews. There was no major change perceptible on an auditory analysis between the first interview and the second. A more precise picture of the changes Brian's accent might have undergone in the intervening months could only be obtained through acoustic analysis.

Analysis of the second formant (F2), as an acoustic measure of how fronted the variable vowels were, bore the following results. The table shows average F2 values for the four vowels for both interviews. For each vowel, the higher the F2, the more advanced the vowel, and the "stronger" the Liverpool accent.

Table 6.ii below shows mean F2 frequencies for Brian's realisation of all four vowels in both interviews, and figure 6.3 illustrates these as boxplots, showing the range between the twenty-fifth and seventy-fifth percentiles (shaded box), the median (central bar), the tenth and ninetieth percentiles (bar caps) and outliers (dots).

vowel	mean F2 in interview 1 [number of instances]	mean F2 in interview 2 [number of instances]
/ə/	1466 [7]	1488 [7]
/ɜ/	1452 [5]	1445 [6]
/a/	1192 [7]	1222 [7]
/əʊ/	1170 [11]	1216 [11]

Table 6.ii **Mean F2 frequencies (Brian)**

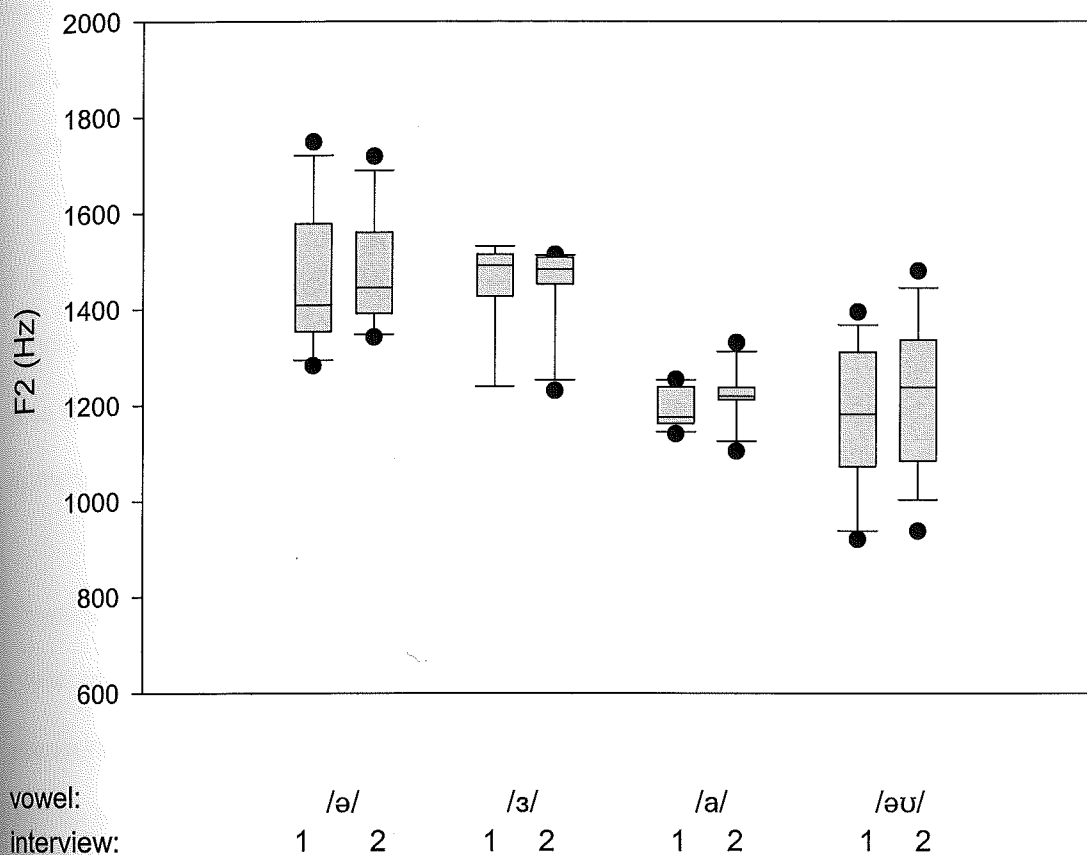


Figure 6.3 F2 frequencies (Brian)

In general, the mean F2s for Brian's vowel were actually slightly higher in the second interview, suggesting that the vowels were, on average, in a more fronted position and therefore that these variables were produced with a stronger accent in the second interview than they were in the first. However, paired-sample *t*-tests indicated that these differences are not statistically significant. This is true when all Brian's vowels are analysed together ($p = .162$) as well as when they are analysed separately.

Now to consider the consonant pronunciations in Brian's two interviews. For each realisation of intervocalic /r/, the presence or absence of closure was noted. Any closure would indicate the use of the flapped articulation. In fact, neither subject

showed any closure for /r/ when it occurred in the passage in either interview. This may indicate that this articulation is less common when a speaker is reading a passage, or that this feature is absent from the speech of both subjects. In any case, there was no measurable variability in this variable and it is not explored further.

For intervocalic /t/ and /k/, duration of closure and friction were measured and proportional duration of friction (PDF) calculated, exactly as in the lenition experiment (the method is described in section 4.4 above). Findings for intervocalic /t/ and /k/ are summarised below.

There were twenty instances of intervocalic /t/ in the passage analysed. Figures given are for eighteen of these, since there were two realisations of /t/ with no measurable friction which were removed from the analysis. These incidences of zero friction were in the words *potent*, which both Brian and Carl realised in both interviews with a glottal plosive [ʔ], and *it appears*, which Brian realised in both interviews with an approximant [ɹ]. The glottal realisation, as in *potent*, is discussed further in section 7.3.3 below, and the approximant realisation, which comes only after a short vowel and seems to be associated with particular words (*get*, *lot*) is also attested (Hughes and Trudgill 1996:93) and discussed in section 3.2.2 above. 90% of Brian's /t/s, though, were realised with the affricated stop explored in Experiment One and typical of Liverpool English. All of the /k/s in the passage were included in the analysis.

Table 6.iii below shows mean friction durations and PDFs for both /t/ and /k/ in both interviews. Some of the differences in the consonants did show statistical significance; *p*-values from paired-sample *t*-tests are included in table 6.iii. Figures 6.4 and 6.5 below illustrate these results as boxplots.

	interview 1	interview 2	t-test
/t/ mean friction duration	0.082 s	0.069 s	$p = .048$
mean PDF	86.9%	77.3%	$p = .057$ n.s.
/k/ mean friction duration	0.071 s	0.055 s	$p = .332$ n.s.
mean PDF	76.3%	65.5%	$p = .478$ n.s.

Table 6.iii Mean friction duration and PDF (Brian)

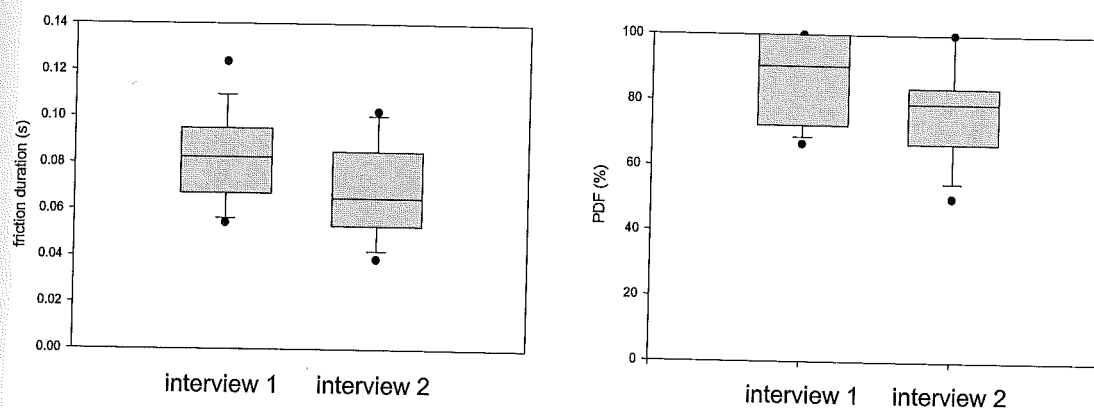


Figure 6.4 Friction duration and PDF for /t/ (Brian)

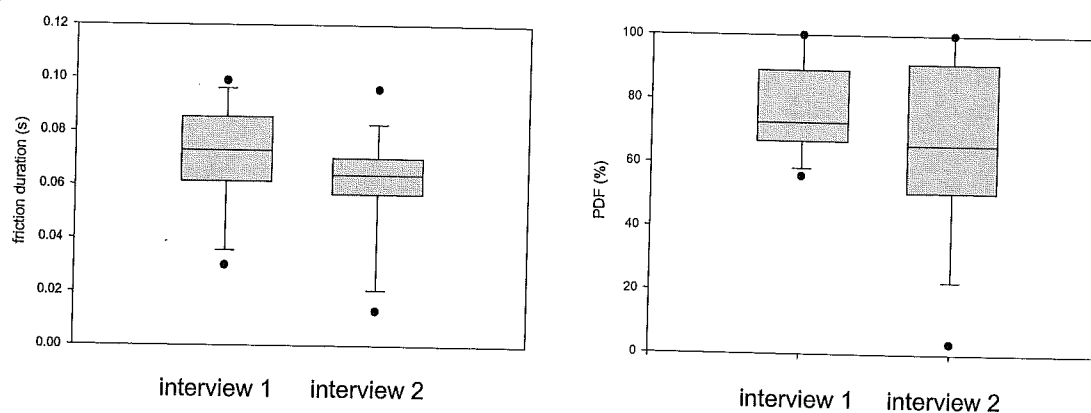


Figure 6.5 Friction duration and PDF for /k/ (Brian)

For both of the consonants, it is clear that the duration and proportional duration of friction was greater in the first interview than the second. This would indicate that, unlike the vowels illustrated above, these consonantal variables were performed with a stronger accent in the first interview. In the case of /t/, there is a statistically significant difference in the duration of friction.

When the friction durations of both consonants (/t/ and /k/) are analysed together in a paired-sample *t*-test, this difference is also significant, to $p = .033$.

6.4.2 Carl

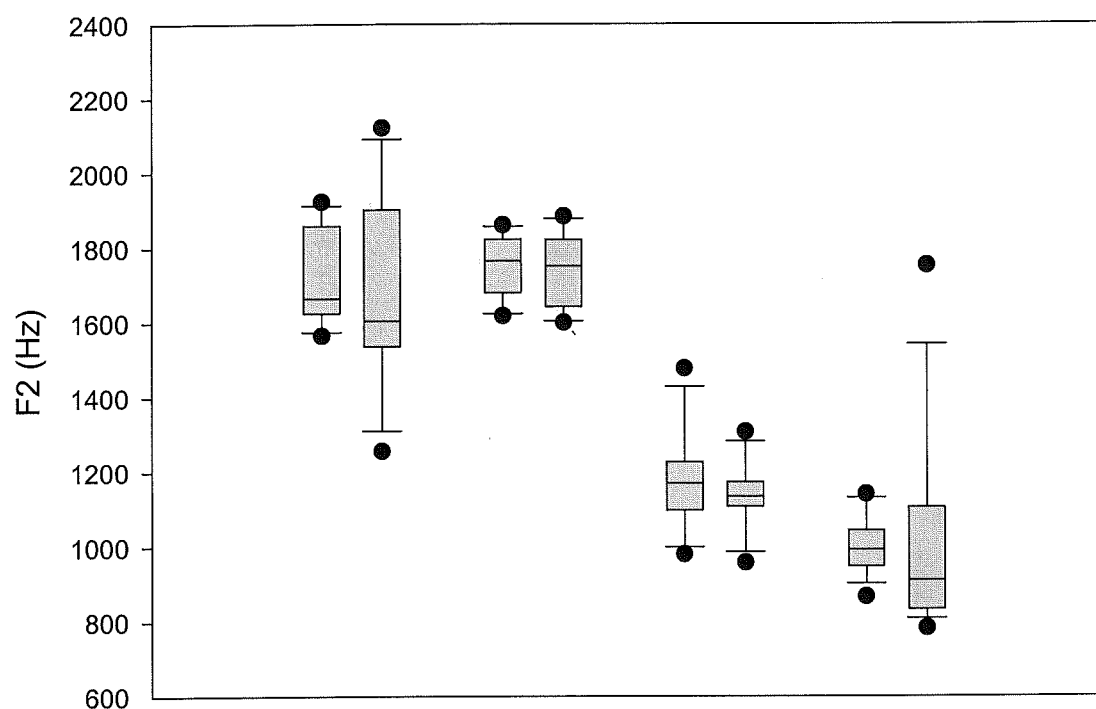
Carl's accent was impressionistically considerably stronger than Brian's, and more stereotypically "Scouse". His speech did not seem perceptibly different in the second interview after he had been at university in Oxford for several months, but again, acoustic analysis provides a more detailed picture.

Spectrographic analysis of F2, as an acoustic measure of how fronted the variable vowels were, bore the following results. Carl's F2 values are higher than Brian's, which might be thought to indicate that Carl's stronger accent features more fronted vowels. However, direct comparisons of this sort cannot confidently be made, because the difference may instead be a function of the two subjects having vocal tracts of different shapes and sizes. The question of comparing Carl's results with Brian's is discussed in section 6.5 below.

Table 6.iv below shows Carl's mean average F2 frequencies for the four vowels for both interviews, and figure 6.6 illustrates these F2s with boxplots.

	mean F2 in interview 1 [number of instances]	mean F2 in interview 2 [number of instances]
/ə/	1731 [7]	1678 [7]
/ɜ/	1752 [6]	1742 [6]
/a/	1185 [7]	1135 [7]
/əʊ/	1003 [11]	1032 [11]

Table 6.iv Mean F2 frequencies (Carl)



vowel: /ə/ /ɜ/ /ɑ/ /əʊ/
interview: 1st 2nd 1st 2nd 1st 2nd 1st 2nd

Figure 6.6 F2 frequencies (Carl)

Carl's vowels were generally produced with a slightly lower F2 in the second interview, indicating a less strong accent than in the initial interview. However, some of these changes were relatively small, and none was statistically significant in paired-sample *t*-tests, either when vowels were considered separately or together ($p = .717$). As with Brian, some vowels (notably /əʊ/) show much wider variability in the second interview.

Now to consider Carl's consonant pronunciations. As with Brian, the flapped realisation of /r/ was not acquired in the small data set, and so that feature cannot be compared. Findings for intervocalic /t/ and /k/ are presented in table 6.v (which includes the results of paired-sample *t*-tests) and figures 6.7 and 6.8 below.

		interview 1	interview 2	t-test
/t/	mean friction duration	0.093 s	0.071 s	$p < .001$
	mean PDF	95.8%	84.8%	$p = .043$
/k/	mean friction duration	0.098 s	0.079 s	$p = .023$
	mean PDF	85.7%	86.4%	$p = .773$ n.s..

Table 6.v Mean friction duration and PDF (Carl)

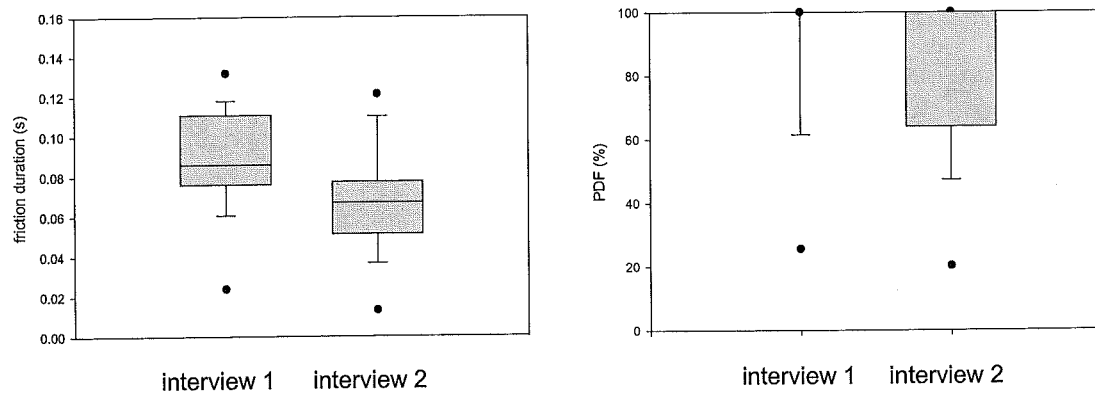


Figure 6.7 Friction duration and PDF for /t/ (Carl)

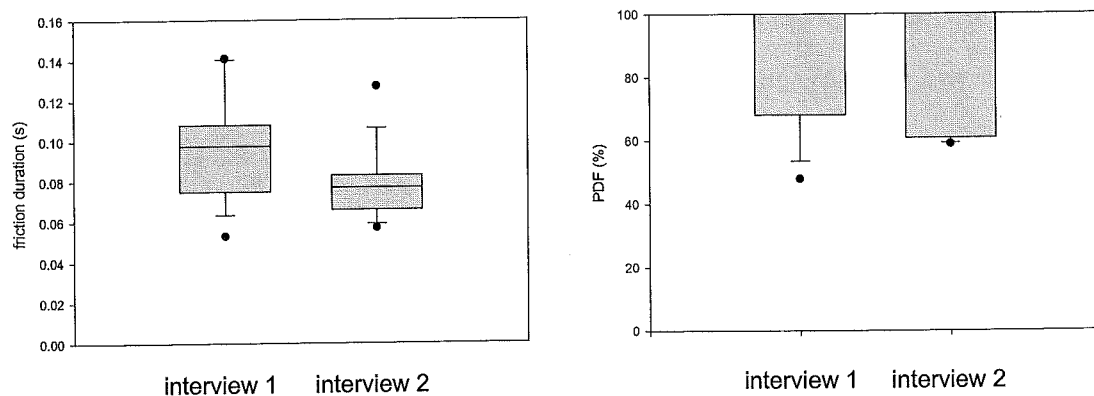


Figure 6.8 Friction duration and PDF for /k/ (Carl)

Carl frequently articulates intervocalic /t/s without any measurable closure; he did so sixteen times (out of twenty) in the first interview and ten times in the second. The duration of friction for his /t/s is measurably decreased in the second interview. Note also that Carl's friction duration for /t/ in both interviews is significantly longer than Brian's, as might be expected, since his accent is impressionistically stronger. In Carl's first interview, the median PDF value and the twenty-fifth percentile are 100%. The overall PDF drops slightly in the second interview, but the median score remains 100%. In only one instance did the PDF for the second interview exceed that for the same token in the first interview. The results for simple duration of friction may be more meaningful than those for PDF here, because of the "ceiling effect" brought about by the high incidence of Carl's articulations which were 100% friction. For /t/, both his friction duration and PDF are significantly different, as is his friction duration for /k/.

To summarise Carl's consonant results, then, the duration of friction was significantly less in the second interview than in the first for both /t/ and /k/, reflecting a less strong accent being performed in these variables in the latter interview. The distinctions between the proportional durations of friction are less clear-cut; /k/ shows more-or-less the same PDF in both interviews, while for /t/ the PDF remains so high that it is difficult to observe a difference, although more realisations with a lower PDF occur in the second interview, and this difference is statistically significant.

When both /t/ and /k/ are analysed together in a paired-sample *t*-test, Carl's PDFs fall just short of being significant, at $p = .052$.

6.5 Assessment of Experiment Two

All the analyses reported so far have compared an individual subject's results in his two different interviews. In both Brian and Carl's speech, the vowels showed some fluctuation but no significant difference between interviews, while the consonants showed some reduction in friction and PDF between the first interview and the second (/t/ only for Brian, both /t/ and /k/ for Carl). This indicates intra-speaker variation over time, accommodating away from Liverpool English, in at least one variable, by both subjects. In addition to this analysis of individual subjects, an analysis comparing the two subjects' results, and another combining the results together were attempted.

Comparing the subjects' results with each other proved difficult. This had been one of the ideas behind the experiment, to see whether differences between subjects' results aligned with differences in the attitudes they expressed in their interviews. In the case of the consonants, Carl seemed to start with a stronger accent than Brian and then accommodate away from it in a more robust way (showing significant effects for both consonants, rather than just /t/). However, further connection to the subjects' attitudes cannot be substantiated. The interviews did not allow the subjects' attitudes to be quantified, and, unlike in Experiment One, which indicated that this was a potentially interesting area to explore (section 4.3.3), there were not enough subjects to make a proper analysis possible. These shortcomings are addressed in the experimental design and results of Experiment Three (reported in the next chapter), where a *post-hoc* analysis relating subjects' responses to questions to the intra-speaker variation that they demonstrated is successfully carried out.

The vowels also proved difficult to compare with each other in any meaningful way. Although Brian's F2s were higher, this indicated not so much more fronted vowels as

a differently shaped vocal tract. This was verified by conducting a *post-hoc* comparison of the first and second formants of some of the subjects' other vowels as uttered in their first interview to gain an impression of their respective vocoid spaces. The vowels selected were the close front vowel in *people*, the close back vowel in *uncouth*, and the open vowel in *part*. These vowels on the periphery of the vocoid space are plotted in figure 6.9 below.

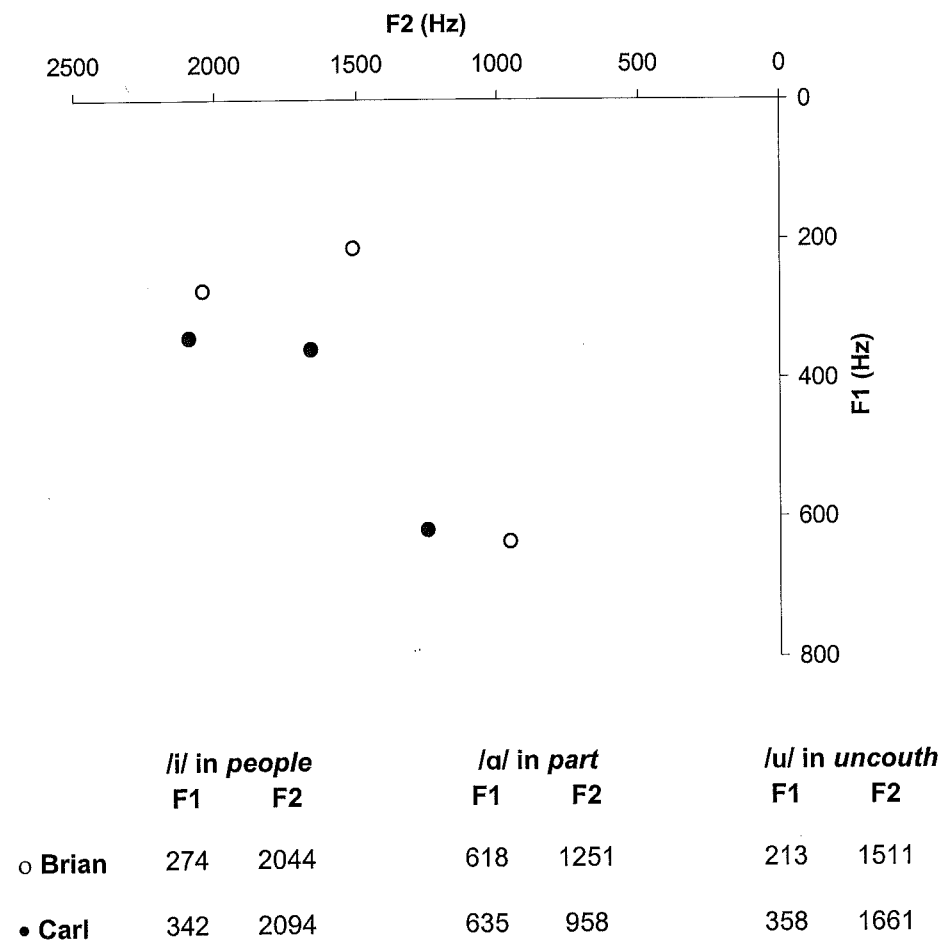


Figure 6.9 Both subjects' hinge vocoids

Since Carl's formants and vocoid space are clearly generally different from Brian's, no particular import can be attached to his higher F2s, and therefore no useful comparison can be made.

Combining the subject's results, to analyse them as a group (albeit a group of only two) did not yield any results which were more significant than those of the individual analyses. In paired sample *t*-tests, vowels for both subjects combined were still not significantly different ($p = .382$). Consonants did, as in the individual analyses, show significant differences between the interviews when the subjects were considered as a group. Friction duration of /t/ was significant at $p > .001$, and of /k/ at $p = .031$, while the PDF of /t/ was significant at $p = .005$, with /k/'s PDF remaining non-significant ($p = .508$). These results show the same significance as Carl's individual results (section 6.4.2 above), and combining them obscures the differences between the subjects' results. So, not much is gained by grouping these subjects together for analysis, and some fine-grained detail concerning the differences between them as individual speakers is lost.

Experiment Two was a limited success, in that it showed change over time in the accent of both subjects, at least in one phonological variable (/t/). Its shortcomings include the regrettably small number of subjects and the difficulty of quantifying their attitudes based on a wide-ranging and loosely directed interview. These shortcomings are not repeated in Experiment Three, which sets out to investigate accommodation which occurs not in the long term over time and space but instantaneously, due to changes in audience and topic. Many more subjects were recruited for this experiment, and the innovative design also allows for quantifiable data about subjects' attitudes to be gathered and taken into consideration.

CHAPTER SEVEN

EXPERIMENT THREE: INSTANTANEOUS INTRA-SPEAKER VARIATION

- 7.1 Accent variation due to audience and topic**
- 7.2 Method**
 - 7.2.1 Subjects**
 - 7.2.2 Premises**
 - 7.2.3 Equipment**
 - 7.2.4 Developing the quiz-questionnaire technique**
 - 7.2.5 Conducting the experiment**
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 - 7.2.8 Statement of experimental hypotheses**
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 - 7.3.1 /r/**
 - 7.3.2 /t/**
 - 7.3.3 Glottal realisations of /t/**
 - 7.3.4 /k/**
 - 7.3.5 Further analysis of consonant data**
 - 7.3.6 Analysis of vowel data**
- 7.4 Assessment of Experiment Three**

7.1 Accent variation due to audience and topic

This chapter reports the largest experiment of this study, Experiment Three, which was conducted in Liverpool in March 2000. The aim of this experiment is to explore how variation in individual speakers' Liverpool accents within a single interview related to changes in audience and topic. Experiment Two looked at intra-speaker variation across space and time; Experiment Three sets out to investigate intra-speaker variation which happens instantaneously.

Many examples of certain phonological features of Liverpool English that appear to be performed with a certain degree of variability by speakers were collected. These are the same seven features explored in Experiment Two (listed in table 6.i above); intervocalic /t/, /k/ and /r/, and the vowels /ə/, /ɜ/, /a/ and /əʊ/. (Unlike in the experiments reported above, in Experiment Three, /t/ was sometimes realised as a glottal stop rather than with the canonical lenited form investigated in Experiment One. The occurrence of this non-local, non-standard pronunciation of /t/ is discussed separately, in section 7.3.3 below.)

The context of the subjects' speech was varied in a carefully controlled way, to investigate whether, and to what degree, their pronunciation altered. The two parameters of context variation were the area under discussion (topic) and the participants in the conversation (audience). The possible audiences that speakers had during the experiment were either their friend or the interviewer (myself). The topics under discussion in the experiment were either casual or formal.

In terms of speech accommodation theory (section 2.1.1 above), the hypothesis could be stated like this. An individual's accommodation, using a more strongly

performed accent, is initiated (a) by the interlocutor being a friend who speaks with the same accent rather than an interviewer who does not, and (b) by the topic of conversation being more casual, concerning favourite foods, music etc., not more formal, concerning future career plans and thoughts of moving away from the city.

As a secondary part of the investigation, since this is the first experiment to include subjects of both sexes, it will be explored whether female speakers exhibit this changeability to a greater degree than male speakers. This sex effect would be predicted by much of the previous work on women and language (see section 2.2.1 above). These analyses are reported in sections 7.3.5 and 7.3.6 below.

In Experiment One's individual speaker analysis (reported in section 4.3.3 above), some inter-subject accent differences were shown to be related to subjects' responses to questions about their social networks and life modes. Both the interviewees discussed in chapter five and the subjects of Experiment Two, who showed significant accommodation in their accent over time, spoke of a connection between losing (or getting rid of) their Liverpool accents and having certain ambitions. A life-mode orientation away from Liverpool is assumed by these interviewees to stimulate accent change. This assumption is tested by analysing the results of Experiment Three, correlating subjects' responses to questions with the levels of variability in their accent. These analyses are also reported in sections 7.3.5 and 7.3.6 below.

The experimental hypotheses are set out in section 7.2.8 below.

7.2 Method

7.2.1 Subjects

The subjects in Experiment Three were young women and men, aged between sixteen and eighteen. The use of teenaged subjects aligns this experiment with Experiments One and Two. Both these previous experiments were conducted with single-sex groups of subjects; girls in Experiment One (chapter four), boys in Experiment Two (chapter six). Including both male and female informants in Experiment Three enables me to make more general observations about speaker behaviour, and also to draw comparisons between the male and female groups. Furthermore, I will be able to comment on gender as a sociolinguistic variable (Wodak and Benke 1997; section 2.2.1 above) and explore the connection of accent performance to performance of gender itself (Cameron 1997; Hall and Bucholtz 1995).

Because of the nature of the task (see section 7.2.4 below), subjects were recruited in same-sex friendship pairs. I wanted to engineer a situation where subjects were speaking in front of one of their close peers, as this is held to be a powerful norm-enforcement mechanism, impelling the individual to speak as s/he normally would in their presence (Milroy 1980:25). In other words, a subject's variation of her/his own speech will be severely checked by the fact that her/his friend is sitting next to her/him, and is likely to react to major deviations from group norms with confusion or, more likely, contempt and ridicule. (A contemptuous response may, if the stereotypical generalisation is to be believed, be particularly likely from Liverpudlians, who, 'do not suffer pretension lightly and always have a stinging put-down at the ready if they detect any falseness in others' (Aughton 1990:214).)

All the subjects were born in Liverpool, with Liverpudlian parents. Because I had observed in earlier research (the study reported on chapter four and previous work) that a school setting or a psychological association of the interview procedure with school may have an effect on the speech of the subjects, I wished to find a way of recruiting subjects which was not directly via their teachers. (For similar reasons, unlike most other sociolinguistic studies of teenagers, I did not conduct the recordings in a school, see section 7.2.2 below).

Furthermore, I wanted to be able to recruit subjects in the 16-18 age bracket who no longer attended school, not restrict the study to sixth-form pupils. If my hypothesis that accommodation will be more extensively exhibited by those with ambition and a desire to move away from Liverpool is correct, then the study would be skewed by interviewing only those subjects who had chosen to pursue education beyond the age of sixteen. For this reason, I used youth clubs as well as schools to recruit experimental subjects.

how well do you know your friend? how well do they know you?	what's their middle name? what's their dream car? what will they call their kids?
<p>If you're interested in finding out, and willing to participate in a recorded interview (for which you will be paid), I'd appreciate your help!</p> <p>You need to come in pairs with a friend of the same sex, and both of you must be aged 16-18 and from Liverpool.</p> <p>Interview sessions will be held in the city centre (near Lime Street Station) between March 7th and 10th and will last about 45 minutes.</p> <p>Please contact me to arrange an interview, or to find out more. Email friendquiz@hotmail.com or phone 01865 270446.</p>	

Figure 7.1 Subject recruitment poster

The poster reproduced in figure 7.1 shows was all the information that the subjects received about the project; I did not reveal that I was investigating variability in speech. They were not actively misled, but nonetheless most of them seemed to

believe that I was making a pilot for a radio quiz; a misapprehension that I was happy to allow them to sustain.

These posters were sent to the heads of sixth form at ten city-centre comprehensive schools, selected for having a socially diverse intake (the selection was based on local advice and on city council information available on-line). Posters were also sent the posters to the co-ordinators of several youth groups in the city centre. A covering letter asked them to display the poster and explained a little about the study.

Despite my attempts to widen the recruitment intake, most of the subjects eventually came from two schools' sixth forms, with only two who had already left school coming from one of the youth groups. Twenty-six subjects were interviewed in total; seven pairs of girls and six pairs of boys.

7.2.2 Premises

I wanted to avoid the possible effects of accommodation according to location from using a school context for recording speech. Also, my experiences of finding suitably quiet premises for recording in schools in Experiment One (reported in chapter four) had not been very good. Somewhere neutral, convenient for the subjects, where they felt comfortable and safe, was required. I was fortunate to be permitted to conduct the recordings in the rooms of the Young Persons' Advisory Service. YPAS is a grant-aided charity with premises in Bolton Street, right in the centre of Liverpool. They run a drop-in centre which provides activities, support, advice and one-to-one counselling to young people, and also directs them to other specialised organisations. It was a familiar place to many of my subjects, easy to find and ideal for my purposes.

The interviews were conducted in one of YPAS's small counselling rooms. These rooms were ideal for the recordings, being small, carpeted and soundproofed for the privacy of the centre's clients. The recordings made were of a very high quality with none of the minor problems associated with making recordings in schools (echoey corridors, bells and noise from other pupils nearby).

7.2.3 Equipment

Interviews were recorded using two Audio-Technica 803b lavalier microphones (one for each speaker) recorded onto two separate channels of a Sony DAT recorder. These small microphones can be clipped to a subject's collar or lapel and were so unobtrusive that the subjects often forgot they had them on and stood up at the end of the interview and made to leave, nearly pulling the pre-amplifier onto the floor. It was hoped that using these small microphones will go some way towards reducing both the intimidating effect on subjects of knowing they are being recorded and the Observer's Paradox (Labov 1972:209). In the first part of the experiment, one microphone recorded the speech of the subject with the other recording the interviewer, and in the second part of the experiment they were used to record interaction between the two subjects in the pair.

7.2.4 Developing the quiz-questionnaire technique

In deciding how the interviews were going to be conducted, I had to balance the need for plenty of tokens of the seven phonetic features with the need for the interaction to be fairly free and unscripted. The more formally an informant is speaking, the less likely they are to exhibit the kind of variability I was trying to investigate. Traditional sociolinguistic techniques such as word lists and reading passages would provide a good number of the required tokens, but their formality would restrict accommodatory speech behaviour. On the other hand, completely undirected conversation would not work, partly because there might not be enough tokens of the requisite phonetic features, but chiefly because the interviews would not be comparable between subjects or audience situations.

One possible experimental technique to use, which allows for some specification of tokens and which is also usually conducted with pairs of subjects, would have been the map task (Anderson et al. 1991). In a map task, one subject is given a picture map with a route marked on it, and the other receives a similar map without the route. Without looking at one another's maps, the second subject must draw the route onto his/her map, a task made more difficult by deliberate discrepancies between the maps. The technique has been successfully used to gather information about dialogue (Anderson and Boyle 1993) and intonation (Kowtko 1995). However, after testing the technique in Liverpool while making recordings for the IViE project (Grabe 2002; Grabe and Post 2002), I decided that it was rather an unsatisfactory tool. Subjects did not enjoy the task, were not engaged with it, and often found it confusing. Furthermore, and on discovering that the maps did not match up with each other, they resent the deception. This would become a potential problem if subjects then became sullen and uncommunicative for the remainder of the experiment.

The solution I came up with was to use an interactive quiz-questionnaire with informants in friendship pairs, in a similar style to the old television game show *Mr. and Mrs.* (*Mr. and Mrs.* was produced by Border Television between 1972 and 1988, and was created by Roy Ward Dickson and presented by Derek Batey.) In this show, a pair of people who know each other well are questioned separately. They are asked to answer some questions about themselves, and then they are asked to answer the same questions on behalf of their partner. These proxy answers are compared to the actual answers that the partner gives to see if they match. Obviously, the more answers that match, the better a contestant knows her/his quiz partner and the higher s/he will score. I adapted this format for my quiz-questionnaire technique. Subjects would discuss the questions with me, answering for both themselves and their friends, and then go on to discuss the questions (and repeat the target variables) further with one another while checking their answers and debriefing each other.

The quiz-questionnaire format has many advantages. The task is one that the subjects find entertaining. Moreover, unlike some other typical tasks for sociolinguistic interviews such as paired map tasks, they can see the point of the exercise, and are interested enough in the information that they are finding out about each other to see the task through to the end. Making the task fun for the subjects makes recruitment easier too. Subjects may speak in a more natural way, and therefore in a way which is more worthy of sociolinguistic study, if they are interested in and motivated by the conversation taking place. Experimental subjects have also been shown to pay less attention to tasks which are repetitive (Goldinger et al. 1997). An entertaining task may also be more effective than a dull or boring one at directing subjects' attention away from wondering what the experimenter might be trying to find out. One last advantage of the quiz-questionnaire technique is that the information provided in the subjects' responses to questions can itself be useful for

later analysis (as is demonstrated in my ambition-related analyses, reported in sections 7.3.5 and 7.3.6 below).

The exact procedure for the quiz-questionnaire technique is described in section 7.2.5 below. The technique enables the easy elicitation of biographical information ("How many brothers and sisters have you [has s/he] got?") as well as more subtle information about the interviewee's social lives ("Who did you [s/he] last go to see a film with?") and ambitions ("Do you [does s/he] want to go to university?"). The technique ensures repetition of identical phrases, as each subject reads every question aloud at least twice. The questions can also be chosen to feature many tokens of the phonological variables which are being investigated. For example, the question "Have you ever had a tattoo?" elicits two intervocalic /t/s with each repetition, while one including the word *karaoke* elicits both an intervocalic /k/ and the diphthong /əʊ/. The questions cited here are all from the fifty used in the questionnaire; the full list of questions is shown in Table 7.i below. (These were the questions with *you* used in the first part of the experiment; a *he* or *she* list was used for the questions about the subject's friend in the second part.) Table 7.i also shows which of the seven target variables appeared in which sentence.

	t	k	r	ə	ʒ	a	əʊ
1. What is your full name, including any middle names?	•						
2. What is your date of birth?	•				•		
3. What is the last film you saw?	•					•	
4. Did you like it?		•					
5. Who did you go with: a mate, your girlfriend or boyfriend, your family?	•				•		•
6. How many brothers or sisters have you got?				•			
7. What are their names?	•						
8. What do you think about ouija boards?		•		•			
9. What is the first board game you can think of?	•	•			•		
10. What is your favourite flavour of ice-cream?	•			•			
11. What is your zodiac sign?	•						•
12. If you're getting a magazine, which one will it be?	•			•			
13. What is your favourite day of the week?	•	•					
14. Would you rather drink a glass of water or a bottle of milk?	•	•		•		•	
15. Who is your favourite actor or actress?	•			•			
16. What is your favourite sport to watch on TV?	•						
17. If you could dye your hair any colour, what colour would it be?		•		•			
18. Have you ever had a tattoo?	•			•			
19. Who is your favourite singer?				•			
20. What CD or cassette is in your stereo right now?	•	•		•			•
21. Are you a lefty, righty or ambidextrous?	•						
22. What is your favourite smell?	•						
23. What is the first thing you think of when you wake up in the morning?	•	•			•		
24. Have you ever sung karaoke?		•		•			•
25. What car would you most like to drive, just once?		•		•			•
26. Did you sleep with a stuffed animal when you were little?				•			
27. What is your favourite colour?	•	•		•			
28. Roller coasters: exciting or scary?	•	•	•				•
29. Have you ever broken somebody's nose?		•		•			•
30. Where is the best place you've ever been on holiday?				•			
31. Who is your favourite cartoon character?		•		•			
32. Do you think storms are scary or exciting?	•		•				
33. Which radio station do you listen to?				•			•
34. What city were you born in?	•						
35. Do you prefer to take a shower or a bath?		•		•	•	•	
36. Have you ever been president of anything?							
37. What time did you wake up this morning?		•					
38. What is your favourite flavour of crisps?	•			•			
39. Is there anything you're allergic to?		•		•	•		
40. What is your favourite book?	•	•					
41. Do you describe yourself as English, British or European?	•						
42. Do you wear glasses or contact lenses?		•				•	
43. Would you rather get a job as a waiter or a cook?	•	•		•			
44. What car would you most like to own?		•					•
45. What do you think the right age is for getting married?	•		•				
46. Do you think you'd like to go to university?	•				•		•
47. Which university? What would you study?	•						
48. Which city would you most like to visit in the future?	•			•			•
49. Do you want to have any children?				•			•
50. What name would you call your future son or daughter?	•	•		•			

Table 7.i Questions used in Experiment Three, showing variables

In order to investigate variability in accent performance, the subjects were recorded speaking on different topics and with different audiences. The aim was to keep other factors constant while varying only audience (between "friend" and "interviewer") and topic (between "casual" and "formal"). The relation of these factors to actual/desired peer group and social network (Milroy 1980) were expected to trigger variation in pronunciation within the subject's repertoire. The speakers were expected to accommodate to perceived norms for each situation, dictated either by the interlocutor or by the topic of conversation.

There were two audience situations, one in which the researcher interviewed each subject separately, and the other in which the pair of subjects were interviewing one another, with the researcher out of the room. It is relevant to note here that, as the interviewer, I kept my own speech firmly towards the RP end of my own repertoire, despite my tendency to accommodate to my family's Liverpool accents. This was done with the intention of triggering the maximum possible accommodation to the norms of my speech as the interlocutor. There were also two topic areas; one light-hearted and related to peer group and social activity, and the other more serious and related to academic activity and future career.

Several tokens of each of the variables /t/, /k/, /r/, /ə/, /ɜ/, /a/ and /əʊ/ were elicited so that statistical analysis could be carried out. Each of the twenty-four subjects gave at least four tokens (and often many more) of each feature in each mode.

7.2.5 Conducting the experiment

Subjects came to the interviews in pairs, with a friend of the same sex whom they knew well. The official reason for them to be doing the quiz, after all, was to find out how well they knew one another. This gave me a good opportunity to get them to repeat the same words under different circumstances, and was sufficiently stimulating that the subjects didn't get bored or fed up. Furthermore, it gave them a reason to be doing the quiz that directed their attention away from the fact that I was recording their speech.

The procedure was as follows. I greeted both subjects, and took one of them into the interview room, leaving the other of the pair outside. I attached lapel microphones to myself (as interviewer) and the first subject, and gave her/him the sheet of fifty questions (table 7.i above) for her/him to answer about her/himself. In this part of the interview, I asked the questions and the subject replied. Then I gave the subject a modified version of this sheet, showing the same questions but with the pronouns altered so that it read "What is her full name..." or "What day is his birthday" etc. I switched off my microphone and asked the subject to read out the questions and then answer them again, this time on behalf of her/his friend. (Having the subject read the questions as well as answer them gave more repetitions of the tokens, as well as enabling me to make notes on the subject's replies.) Meanwhile I took notes of the answers the subject gave about her/his friend on a "crib sheet". When the questionnaire was finished, the first subject left the room, the second subject entered, and the whole process was repeated.

Then, the first subject was brought back in, given a microphone and also the crib sheet and a pen. The second subject, meanwhile, was given a blank answer sheet with boxes to tick for correct answers. The interviewer left the room and the subjects

read out the questions to each other, discussed their replies (using the crib sheet as a prompt) and worked out their scores together. Finally, the interviewer re-entered the room and the interview ended.

7.2.6 Data processing

Twelve usable pair interviews were acquired, five with boys and seven with girls. One further interview, with two boys, had to be discarded because one participant sniffed, coughed and sneezed throughout, obscuring much of his fellow interviewee's speech, and then the other participant left before the exercise was completed. Rather than using the subjects' names or giving them pseudonyms, the twenty-four subjects were numbered. Each odd numbered subject was the partner of the subject with the following even number. Numbers one to ten are male subjects, and eleven to twenty-four are female subjects. Although the recordings consist of the subjects both reading the questions aloud and responding to them in both audience conditions detailed above, acoustic measurements have only been made of the questions, not the responses. The questions were written so as to elicit many tokens of the key variables in the same words and the same sentence position. Analysis of the questions only is therefore a technique which will provide a more controlled and uniform data set than analysis of both the questions and the responses. Additionally, the questions were found to have a much more consistent inter-subject speech rate than the responses, and I felt it was important to monitor this and make sure that it was not speech-rate differences which accounted for durational differences.

The recordings of each interview were transferred to a Silicon Graphics Indy computer and divided into four component sound files. These four files are: the first subject speaking to me, the second subject speaking to me, and then each subject speaking to the other. These last two files were of course recordings of the same conversation, but the two channels (one recorded from each speaker's microphone) were transferred separately, to give two sound files. On each of these last two files, the speech of the other speaker can be faintly heard, but only the main speaker's speech was analysed.

ESPS/waves signal processing software (Entropic Research Laboratory Inc., Washington DC) was again used for segmentation, labelling and analysis. I used the *label* function of the program to mark all the instances of the phonetic variables I am looking for, and also to mark the time point where the questionnaire shifted between the casual and formal topics. Appropriate acoustic measurements, described below, were made so that speech in the four different speech situations could be compared. The four situations are: speaking to the interviewer on a casual topic, speaking to the interviewer on a more formal topic, and speaking to their friend on both casual and formal topics.

7.2.7 Acoustic analysis

Acoustic analysis was performed on the labelled segments, looking at the realisation of the same seven phonetic features (see table 7.ii below) that were investigated in the previous chapter. The variables analysed for Liverpool English are once again those identified as particularly distinctive features of the city's accent (see sections 3.2 and 5.2.1 above). These variables are the consonants /r/, /t/ and /k/, and the vowels /ə/, /ɜ:/, /a/ and /əʊ/. The analyses were conducted in the same way as described in chapter 6 above, by using *xwaves* software to measure F2 (a correlate of frontedness) in the vowels, and closure and friction duration in the consonants. For convenience, the variables are summarised in table 7.ii, which duplicates table 6.i.

	variable	RP	as in	ranges between	acoustic measure
vocalic	/ə/	[ə]	father, ago	[ə] – [ɛ]	F2 (frequency)
	/ɜ:/	[ɜ:]	bird, university, nurse	[ɜ:] – [ɛ:] – [e:]	
	/a/	[ɑ:]	grass, castle, bath	[a]/[æ] – [ɑ:]	
	/əʊ/	[əʊ]	most, karaoke, goat	[ou] – [əʊ]	F2 of first vowel
consonantal	/r/	[ɹ]	married, sorry	[ɹ] – [r]	presence/absence of closure
	/k/	[k ^h]	worker, wake up	[k ^h] – [k ^x] – [k ^h x] – [x]	presence/absence of closure and
	/t/	[t ^h]	cartoon, exciting	[t ^h] – [t ^s] – [s] – [s]	duration of friction (i.e. lenition)

Table 7.ii Seven variables in Liverpool English

The stressed vowel /ɜ/ as in *bird* and its unstressed counterpart /ə/ are both commonly fronted in Liverpool English, ranging to [ɛ] or even as far forward as [e]. (Conversely, the front-mid vowel is frequently backed, so that *hair* and *her* can be homophonous, but this variable is not one of those explored here.) /a/ is the vowel in *bath*, with the canonical short 'a' used generally in the North of England. This is a highly psychologically salient feature (see section 2.2.6 above), very prominent in people's awareness of how they and others talk. However else a Liverpudlian may modify his or her speech, disloyally adopting the longer, back 'a' of the South [ɑ:] would lead to censure and ridicule. The first element of /əʊ/ is also often fronted, with the pronunciation of the diphthong ranging between [ou] and [ëʊ]. (The later part of the diphthong can be somewhat fronted too, giving something more like [ëʏ].) Carl, one of the subjects in Experiment Two, showed greatly increased variability in this feature in his second interview, although his median F2 was lower.

The first consonantal variable is intervocalic /r/, which is realised as either [ɹ], as in RP, or with a flap [ɾ]. For this feature, the spectrograms were inspected, and the simple presence or absence of closure noted. For intervocalic /t/ and /k/ the degree of lenition is variable in Liverpool English, with realisation varying between [k] – [kʰ] – [k̚] – [x] and [t] – [tʰ] – [t̚] – [s] respectively (see chapter 4 above). As in Experiments One and Two, the spectrograms were inspected and periods of closure and friction measured. The proportional duration of friction (PDF), which expresses the friction duration as a percentage of the closure duration, was measured. An RP /t/ or /k/, with little or no affrication, would have a very low PDF score, while the typical Liverpool realisation of these consonants gives high scores, ranging up to 100 in cases where there is no closure at all. This was observed in the results for Carl in Experiment

Two, where the overall trend for both subjects showed a decline in duration and proportional duration of friction between the first and the second interview.

The data were collected from twenty-four subjects; ten male and fourteen female, who attended the experiment in pairs with a friend of the same sex. Each subject was recorded speaking in two audience conditions. The condition called INTERVIEWER here was when the subject was speaking to the interviewer, and the condition called FRIEND was when s/he was speaking to her/his friend. Subjects were also speaking on two different topics: CASUAL denotes a casual or frivolous topic of conversation such as favourite flavours of ice-cream, and FORMAL a more formal or serious topic such as plans to leave Liverpool to go to university.

A more strongly performed accent will be shown by high F2 values in vowels (indicating fronting), by increased incidence of closure for /r/, and by increased PDF (less closure, more friction) for /t/ and /k/. In this accommodation experiment, for each of the seven variables, all subjects' results were recorded and coded for subject, sex, audience and topic. The variations in the relevant acoustic measure according to audience and topic were measured. In further analyses, the linguistic behaviour of male and female subjects, and subjects with different levels of ambition, was compared.

7.2.8 Statement of experimental hypotheses

The primary experimental hypotheses for Experiment Three test the conditions under which instantaneous intra-speaker variation (accommodation) occurs. To restate the primary experimental hypotheses in the terms outlined in the previous sections:

- The audience accommodation hypothesis predicts (a) that there will be a significant difference in accent according to audience, and (b) that the accent will be more strongly performed in the FRIEND condition than in the INTERVIEWER condition.
- The topic accommodation hypothesis predicts (a) that there will be a significant difference in accent according to topic, and (b) that the accent will be more strongly performed in the CASUAL condition than in the FORMAL condition.

Some speakers are expected to show more accommodation behaviour than others. Secondary experimental hypotheses investigate differing levels of intra-speaker variation, comparing speakers by sex and by ambition (life mode/orientation):

- The sex variability hypothesis predicts (a) that there will be a significant difference in variability according to the sex of the speaker, and (b) that female speakers will exhibit greater variability than male speakers.
- The ambition variability hypothesis predicts (a) that there will be a significant difference in variability according to the level of ambition of the speaker, and (b) that speakers with a higher level of ambition will exhibit greater variability than speakers with a lower level of ambition.

7.3 Results and statistical analysis

The results of the analyses by audience and topic, which test the accommodation hypotheses, are presented variable-by-variable in sections 7.3.1, 7.3.2 and 7.3.4 (consonants) and section 7.3.6 (vowels). *t*-tests were performed to test for differences of means in the speech of the subjects in the different audience and topic conditions. The data proved to be neither equally variant nor normally distributed, so Welch modified two-sample *t*-tests, which do not assume equal variances, were used for statistical analysis to test the hypothesis. Results were cross-checked with bootstrap (resampling) *t*-tests. However, for the variable /r/ (section 7.3.1 below), for which simply the presence or absence of closure was noted, the most effective statistical analysis proved to be the use of odds ratios.

Other sections contain further analyses of the data. In section 7.3.3, the incidence of glottal /t/ is examined. In sections 7.3.5 and 7.3.6, inter-speaker differences in variability are explored, testing the sex variability hypothesis and the ambition variability hypothesis using Levene statistical tests for homogeneity of variance.

7.3.1 /r/

The analysis of this variable was of necessity different from the others, because of the binary nature of the acoustic measure. Closure was either present or absent, so analysis was conducted with the use of contingency tables and odds ratios rather than *t*-tests or ANOVAs. Odds ratios are an informal test of influence used for categorical variables. Any difference in odds greater than 3:2 is considered to be significant here.

The odds ratio, θ , is calculated by expressing the results in a 2x2 contingency table, which shows how many times closure was present or absent under each condition, and then by using the formula shown in Figure 7.2 below:

$$\theta = \frac{m_{11} m_{21}}{m_{12} m_{21}}, \text{ where } m_{ij} \text{ is the observed count in cell } (i, j) \text{ of the table.}$$

Figure 7.2 Formula for calculating odds ratios

Table 7.iii shows a contingency table for /r/ across all subjects, comparing audience conditions:

closure?	INTERVIEWER	FRIEND	
y	18	25	
n	65	43	$\theta = 0.476$

Table 7.iii Contingency table and odds ratio of /r/, comparing audience conditions

Table 7.iii shows that, in condition INTERVIEWER, when subjects were talking to me, eighteen out of a total of eighty-five /r/s were realised with closure (i.e. as a flap) and the other sixty-four were not, while in condition FRIEND, when subjects were talking to one another, twenty-five of sixty-eight were flapped and forty-three were not. The odds ratio (θ) was calculated using the formula shown in figure 7.2 above.

This means that the odds of having closure in condition INTERVIEWER are 0.476 times the odds of having closure in condition FRIEND. Or equivalently, the odds of closure are 2.099 times higher for FRIEND than for INTERVIEWER (2.099 is $1/\theta$). In this case there seem to be a significant difference in the speech depending on the audience. Flapped /r/ is more than twice as likely to occur in the condition FRIEND than in the condition INTERVIEWER. This is in line with my hypothesis.

Table 7.iv shows another contingency table, this time comparing topic conditions:

closure?	CASUAL	FORMAL	
y	32	11	
n	82	26	$\theta = 0.922$

Table 7.iv Contingency table and odds ratio of /r/, comparing topic conditions

Table 7.iv shows that when the topic of conversation was casual, 32 /r/s were flapped and 82 were not, while for more formal topics eleven were flapped and twenty-six were not. The odds ratios for this 2x2 table are not so conclusive. The odds of having closure in condition CASUAL are 0.922 times those for FORMAL; or that the odds of having closure are 1.084 times higher for FORMAL than for CASUAL. This is a very

small effect; the odds are more-or-less equal. It can be concluded that there is no real difference observed in this variable which relates to the topic condition.

In summary, when all subjects are considered together, this particular phonetic variable seems to be influenced by audience, but not by topic.

The same analysis, using the same formula to calculate the odds ratios, was conducted on all the subjects divided into two groups according to sex. Table 7.v below shows the contingency tables and odds ratios for audience for male and female subjects, and table 7.vi shows the contingency tables and odds ratios for topic, also for male and female subjects.

a.	closure?	INTERVIEWER	FRIEND	
	y	9	15	
	n	23	16	$\theta = 0.417$
				$1/\theta = 2.396$

b.	closure?	INTERVIEWER	FRIEND	
	y	9	10	
	n	42	27	$\theta = 0.579$
				$1/\theta = 1.728$

Table 7.v Contingency table of /r/, comparing audience conditions

- a. male subjects
- b. female subjects

The results for all subjects divided by sex show that the audience condition influences the realisation of the variable /r/ in the speech of subjects of both sexes.

This seems particularly to be the case for male subjects; flapped /r/ is almost 2.4

times more likely to occur in the male subjects' speech in audience condition FRIEND than in INTERVIEWER, while for the female subjects' speech, this is only 1.728 times more likely.

Next, the data for male and female subjects comparing topic conditions were analysed.

a.	closure?	CASUAL	FORMAL	
	y	17	7	
	n	30	9	$\theta = 0.729$
				$1/\theta = 1.373$
b.	closure?	CASUAL	FORMAL	
	y	15	4	
	n	52	17	$\theta = 1.225$
				$1/\theta = 0.816$

Table 7.vi Contingency table of /r/, comparing topic conditions

- a. male subjects
- b. female subjects

As with the results for all subjects, the results for both the male and female subjects considered as a group do not show a strong indication that topic influences the realisation of the measured speech variable.

It is interesting to note that, while my male subjects seem somewhat more likely to flap their /r/s in a formal context than a casual one, my female subjects show the opposite tendency. It is the latter tendency which would be in line with the stated hypothesis, had the effect been significant. This small effect is not in itself reportable,

because the ratios are not different enough, but the possibility of sex differences in accent variation behaviour is suggested, and will be considered further in the analyses of the other variables (see sections 7.3.5 and 7.3.6 below).

7.3.2 /t/

The measures of proportional duration of friction for /t/ were compared according to audience and topic. *t*-tests were carried out to test the significance of the differences, and boxplots for all results significant to $p < 0.05$ are shown below. As before, the boxplots feature a grey box which spans the twenty-fifth and seventy-fifth percentile, with the median line shown in black. Whisker caps show the tenth and ninetieth percentile, and extreme outliers are shown by black dots. Unlike the boxplots in section 7.3.6 below, which show results for the F2 of vowels, these boxplots comparing PDF are somewhat top-heavy because of the large number of scores of 100%. Indeed, for all the plots for /t/, the median value was 100%, so the median line is not visible.

Note that, because of the formula used to calculate PDF ($100f/(c+f)$), the tokens which had zero friction had to be removed from the analysis, because it is not possible to divide by zero. When this was done in the lenition experiment described in chapter four, there were only a very few such tokens, where /t/ was realised either as an approximant [ɹ], with neither closure nor friction; or with a glottal plosive [ʔ], with a measurable period of closure but no friction on release. In this experiment however, perhaps because of the less formal talk being studied, the glottal realisation occurred with greater frequency, although still in a minority of cases. This phenomenon is discussed separately in section 7.3.3 below.

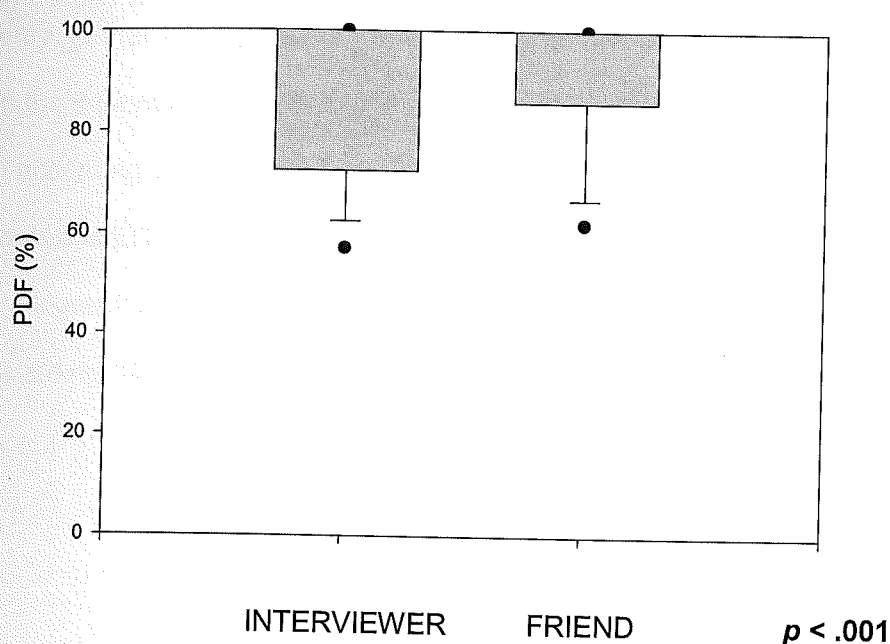


Figure 7.3 PDF of /t/, comparing audience conditions

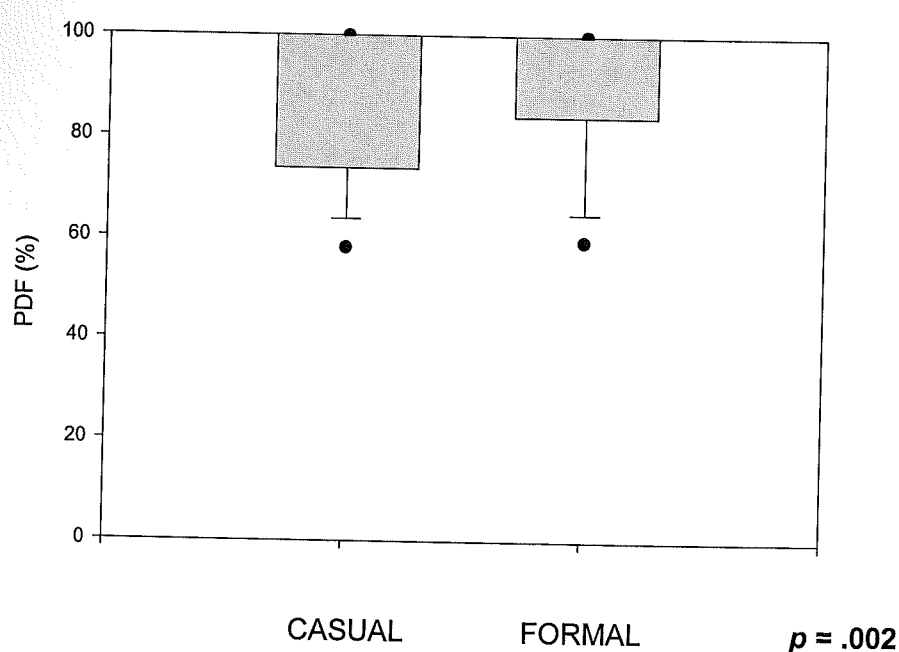


Figure 7.4* PDF of /t/, comparing topic conditions

* although this boxplot looks very similar to figure 7.3, it is not actually the same boxplot

To summarise the results, then, the proportional duration of friction for /t/ is significantly greater when subjects were addressing their peer, than when they were talking to the interviewer. This is in line with the stated hypothesis on intra-speaker variation according to audience. However, the result of the analysis according to topic shows a result which runs contrary to the hypothesis. The PDF for /t/ is significantly greater when the subjects were discussing formal topics than when they were discussing more casual topics.

7.3.3 Glottal realisations of /t/

An increased incidence of glottal realisations of /t/ in urban varieties of British English has been noted by phoneticians for some time (Roach 1973; Wells 1982). In more recent sociophonetic studies of urban varieties, the feature seems to be becoming ubiquitous (see e.g. Foulkes and Docherty 1999; Llamas 2000:125). The spread of /t/-glottalling is often cited as an example of adherence to supra-local norms (Milroy, Milroy and Hartley 1994) or dialect levelling (Kerswill and Williams 2000).

Despite assertions that glottal realisations of /t/ are increasing in urban accents everywhere in England (Wells 1982), there has been very little evidence for this in Liverpool. Milroy, Milroy and Hartley (1994:4) mention one instance of a glottal realisation of /t/, reported to them by a sociolinguist well-qualified to comment on Liverpool English, but this example is notable chiefly for its rarity:

G.O. Knowles (personal communication) has recently reported that in the late '60s in Liverpool he picked up a single clear instance of a glottal stop in the speech of a 25 year old woman (the gender and age of the speaker is significant, as we shall see) which was clearly audible as a reflex of /t/ in the word "Bootle".

If Knowles, who spent years researching Liverpool English in the late sixties (see section 3.3.1 above), could recall only a single example of a glottal /t/, it seems safe to infer that its occurrence in Liverpool English a generation ago was quite rare.

In Experiment One, the lenition experiment reported in chapter four above, I found an extremely small incidence of glottal realisations of /t/. In Experiment Three, however, glottal realisations were considerably more evident than in Experiment One, although still much in the minority compared to the affricated or fricative /t/ characteristic of Liverpool English. It seemed worth exploring these non-local, non-standard realisations a little further.

Of the seven hundred and fifty intervocalic /t/s collected for analysis in Experiment Three, one hundred and eighteen (15.7%) were realised with a glottal stop. The remaining six hundred and thirty-two /t/s were all realised with the lenited stop investigated in Experiment One.

The proportion of glottal /t/s to lenited /t/s was explored, firstly according to audience and topic conditions, and then by subdividing the groups of speakers according to sex. There was a slightly higher proportion of glottal /t/s under the FRIEND audience condition than under the INTERVIEWER condition, and a slightly higher proportion under the CASUAL topic condition than the FORMAL condition. Interestingly, male subjects used a higher proportion of glottal stops under the INTERVIEWER audience condition, while female subjects used a higher proportion under the FRIEND audience condition. However, these differences in proportion within the data were all within the range 14%-17%, and the correlation (r^2) was found not to be significant.

There was a great deal of inter-subject variation in the proportion of glottal /t/s used. Although the overall findings on glottal /t/ are not conclusive, some closer examination of individual variation, to try to find out what is going on with /t/, seems worthwhile. The graph in figure 7.5 shows the percentage of /t/s realised as [ʔ] by each individual speaker in the two different audience conditions. A high level of inter-subject variation in the use of glottal /t/s can be observed, ranging between 0% and 50% when speakers are talking to their friends. Note that the male subjects are those numbered 1-10, and the females are numbered 11-24. Note also that each odd-numbered subject's friend (to which s/he was speaking during the experiment) is the subject plotted to her/his right.

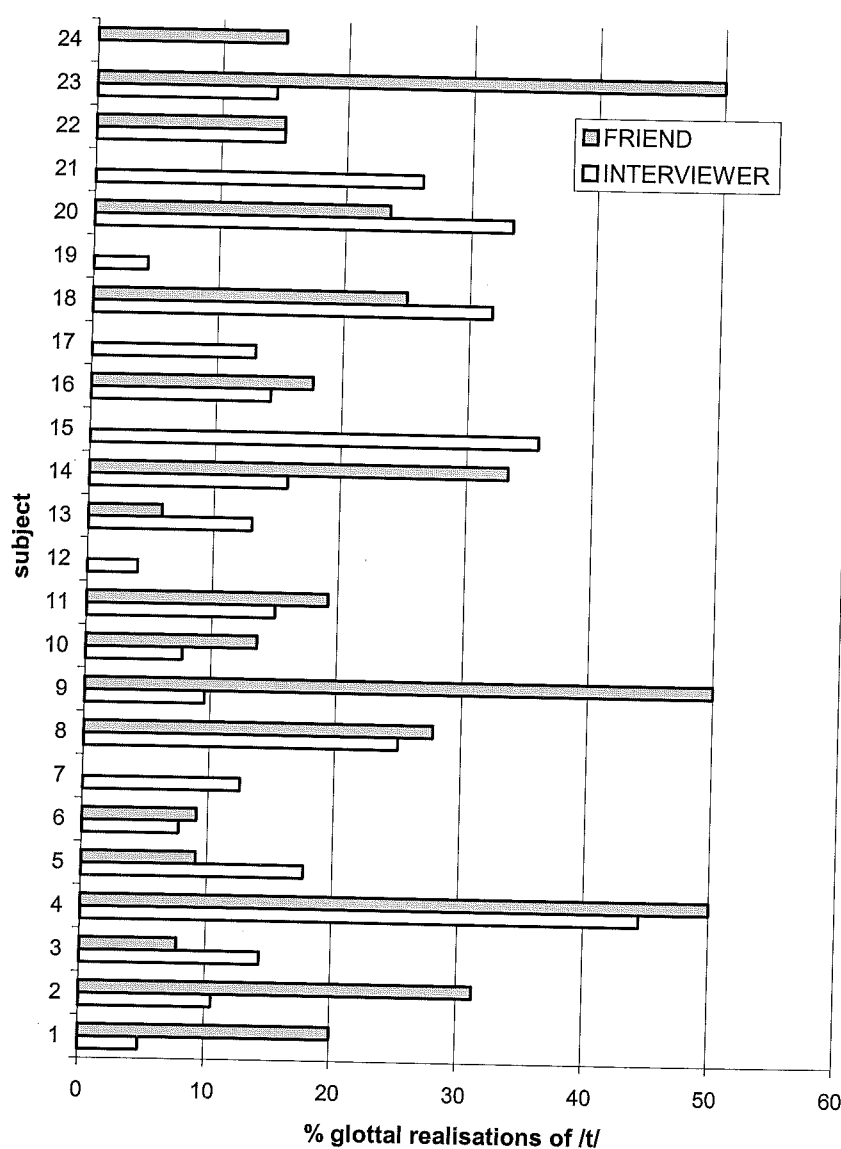


Figure 7.5 Glottal realisation of /t/ by individual subjects (by audience)

As can be seen from figure 7.5, not only the degree but also the direction of variation of /t/ realisation according to audience varies widely between subjects. Of the eleven subjects who used more glottal realisations of /t/ when speaking to the interviewer, more than half (numbers 7, 11, 15, 17, 19 and 21) did not use this realisation at all when speaking to their friend. The interviewer was speaking with a southern British

accent, including a few glottal /t/s. Speech accommodation theory would suggest that these trends are due to the subjects accommodating to their interlocutor. It is curious that all subjects in this group have an odd number, which indicates that they were the first speaker to be interviewed (see section 7.2.5 above for precise details of how the experiment was conducted). Because of a slight imbalance in the experimental design, these subjects sometimes spoke more than their partners in the final, between-friends section of the experiment.

Half of the subjects, however, showed more glottal realisations of /t/ in the FRIEND audience condition than in the INTERVIEWER condition. Many of these subjects (numbers 1 and 2, 9 and 10, 23 and 24) are grouped in pairs, which offers tentative support for the idea that they are accommodating to each other, although the correlation between the incidence of glottalisation in the pairs proved non-significant in a paired-sample *t*-test.

Judging from my data, glottal realisation of /t/ seems to be on the increase in Liverpool English, although it remains, unlike in many other British urban varieties, the minority realisation. My subjects might be expected to exhibit an especially high proportion of a spreading feature like glottal /t/, since they are all adolescent (see section 2.2.2 above), and yet it still occurs at a relatively low rate in the informal speech collected for this experiment. /t/ in Liverpool English may be in the early stages of a shift from the local non-standard variant [t^h] to the non-local non-standard variant [ʔ]. Some evidence of a similar change in other urban varieties of English, from the local glottalised form [ʔt] to [ʔ], has been provided in recent studies of Tyneside (Docherty and Foulkes 1999) and Teeside (Llamas 2001). At this stage I can do little more than speculate, but more work on the changes /t/ is undergoing in urban British varieties might well yield interesting results.

7.3.4 /k/

Just as for /t/, PDF for /k/ was compared according to audience and topic. Boxplots for results significant in t -tests to $p < 0.05$ are shown below.

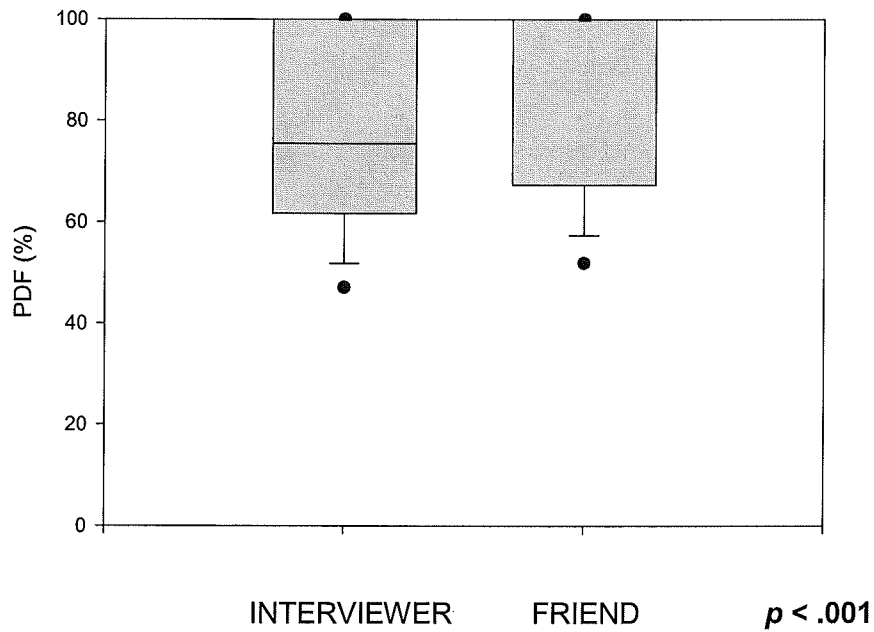


Figure 7.6 PDF of /k/, comparing audience conditions

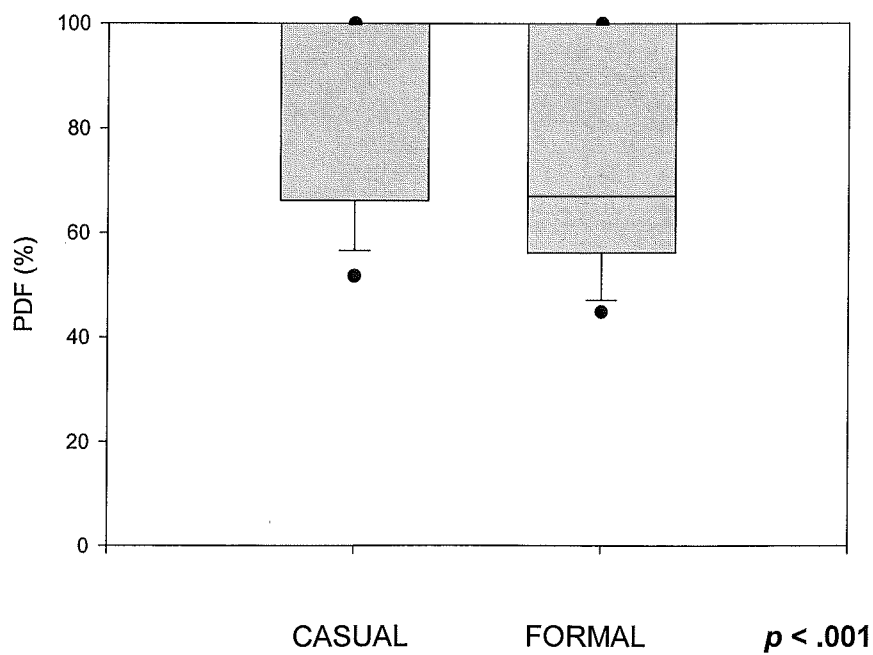


Figure 7.7 PDF of /k/, comparing topic conditions

The results for /k/ are entirely in line with the original hypothesis. PDF is significantly greater under the audience condition FRIEND than INTERVIEWER (see figure 7.6 above) and also significantly greater under the topic condition CASUAL than FORMAL (figure 7.7).

7.3.5 Further analysis of consonant data

Because Experiment Three is the first in this study to have subjects of both sexes, and sex often influences linguistic behaviour (see section 2.2.1), analyses comparing male subjects' results with female subjects' results were conducted for the consonant variables /t/ and /k/. The binary nature of the data for /r/ meant that investigation beyond what had already been carried out (reported in section 7.3.1 above) was not possible.

Recalling the marked sex effect in the results of the analysis of /r/ according to topic, an analysis of /t/ comparing PDF by sex was carried out. The *t*-test comparing male subjects' and female subjects' PDFs fell just short of being statistically significant.

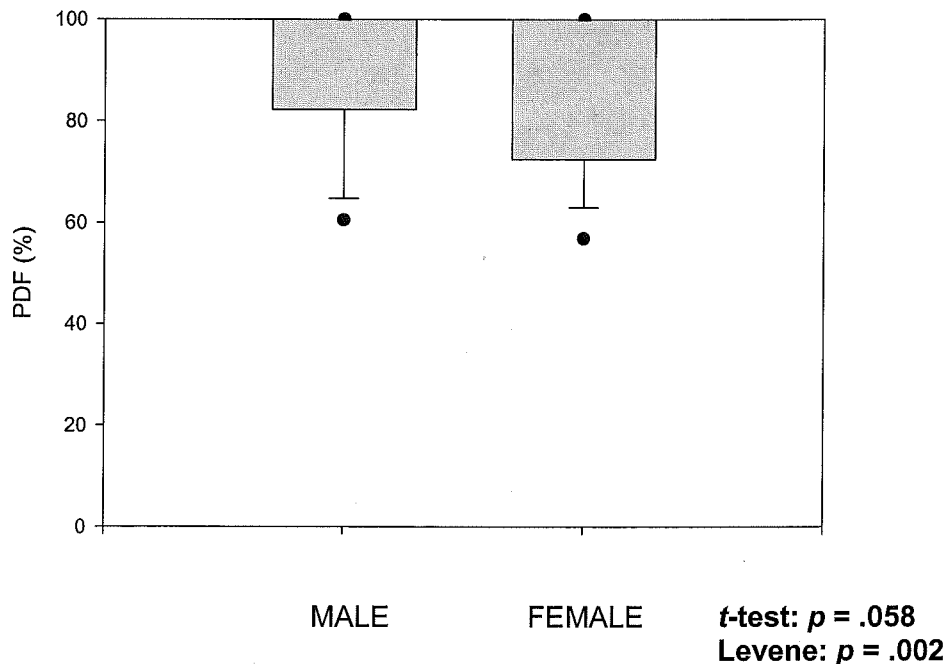


Figure 7.8 PDF of /t/, comparing speaker sex

However, the hypothesis concerning the sex of the subjects (section 7.1 above) posited that female subjects would show more variability in their production of phonological variables, not necessarily that their production means would differ from that of male subjects. In order to analyse the range of variability used by my female subjects compared with my male subjects, a Levene test for homogeneity of variance was applied. This test showed that the female subjects' PDFs for /t/ were significantly more variable (to $p = .002$) than the male subjects' PDFs. To give an indication of the ranges of variance, the interquartile range for the female subjects was 28%, while for the male subjects it was only 18%.

The same analyses were carried out for the consonant /k/. A comparison of subjects' PDF for /k/ according to sex shows that, as with /t/, male subjects have a generally greater PDF than females. For /k/, this finding is statistically significant, and is shown in figure 7.9 below.

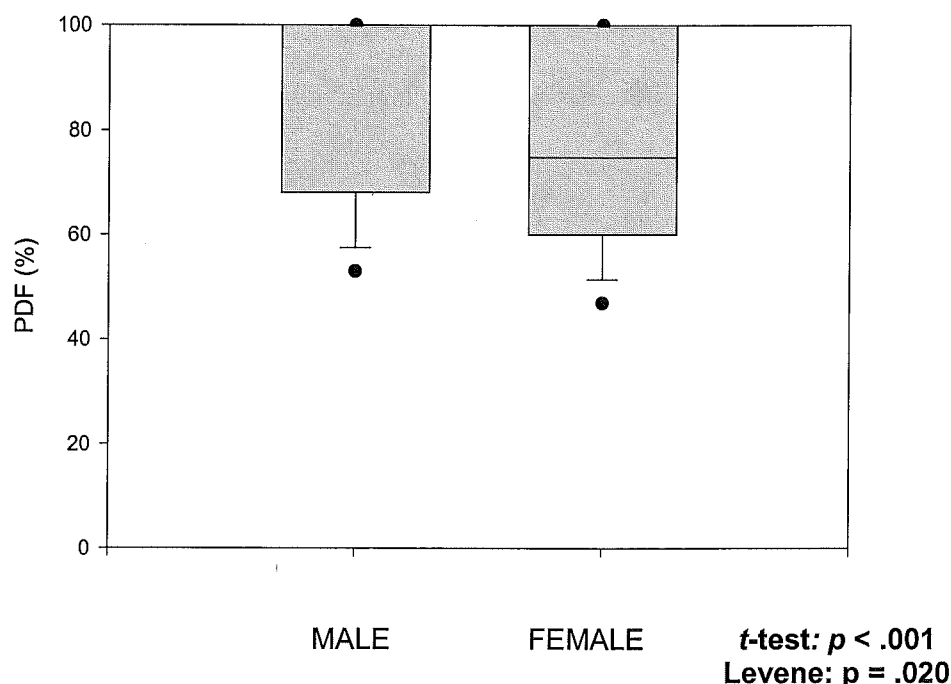


Figure 7.9 PDF of /k/, comparing speaker sex

As with /t/, a Levene test for homogeneity of variance was applied to analyse the range of variability used by the female subjects compared with the male subjects. The test showed that the female subjects' PDFs for /k/ were significantly more variable (to $p = .020$) than the male subjects' PDFs. The interquartile range for the female subjects was 40%, while for the male subjects it was 32%.

Analysing the homogeneity of variance in the data is an effective way of investigating whether the secondary hypotheses, which expect that some speakers will show more intra-speaker variation than others, are supported. For both /t/ and /k/, female subjects demonstrate a higher level of intra-speaker variation than male speakers.

In the individual speaker analysis of the results of Experiment One (section 4.3.3 above), some significant differences were observed in speakers' production of lenited stops correlated to their responses to questions about social network and life mode. One advantage of the interactive questionnaire technique developed for Experiment Three is that it allows for the easy collection of personal data about subjects. The fifty questions in this particular questionnaire, which are listed in table 7.i above, give information about subjects' ages, families and ambitions. Ambitions, which would relate to notions of life mode and also to Douglas-Cowie's (1978) work on code-switching and social ambition (see section 2.1.2 above), are particularly addressed in questions forty-six and forty-seven, which ask about plans to go to university. To investigate whether subjects' ambitions correlate with variability in their accent, subjects were grouped according to their responses to these questions, and the homogeneity of variance in the data was analysed.

The hypothesis for this analysis, then, is as follows. An adolescent speaker who has a higher level of ambition, as indicated by their intention to go to university, will have more variation in his/her accent than a speaker with a lower level of ambition. Of

course, it is quite possible to be ambitious without wishing to go to university, and I acknowledge the bluntness of the instrument in this *post-hoc* analysis of my data. I am also keen to emphasise that some subjects' wish to go to university is not simply a reflection of their being middle-class; by the criteria laid down in Experiment One (see section 4.2.1 above), all the subjects of this Experiment would be considered working-class.

Question forty-six of the questionnaire asked whether the subject wished to go to university and, if the subject answered "yes", question forty-seven asked where and what s/he would like to study. On the ambition scale, subjects were awarded one point if they wished to go to university, and another point if they wanted to go to university outside Liverpool. Wishing to go to university at all indicates a certain desire to "go places"; planning to leave Liverpool to do so indicates a higher level of ambition, and reflects an outward-looking orientation. Under this hypothesis, planning to go to a new city to study might be expected to predict a higher level of intra-speaker variation. This hypothesis is based on the findings of my interviews (chapter 5) and of Experiment Two (chapter 6).

Of the twenty-four subjects, eleven planned to go to universities outside Liverpool, mostly in Leeds, Sheffield or London (two points); seven planned to go to university in Liverpool (one point), and six did not wish to go to university at all (no points). The ambition scores were evenly distributed between male and female subjects.

The ambition analysis works exactly like the analysis by sex above, comparing the PDFs of /t/ and /k/ between the different groups of speakers and using the Levene test for homogeneity of variance to see whether some speakers exhibit more intra-speaker variability than others.

Figure 7.10 shows the analysis by ambition for /t/. In the Levene test, the variances were shown to be significantly heterogeneous ($p < .001$). The higher the level of ambition of the speaker, the more variance in /t/ they showed. The interquartile ranges of variance are shown as grey bars. Also on figure 7.10, the mean PDF for /t/ in each group is shown (as points), indicating that a high level of ambition was correlated with a low overall mean PDF for /t/.

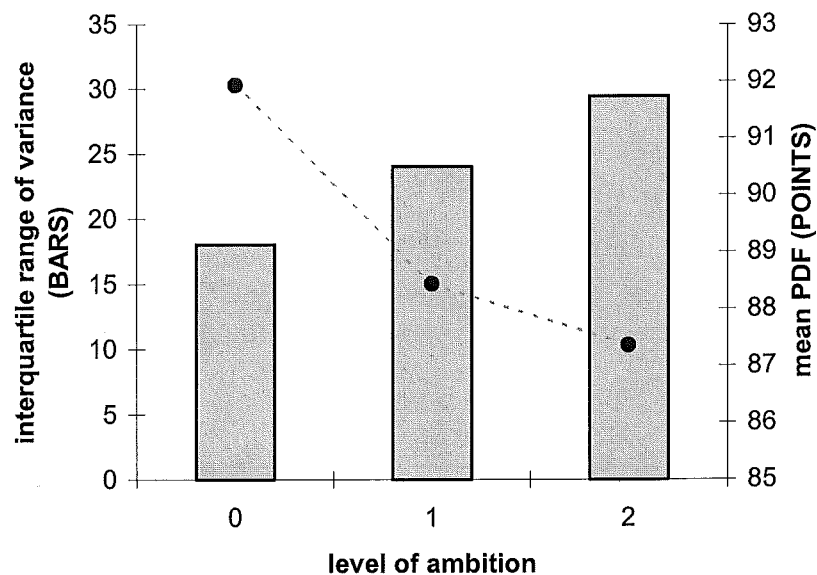


Figure 7.10 PDF of /t/, comparing speaker ambition

The same analysis was carried out for /k/. The results of this analysis are shown in figure 7.11 below. Although the trends are the same, with the variance in /k/ rising with the level of speaker ambition, the Levene test showed that the variances were not significantly heterogeneous ($p = .081$).

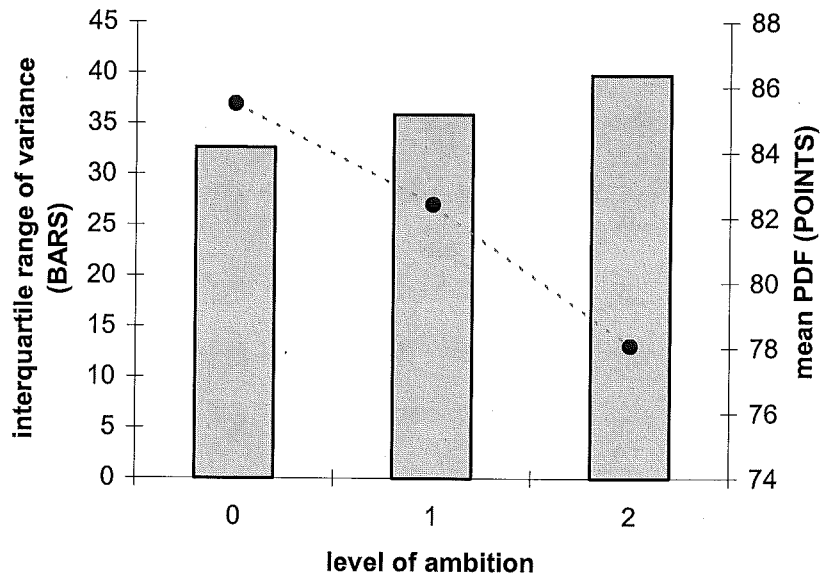


Figure 7.11 PDF of /k/, comparing speaker ambition

To conclude this section of further analysis of consonant variables, analyses of homogeneity of variance indicate significant results for levels of variability between different speakers. /k/ is significantly more variable in the speech of my female subjects than in the speech of my male subjects. Variability in /t/ rises significantly in line with the level of ambition of the speaker.

7.3.6 Analysis of vowel data

In the analysis of vowels, the frequency of F2 as a correlate of frontedness was compared. For each of the four vowels /ə/, /ɜ/, /a/ and /əʊ/, the hypothesis held that a strongly-performed accent would feature increased frontedness in these variables. The audience and topic accommodation hypotheses predicted that such fronted realisations would be more likely to occur under audience condition FRIEND and topic condition CASUAL.

Table 7.vii compares mean F2 frequencies across audience conditions, with *p*-values from *t*-tests given. None of the differences in the data proved to be statistically significant. The results were also reanalysed using two alternative statistical methods, ANOVA and a linear mixed effects model (Pinheiro and Bates 2000), but they remained non-significant.

	audience	mean F2 (Hz)	<i>t</i> -test
ə	INTERVIEWER	1673.64	<i>p</i> = .379 <i>n.s.</i>
	FRIEND	1651.24	
ɜ	INTERVIEWER	1980.42	<i>p</i> = .117 <i>n.s.</i>
	FRIEND	1916.52	
a	INTERVIEWER	1373.94	<i>p</i> = .126 <i>n.s.</i>
	FRIEND	1330.23	
əʊ	INTERVIEWER	1733.79	<i>p</i> = .238 <i>n.s.</i>
	FRIEND	1682.44	

Table 7.vii Mean F2 of four vowels, comparing audience conditions

Table 7.viii compares mean F2s across topic conditions.

	topic	mean F2 (Hz)	t-test	ANOVA
ə	CASUAL	1643.73		
	FORMAL	1813.82	$p < .001$	$p < .001$
ɜ	CASUAL	1953.64		
	FORMAL	1969.76	$p = .655$ n.s.	n.s.
a	CASUAL	1355.29		
	FORMAL	1376.14	$p = .552$ n.s.	n.s.
əʊ	CASUAL	1732.46		
	FORMAL	1657.32	$p = .069$ n.s.	$p = .022$

Table 7.viii Mean F2 of four vowels, comparing topic conditions

Figure 7.12 below is a boxplot for /ə/. /ə/ is the only vowel which had F2s shown to be significantly different in a *t*-test. This difference is in the opposite direction to that predicted by the hypothesis, with the vowel being more fronted in the FORMAL than in the CASUAL topic condition. However, when alternative statistical methods were applied, a further significant difference in the vowels emerged. In an ANOVA, /əʊ/ was shown to be significantly more fronted under the topic condition CASUAL than under the topic condition FORMAL. A boxplot for /əʊ/ is shown in figure 7.13. This finding is in line with the original hypothesis. It can be seen from the interquartile ranges in the boxplot (figure 7.13) that there is much more variability under the FORMAL topic condition, as well as a lower mean; variability is considered further in section 7.3.6 below.

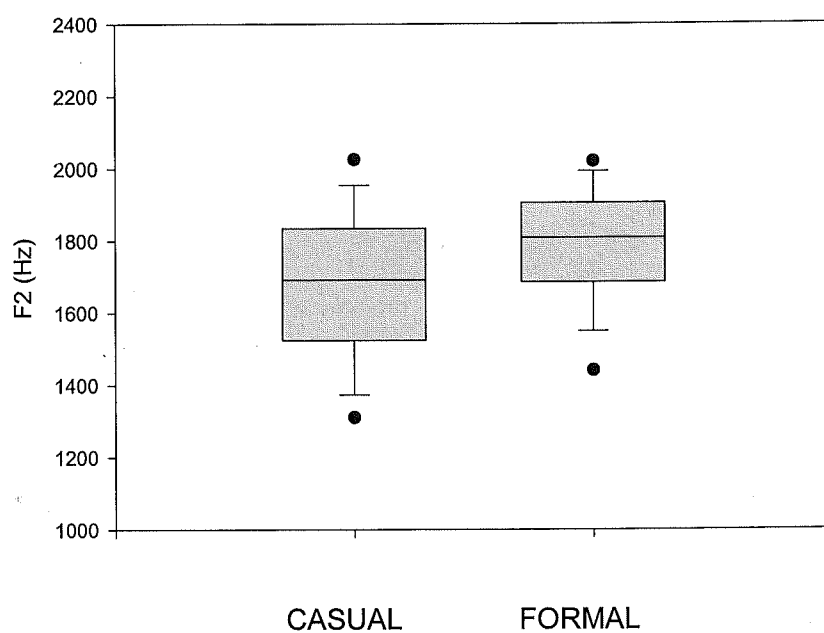


Figure 7.12 F2 of /ə/, comparing topic conditions

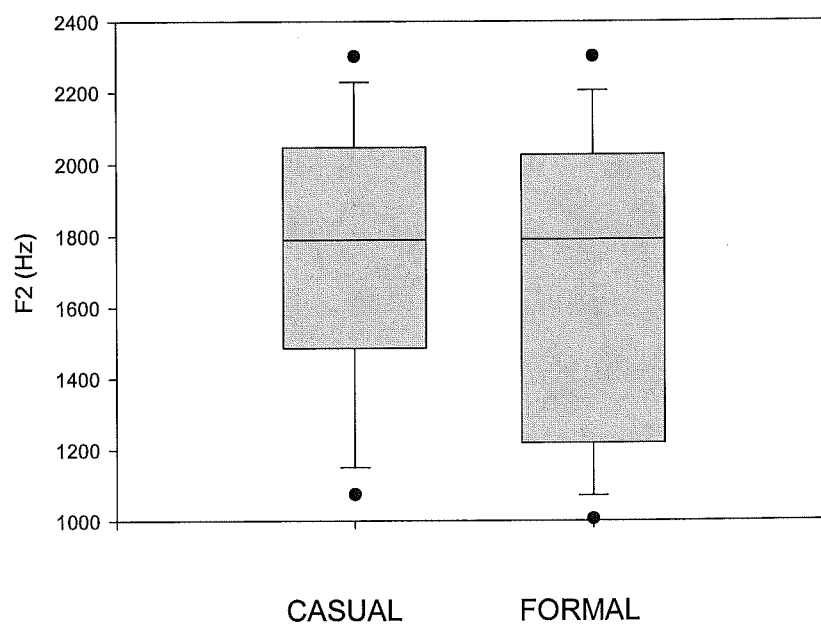


Figure 7.13 F2 of /əʊ/, comparing topic conditions

Because the findings for the vowels were not very "clean", the experimental technique was tested to make sure that there had been no error. I returned to the original sound files and took several sample F2 measurements manually, to ascertain that the automatic measurement had worked properly, which it had.

To summarise the vowel analyses so far, then, two significant results were found. F2 for /ə/ is higher when subjects are speaking on more formal subjects than on casual subjects, which is contrary to the initial hypothesis. F2 for /əʊ/ is higher when subjects are speaking on more casual subjects than on formal subjects. There is no significant difference in the other vowels /ɜ/ and /a/, and no significant difference in any of the four vowels according to audience condition.

Further analyses of the vowel data were carried out to test the sex and ambition variability hypotheses. In the vowel data, the acoustic correlate of accent variation is the second formant, F2. In each of the four vowels studied, the higher the frequency of F2, the more fronted the vowel, and the stronger the accent. F2 is, however, related to the shape and size of a speaker's vocal tract, and adult male speakers generally have lower formants than adult female speakers. This means that, although the F2s of male and female speakers are significantly different, this merely reflects the unremarkable finding that female subjects have a higher average F2 than males, and cannot be used to explore sex differences in variation according to audience and topic. However, it is still possible to look at relative differences between vowels, and also at levels of intra-speaker variability using the same homogeneity of variance techniques applied in section 7.3.5 above.

The subjects were divided according to sex to investigate whether the vowels differed significantly. The arithmetic means of F1 and F2 were calculated separately for male

and female subjects, and are plotted in figure 7.14 below. These F1-F2 plots show the acoustic correlates of how high or low (F1) and how front or back (F2) each vowel is, and approximate the vocoid space.

In figure 7.14, the vowel /ə/ is shown with a square symbol, /ɜ/ with a circle, /a/ with a diamond, and /əʊ/ with a triangle. For each vowel, the mean value for audience condition INTERVIEWER is shown with an all-white symbol, and the mean value for audience condition FRIEND with an all-black symbol. The mean value for topic condition CASUAL is shown with a white symbol with a black cross, and the mean value for topic condition FORMAL by a black symbol with a white cross.

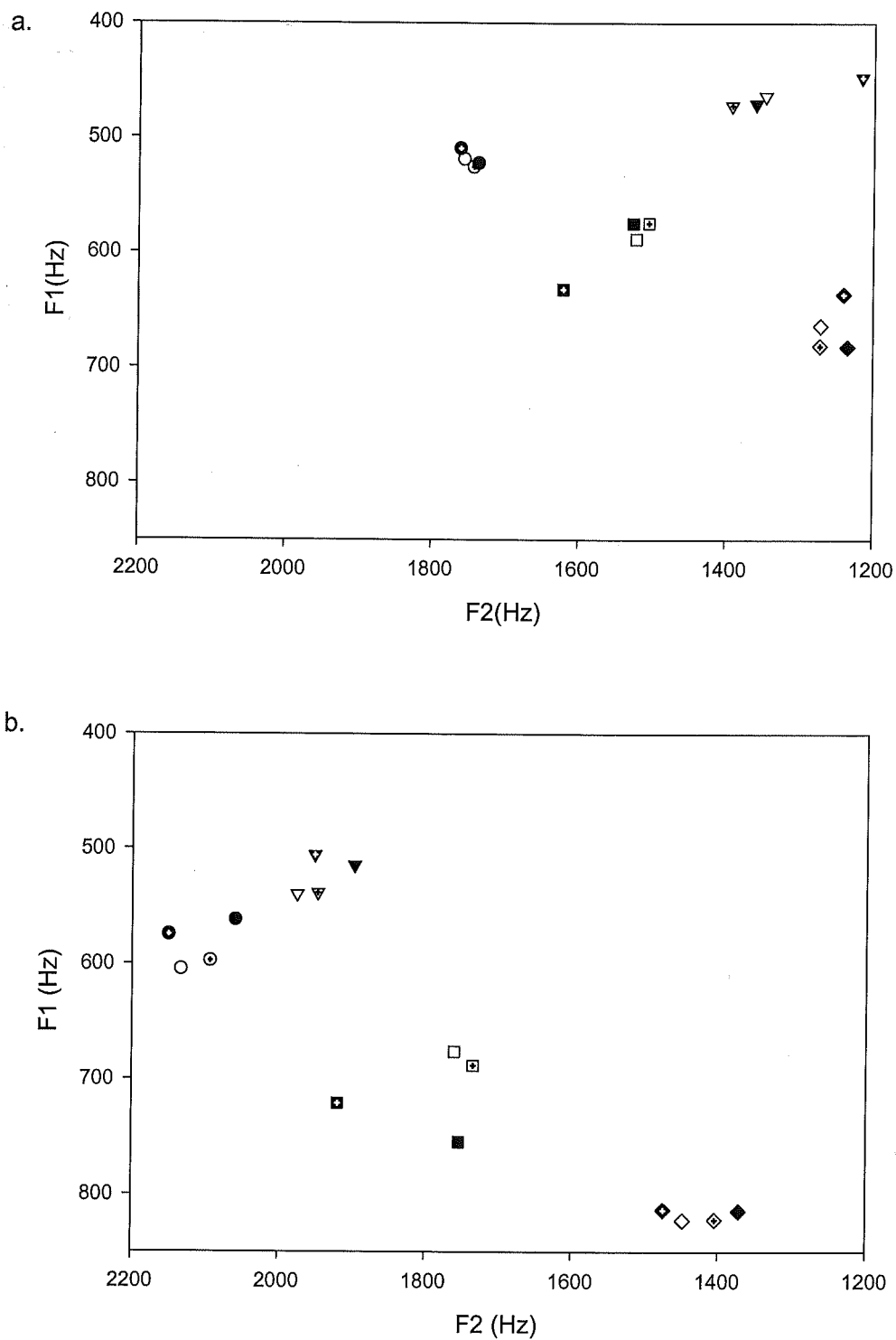


Figure 7.14 F1-F2 plots for mean vowel values

- a. (above) male subjects
b. (below) female subjects

Legend /e/ ■ /ɜ/ ● /a/ ◆ /əʊ/ ▼

The axes for these two plots have been kept the same. Also, although the axes have been arranged so that the layout of the plot echoes that of a classical vowel quadrilateral, it should be borne in mind that these are acoustic not articulatory measures.

There are two main differences that can be observed between the two plots in figure 7.14. The first is that the symbols for each vowel in the plot for female subjects are more dispersed than in the plot for the male subjects. This is particularly true of /ɜ/ (represented with circular symbols). This suggests greater variability in the female subjects' performance of this variable.

However, the homogeneity of variance was tested, as it was for /t/ and /k/ in section 7.3.5 above, and the differences were not statistically significant. In fact, although the means were further apart, in two of the four vowels, the interquartile range was actually slightly larger for male than for female subjects.

	interquartile range		Levene
	male subjects	female subjects	
ə	264.75	236	$p = .588$ n.s.
ɜ	138	236	$p = .055$ n.s.
a	138	145	$p = .090$ n.s.
əʊ	503	341.25	$p = .357$ n.s.

Table 7.ix Homogeneity of variance in vowels, comparing speaker sex

The second difference observable in the plots is in the positioning of the triangles which signify the mean values for /əʊ/. These are in a much more advanced position for the female speakers. In the male speakers, the /əʊ/ vowel is well behind the central vowel /ə/, but for the females it is well in front of that area. There is a considerable (and significant) sex difference in the production of this variable by my subjects.

In section 7.3.5, homogeneity of variance in /t/ and /k/ was analysed with subjects grouped according to level of ambition as well as by sex. The same analysis, using Levene tests, was carried out on the four vowels but, although three of them (/ə/, /ɜ/ and /a/) showed significantly heterogeneous variances, the pattern found for the consonants (of variability rising with level of ambition) was not observed in any of the vowels.

7.4 Assessment of Experiment Three

Experiment Three set out to test two primary and two secondary hypotheses. These are set out in section 7.2.8 above, and the results of the tests are shown in figure 7.x below. The primary experimental hypotheses test the conditions under which instantaneous intra-speaker variation occurs. The audience accommodation hypothesis predicts that there will be a significant difference in accent according to audience condition, and that the accent will be more strongly performed in the FRIEND condition than in the INTERVIEWER condition. The topic accommodation hypothesis predicts that there will be a significant difference in accent according to topic condition, and that the accent will be more strongly performed in the CASUAL condition than in the FORMAL condition. The results for each of the seven phonological variables investigated were used to test these primary hypotheses (reported in sections 7.3.1, 7.3.2, 7.3.4 and 7.3.6 above).

The secondary experimental hypotheses investigate differing levels of intra-speaker variation. The sex variability hypothesis predicts that there will be a significant difference in variability according to the sex of the speaker, and that female speakers will exhibit greater variability than male speakers. The ambition variability hypothesis predicts that there will be a significant difference in variability according to the level of ambition of the speaker, and that speakers with a higher level of ambition will exhibit greater variability than speakers with a lower level of ambition. The results for each phonological variable were used to test these secondary hypotheses (reported in sections 7.3.5 and 7.3.6 above).

Table 7.x summarises all the results, indicating for each phonological variable whether the four hypotheses were supported or rejected by the experimental data. If there was a statistically significant difference in the results in line with the prediction,

then the hypothesis is said to be supported. These cells are shaded grey in table 7.x. If there was no statistically significant difference, then the hypothesis is not supported. If there was a statistically significant difference which ran contrary to the prediction, then the hypothesis is said to be rejected for that variable. These cells are surrounded by a dotted line in table 7.x.

		hypotheses			
		audience accommodation	topic accommodation	sex variability	ambition variability
vocalic	/ə/	hypothesis not supported	hypothesis rejected	hypothesis not supported	hypothesis rejected
	/ɜ/	hypothesis not supported	hypothesis not supported	hypothesis not supported	hypothesis rejected
	/a/	hypothesis not supported	hypothesis not supported	hypothesis not supported	hypothesis rejected
consonantal	/əʊ/	hypothesis not supported	hypothesis supported	hypothesis not supported	hypothesis not supported
	/r/	hypothesis supported	hypothesis not supported	-	-
	/k/	hypothesis supported	hypothesis supported	hypothesis supported	hypothesis not supported
	/t/	hypothesis supported	hypothesis rejected	hypothesis supported	hypothesis supported

Table 7.x **Summary of experimental results**

Several conclusions can be drawn from the information summarised in table 7.x. All four of the experimental hypotheses are supported by the results for at least one variable. Two of these, the audience accommodation hypothesis and the sex variability hypothesis, are also not rejected by the results for any variable. These hypotheses, then, are robustly supported by the experimental findings. Speakers do perform parts of their accent more strongly when talking to their friend than when talking to an interviewer, and female subjects did show more variability in parts of their accent than male subjects.

The topic accommodation hypothesis and the ambition variability hypothesis, however, are rejected by the results for some variables. Support for these two hypotheses, therefore, is less robust, although the topic accommodation hypothesis is supported by the results for /k/ and /əʊ/, and the ambition variability hypothesis by the results for /t/. These hypotheses, then, apply to some variables but not to others, and have should not be overstated or overgeneralised.

There is a clear difference between the vowel variables and the consonant variables. With the exception of /əʊ/ and topic accommodation, none of the results for the vowels supports any of the hypotheses. The stop consonants /t/ and /k/, on the other hand, offer support for all four hypotheses between them. Aside from other considerations, these disparate findings for different variables show the importance of sociolinguistically investigating a wide range of accent features, not just one or two variables.

Apart from the results' limited support for the experimental hypotheses, one of the successes of Experiment Three was the development and testing of the interactive questionnaire technique. This worked extremely well, allowing for the easy collection

of an excellent range of naturalistic data, and represents one of the key contributions of this thesis. The technique is assessed further in the concluding chapter, chapter eight.

CHAPTER 8

CONCLUSIONS

- 8.1 Overview**
- 8.2 Experiment One: conclusions and analysis**
- 8.3 Interviews and discussions: conclusions and analysis**
- 8.4 Experiment Two: conclusions and analysis**
- 8.5 Experiment Three: conclusions and analysis**
- 8.6 Contributions of the study**

8.1 Overview

This final chapter brings together analysis of the experiments and interviews described in the preceding chapters, and identifies the key findings and contributions made by this study. The results of the various experiments are assessed, and the implications which those results have for the various theories being tested, and for the study as a whole, are considered.

The four sections below provide conclusions and analysis of the results of each of the three experiments conducted (reported in chapters four, six and seven) and also of the interviews and discussions reported in chapter five. Each of these sections offers responses to the research questions addressed by each experiment, which were set out in chapter one.

The final section, section 8.6, brings together the contributions of the study and draws some final conclusions about inter- and intra-speaker variation in Liverpool English.

8.2 Experiment One: conclusions and analysis

There are methodological, experimental phonetic and sociolinguistic findings from Experiment One, reported in chapter four. This experiment looked at the phonetic feature of lenition of stop consonants in Liverpool English.

The experiment represents the study's first opportunity to test the sociophonetic methodology of conducting laboratory-standard investigations in the field and subjecting the data to acoustic analysis. Lessons were learned about optimising the recording quality, and about making the experimental tasks interesting while keeping the speech collected under control.

The phonetic findings of this experiment can be summarised thus. In the speech of the experimental subjects, who were young females from Liverpool:

- there is no neutralisation in terms of friction duration between the lenited alveolar plosives [t^ɸ] and [d^ɹ] and the fricatives [s] and [z];
- there is also no neutralisation in terms of proportional duration of friction between voiceless lenited alveolar plosive [t^ɸ] and the stop-fricative cluster /ts/;
- however, neutralisation in terms of proportional duration of friction is evident between voiced lenited alveolar plosive [d^ɹ] and the stop-fricative cluster /dz/;
- the proportional duration of friction for monophonemic lenited stop /t/ is greater than that of biphonemic stop-fricative cluster /ts/.

These findings contribute to the corpus of sociolinguistic and dialectological research on Liverpool English, expanding our knowledge about this particular feature of the variety. The use of acoustic analysis has corrected assumptions which had been

made by earlier sociolinguists (Knowles 1973; Hughes and Trudgill 1996), based on auditory impressions, that lenited stops were 'merged' or neutralised with fricatives. The only neutralisation effect observed is between voiced lenited stops and voiced affricates, which is surprising since Hughes and Trudgill (1996:93) report lenition and suggest merger only in voiceless stops.

The final phonetic finding listed above, that the duration of friction compared with closure for [t^s], a single phoneme, exceeds that of the stop-fricative cluster /ts/, presents a challenge to phonological theories which postulate X-slots (Steriade 1990:383) or include a relationship between segments and a timing tier.

There are also variationist sociolinguistic findings to be reported from Experiment One. Taking the school which subjects attended as an indicator of socio-economic status, the typical sociolinguistic hypothesis that realisation of a non-standard feature would be socially stratified was tested. This hypothesis, however, was not confirmed. Differences between the two groups for duration of friction were not significant for /t/ in either initial or final position in a CVC word, nor for /d/ in initial position, although final /d/ was significantly different (at $p=.012$), in line with the hypothesis. Generally, though, the conclusion is that the lenition of alveolar stops is evident in all speakers of Liverpool English studied, and does not exhibit a straightforward sociolinguistic pattern.

An analysis comparing proportional duration of friction between the two groups was also carried out. This showed that the stop-fricative clusters of the group with a higher socio-economic status were more like their lenited stops, and this group came closer to phonetic neutralisation between /ts/ and [t^s].

The results of Experiment One were analysed further, to test various ideas about social groups which might account for inter-speaker variation in this phonetic feature. These ideas are propounded in the studies of inter-speaker variation reviewed in chapter two. Individual subjects' responses to questions about their social networks and life mode were considered alongside their results for the lenition of stops. Subjects whose results "stuck out" by diverging from those of the rest of the group were particularly examined, to see if the findings supported, or could be accounted for by, either social network theory (Milroy 1980) or life mode (Pedersen 1994; Marshall 2000), or whether the differences which emerge should simply be ascribed to individual sociolinguistic idiosyncrasies (Johnstone 1996, 2000a). There are not sufficient data from this experiment to provide a full assessment of these theories, but consideration of individual subjects' responses still yielded some statistically significant results, and some evidence supporting both social network theory or life mode emerged.

Personal, identity-related factors such as life mode are less static than factors such as sex and social class. It is possible for speakers, especially the adolescent speakers who are my experimental subjects, to undergo changes in their social networks and in their life mode orientation. Identities can be dynamically varied, and this can be demonstrated through stylistic variation, including variation in accent.

Although in Experiment One the analysis was only of variation between the speakers, the significance of these identity-related factors stimulated the thinking behind the subsequent experiments, which analyse variation within speakers' accents. Also in response to the significance of these factors, social psychological and anthropological approaches were adopted in order to examine the motivations and reasons behind the linguistic behaviour exhibited in the experiments. These approaches are evident in the Liverpool-specific background information discussed in

chapter three, and particularly in the interviews and discussions of chapter five, which are assessed in the next section.

8.3 Interviews and discussions: conclusions and analysis

Chapter five reports interviews and discussions with several young speakers of Liverpool English. These interviews discussed their identity and how they perceived accent variation (both in their own speech and the speech of others), and whether there seemed to be any connection between the two. The discussions ranged widely over many topics, touching in particular on the media, sexuality and the call centre phenomenon. The interviews offered a platform for these particular topics to be explored further, and for certain conclusions to be drawn.

The media seem to be greatly responsible for the production of the Liverpool stereotype, which in turn encourages Liverpool English speakers who do not wish to be thought of in that way to vary their accent. For some speakers, accent variation is tied up with the performance or simulation of sexuality; this is a new finding not previously reported by those studying language and sexuality, and deserves further investigation. The supposed call centre boom in Liverpool is not due to the accent's sudden rehabilitation or popularity, but if it is reported as such, this becomes part of the ongoing saga of the changing fortunes of Liverpool English, and itself contributes to speakers' motivation to vary their speech.

Coupland (1982:168) argues that 'social psychological processes lie at the heart of phonological style-shifting and need to be drawn on if we are to explain rather than merely describe stylistic variation in speech'. These interviews represent an attempt to get at these social psychological processes, and consider why (rather than just whether, how and when) intra-speaker variation should occur. In many cases, ideas put forward in prior work on intra-speaker variation (reviewed in chapter two) are supported by the opinions expressed in these interviews.

The interview and discussion section of the study show that speakers are highly aware of intra-speaker variation, and can suggest particular circumstances in which it is demonstrated. These observations, which are one step removed from actual sociolinguistic findings because they are reported rather than performed by speakers. Silverstein (1996) refers to such meta-data as having "second-order indexicality", a concept more recently applied in British urban sociolinguistic studies by Llamas (2000:142), who complements her investigations of variation in Middlesbrough English with the use of identity questionnaires asking questions such as 'what accent would you say you had, and do you like it?' (Llamas 2000:129) . First-order investigations, which test quantitatively whether, how and when intra-speaker variation occurs, were carried out in Experiments Two and Three. Experiment Two, assessed in the next section, also attempted to link speakers' attitudes and awareness of intra-speaker variation, as revealed in interviews, with their performance as experimental subjects.

8.4 Experiment Two: conclusions and analysis

Experiment Two, reported in chapter six, investigates intra-speaker variation in the speech of two male subjects in their late teens who had just moved from Liverpool to Oxford as first-year undergraduate students. The subjects discussed Liverpool identity, with a reading passage used as both a prompt for discussion and for analysis of their speech. The discussions also dealt with intra-speaker variation, with an extract from one of the interviews reported in chapter five (assessed in the previous section) provided as a stimulus for discussion. The first recording session in this experiment took place at the start of the academic year, and the reading passage was re-recorded under the same conditions at the end of the same year. This method was used to examine the variation within the speech of each individual over several months following relocation. It was hoped that the views expressed in the interviews could be correlated with the experimental results in some way, but the former proved difficult to quantify, and with only two subjects, no proper conclusions could be drawn on this question in Experiment Two (although the question is more satisfactorily addressed by Experiment Three, see following section).

Young adults who decide to move away from Liverpool to attend university might be expected to have a broader worldview, and to be motivated to present themselves as less locally focused, so they might already have less strongly performed accents on arrival in a new city. This expectation is somewhat supported by the analysis of data in Experiment Three, where subjects who intended to go away to study showed greater variability in some phonetic variables (section 7.3.5).

The experience of joining a new peer group which includes speakers of many other accents, predominantly but not universally Southern British English towards the RP end of the scale, would also be expected to influence speech in one direction or

another. Divergence was described, for instance, by Andrew, who spoke in the interviews (see section 5.2) about a perception of a Liverpudlian in Oxford being 'a good, happy sort of everyone-likes-it different'. Convergence and accommodation to the accents around, though, would generally be expected, and it is this which Experiment Two sets out to test. Seven phonetic variables, identified as features of Liverpool English, are measured in each interview. The hypothesis that speakers' accents will vary over time, diverging away from the accent they arrived with and converging on the accents which surround them, is tested.

It was expected that the subjects' Liverpool accents will be less strongly realised in the second interview, after one academic year had been spent at Oxford, than in the first interview. However, there are forces at work to counter this apparently straightforward assumption. For example, a newly arrived student is likely to be less confident and more keen to ingratiate himself, perhaps through linguistic accommodation, while one who has become more settled and secure after a successful year may be more ready to embrace his Scouser identity as something that marks him out and makes him distinctive.

The outcomes reflect variability along several different planes. It is clear from their interviews that the two subjects Brian and Carl have very different ideas and attitudes about their identities as Liverpudlians. It might be predicted that Carl's accent would be more tenacious than Brian's, since the latter seemed relatively unconcerned about the prospect of losing it. However, since Carl's accent was stronger in the first place, he might be regarded as having more scope to modify his speech along the continuum between broad Scouse and so-called Oxford English. In fact, the latter of these two predictions proved more accurate, as Carl showed greater change over time than Brian did.

The central sociophonetic finding of this experiment was that both subjects showed significant change in at least one feature (lenited /t/), with their Liverpool accents diminishing between the two interviews. Although this finding contributes to the study's investigations, Experiment Two was also important for the contributions it made to the developing methodology of the study.

Whereas Experiment One investigated variation only in alveolar stops, Experiment Two looked at a range of seven variables, both consonants and vowels. Investigating a wider range of variables required the addition of new analytical techniques, looking at formant frequencies of vowels and at closure for /r/, as well as at duration of friction for /t/ and /k/ using the same technique as Experiment One. Analysing a number of variables gives a broader picture of variation in the accent. It was thought that a multivariate analysis would also show whether some phonetic features were more prone to variation than others, and whether this could be connected to notions of salience (Kerswill and Williams 2000) or to the greater symbolism attached to certain features. However, comparison between the variables proved difficult. Comparisons could only be made between variables which had been analysed in the same way. /t/ and /k/ showed a similar level of variation, and the four vowel variables showed non-significant results, so no real conclusions could be drawn on this point.

The most useful results from Experiment Two were provided by the analyses of each speaker individually. Grouping the subjects together only served to obscure the differences between subjects, although the overall result was the same. This type of analysis is more common in social psychological studies, which are often conducted with a single subject (e.g. Coupland 1981). However, much more data per subject is generally collected for such studies than is provided by Experiment Two. A full sociophonetic study, on the other hand, might have a similarly short experimental task, but would have many more subjects, and would group them together for

analysis. One possible criticism of Experiment Two would be that the task is not long enough for an extensive analysis of individual speakers, and the number of subjects is too small for any effects above the individual level to be observed.

There was another difficulty in comparing Brian's data with Carl's, rather than making comparisons for each subject between the two interviews. This problems arose with analysis of the vowels, for which F2 frequency was the acoustic correlate of variation. Differences between formants across subjects indicates nothing more than differently-shaped vocal tracts. It is not really possible to normalise this data, as Docherty and Foulkes (1999:53) point out:

There is no inscrutable algorithm for transforming the mathematical differences between speakers, which can render the interpretation of formant measures extremely difficult.

This was certainly a problem, in both Experiment Two and Experiment Three, when data from different subjects was to be compared. Despite this inter-speaker comparison problem, analysis of vowel formants has been the most popular pursuit of sociophoneticians for some time (Thomas 2002). Indeed, vowel formant analysis is actually less problematic in my study than in most, since the main comparisons in both of these experiments are intra-, not inter-speaker.

8.5 Experiment Three: conclusions and analysis

Experiment Three had twenty-four subjects aged between sixteen and eighteen, both male and female. This experiment makes two of the study's main contributions. First, it tests several hypotheses about instantaneous intra-speaker variation and answers several of the study's research questions. Second, it does so by means of an innovative and powerful method.

Neither of the tasks of the first two experiments was ideal. Experiment One gathered a lot of data but the subjects found the repetitive reading of carrier sentences boring and unnatural, while Experiment Two's reading passage was more natural and engaging, but rather too brief. In Experiment Three, however, the interactive quiz-questionnaire technique which was developed can collect a large amount of data in a meaningful task which subjects enjoy for its own sake. The quiz-questionnaire technique also allows for phonotactic control, easy variation of factors such as topic and audience, and the collection of attitudinal and personal data about subjects. This flexible new methodology could be of use to sociolinguists investigating many different kinds of phenomena.

The research questions which Experiment Three asked were about the conditions under which instantaneous intra-speaker variation occurs, and about whether inter-speaker variation in intra-speaker variation could be observed (that is, whether some groups of speakers exhibit more variability than others). These questions set out to test theories and models of intra-speaker variation such as accommodation, style-shift and audience design (see chapter two).

A significant level of intra-speaker variation was observed in at least one phonetic variable when both audience and topic were varied. However, not all variables

showed such variation. For intra-speaker variation according to audience, all the significant results showed that the speakers used a stronger accent with their friend than with the interviewer. For intra-speaker variation according to topic, some speakers used a stronger accent for casual topics than for formal topics, but others did the opposite, which was contrary to the hypothesis.

The secondary analyses, which looked at inter-speaker variation in intra-speaker variation, showed a significant difference between male and female subjects in variation in two phonetic variables, /t/ and /k/. The question of whether girls exhibit more intra-speaker variation than boys is answered with a "yes".

There was also a difference shown between the speakers according to their levels of ambition (according to categories based on their questionnaire responses), with more intra-speaker variation in one variable (/t/) being exhibited by subjects planning to leave Liverpool to go to university. This confirms some of the anecdotal and qualitative evidence gathered in the interviews (chapter five), in which Liverpudlian students who had left the city reported undergoing such changes themselves. However, results in this analysis for other variables (vowels) undermine the hypothesis somewhat. As a general observation, the acoustic analysis of vowels in Experiments Two and Three has proved a great deal more difficult and problematic than the acoustic analysis of consonants.

8.6 Contributions of the study

Many of the study's contributions, both methodological and sociophonetic, have been summarised in this chapter. Through its three experiments and set of interviews, the study has investigated sociophonetic variation in Liverpool English both between and within speakers. A new account of the accent has been provided, and a range of theoretical models and accounts have been tested.

The use of acoustic analysis for sociolinguistic investigation has proved to be an effective and scientifically robust technique. I welcome the increase in the number of sociophonetic studies which use instrumental methods, and would encourage sociolinguists currently using impressionistic techniques to consider analysing their data acoustically. This study has tested various acoustic techniques, some of which (e.g. duration measurements) do not even require particularly good recordings.

One possible direction for further study relates to the only phonetic variable examined in all three experiments. The behaviour of /t/ in various British accents is emerging as a topic of particular sociophonetic interest. The glottal realisation of /t/ (see section 7.3.3) is one of the variables looked at in current work on dialect levelling (Williams and Kerswill 1999; Kerswill and Williams 2000) and has been widely studied in sociolinguistic work on British English (Macaulay 1977; Reid 1978; Mees 1983). /t/ is also subject in some dialects (Liverpool included) to the "T-to-R rule" (Wells 1982:370) which produces, for instance, "lorra" for "lot of". Tyneside /t/ has been subject to particular recent attention. In Tyneside, there appear to be two different glottal variants, an "ordinary" glottal stop and a variant which 'presents the auditory impression of a glottal stop reinforcing any of three voiceless stops /p, t, k/ when they occur between sonorants (e.g. in *happy*, *set off*, *bacon*). These variants are usually labelled "glottalised" (Docherty and Foulkes 1999:54) and are 'more

characteristic of male speech' (Watt and Milroy 1999). Acoustic phonetic techniques are beginning to be applied to this particular variable with great success (Docherty and Foulkes 1999); further work on /t/ from an instrumental perspective, perhaps comparing different varieties of British English, would seem to be indicated for the future.

With regard to inter-speaker variation among the subjects, the results of this study have quantitatively shown that individual factors such as life mode and ambition should be considered alongside group factors such as social group and sex, because they are also significant. The study shows that no single factor can or should be given supremacy, and seen as the one true indicator of sociolinguistic variation; many factors contribute to variation between speakers. Some of these factors are individual and personal, and are best accessed with the use of anthropological and qualitative techniques. Allowing informants to shape studies themselves, identifying which personal and group factors they see as relevant, rather than imposing predetermined dependent variables, is an exciting new direction in which some sociolinguists are beginning to travel, as Bayley (2002:135) reports:

Traditionally, variationist studies have grouped participants according to predetermined social categories such as class, ethnicity, gender and age, and examine possible correlations between these non-linguistic factors and use of socially salient linguistic variables. Rather than grouping participants by predetermined social categories, Eckert (2000) and Mendoza-Denton (1997), through intensive ethnographic investigation, sought to discover the social categories that participants themselves found meaningful. At times, these categories overlapped with the categories usually considered in variationist studies, but at other times they differed considerably. For example, Mendoza-Denton found six distinct groups among the Mexican immigrant and Chicana students in a California high school, ranging from immigrant *pipporas* ("country girls"), who tended to preserve traditional rural Mexican values, to the mostly non-immigrant "Latina jocks", who ... tended to accept the values of the larger society that the school represented. Moreover, different group affiliation was associated with differing patterns of language use ... Clearly, much would have been lost by simply grouping speakers according to ethnicity or immigrant generation.

Although this study only begins in Experiment Three to incorporate this approach, with its reference to subjects' questionnaire responses, it is potentially a very productive direction for studies of inter-speaker variation to go. If personal or individual factors influence sociolinguistic variation, they ought to be the subject of sociolinguistic inquiry.

With regard to intra-speaker variation, the study has successfully applied a sociophonetic methodology to investigations which had previously been conducted in a different way. In social psychological studies of accommodation, reviewed in chapter two (e.g. Coupland 1981, Bell 1984), assessment of the differences in pronunciation is based not on quantifiable acoustic data or even on systematic auditory analysis, but with the use of listener-judges. The findings of Experiment Three re-examine intra-speaker variation from a sociophonetic perspective, testing the accounts with a different analysis.

Two of Experiment Three's hypotheses, topic accommodation and ambition variability, only held true for certain phonetic variables. This is important because it shows that not all variables exhibit the same patterns of variation. Sociolinguists who only examine one or two phonetic variables can miss these different patterns, and perhaps risk overgeneralising their findings. Experiment Three shows specifically that pronunciation of /k/ and /əʊ/ varies significantly with topic, with speakers leniting /k/ and fronting /əʊ/ more when speaking on casual topics than when speaking on formal ones. The experiment also shows that the more ambitious a speaker is, the more variable her/his pronunciation of /t/ will be. These particular variables may be more subject to variation in line with these hypotheses because they are especially salient (see section 2.2.6 above) or psychologically prominent.

Experiment Three's other hypotheses, audience accommodation and sex variability, are not rejected by the data for any of the phonetic variables, although they too are only supported by the data for certain variables. Speakers are shown to vary all the consonants tested (/r/, /t/ and /k/) according to audience, pronouncing them with a stronger accent when speaking to a friend than when speaking to the interviewer. Female speakers exhibit significantly more variation in the pronunciation of both the consonants tested (/t/ and /k/) than male speakers. These two sets of findings represent the main contribution of the study to the field of research on intra-speaker variation.

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