Vowel Change in Australian English – A Sociolinguistic Perspective

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Summary

Sociolinguistic studies have supplemented historical linguistics for the last forty to fifty years and have introduced quantitative studies to the study of language. The focus has changed from the study of idiolects to the language of speech communities. Correlation of the data with social factors allows for a more varied description of linguistic change and a more reliable prediction of linguistic development according to these external factors in combination with the internal factors.

In Australia a distinct variety of English has developed over the last 200 years. Phonetically this variety differs from Received Pronunciation in a number of more raised and more fronted monophthongs, and the rising diphthongs have quite different trajectories while the centralising diphthongs tend to become monophthongised. Australian English is considered to be regionally homogenous, and where there are differences, they are mainly found in the vocabulary and not in the phonetic inventory.

Variation in Australian English is traditionally described in terms of sociolects that are part of a continuum ranging from Cultivated Australian English at one end to Broad Australian English at the other end. In the central part of this sociolectal continuum the General Australian English variety is found, which is the variety used by most Australians. Broad is the variety that is associated with least prestige as it has the most stigmatised and non-standard variants and has the most unmistakable Australian sound to it. Cultivated, which is the variety closest to Received Pronunciation, carries most prestige because of its resemblance to the British external standard.

During the last thirty years Australian English vowels have changed. Both monophthongs and diphthongs have moved and some of these changes seem to have been influenced by internal factors as the vowels appear to have moved as part of chain shifts. There also seem to be more general changes in Australian English as there is a tendency to prefer the General variety to the more extreme varieties in the continuum of sociolects.

Social factors are important in the study of these changes. The Australian material supports sociolinguistic theory that gender is very important as gender differences are very explicit in Australian English. It is clear that male and female speakers respond differently to social prestige – in fact, it seems that their linguistic behaviour is influenced by different

kinds of prestige. Consequently, women are more likely to choose standard forms that are associated with overt social prestige, while men are more likely to use socially stigmatised forms. Women are likely to be motivated by social mobility, while men use language to signal values like solidarity and loyalty.

Other social factors also influence linguistic behaviour. The influence from socio-economic class has surprisingly little effect while factors such as parents' education and school type are more useful for predicting linguistic choices. It appears, though, that the set of traditional sociolectal markers have lost their social significance. A new set of vowels seem to have assumed social significance, which renders the traditional sociolectal system inefficient and in need of revision or renewal.

There also seem to be some changes in the system of prestige in Australia due to changes in the Australian identity. There is an increasing acceptance of being Australian, which may have resulted in more prestige being associated with the General variety of Australian English. This variety has a clearly Australian sound to it but it is without the stigmatised vowel variants of the Broad variety. The external standard Received Pronunciation has less influence and therefore the Cultivated variety has become less popular. The decreasing use of the Broad variants may also be related to the changes in the Australian identity as the inclination to react against the British influence via linguistic choices is diminishing.

List of Symbols and Abbreviations Used in this Thesis

There is much disagreement about what symbols to use for the description of Australian English vowels, but in this thesis the symbols used by Mitchell and Delbridge (1965) have been chosen as they have been used in the primary sources for this thesis.

/i/
/ɪ/
/ɛ/
/æ/
/a/
/ʌ/
/ɒ/
/ɔ/
/u/
/ʊ/
/ɜ/
/ɪə/
/ɛə/
/eɪ/
/aɪ/
/ɔɪ/
/aʊ/
/oʊ/

AusE:	Australian English
RP:	Received Pronunciation
C:	Cultivated Australian English
G:	General Australian English
B:	Broad Australian English
ANDOSL:	Australian National Database of Spoken Language

I Introduction

During the last two hundred years English spoken in Australia has developed and is now recognised as a variety of English in its own right. Received Pronunciation still has some status as an external standard, but as a result of an increasing sense and awareness of Australian identity during the last forty years, Australians are beginning to reject the linguistic authority of their British mother culture, and thus defy a strong linguistic prejudice which they have experienced against their accent because of similarities with lower-class Cockney English. The variety that has developed is very distinct and clearly recognisable as Australian.

Australian English is often claimed to be very homogenous but there is certainly variation that appears to be used by speakers to differentiate between different social groups. There are different varieties of Australian English that have more or less in common with Received Pronunciation and the use of these varieties is associated with different levels of prestige. Due to the British influence, the variety closest to Received Pronunciation has traditionally enjoyed the most prestige while the broader variety has been less prestigious. The system of prestige is quite complicated, though, and the structure of this system will be discussed in detail in this thesis.

As any other language, Australian English changes. Most variation is found in vowel realisations and vowels in particular are very susceptible to the influence from social factors. Therefore change in the vowel system is the most interesting in a study of Australian English.

There are several social factors that can affect linguistic behaviour and change. Generally gender and socio-economic class are considered important factors in the prediction of linguistic behaviour but many other factors can have influence on language. This can be on several different levels: personal, social as well as more general levels. These different levels include a number of factors that are relevant to the study of language. On the personal level factors such as age and gender of the speaker are important while socio-economic class and ethnicity, for instance, belong to the social sphere. On a more general level a sense of identity is important as this is the foundation of social aspiration and may affect the general linguistic situation in society. These are just examples and there are many other factors to take into consideration in a study of language - a study which is complicated by the fact that these

factors can also affect one another. This means that they can have direct as well as indirect influence on manner of speech.

1.1 The Object of the Present Study

The object of this study will be to identify the changes in the Australian English vowel system. That is, to identify vowels that have changed in phonetic vowel realisation during the last thirty years or so and may still be changing. In order to limit the object of study only the first and second formants of the vowel targets will be discussed. Onset and offset values will only be included in the discussion if they are of particular interest in relation to Australian English.

Furthermore, changes in the social association of the Australian English vowels will be identified, and the relevance of the different social factors will be discussed in order to determine which social factors have the greatest influence on English spoken in Australia. In the process some sociolinguistic methods and theories used in the study of other varieties of English will be evaluated relative to sociolinguistic studies of Australian English.

A hypothesis, which is often referred to in Australian sociolinguistic studies, about more general tendencies in Australian English will also be presented and tested to the extent possible with the material available. The suggested general changes would have far reaching consequences for the traditional system of sociolects generally used for the description of Australian English. These consequences for the sociolectal system will be discussed in relation to the system of prestige that may need revision in order to reflect the Australian society of today more accurately.

1.2 Method

A general introduction to the most common sociolinguistic methods is necessary in order to discuss their usefulness in the study of Australian English. Chapter two will primarily introduce the methods and theory of Labov but also include alternative points of view. The general methodology of quantitative studies of language will be introduced and then the individual social factors studied most often will be discussed as separately as possible.

Chapter 3 will offer a brief overview of the language history in Australia and a phonetic description of Australian English compared to Received Pronunciation. After a short review of sociolinguistic studies in Australia, the three the sociolects traditionally used to classify

speakers of Australian English will be introduced. As these sociolects, Broad, General, and Cultivated Australian English have developed into points of reference for any Australian linguist, an introduction is necessary for communication with previous studies despite the suggestion later in this thesis that these sociolects may be slightly outdated.

Based on a comparative study of various research projects carried out by a number of Australian linguists, it will be suggested which Australian English vowels have changed, how they have changed and what stage of the change they may have reached (chapter four). This will be on a phonetic level while on a more general level other studies have suggested tendencies in the linguistic situation in Australia. These general tendencies and their relation with the phonetic changes will be discussed at length in chapter five where all the traditional social factors will be considered based on social correlations found in Cox (1996) primarily. A number of different studies will be used in the discussion to supplement the findings in Cox in order to achieve the most accurate understanding of the influence from social factors on English in Australia. Some physical factors naturally also have influence on language in Australia, but as they are not the objects of study in this thesis, they will only be mentioned briefly when relevant.

The sense of identity in Australia will be described in the beginning of chapter five as changes in the Australian identity may influence the linguistic changes as well as the social factors in Australia. The entire chapter will form the basis for a discussion of the system of prestige, which is the foundation of the linguistic choices and judgements of speakers of Australian English.

II Linguistic Change

2.1 Introduction

Since the 1960s sociolinguistic studies have added a new perspective to studies of language, which had previously been dominated by structuralist abstractions. Saussurean structuralism regards language as a system of structures and when used in historical linguistic studies, the purpose is to identify the differences between two or more states of a language. However, when it comes to accounting for the process of change in between the different stages and the mechanisms of change, the structuralist approach fails (Milroy 1992). Sociolinguistics has changed the focus of linguistic studies from the idealised structures to the more normal and variable nature of language, where the main object of study is no longer idiolects, but rather the language used by whole speech communities. It has become clear that language cannot be separated from the context in which it is used as this has influence on the linguistic choices of speakers in this particular context (Labov 2001).

Labov was one of the first to introduce the studies of linguistic variation and change based on empirically founded research of speech communities. This chapter will introduce the basics of such variationist studies including a brief introduction to the methods used in the research, as well as a presentation of the central theories and principles introduced by Labov.

2.1.1 Variation and Change

Variation is generally considered to be a precondition for change but variation does not necessarily cause change. Variation is an inherent part of a language, as different pronunciations exist side by side. An example of such stable variation could be the pronunciation of /ɪ{/, which can be either apical of velar. These options have been used simultaneously for centuries and cannot be considered to be a change from one to the other. A change, on the other hand, is when there appears to be a development in a language from older to younger generations. There is also variation in a language which is due to normal age-grading – that is when the speech of an individual changes independent of the speech community. The use of non-standard forms tend to decrease with age and therefore

differences between generations do not necessarily indicate change in progress in the speech community, and thus it complicates the study of linguistic change as the different kinds of variation can be difficult to distinguish. This will be discussed further in section 2.3.2.1.

2.2 Studies of Linguistic Change – Methodology

2.2.1 Variationist Studies

One of the cornerstones in the sociolinguistic method introduced by Labov is the large amount of data that has to be collected from a representative number of people in a speech community. All groups in society have to be represented usually including people of all ages, of both sexes, from all social classes and so on. The amount of data collected from each individual has to be quite substantial, in order to represent the way this person speaks as accurately as possible, and the type of data collected from each individual has to be of the same kind in order to allow comparison and statistical treatment. This is generally referred to as quantitative studies and it has as its main goal the description of the vernacular of ordinary people.

Most recently Labov used this method in his sociolinguistic studies of the speech community in Philadelphia where he carried out interviews with a large number of people in different areas of the city and analysed the material correlating it with social factors – that is socio-economic class, gender and age. There are several stages in a study of this kind and also some preliminary decisions to be made (Hudson 1991).

2.2.1.1 Preliminary Decisions

First of all a hypothesis has to be formed in order to know which variables need to be studied. These variables have to be identified and a number of variants for each of them must be listed. The objective is that a limited number of variables will be observed and the advantage is that the material thus becomes comparable. With only a few possible variants available for the variables, it is possible to analyse the material statistically and make comparisons between different variables in order to find correlations that would enable some kind of description of the speech community. There are some concerns with this method, though. The fact that the variables to be studied are determined in advance based on hypothesis rather than empiricism creates the risk of overlooking something important because it has not been included in the hypothesis.

Thus the hypothesis is very important. It has to be extensive enough to include everything that might be important, yet at the same time it has to be narrow enough to limit the amount of data needed for an accurate description of a certain feature, which is the object of the study. As it is very time consuming to collect data there must be a balance between the quantity of data and a manageable amount of data, and this can be partly secured by a good hypothesis.

It is also important to have clear definitions of both the linguistic variables and the social factors in advance. The linguistic environment can be quite decisive for the realisation of a vowel for instance, and thus it must be decided beforehand what type environments should be included in the study of a particular sound. The independent variables, the social factors, should also be clearly defined in advance. For example, the division of speakers in a speech community into different socio-economic classes is based on different factors, such as occupation and education among others, but there is no universal scale used by all linguists and consequently it has to be decided which scale or system is more advantageous for the speech community in a particular study.

2.2.1.2 Collection of Data

When all these preliminary decisions have been made, the study can proceed to the next stage – the collection of data, which is an important part of language studies. The selection of the subjects that are to be studied is a rather delicate matter as they have to be representative of the community to be studied. There should be a significant number of people from all socio-economic classes, age groups, ethnic groups, both sexes and so on and so forth. They should be selected randomly, for instance using a phonebook, and after an initial approach, a relatively long interview should be conducted. It has to be of a certain length in order to allow the subjects to relax and reach a certain level of informality so that their speech is as close to their vernacular as possible. There should also be a considerable amount of speech in order to provide enough tokens of each of the variables that have been chosen for the study.

An important part of a linguistic study is the “pilot study”. This is a small-scale study used to test the hypothesis before a larger and more thorough study. Labov’s department store study is a good example of this. He tested the use of postvocalic /r/ in 3 different department stores in New York using “rapid anonymous observation”. He asked a number of employees for directions to a store located on the fourth floor. Their answers provided Labov with the

pronunciation of the linguistic variable /r/ in two linguistic environments (same preceding vowel but followed by either a dental fricative or no ending). As he pretended not to hear the answer the first time, he would make them repeat it and thus provoke a pair of tokens of more careful speech. This allowed Labov to test his hypothesis that high-status groups were more likely to use the more prestigious variant [r] as opposed to [Ø], but the results revealed a cross over pattern of the second highest status group, which forced him to revise his hypothesis slightly (Hudson 1991).

When the hypothesis has been tested and possibly revised in a pilot study the real interviews can take place. These are structured interviews designed by Labov so that they elicit speech with different levels of formality. These range from casual speech to the reading of a wordlist, which is considered to be the most careful speech and to have the highest level of formality. The interviews have to be of a certain length allowing the interviewee to relax in the unnatural situation and the company of the interviewer.

The interviewee's awareness of the interviewer and his tape recorder is the largest problem with the collection of data. This is popularly called the "observer's paradox". The interviewer is interested in recording the vernacular of the interviewee, but the fact that the interviewer is there influences the manner of speech and the interviewee does not speak the way he or she would speak in an informal and relaxed everyday atmosphere. Furthermore, it is not only the recording situation that may influence the way a person speaks. The identity of the interviewer may also have a role to play. This is both due to the manner of speech used which may influence the interviewee and also because of the interviewer's possible status as an outsider, and thus there may be an in-group versus out-group situation to consider. An example of this could be ethnic groups that may have one way of communicating with each other and a completely different way of speaking when they are approached by someone from outside the group. It can be quite difficult for an outsider to gain the sort of confidence from a group that is necessary to document the way its members speak to each other.

There are methods to limit this influence as much as possible and Labov's relatively long interviews are one way to do so. Another solution could be self-recordings, but the quality of these recordings is of a questionable standard as people are responsible for them themselves. This is the dilemma facing the interviewer: does he want speech samples that are as close to reality as possible at the expense of the quality of recording or does he want the

perfect recording of speech that may be influenced by the circumstances of the recording? (Mesthrie *et al.* 2000)

2.2.1.3 Acoustic Data Collection

The method for collecting data has been modernised as has the coding of the data from an interview, which is now instrumental as opposed to the old impressionistic method. Previously, listeners had to transcribe all the data and thus there was a risk for the coding to be rather subjective. The problem with impressionistic coding is both that the listener may hear and code the wrong sound and that the listener may not be expecting an unconventional sound, which may lead to an interesting and new linguistic feature being overlooked. With acoustic data collection the sound is registered with the exact frequencies in hertz, and if variation shows considerable significance the researcher will be aware of it and will be able to consider how important it is and whether or not to follow up on it.

Acoustic description of a vowel is very technical, and the specifics of this technique will not be described here, but basically it involves the identification of a number of formants in a spectrogram of a vowel sound. Normally only the first three formants are included in a study as they are important for speech perception. They are roughly equivalent to the physical position of the tongue when pronouncing a vowel sound. The first formant (F1) is related to the height of the vowel and a higher F1 value indicates a lower tongue position. The second formant (F2) relates to fronting and a high F2 value indicates a very fronted position of the tongue and thus the vowel. The third formant (F3) is not as straightforward as the first two. There is more than one physical feature associated with F3 values, but the most important is lip rounding (Cox *et al.* 2001; Cox 1996). Only few of the studies available for this thesis have included a discussion of this formant, thus it has been left out of further discussions in this thesis.

The acoustic description of vowels is very objective as a computer will keep the odd vowel realisations, which a subjective listener might have coded erroneously, as a familiar variant. It allows the vowels to be plotted into the vowel space with great accuracy and facilitates comparison between sets of data as well as complicated statistical analysis of a large amount of data.

2.2.1.4 Data Analysis

When the data has been collected, all the tokens of the different variants should be counted and coded into computer programs that are available for the analysis of the data. There are a number of possibilities for the data analysis. Some methods are suitable for one kind of analysis while others are interesting in other ways, and the choice of method depends on the purpose of the study. The purpose could be the testing of a rule or a theory, and then a good choice would be a variable rule analysis as it only has two possible options for the coding. Either the rule is applicable or not. This is easy to code and not very time consuming. The problem is that the result of such an analysis depends completely on the question asked and thus also the value of the whole study. This means that the hypothesis has to be quite good, as it is the basis for the whole research project. Another problem is that other important factors or interesting and relevant features in the data may be overlooked simply because their significance is not being questioned. What may seem to be an important factor in an analysis of a particular linguistic feature may actually be a by-product of some other and more important factor that has not been included in the study.

Another option could be a principle components analysis. This offers the opportunity to test an amount of data and a number of different variables for relative significance. This method does not depend on a theory proposed in advance, it only compares all the variables and it will reveal which ones have the most significant influence on the linguistic feature being studied. This method is of course not completely independent of a theory or hypothesis as the variables have been chosen for a reason. There may be a suspected significance that is to be tested, but this method does not rule out as many possibilities as the variable rule analysis. The real advantage of this method is that it can help generate a hypothesis. This is because it tells the researcher what might be a significant factor and this will help in the process of generating theory about what may have influence on a particular linguistic feature. This theory can then be tested later with the variable rule analysis.

These methods are based on an enormous amount of data. As there is a relatively large number of variables there is also a large number of combinations of them. This means that ideally there should be a subject in the study for every combination in order to determine the true significance. This is of course very difficult, if not impossible, but the more people taking part in the study, the more accurate the result will be, or rather, the probability will be greater the more material there is to support it.

Statistical methods are also used to show the significance of a number of variables and to test the probability of the results. Labov makes use of multiple regressions in order to take more than one factor into consideration at the time. A detailed description of these methods is beyond the scope of this thesis, but it is important to be aware of the fact that these statistical techniques are based on different assumptions. For instance, multiple regression and multivariate analysis of variation rely on the normality of the data being analysed.

2.2.1.5 Problems

One problem with variationist studies is the lack of qualitative studies. Stylistic variation is interpreted as a result of the amount of attention paid to the manner of speech or the level of formality. However, the amount of attention may not be the only factor with influence in this respect. It is also relevant to look at the function of the different styles. This demands more qualitative studies of the individual speakers and the way they use different styles of speech, known as "code switching studies" (Mesthrie et al. 2000).

Another problem is that some variation is due to physical differences between men and women as well as different age groups. The simple way to avoid this problem is to study male and female data separately, yet if a comparison of this data is important in a study it is necessary to compensate for these physical differences as they are not relevant to a sociolinguistic study. There are different methods for this compensation, generally known as "normalisation" of data. Basically these methods eliminate differences due to physical factors, while the differences caused by social factors are retained for the study. The different methods of normalisation are not equally efficient, which Labov illustrated with a test of three different ones, and depending on the nature of the study, type of data et cetera, it is rather important to choose the most suitable method for any particular study (Labov 2001).

2.2.2 Psycholinguistic Studies

Studies of attitudes are important to linguistic studies as manner of speech can mark social identity or association with a particular social group. Attitudes to language also reveal much about the system of prestige in a particular society as it is the foundation for value judgements on linguistic behaviour. There are two different approaches for measuring attitudes – a direct and an indirect method, which can be advantageously combined.

2.2.2.1 Observation and Questioning

The direct way of studying attitudes by questioning can give an overview of the attitudes of the society on various levels, such as different regions or socio-economic classes and it provides an idea of how different groups have different attitudes. It is important, though, to be sceptical of the information because of the inclination of the respondents to mislead. Simple observation is another way of collecting information about attitudes, yet while it provides more accurate information about the actual attitudes, it is in a form that is more difficult to analyse and harder to compare.

2.2.2.2 Subject Reaction Tests

The indirect method for studying attitudes in social psychology and psycholinguistics includes techniques called “subjective reaction tests” (SRTs) or “verbal guise techniques”. They are very useful for studies of attitudes to different languages, different accents, and so on. For instance, in a study of attitudes to different accents, a number of listeners are asked to rate speakers, of whom they have heard recordings, on scales of prestige, competence, popularity and so on and so forth. Two kinds of information are recorded about the listeners - the actual ratings, or rather the attitude they express, as well as relevant sociological information which is important in a study of the factors that make people judge others the way they do based on language.

There are also factors on the part of the speaker that may influence the ratings apart from the accent. This could be the something a trivial as how pleasant the voice sounds, or even the quality of the recording. To avoid this influence, a technique called “matched guise technique” can be employed. This technique works by recording the same speaker more than once using the different accents. This will eliminate any influence from other factors than the actual object of the study. However, there are a few problems with this method. If the method is used, for example, to study the attitudes towards different sociolects in Australian English, one speaker will have to be able to use the different sociolects convincingly in order to make the different recordings. This may prove difficult for several reasons. Firstly, the sociolects are not distinct categories, but rather parts of a continuum based on the degree of broadness, among other things. This makes it quite hard to say how an individual is supposed to speak in order to be categorised as a speaker of a certain sociolect. The speaker will have to aim for the extreme points of the continuum to the best of his ability. Another problem is the fact that a

speaker is not likely to be a natural speaker of more than one sociolect. This means that the speaker must have acquired the additional sociolects in some artificial manner and thus he will have to act out the other sociolects that need to be recorded. Thus there is a risk that these are based on stereotypes of the general society and that they are not really representative of the sociolects that are to be rated in the study (Ball *et al.* 1989).

2.3 Why does Language Change?

It is quite interesting why some linguistic features change while others remain unchanged. There are both physical and social constraints on language that prevent change – for instance the avoidance of homophony or social factors such as prestige and solidarity that may have a conservative effect on language (Milroy 1992). There are also different motivations for change. Some of the motivations that have been suggested are the structural principle of least effort, or the more functional optimisation of the communicative function of language by preserving symmetrical linguistic systems and maximising the distinctiveness of the various phonemes in the system. There are also social motivations for change such as imitation of the linguistic behaviour of socially dominant groups or a need for social differentiation (Labov 2001). These social motivations are the primary object of study in this thesis.

Generally, change can enter a language in two ways. It can be introduced by dominant groups in society and then spread to the rest of the speech community. These "changes from above" are associated with prestige and are subject to social awareness. Changes can also enter a language through the vernacular and then spread and become recognised variables. This process follows an S-shaped curve, as a new variant enters the linguistic system at a very slow rate, and then the use of it increases drastically at some point before the curve levels out again slowly moving towards completion of the change (Mesthrie et al. 2000). This kind of change happens in the beginning below the level of awareness and is termed a "change from below" in opposition to changes from above.

As mentioned, one of the most influential researchers in the area is Labov. He made extensive studies of linguistic change primarily in speech communities in New York and Philadelphia. In his work *Principles in Linguistic Change* – Volume one and two (1994, 2001), Labov worked with the factors that influence linguistic change. In volume one his focus was on the internal or physiological factors where he described the different kinds of change and their most natural movements. The second volume supplemented the first as an

attempt to account for irregularities, which could not be explained by the physiology, by studying social factors influencing language.

2.3.1 Internal Factors

There are several theories about internal constraints and motivations for change and despite the fact that these will not be discussed further later in this thesis, a few will be mentioned as they are relevant to any changes of language. These are principles that can help predict the move of a vowel in a certain direction.

The "principle of least effort" is often mentioned as one of the motivations for change suggesting that some changes happen in order to ease the pronunciation of a sound. Not all changes result in easier pronunciation, though, and for some kinds of changes the opposite is actually the case. Labov described how chain shifts and other changes that involve place of articulation, often involve a need for more energy in the articulation as vowels can move to more extreme positions in the vowel space or change into diphthongs and so on.

Chain shifts have been studied intensively and Labov attempted to define principles for the movement of vowels that take part in a shift like that. There are two kinds of chain shifts, as a vowel sound can move as part of either a push chain or a pull chain. In the former, an element moves into the space of another element forcing it to move away, while in a pull chain an element moves into the vacuum of another element that has moved away. One of the driving forces in these kinds of changes is the tendency for a vowel system to maintain symmetry and secure the intelligibility of the different vowels. It is likely to restore the distances between vowels as these distances secure the optimal understanding and ease of perception (Labov 2001).

Labov formulated three universal principles based on historical chain shifts that are completed: (I) long vowels rise, (II) short vowels and the nuclei of rising diphthongs fall and (III) back vowels move to the front (Labov 1994). These principles were refined further by adding the concept of peripherality. Quite a complicated system developed where the vowels moved along peripheral or nonperipheral tracks relative to the vowel system as a whole. Basically it was suggested that 'peripheral vowels become more open and nonperipheral vowels become less open'. Furthermore, 'low nonperipheral vowels become peripheral… [and] the first of two high morae may change peripherality, and the second may become

nonperipheral…[Lastly,] peripheral vowels rising from mid to high position develop inglides' (Labov 1994, 601-2).

There are many instances where these principles do not apply and as they are structural entities, they are not able to take into consideration the unpredictable nature of language. Social factors or psychological factors also have great influence and their influence may even affect a vowel to move in the opposite direction of what should be expected according to the principles. This does not render the internal factors and Labov's principles irrelevant or uninteresting as the combination of all the factors may contribute to a fuller understanding of linguistic change.

2.3.2 Social Factors

Labov described in detail how a change from below goes through several stages from a very new variant of a sound that enters the language, to a social marker and then a completed change (table 2.1). It is clear from this description of the stages that the study of social factors is extremely important. The function of a new linguistic variable as a possible signifier of social distinctiveness is obvious, as is the function as a symbol of social values. It is clear that language is related to location in a social structure and can be used to signal either solidarity or opposition to social groupings. Thus a study of the different social factors is necessary to achieve a better understanding of their influence on linguistic behaviour and the development of linguistic change.

A correlation of the social factors is also important. However, initially it is necessary to determine the effect of the individual factors in order to achieve a better understanding of the combined effect. The following sections will look at the factors separately in so far it is possible. The main source will be Labov (2001) as his studies have formed the basis for many sociolinguistic studies for decades, but the final section of this chapter will include an alternative way of describing society, which was suggested by Milroy (1992). This view of society may add a different perspective to the study of linguistic change and the way it is transmitted from one group to another in a community.

2.3.2.1 Age

It is no surprise that age is an important social factor in a study of sound change. Languages are not static but develop constantly and the language of individuals naturally changes with

age. It develops in all sorts of ways and is always subject to influence from a number of factors – the way others speak, other languages, teaching etc. A speaker never ceases to learn and thus language develops continuously throughout life.

Table 2.1 Possible Process of a Change from Below (Labov 1994, 300)

1) 'A linguistic change begins as a local pattern characteristic of a particular social group, located at the interior of the social hierarchy'.

2) 'The change may be accelerated by its use as a symbolic claim to local rights and privileges, defending the original group against claims by new groups entering the community'.

3) 'As the change becomes generalized throughout the group, it becomes associated for others with the social values attributed to that group'.

4) 'The change then gradually spreads to those neighboring populations that take the first group as a reference group for social values, and it is often reinterpreted and accelerated further by groups first gaining entrance to the social structure'.

5) 'As the opposition of the two linguistic forms continues, it may symbolize an overt opposition of social values. This association of linguistic and social values may rise to the level of social consciousness and result in a stereotype, subject to irregular social correction, or it may remain below that level and result in an unconscious marker'.

6) 'Finally, one of the two forms wins out. There follows a long period when the disappearing form is heard as archaic, a symbol of a vanished prestige or stigma, and is used as a source of stereotyped humor until it is extinguished entirely'.

7) 'After the change is completed, the older pronunciation may be preserved in place names or fixed forms, and it is heard as a meaningless irregularity'.

However, age in a sociolinguistic context is not as straightforward as that. There are different kinds of change or non-change. It is not only the language of individuals that can change, but also the language of an entire speech community. This change can be studied in apparent time by studying speech of different age groups. As young speakers use a larger proportion of new forms than older speakers, a difference between speech patterns of younger and older generations may signal that a change is in progress.

This is complicated, though, by normal age-grading. It is quite normal that young speakers use a larger proportion of non-standard stigmatised variants and that this use

decreases with age. This kind of variation is regular and it is possible to predict as it has a recurring pattern in successive generations and thus it is not a change as such, just a normal development due to aging (Chambers 1995). Age-grading is related to socio-economic class, which creates a problem for an apparent time study of linguistic change as both age-graded stable variation and changes in progress show similar patterns in the central socio-economic classes (table 2.2), and the problem is then to distinguish between variation due to age-grading and changes in progress (Labov 2001).

Table 2.2 Age-grading and Change in Progress (Labov 2001, 76)

	Socio-economic Class			
	Lowest	↔		Highest
Use of stable stigmatised feature:				
Young speakers:	high	higher	higher	low
Older speakers:	high	lower	lower	low
Use of disappearing stigmatised features:				
Young speakers:	[lower]	lower	lower	low
Older speakers:	[higher]	higher	higher	low
Use of features entering the language from below – early stage:				
Youngest speakers:	high	high	high	medium
Young adult speakers:	medium	high	medium	low
Middle-aged speakers:	low	medium	low	low
Oldest speakers:	low	low	low	low
Use of features entering the language from below – late stage with correction from above:				
Youngest speakers:	high	high	medium	medium
Young adult speakers:	high	high	low	medium
Middle-aged speakers:	medium	high	low	medium
Oldest speakers:	low	medium	low	low

Confirming the generational "change in progress" with a real time study can solve this problem, but as this demands a repetition of the data collection with a substantial interval of time in between, this is rarely possible. However, if a study is designed in a way that matches a previous study so that the data is easily comparable, it is possible to theorise about the changes that have been going on in the immediate past. The study made by Cox (1996) about vowel change in Australian English is an example of a current study, which is designed in order to be comparable to an older study (chapter 4). Cox's study suggested what changes have been in progress in Australia for the past 30 years and what changes have been initiated in-between the studies.

A real time study is less efficient in determining whether or not a change is still in progress as there is no way of knowing if the changes have been completed at some point in the interval between the collection of the two sets of data. A study of age effects is an important tool in this respect as it can be used to determine what stage a change has reached. The age coefficient is more significant for new and vigorous changes and mid-range changes, while there are no age effects for completed changes (Labov 1990).

2.3.2.2 Gender

Along with socio-economic class, gender is by far the most important social factor in connection with linguistic change. Gender is a social factor rather than a biological one as it is more the social function, or social role, than the physical difference between males and females that is important. The linguistic behaviour of men and women is rather complex, and it can be summed up in what Labov calls the gender paradox: 'women conform more closely than men to sociolinguistic norms that are overtly prescribed, but conform less than men when they are not' (2001, 293). This paradox is expressed in more detail by Labov's principles 2-4 in table 2.3 below. It is clear that the distinction between change from above or below is important as well as the patterns of stable sociolinguistic variables. The notion of prestige and a division of the changes into stages is important for a clear understanding of the implications of the principles, and this will be further discussed below.

Stable sociolinguistic variables are generally recognised in a society and speakers are most often aware of the social characteristics that are associated with the different variables. There is a general consensus about which variables are more 'proper' than others, or closer to standard pronunciation as opposed to non-standard. One of the most studied examples is the phoneme /ɪ{/ and its variants [ɪ{] and [ɪn]. Most people know this variable and its associations. The [ɪ{] variant is closer to the standard pronunciation and is more prestigious than the other. Stable variables are characterised by relatively straightforward patterns and monotonic functions of socio-economic class as well as style. There is a regular pattern of style as the use of non-standard forms seems to decrease with higher levels of formality and the relation with social class is also quite predictable as non-standard forms decrease in higher socio-economic classes. (Labov 2001)

Table 2.3 Labov's Four Principles in Relation to Social Factors (Labov 2001)	
Principle 1:	"The curvilinear principle" – 'Linguistic change from below originates in a central social group, located in the interior of the socio-economic hierarchy' (188).
Principle 2:	'For stable sociolinguistic variables, women show a lower rate of stigmatized variants and a higher rate of prestige variants than men' (266).
Principle 3:	'In linguistic change from above, women adopt prestige forms at a higher rate than men' (274).
Principle 4:	'In linguistic change from below, women use higher frequencies of innovative forms than men do' (292).

In connection with stable sociolinguistic variables, gender differentiation is just as important as style and socio-economic class, which follows from Labov's second principle (table 2.3 above). Gender is relevant as women tend to prefer standard forms to a larger extent than men, which means that they ultimately encourage the elimination of socially stigmatised forms and stereotypes in the language. This is closely related to Labov's third principle about change from above, which has to do with women being more ready to accept these changes, which are quite similar to stable variables. Like stable variables, changes from above are also subject to a higher level of social awareness as they occur at a higher rate in formal styles. They are 'often subject to hypercorrection, and sometimes form overt stereotypes' (Labov 2001, 274). Thus women seem to be more conservative as well as innovative at the same time. However, this is not entirely incompatible as the common denominator of principles 2 and 3 is the tendency to prefer a language which is considered to be most proper and prestigious.

Prestige is quite important in this respect. Milroy defined two kinds of prestige as "macro prestige" which is 'accessible through a theory of abstract social structure, [and] often appears in practice to be institutionalized, and…is associated with unequal distribution of power in society at large', while "micro prestige" is subjective and 'predicated of personal attitudes developed in the situations in which speakers interact as individuals'. He continued by calling it 'a truism that people who are accorded prestige in [the] second sense frequently do not have prestige in the first sense. In fact, these two kinds of prestige are often in conflict: the social values that confer prestige on prominent members of street gangs…are clearly in conflict with the values of mainstream society' (Milroy 1992, 173). These two kinds of prestige are also known as "overt" and "covert" prestige and what is important to note in this chapter is that women tend to prefer forms that are associated with macro (overt) prestige,

while men prefer the less proper forms that are often associated with micro (covert) prestige. The motives for the different use of prestige are different for men and women and this will be discussed at length in later chapters in relation to the Australian material.

For now, the different patterns of prestige may offer some explanation for the apparent conflict in the behaviour of women, but Labov's gender paradox becomes apparent again when discussing his fourth principle concerning change from below. Here women seem to be the linguistic innovators and leaders quite ahead of men. As opposed to the changes from above that are imposed on speakers by a standard, the changes from below enter the language via the vernacular. As previously mentioned, they are changes that happen below the level of social awareness as the new variants enter the language and are used unnoticed for a period of time until they are recognised as new variants, and social meaning may be associated with the use of them, as was seen in the stages in table 2.1 above.

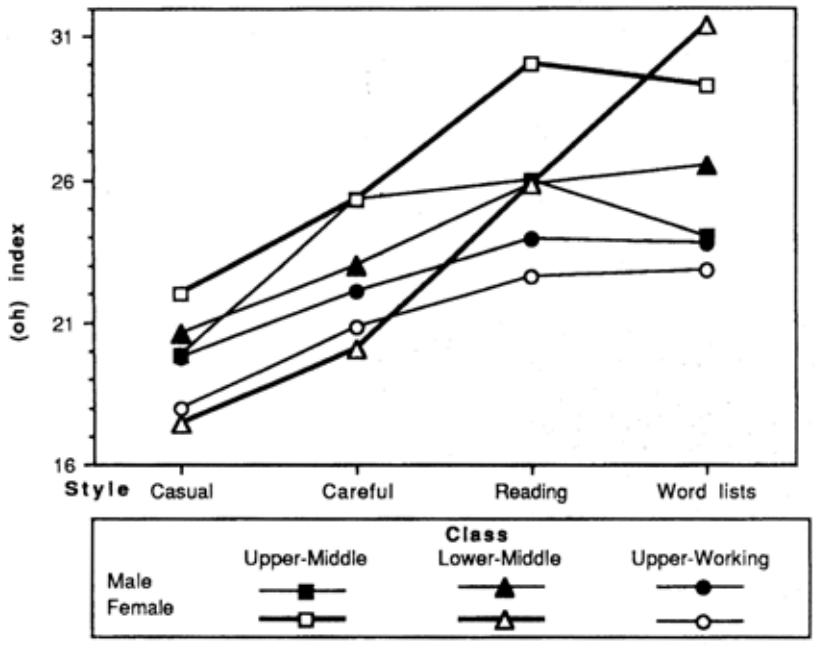
In the very early stage of a sound change from below, women are actually those who use most non-standard forms. In some cases women are a full generation ahead of men, and it is only in very few cases that men actually find themselves ahead of women. Thus the women are leading the changes from below, but this is only at the very early stages of the change. As the changes reach certain maturity, they are recognised by the community and may become stigmatised sociolinguistic variables. At this stage they are likely to be associated with lower social classes and thus less prestige, and they will most likely be used less by women who previously used them most.

There are several stages of sound changes. The first is the incipient stage, followed by new and vigorous changes. These are the ones led by women, or rather, where the gender differentiation is largest, and where the pattern of change from below is apparent. Then follows the mid-range changes and finally the almost completed and completed changes. These show the pattern of sound changes that are overtly recognised and stigmatised, sharing the features of the stable variables with a high degree of social stratification.

To sum up, the tendency is for women to lead linguistic change in its very early stages. As soon as the change is more advanced and the speech community in general becomes aware of the change and speakers associate certain social characteristics with the new variables, women will use them less, in particular in more formal speech where much attention is paid to language. The higher the social class is with which the women associate themselves, the less the new variables will be used.

2.3.2.3 Socio-economic Class

Previously, only the last three principles in table 2.3 have been discussed as they were primarily associated with gender. They relate to the tendency for women to act differently depending on the stage and the nature of the change in progress. However, gender differences are strongly correlated with the influence of socio-economic class. The first of Labov's principles – the curvilinear principle states in which socio-economic class a change is likely to be initiated. Several studies show that the women in the second highest status group are those with the lowest degree of non-standard forms, or to put in another way, this is the status group with the greatest gender differentiation. Women in this status group also exhibit the most linguistic insecurity and a striking pattern of style shifting (Labov 1990).



(Labov 1991, 224)

Figure 2.1 Socio-economic Class and Style

This is clear from figure 2.1 where it is apparent that the lower middle class (LMC) female data is the most interesting. While the upper middle class (UMC) females are most conservative in all the different styles (except the most formal one), the LMC females are the most innovative of all speakers in casual style, but most conservative in the most formal style

– that is wordlist. So the more formal the situation is, the more observant LMC females are of their language and the more 'correct' they are in their speech. Naturally, all the groups become more careful with their speech as the level of formality increases, but the LMC females even tend to hypercorrect their language (Labov 1990).

This shows that women in the second highest social group are most sensitive to social stratification and this is likely to reflect linguistic and social insecurity. The theory is that part of the motivation for this behaviour is social mobility, as the use of more prestigious standard forms will allow these women to be associated with groups that are higher in the socio-economic hierarchy and thus they will gain prestige through their choice of linguistic behaviour. Labov has also managed to show that the second highest social group use the highest proportion of non-standard forms in connection with new changes that are not yet above social awareness. This tendency is what forms the basis for the curvilinear principle (table 2.3).

Thus it appears that in connection with the same linguistic variable, the same speakers (LMC females) can be the most innovative and the most conservative depending on style as well as the stage of a change from below. This is not necessarily a paradox and Labov saw it more as an indication that women, in the central parts of the socio-economic hierarchy in particular, respond more readily than men and other social groups to the changes in the social association of a linguistic change or variable (Labov 1990). This is not surprising as this group is also associated with the highest degree of linguistic insecurity and hypercorrection indicating a very high degree of linguistic awareness and observance.

2.3.2.4 Ethnicity and Identity

The effect of ethnicity is surprisingly small according to Labov. It could be anticipated that a large number of speakers with a different ethnic background would influence the language of a speech community, but this does not seem to be the case in Labov's studies (Labov 2001). As language is transmitted from parents to their children it might be expected that immigrants in an English speaking community would transmit an accented English to their children with influence from their first language, but this effect seems to be weak.

On the contrary, what seems to be the case is a move in the opposite direction of what could be expected for the second-generation immigrants. The tendency seems to be that often the younger generations of the immigrants use language to distance themselves from their

background cultures in order to integrate into a host culture. This can be done to such an extent that they actually hypercorrect themselves relative to speakers of English. Labov has called this "ethnic hypercorrection" or the "principle of counter reaction" (2001).

Language is closely connected with identity for most people, and identity can be an important factor when an individual determines which language or accent to use in a certain situation or in general. Language can be employed as a tool to signal attitude to a person spoken to, as well as membership of a group and in-group solidarity. It can also be used to create distance between both different speakers and also certain ethnic backgrounds for instance. Sometimes a speaker can even use language to shift between different identities with remarkable ease. For example, when an Australian with an Italian background interacts with his Italian peers he may use a register which is quite different from the one used when he is among Australians with a British background. This raises the problem of code switching, which is quite relevant for a study of language. The fact that speakers are capable of switching from one dialect or sociolect to another depending on context can distort the data in a linguistic study, which is also related to the observer's paradox mentioned above.

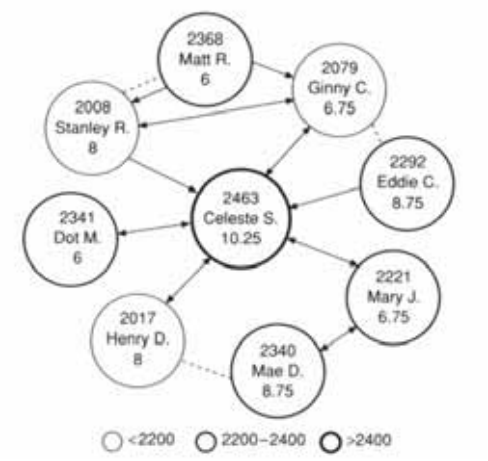
The idea of intergroup relationships is relevant as language is an important factor for signalling the fact that the entire group is distinct from the rest of society. Often this is important in diverse societies like Australia where many ethnic groups have experienced a sense of not belonging to the main society. In Australia there has been much public discrimination towards some ethnic minorities and these groups have generally not enjoyed a very high status. This has motivated the establishment of rather closed communities with different ethnic backgrounds, where the primary culture can be maintained in the company of others with the same background. This sense of being part of a group may then be signalled partly through language, either by speaking the language of the background culture or by speaking English with a recognisable accent. This can be termed as a collective divergence from the host-culture – in this case the British dominated Australian culture – in order to signal the group's distinctiveness. The opposite linguistic strategy is convergence – the strategy chosen by someone who is not closely connected to the background culture, but tries to assimilate into the host-culture by speaking English with as little accent as possible. The choice between these two strategies is determined by how dominant the ethnic identity is opposed to the wish to integrate (Ball *et al.* 1989).

2.3.2.5 Social Networks

So far it has been established that the behaviour of females is most relevant in connection with linguistic change, as they are the ones who most readily accept new forms entering the language. This is the case both for changes imposed on language from above and for changes entering from below. However, there is still the conflict between this innovative behaviour and the generally accepted claim that women are the more conservative when stable variables and stigmatised forms are concerned. In his search for the linguistic leaders, Labov tried to resolve this paradox by studying the social networks of the Philadelphia speakers (2001).

In order to examine how a social network is structured and how it may influence language and linguistic change, Labov tried to monitor the relationship between people living in the same neighbourhood. He did so with qualitative research, by interviewing people and registering what they talked about, whom they mentioned, if they considered people acquaintances or friends, how often they visited people and so on and so forth. He used this information as basis for sociometric diagrams that illustrated how certain individuals in a small community were interrelated. Adding linguistic data to the individuals allowed him to observe their linguistic behaviour relative to their position in a social network.

Figure 2.2 shows one of Labov's examples of a social network of a block in one of the neighbourhoods in his Philadelphia study. This illustrates how Celeste S. is a central person in her neighbourhood and how the people she interacts with are interrelated. Dashed lines means that the individuals are related. The numbers in the circles are linguistic data, the top number being the F2 values of a new change in progress, and the bottom number being an index value indicating the degree of communication with people on the block. A number of examples of this kind have allowed Labov to show that there appears to be a relationship between the centrality in social networks and the use of more advanced realisations of changes in progress. Thus it seems that Labov was able to identify a small group of leaders that all occupy central positions in local social networks.



(Labov 2001, 350)

Figure 2.2 Example of a Social Network

2.3.3 The Leaders of Linguistic Change

The centrality in the sociometric diagrams is therefore one of the most important features of a leader of linguistic change as this person becomes a reference point for everyone else in the community – a position that allows for an influence on the linguistic behaviour of others (Labov 2001). This central position is a consequence of the personalities of these leaders. Labov called them "block captains" and it is quite clear that they are the kind of people who would also have the role of leaders in more conventional ways. They generally enjoy much respect from others in the neighbourhood. They have high status, are generally very sociable, and they have many friends and ties to people outside their local blocks.

It follows then that in his search for the linguistic leaders, Labov narrowed it down to women in the intermediate socio-economic classes who enjoy central positions in their local social networks and also have many friends outside these local networks. They are well liked and sociable and have the personalities of social leaders.

Labov continued his research of these leaders in order to further explain the previously mentioned paradox that women are both more innovative and more conservative than men, and it appeared that there was a need to further subdivide the group of women that collectively exhibited this contradictory behaviour and not treat them as an entity. Using multiple regression analysis, Labov tried to correlate stable sociolinguistic variables with changes shown to be in progress and he found that there was a correlation between the voiced dental fricative, which was a stable variable in the Philadelphia study, and some of the

changes in progress. This analysis divided the women into two groups – a smaller group that used the more progressive variants of the changes in progress, but surprisingly also used most non-standard variants of the stable variable. The smaller group of women turned out to be the leaders of change already identified in the part of Labov's study concerning social network. Thus it appears that the leaders are non-conformist with respect to both stable variables and changes in progress, while other female speakers are responsible for the more conservative behaviour rejecting the stigmatised forms in the language. These findings clearly stress the need for quantitative studies to be supplemented by qualitative studies in order to reveal such interesting connections that would otherwise have been concealed in the statistical analysis.

The last point that needs to be made in this section is that there is an important distinction between "leaders" of linguistic change and the "innovators" who initiate the change. This relates to the actuation problem, which is still unsolved as it is very difficult to observe or identify the very beginning of a change. In his more structural approach, Milroy addressed this problem as a part of his study of the structure of society and the transmission of change.

2.3.4 Social Networks as a Structure of Society

While Labov used social network on a personal level in order to identify and describe the leaders of linguistic change, Milroy (1992) approached the matter differently and used social networks on a more abstract level. Milroy criticised Labov's characterisation of society as socially stratified. He found it problematic that Labov located his linguistic innovators and leaders within the system of social class and then explained the motivation for the changes using the notion of prestige, which is derived from the same social system. As an alternative to Labov's stratification of the speech community in social terms, Milroy suggested a more abstract model of social networks and the connection between them via strong or weak ties.

Milroy's structural approach allowed him to theorise about the manner in which a linguistic change is transmitted from one group to another. He tried to address the actuation problem and surprisingly, he found the initiators of change in non-central positions of the social networks. The distinction between strong and weak ties is crucial to Milroy's argument. Generally it was assumed that strong ties were more important with respect to the spreading of a sound change, but Milroy claimed that the strong ties impede rather than facilitate change, while weak ties create better conditions for linguistic influence from external sources.

Thus change is transmitted along weak ties in-between groups, and it might be added that groups, which are characterised internally by strong network ties, are less susceptible to change.

A person responsible for this transmission is therefore connected to more than one group with weak ties and is thus a peripheral rather than central member of the groups. According to Milroy, the central members of the close-knit groups are not likely to adopt the changes until they are widely accepted by the peripheral members – in fact the central members are not likely to accept changes at all, so people influencing the group through weak ties have to be quite numerous in order to make the change successful.

At first glance Milroy and Labov's models do not seem easily compatible, but in some areas there is actually agreement between the studies. They both agree that the kind of person responsible for the diffusion of linguistic change is sociable and has many friends in more than one group, both inside and outside the community they belong to primarily. It is a person found in the socially mobile groups, but Milroy and Labov differ in the fact that Labov found this kind of person central in his sociometric diagram, while Milroy's innovator was peripheral to the group.

Milroy claimed that Labov's leader of linguistic change is more like what Milroy would call an early adopter. In Milroy's theory the early adopters were central members of a social group and conforming to the norms of the group, while the innovator was marginal, linked to more than one group through weak ties and 'underconforming to the point of deviance' (184). However, there seems to be an inconsistency in Milroy's distinction between innovators and early adopters. Apparently the early adopters are supposed to adopt the changes from the innovators, who were supposed to be peripheral members of the groups, but it is not amply clarified how the change diffuses to the rest of the group once it has reached the early adopter. As described earlier, Milroy's theory is based on the claim that change is transmitted via weak ties and that subsequently it moves from the periphery of the group towards the centre. If the early adopters are also able to transmit the change then it follows that the opposite direction, from centre to periphery, is also possible and this would then be along relatively strong ties, which were supposed to impede change.

What is worth noting is first of all Milroy's distinction between the innovator and the early adopter. The linguistic behaviour of the innovator represents the very early stage of a linguistic change and can be considered personal as it has not yet spread to others in the

speech community. The innovative behaviour cannot actually be considered a change until it has been accepted by the early adopter. When it has reached the early adopter, the change will become more widespread in the community and it will become socially significant.

Secondly, it is important that the innovators are not central in the group, but rather peripheral and not conforming to linguistic norms of society. It might be possible to draw a parallel to Labov's comparison with fashion leaders, where a small number of people may be deviant in their choice of clothing and this tendency will only become a fashionable trend when another group of people, equivalent to the early adopters, accepts this new way of dressing – not until then is there a new change in progress.

Thirdly, the weak-tie versus strong-tie distinction is quite interesting with the suggestion that strong ties impede change and that change is transmitted along weak ties. At any rate until the linguistic innovation has reached the early adopter, then it appears to be possible for the new linguistic trend to diffuse within the groups along relatively strong ties.

Finally, it seems that the search for the innovator and the solution of the actuation problem is close to impossible. It can be hard to observe the actuation of change as it is bound to happen in relatively unimportant situations when people connected via weak ties meet. Also, it is not a matter of finding an innovator and then observing him, since once an innovator does not necessarily mean always an innovator. It seems to be more a matter of identifying the situation in which the change can be initiated, rather than finding the person who is actually responsible for the event (Milroy 1992).

III Australian English

There is general consensus that Australian English (AusE) is related to Cockney as there are many similarities with this particular English variety, but there is some disagreement on the actual composition of the English language that was exported and how it developed into the Australian English used today. One theory suggests that AusE is a further development of Cockney as it was spoken a century ago, but most studies support a theory of amalgamation of a number of dialects that were transported to Australia. Not all the convicts came from London and even though the London accent was predominant in the colony, it is likely that other dialects would have influenced the developing Australian variety of English (Cox 1996; Guy 1991)

According to the amalgamation hypothesis, the Australian accent was developed by the so-called "Currency Lads" who were the children of the convicts and first immigrants and thus the first generation that was born in Australia. These children were exposed to a number of different dialects spoken around them and they developed their own accent based on the linguistic features heard most often. This is consistent with the predominant influence of the lower class London accent, Cockney, as it would have been the accent most used in the early colony.

According to one theory, the accent developed by the Currency Lads was called Proto-broad AusE, from which other accents developed, constituting a system of different accents or that were associated with different levels of prestige, later to be described by Mitchell and Delbridge as sociolects of AusE. An alternative to this theory is the idea that a variety of dialects with different levels of prestige were imported to Australia simultaneously, so that a hierarchy of dialects or accents were present from the beginning. These have then developed into the different sociolects of AusE (Cochrane 1989; Cox 1996). Görlach has suggested a third possibility that two general levels of prestige were imported based on London middle-class speech and lower-class Cockney, and partly because of social mobility these merged forming the foundation for the central sociolect, General AusE, used by most Australians to this day (Görlach 1991). It is impossible to determine with any certainty exactly how the Australian accent has developed, but there is generally consensus about the strong influence

from London accents, and there appears to be most support for a mixing of a number of different dialects.

Apart from the phonetic differences that will be discussed in this chapter, AusE has developed some features that are particular to this variety of English. The vocabulary in particular is very different as a lot of new words have been coined for things and animals that are not known in other parts of the world. Words have been adopted into AusE from the Aboriginal languages – especially place names and names for culturally unique items like boomerang and didgeridoo. Due to the growth of multiculturalism in Australia, many words have been imported from Asian cultures and southern Europe. This is very common in the gourmet section of the vocabulary, as Australians have adopted culinary art from all parts of the world.

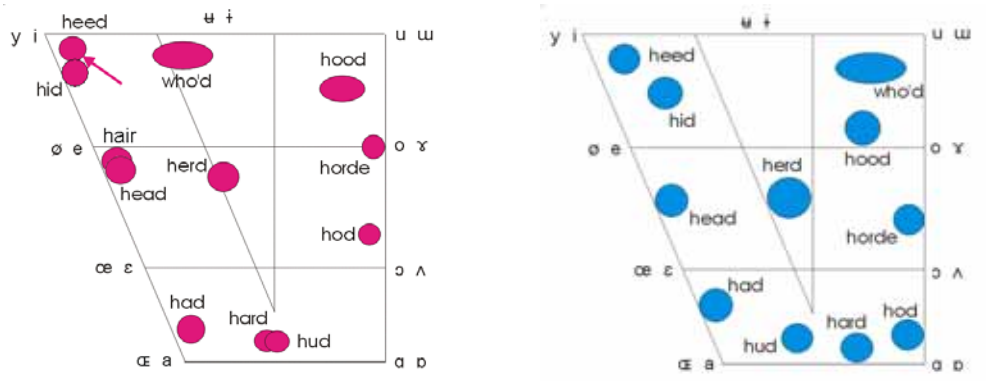
Phonetically AusE is considered to be regionally homogenous, but there are many regional differences in the vocabulary, which means for instance that a swimsuit is known as bathers, trunks, swimmers, togs, cossie and costume depending on which state you live in. Another tendency that is quite widespread in Australia is the inclination to shorten everything and create diminutives for anything possible, for example 'arvo' (afternoon) and of course 'Aussie' for anything Australian. Thus AusE has developed into this very unique variety of English and with the advent of the Australian Government Style Manual in 1966 and the creation of the Macquarie Dictionary in 1981, it has been accepted as such (Peters/Delbridge 1989).

3.1 Phonetic Characteristics

When comparing AusE monophthongs with their counterparts in Received Pronunciation (RP), the general tendency is that they are either more fronted or more raised. Cox and Mannel have produced the vowel charts below (figure 3.1), which allow for a comparison between AusE and RP. It should be noted that the AusE vowel chart does not take into consideration the inherent variation in AusE and thus the comparison will only allow for an illustration of the general differences relative to RP.

The two vowel charts indicate that the AusE vowels /ɛ, ɒ/ (head, hod) and /ɔ/ (horde) are all more raised, and /ɪ, i̇, a, ɜ/ and /u/ (hid, heed, hard, herd and who'd) are all more fronted as well as slightly more raised. The RP /i/ is also quite fronted, but there is a tendency

for the AusE /i/ to have an onglide from a lower and more central position. AusE /ʊ/ (hood) is also more raised, but slightly further back than its RP counterpart. /ʌ/ and /æ/ (hud, had) are the only vowels that are neither more raised nor fronted compared to RP as the AusE /ʌ/ is further back behind central position, and the AusE /æ/ is lower than the RP version. The fact that the AusE /ʌ/ is further back means that it is overlapping with /a/. Furthermore, the AusE vowel chart has an extra front vowel – the vowel sound in "hair". This would normally be considered a diphthong (/ɛə/), but there is a tendency in AusE to monophthongise the centralising diphthongs (see below).



a) AusE monophthongs relative to the cardinal vowels. (Adapted from Cox 1996)

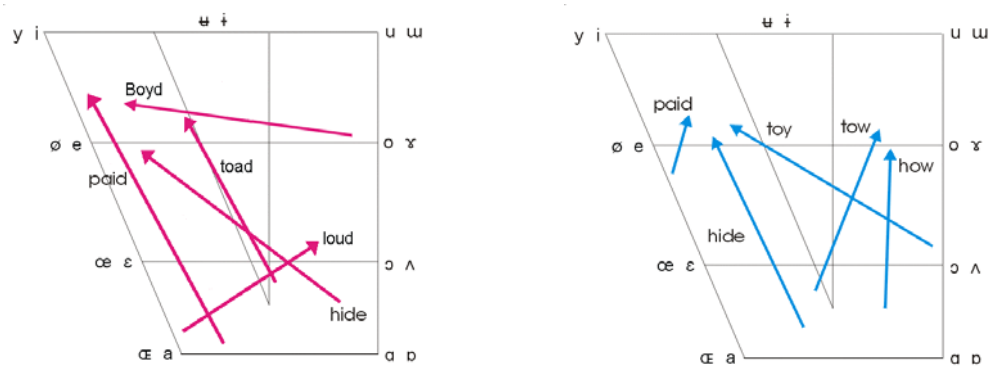
b) RP monophthongs relative to the cardinal vowels.

Figure 3.1 Australian English and RP Monophthongs (Mannel 2001)

The AusE diphthongs are also quite different from RP. The vowel charts below (figure 3.2) show the rising diphthongs only. The most striking difference is the diphthong /aʊ/ (loud/how). The first target of the AusE version is just behind front, whereas the RP version has a centralised back position. The AusE /aʊ/ T1 is just above open, while the RP version is between open and half open. The second target of AusE /aʊ/ moves toward a back position just above half open, while the RP /aʊ/ T2 moves up to a half close position.

The AusE diphthong /eɪ/ (paid) has a much lower T1 than the RP version, and while the RP T2 moves up to a centralised front position just above half close, the AusE /eɪ/ remains fronted but moves to a position above half close and it has a much longer trajectory than the

RP version. The AusE /aɪ/ has a T2 which is quite similar to its RP counterpart as they move toward a half close and centralised front position, but the AusE /aɪ/ T1 is almost at a back position whereas the RP T1 has a centralised front position. The AusE and RP versions of /oʊ/ (tow/toad) have rather similar first targets just below half open in the centre of the vowel chart, but their trajectories have different directions. The AusE /oʊ/ moves to a centralised front position just above half close, and the RP T2 has a centralised back position. Finally, the AusE diphthong /ɔɪ/ (toy/boyd) differ from RP primarily in the first target, as it moves from a half close back position to a centralised front position just above half close. The RP /ɔɪ/ T1 is much closer to half open but moves towards a centralised front position just above half close like the AusE version.



a) AusE non-centralising diphthongs relative to the cardinal vowels.

b) RP diphthongs relative to the cardinal vowels.

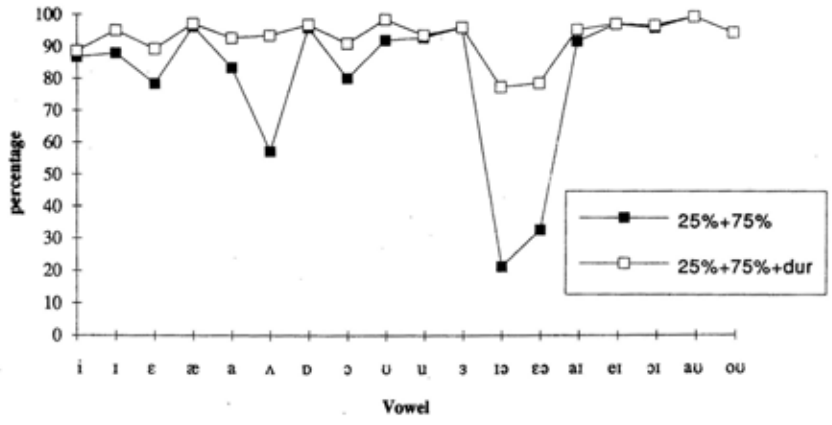
Figure 3.2 Australian English and RP Diphthongs (Mannel 2001)

Monophthongisation of centralising diphthongs is considered to be a feature of AusE (Turner 1994), but some studies also show that there are still a large proportion of these vowels that retain their diphthongal quality. The tendency to monophthongise is greatest for /ʊə/ which seems to have merged with /ɔ/ in many cases. The linguistic environment is quite important in this respect as the diphthongal quality is retained primarily in open syllables, while the long monophthongs are more common in closed syllables as in the /hVd/ context used by Bernard and Cox in their studies (see below). This might be the reason why Bernard and Cox's studies offer relatively strong support for the theory of increased monophthongisation. (Harrington *et al*. 1997)

One of the consequences of the monophthongisation is that these new long monophthongs overlap with some of the other monophthongs in vowel quality. This results in vowel pairs that are only distinguishable in terms of duration. The trajectories of the centralising diphthongs are very short making these diphthongs very similar to the monophthongs corresponding to their respective first targets (Cox 1996). This tendency is the reason why Cox has added /ɛə/ to her monophthong vowel space in figure 3.1 above.

Generally, duration of vowels is becoming increasingly important to the AusE vowel system. Not only due to the monophthongisation of the centralising diphthongs, but also because of a tendency for other vowels to move closer to one another in the vowel space. As they overlap and share vowel quality, the length of these vowels is important for their classification. The clearest example of this is the vowel pair /a/ and /ʌ/, which occupy the same position in the vowel space and are distinguished by duration with /a/ being a longer version of /ʌ/.

Cox (1996) made an experiment to test the importance of duration in the classification of AusE vowels and she was able to demonstrate quite a significant influence. Her results show that the percentage of correct classification increases when durational information is supplied, and the effect is strongest for the centralising diphthongs and the monophthong /ʌ/. There is also an effect for /a, ɛ, ɔ/ and to a lesser degree for /ɪ/ and /ʊ/ (figure 3.3).



Percentage of correct classification of vowels with information about the 25% and 75% point of the vowel – with and without durational data. (Cox 1996, 162)

Figure 3.3 Durational Data of Vowels

3.2 Variation in Australian English Vowels

Generally, AusE is thought of as being very homogenous in terms of dialects, especially if compared with dialects in Britain for instance. Despite the vast area of the Australian continent there is not much evidence to support the existence of regional variation. Linguists like Bradley (1989), Bernard (1989a), and Horvath/Horvath (2001), have studied regional variation but despite their efforts they have only been able to point out a few tendencies that are stronger in some urban centres than others. Their findings are not particularly significant yet it is an area of Australian linguistic studies that would be interesting to investigate further. However, the available material is too limited to make any certain conclusions.

3.3 Sociolinguistic Studies in Australia

Despite the claim that AusE is extremely homogenous, there is certainly variation to be found. AusE has generally been described in terms of three sociolects that constitute a continuum of broadness. The sociolect called Cultivated AusE (C), which has most in common with the external standard RP, is at one end of this continuum. Broad AusE (B) is at the other end, and General AusE (G) is in between the two. G is the variety or accent spoken by most Australians, whereas only about a tenth of the population favour C, and a third of the Australians employ B AusE (Mitchell and Delbridge 1965). It is important to stress that the sociolects are not distinct and that a speaker does not use only one category of vowels but may use all the varieties with a larger proportion of one of the vowel types.

These sociolects are a legacy of the linguists Mitchell and Delbridge who were the pioneers of sociolinguistic studies in Australia. Paradoxically, they set out to confirm Mitchell's claim that social factors had no influence on a speaker's choice of variety, but they had to conclude that the social factors, education in particular, were important (Horvath 1985). Mitchell and Delbridge were part of a structuralist tradition, which is reflected in the three varieties that are merely theoretical constructs rather than actual varieties used by speakers in Australia (Guy 1991). Mitchell and Delbridge had to acknowledge the fact that no speaker of AusE was limited to using just one of the varieties but used a percentage of vowels from all of them, as mentioned above. It was also clear that the varieties were not distinct, but points on a continuum. Thus the abstraction of the sociolectal system is relatively unsuccessful in categorising speakers as users of one sociolect or the other, as will be clear

from Horvath's study, but nonetheless the sociolects have remained with Australian sociolinguistics to this day.

Horvath studied the sociolects in Sydney, but she was motivated to attempt a different approach because of the fact that the sociolects are not distinct and that a division of speakers according to the three sociolects C, G and B does not reflect reality (1985). Based on Labov's methods, she conducted sociolinguistic interviews with 180 subjects in Sydney, but instead of classifying speakers in advance as speakers of either of the sociolects, she used the sociolects to classify the individual vowels used by the speakers. This allowed a more objective approach to the speech community as well as grouping of the speakers according to linguistic characteristics. She used principal components analysis in order to classify speakers according to their use of vowels, and she managed to divide the Sydney speech community into two primary groupings - a core and a periphery. The periphery has two subgroups and the core group is further divided into four sociolects.

What is innovative in Horvath's study is the fact that, in addition to people with a British (Anglo) cultural background, she has included people with a non-Anglo background, who had previously been left out of the studies of AusE because of their non-AusE accent. Horvath took into consideration the increasing number of immigrants, especially from southern Europe, and considered them just as much a part of the Sydney speech community as people of an Anglo-Australian background. Thus influence from immigrant groups could not be dismissed in advance.

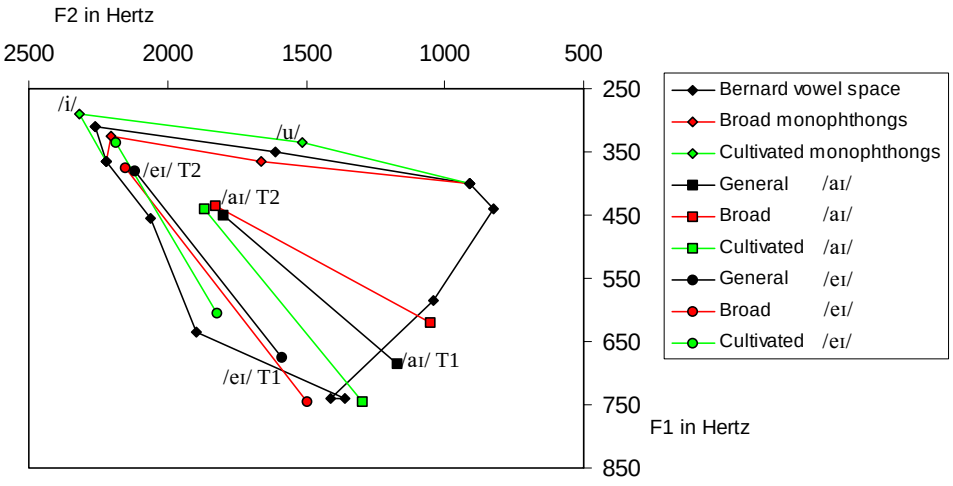
Despite the fact that Horvath did not control her study phonetically and that the acoustic methods available at the time of her study have not been used, Horvath's study contributed to studies of AusE by questioning the well-established system of description in terms of the sociolects. Her use of linguistic groupings as an alternative to groupings according to social factors can be useful, but it is also important to be aware of the risks in using linguistic variables as independent variables. It may result in artificial groupings, as in a case where a curvilinear pattern is present and both lower and upper classes exhibit the same linguistic behaviour in some instances, but do not necessarily belong to the same group because of that (Labov 2001).

Bernard was the first to introduce sound spectography in Australian linguistic studies. The acoustic measurement of vowels was a welcome alternative to the impressionistic method used in linguistic studies and Bernard's measurements have been considered representative of

the AusE vowels from the 1970s until the late nineties. In 1996 Cox conducted a large-scale study of AusE comparing her acoustically measured vowels with those of Bernard and she managed to show that the vowels have changed, and that the Bernard data no longer accurately describes the Australian vowel system (see chapter four). As in Bernard's study, Cox's study was phonetically controlled as all the vowel tokens were collected in the same linguistic environment. What is different with Cox's study is that she did not classify her speakers in advance according to the traditional sociolects. After describing the vowels and their development, she correlated her data with social factors predicting linguistic behaviour according to these to the extent possible (see chapter five).

3.3.1 The Sociolects

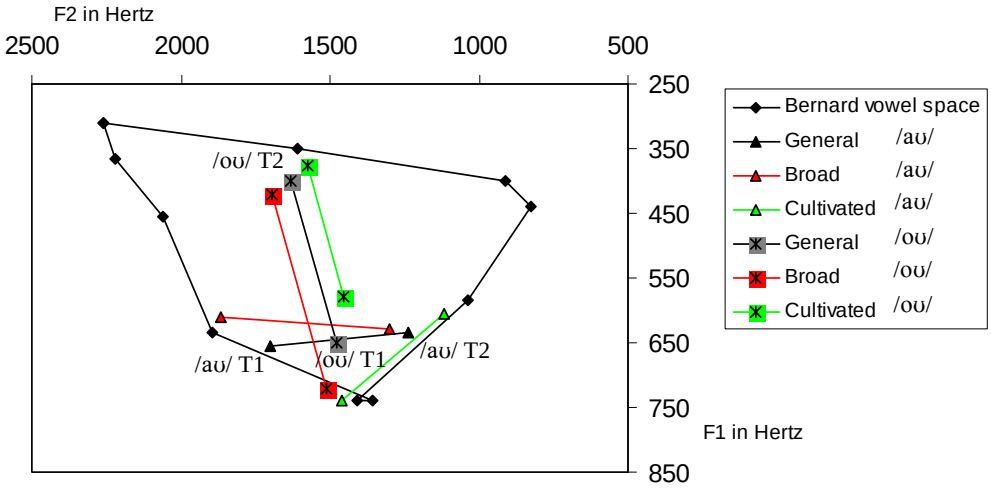
Mitchell and Delbridge claimed that six vowels in particular could be used to distinguish speakers of the three sociolects: /eɪ, aɪ, i, aʊ, oʊ, u/ (1965), and Bernard's studies have confirmed that these vowels, especially the diphthongs, show the greatest accent variation (Bernard 1989b). The variation in these sociolectal markers has been illustrated in figures 3.4 and 3.5, which were generated using the raw data published in Bernard (1970). Cox found in a reanalysis of the Bernard data that compared to C and G, the B variety was characterised by larger onglide of /i/, retraction of the first target of /eɪ/, retracted and raised T1 of /aɪ/, fronting and raising of first target of /aʊ/, a lowered T1 and a lowered as well as fronted T2 of /oʊ/, diminished offglide for /ɪə/ and /ɛə/, fronting of /a/ and /ɜ/, and lowering of /u/ (Cox 1998).



(Based on data from Bernard 1970)

Figure 3.4 Bernard's Sociolectal Markers /i, u, aɪ, ɔɪ/

Harrington, Cox and Evans (1997) also described the three sociolects, B, G and C, based on an acoustic phonetic study of the AusE vowels. Despite the fact that the speakers in the Harrington *et al.* study were categorised according to accent before the acoustic analysis, a method Cox herself was critical of in her doctoral thesis (1996), the results of their study give a clear idea of the traditional sociolectal variation in Australian English.



(Based on Bernard's data from 1970)

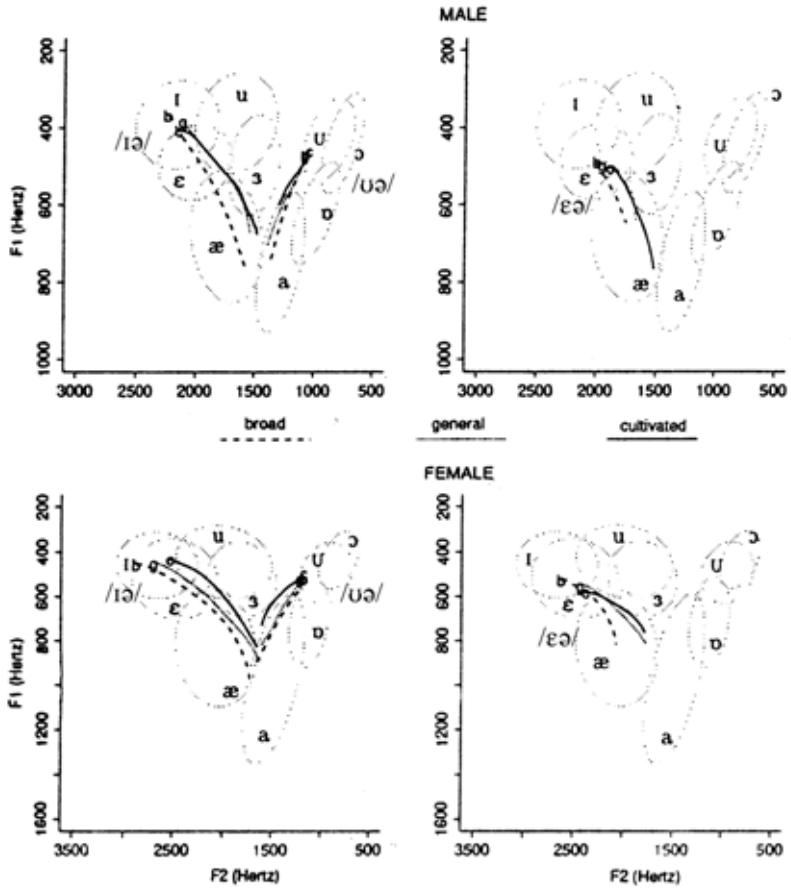
Figure 3.5 Bernard's Sociolectal Markers /aʊ, oʊ/

It appears that /u/ is more fronted in the B variety, and this is also the case for /ɜ/, but only in the female data. For both /u/ and /i/ the duration from onset to target is longer for the B vowel variants, and it appears to be a general tendency for B speakers to have a higher proportional target time than speakers of the other varieties, especially in the male data. This corresponds to the stereotypical description of B speakers as slow or even lazy (Harrington *et al.* 1997).

For /i/ there is an expected lower F2 value for the onset of the B variants corresponding with the tendency for /i/ to have a longer F2 onglide in Broad AusE. It is interesting that young B speakers show less marked onglides than older B speakers. Harrington *et al.* did not suggest an explanation for this difference according to age, but it may be related to the theory that /i/ is in the process of change in the direction of a realisation with a diminished onglide, which will be discussed later in the present study.

The accent differences for the rising diphthongs are most significant for /aɪ/ and /aʊ/. The B T1 of /aʊ/ is raised and more fronted, and for /aɪ/, B T1 is further back and more raised than in the other accents. Both /oʊ/ and /eɪ/ have more fronted first targets compared to the other accent groups. All of these differences, except for the fronted B /eɪ/ T1, support Bernard's sociolectal differences that were illustrated in figures 3.4 and 3.5.

The centralising diphthongs are difficult to work with in AusE because of the tendency mentioned earlier to become long monophthongs. However, it is noteworthy that the trajectories of the B variants are closer to the periphery of the vowel space (figure 3.6). Thus the trajectories of /ɪə/ and /ɛə/ are more fronted for B speakers while Broad /ʊə/ is slightly retracted compared to the other accents (Harrington *et al.* 1997).



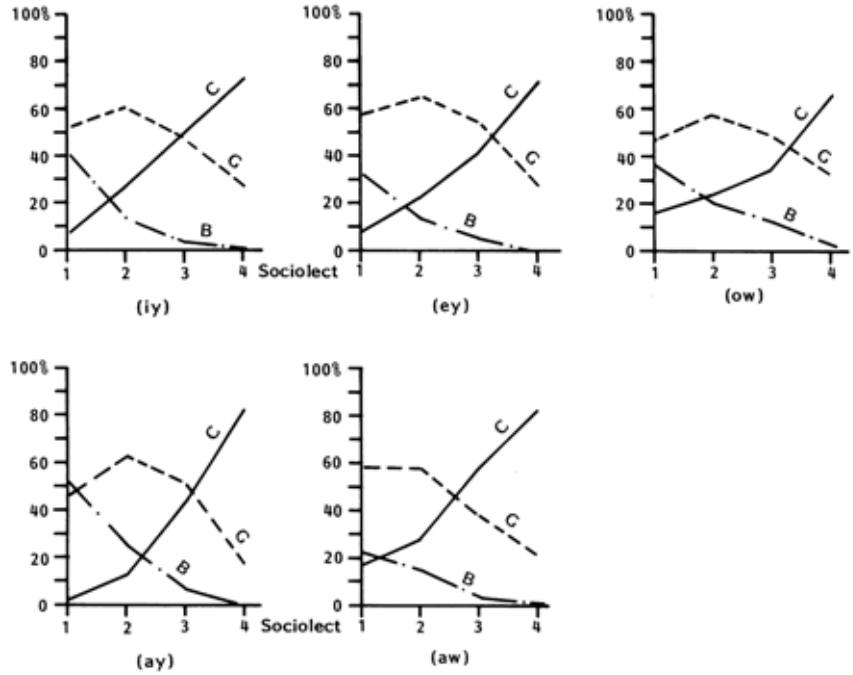
(Harrington *et al*. 1997, 176)

Figure 3.6 Centralising Diphthongs of the Three Sociolects

As mentioned, Horvath (1985) used a different approach and attempted to describe a completely different set of sociolects. As she included people with Italian and Greek backgrounds, she found that these groups use variants of vowels that cannot be classified according to the traditional sociolects, so she added two classifications – Ethnic Broad (EB)[1] and Accented (A) AusE. The A variants are not interesting as they are affected by the first language, but the EB variants are interesting to Horvath as they are qualitatively similar to the C, G and B variants, only they 'carry the movement of the vowels further along their trajectories' (69). Horvath claimed that the EB variants are interesting in connection with

[1] In Horvath's terminology 'ethnic' is to be understood as 'non-Anglo', but when discussing 'ethnicity' on a more general level, Anglo-Australians have been included as an ethnic group. Thus the category EB refers to vowels that are only used by speakers with non-Anglo backgrounds.

linguistic change in progress as these vowel variants may be advanced stages in a chain shift suggested in other studies. This suggested connection will be discussed further in section 5.5.3.



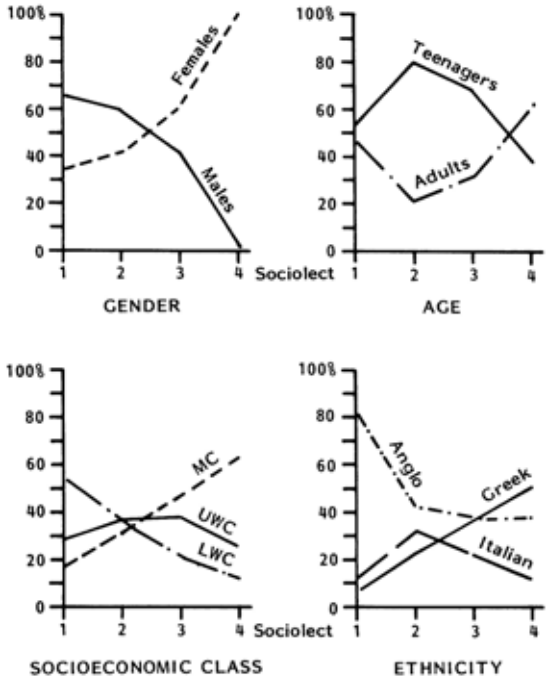
(Horvath 1985, 77)

Figure 3.7 Proportion of C, G and B Vowels Across the Four Core Sociolects

The EB and A vowel variants are only used by speakers in the peripheral group of the Sydney speech community, but this group also use a relatively large proportion of the classical AusE vowel variants, which is why the peripheral group is considered to be a part of the entire speech community and not a distinct community. The peripheral group is further divided into two groups or sociolects using principal components analysis. The only variable that is relevant in this process is ethnicity. There is no gender effect or any influence from socio-economic class. The speakers are either Italian or Greek adults.

The four groups in the core speech community are characterised by the use of the C, G and B variants as they differ in quantity of vowels from the three varieties. The proportion of G variants only varies little in the first three sociolects while sociolect four (SL 4) has

relatively few G vowels. There seems to be a linguistic boundary between SL 2 and SL 3 as the G variety peeks in SL 2 and then decreases forming a curvilinear pattern. The proportion of vowels from the other varieties, C and B, increase and decrease respectively from SL 1 to SL 4 (figure 3.7).



(Horvath 1985, 79)

Figure 3.8 Social Data Across the Four Core Sociolects

In a comparison with the social data about the speakers of the different sociolects there is definitely a pattern which indicates some sort of boundary around SL 2 (figure 3.8). The gender pattern shows that SL 1 and 2 are dominated by males, and that SL 3 and 4 by women. The age pattern shows that teenagers prefer SL 2 and 3, and to a lesser degree SL 1 while adults dominate SL 4. Socio-economic class also show significance as the percentage of middle class speakers increases linearly from SL 1 to SL 4, and the lower working class decreases from SL 1 to SL 4. Upper working class has a slightly curvilinear pattern but is almost constant in all the sociolects. The boundary around SL 2 is also clear in relation to ethnicity but here there is also an interesting pattern for speakers with a Greek background as they dominate SL 4, while the percentage of speakers with an Italian background decrease from SL 2 – SL 4 (Horvath 1985).

IV Linguistic Change in Australian English

This chapter will identify changes in progress in AusE - both general tendencies and the phonetic change of individual vowels. The general tendencies will be based on Horvath's theories and for the discussion of the phonetic changes a number of different studies will be used in order to be able to make the necessary comparisons and establish what changes are most likely to be in progress.

4.1 General Changes in Australian English

Based on her studies of the Sydney sociolects described in the previous chapter, Horvath (1985) formed the hypothesis that there is a general change in AusE as speakers tend to use the General variety more and move away from both ends of the AusE continuum: C → G ← B. There are two parts of this change – the move from C → G and from B → G. Horvath claimed that the change from B → G is 'unnatural' as opposed to the 'natural' change from C → G. This distinction between 'natural' and 'unnatural' changes is slightly misleading as it is based solely on whether or not the changes can be predicted by internal factors and studies of chain shifting conducted by Labov, among others (Horvath 1985). Thus her point merely appears to be that the change from B → G is 'unnatural' as the factors influencing the change are external rather than internal.

Table 4.1 Estimated Use of Sociolects in Australia (Horvath 1985, 90)

Mitchell and Delbridge (1965)		Horvath	
Broad	34%	Broad (SL 1)	13%
General	55%	General (SL 2 + 3)	81%
Cultivated	11%	Cultivated (SL 4)	6%

In an attempt to confirm the tendency to prefer the central part of the AusE continuum, Horvath compared the use of her sociolects in the Sydney speech community with the

proposed distribution across the sociolects by Mitchell and Delbridge (table 4.1). Horvath's comparison cannot serve as evidence for her theory, though, as the studies of Mitchell/Delbridge and Horvath used very different methods and thus their studies are not directly comparable. Therefore, table 4.1 can only be indicative of the proposed tendency. Horvath also tried to test her hypotheses using variable rule analysis (VRA), but as the change is bi-directional the factors neutralised one another and she was only able to conclude that VRA is unsuitable to provide evidence for her hypothesis.

4.2 Identification of Changes in Progress

As described in chapter two, there are different ways to identify vowels that are undergoing a process of change. One possibility is a diachronic study, which involves a comparison of data collected from two similar groups at different points in time. This kind of study gives an idea of what changes have actually happened during a certain period of time, but it is difficult because of the intervals of time necessary in between the collection of data from the two groups. However, as mentioned, if an old set of data is available for analysis, it is possible to design a new study in a way that will allow easy comparison between the two sets of data. This is what was done by Cox in Australia as she compared data collected by Bernard in 1970 with data collected by herself in 1996. This study offers information about changes in AusE in real time.

An alternative to this method is a study of change in apparent time – a synchronic study which involves a comparison of different age groups. There is important information to be found in age related variation but, as discussed in chapter 2.3.2.1, this method is complicated by the fact that the variation between the different age groups may be caused by factors other than change, like physiology and age-grading. However, keeping these reservations in mind, a combination of the two methods can be quite advantageous.

In her doctoral thesis, Cox only used one age group, which prevented her from comparing the results from her diachronic study with data from a synchronic study of her data. Such a comparison was carried out at a later stage, as Cox and Palethorpe (2001) analysed data from the Australian National Database of Spoken Language (ANDOSL) and compared three age groups in order to determine what changes seem to be in progress in apparent time. They then compared this with the result of Cox's real time study. It should be noted that the young group in the ANDOSL data consisted of speakers who were between 18

and 30 years of age, while the subjects in the Cox data and the youngest group in the Bernard data were about 15 years old, and thus the Cox data may represent the newest variants. It is also important to note that there are slight differences in the linguistic context, which may also have an influence on the results of the comparison. In the ANDOSL data the diphthongs /eɪ, oʊ, aʊ/ were collected in open syllables and /ɔɪ/ was collected in the context of the word *hoist*. Furthermore, only male data was available in the Bernard data, which means that the changes in the female data in the synchronic study of the ANDOSL data cannot be tested with the diachronic analysis of the Cox/Bernard data.

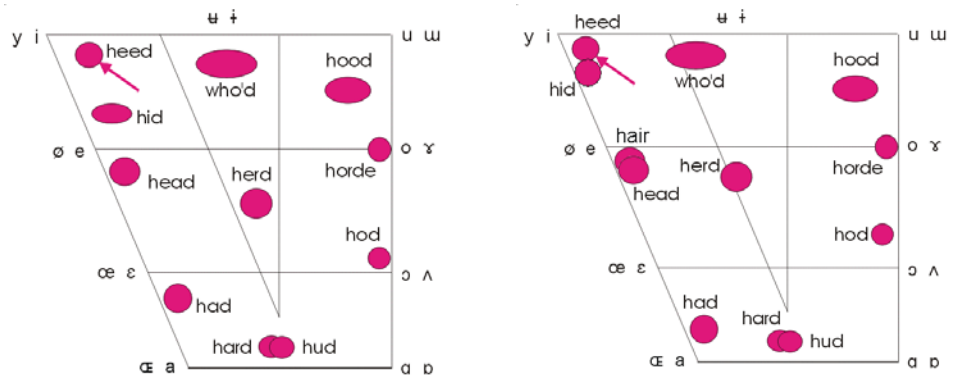
4.2.1 The AusE Vowels 1970 – 1996

Bearing in mind that only male data was available for comparison, the two vowel charts in figure 4.1 give an indication of the changes that have been observed over 26 years from 1970 to 1996. Some of these changes have already been mentioned in section 3.1. It was noted that one of the differences between AusE and RP is that the duration of vowels is important when distinguishing between a number of AusE vowel pairs. As is evident from the vowel charts below (figure 4.1), the vowels /ʌ/ and /a/ overlap in both charts, and during the 26 years other vowels have also approximated one another, that is /ɪ/ and /i/. As mentioned on page 31, there is a tendency for the centralising diphthongs to have a reduced offglide and during the 26 years between the two studies, this tendency has increased leaving these vowels close to long versions of the corresponding monophthongs. The consequence of this is, as mentioned, the additional monophthong in “hair” realised by [ɛː] in the vowel space of 1996 adding to the issue of duration being increasingly important.

The fact that /ɪ/ and /i/ have become quite similar in vowel quality has not yet caused duration to be the primary means to distinguish the two vowels. They do not overlap to the same extent as the other pairs, /a, ʌ/ and /ɛ, ɛə/, and the distinction between the two front vowels is eased by the tendency for /i/ to have a long onglide from a lower and more centralised position. According to Cox this diphthongisation of /i/ has decreased during the 26 years. As diphthongisation of /i/ is associated with broadness, this tendency to decrease diphthongisation corresponds well with the general tendency to prefer General AusE to the

other accents. If the tendency to decrease the onglide of /i/ continues, the result may very well be that length will be increasingly important in connection with this vowel pair as well.

In figure 4.2(b), the Bernard and Cox monophthong vowel spaces are compared in the same diagram and it is clear how some of the vowels have moved during the 26 years. /u/ and /ɜ/ are more fronted while /u/ is more raised as well. The back vowel /ɒ/ is raised and /æ/ has moved down in the vowel space. /ɪ/ is raised while the change of /i/ is seen primarily in the onglide, which is decreasing, as discussed above, and illustrated by the vowel space in figure 4.2(a). This shows the monophthongs at onset and it is clear how the long onglide of /i/ has moved in the direction of the target reducing the onglide of the close front vowel (Cox 1996).



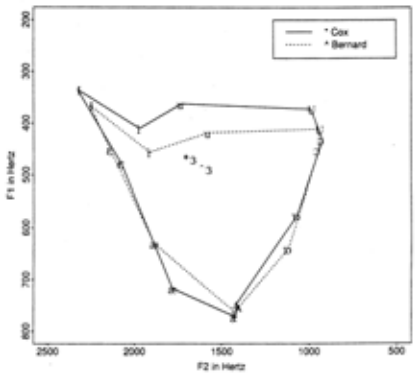
a) AusE monophthongs relative to the cardinal vowels in 1970 (Bernard data).

b) AusE monophthongs relative to the cardinal vowels in 1996 (Cox data).

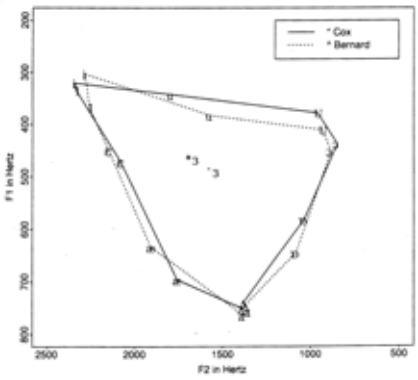
Figure 4.1 Development of AusE Monophthongs (Mannel 2001)

The ANDOSL data supports the lowering of /æ/ and the female data suggests other changes of monophthongs, which are the lowering of /a/, lowering and fronting of /ʊ/, and fronting of /i/. Cox and Palethorpe considered these movements to be possible new changes based on the fact that these vowels have not traditionally been associated with social factors in Australia, and thus they could be changes from below. According to Labov's theory of women being more progressive than men in changes from below, the fact that male data does not show any movement of these vowels makes it possible that these are in fact very new changes. Unfortunately, this cannot be tested with data from the diachronic study because of the lacking female data, but it would be very interesting to test this theory in a new synchronic

study including even younger speakers than the youngest group in the ANDOSL data as adolescents are more likely to use innovative forms, making the suggested changes more easily observed.



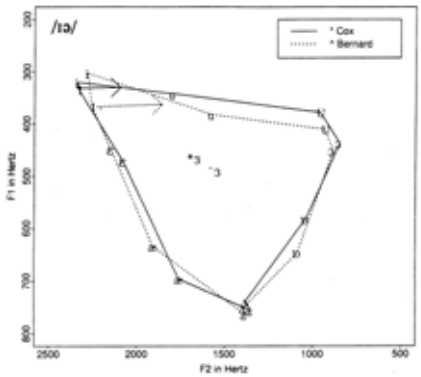
a) Cox (1996) and Bernard (1970) monophthongs at onset. (Cox 1996, 178)



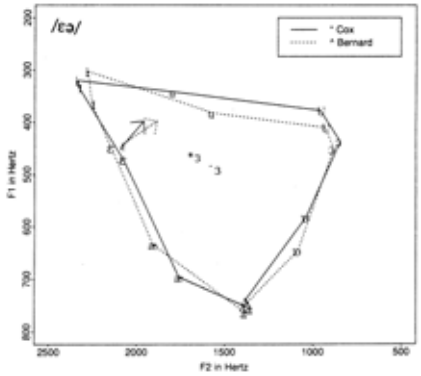
b) Cox and Bernard monophthongs at target. (Cox 1996, 179)

Figure 4.2 Development of Onset and Target

At first glance, there seems to be a pattern in the way the monophthongs have moved. With a few exceptions, the AusE vowel space seems to have tilted slightly counter clockwise. Looking at the vowel space in figure 4.2(b) all the back vowels are more raised in the Cox data, /u/ is more fronted and all the front vowels except /ɪ/ are lowered. /a/ and /ʌ/ have not moved significantly.



a) Male trajectories of /ɪə/ in 1970 and 1996. (Cox 1996, 182)



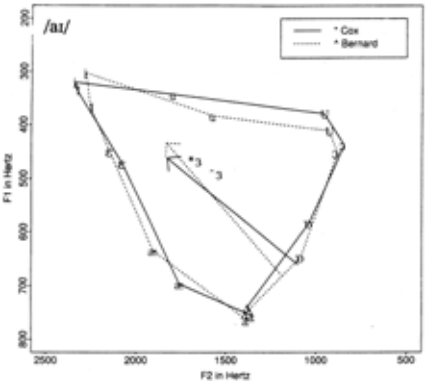
b) Male trajectories of /ɛə/ in 1970 and 1996. (Cox 1996, 182)

Figure 4.3 Development of the Centralising Diphthongs

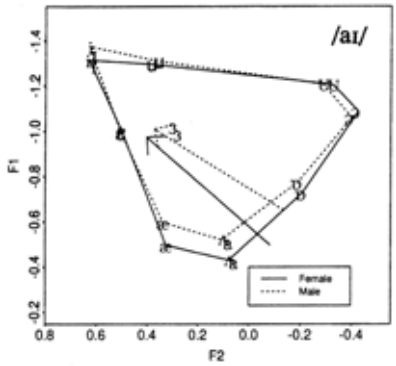
The AusE diphthongs have also moved. The centralising diphthongs /ɪə/ and /ɛə/ have already been mentioned, and figure 4.3 shows their development. It is clear that their trajectories are considerably shorter than the other diphthongs and both have decreased further during the 26 years which illustrates the development of these vowels into long monophthongs. The trajectory of /ɪə/ is also raised which is likely to be connected to the raising of /ɪ/.

Figures 4.4, 4.5, 4.6 and 4.7 show the movements of the five diphthongs /aɪ, ɔɪ, aʊ, oʊ, eɪ/ relative to the monophthong vowel spaces. In figure 4.4(a) T1 of /aɪ/ has moved up in the vowel space and is more retracted while T2 has moved down. The ANDOSL data only supports some of these changes, as female data indicate lowering of T2, but no support was found for the raising and retraction of the first target. Before a more detailed comparison of the vowel charts in figure 4.4, it might be worth noting that as opposed to for instance /ɔɪ/ in figure 4.5(b), /aɪ/ (figure 4.4(b)) shows a relatively strong gender difference in Cox's study (1996). The female T1 and T2 of /aɪ/ are both much lower than the targets in the male data but the lack of different age groups in Cox's study prevents a study of the development of both the male and female /aɪ/. Instead a comparison with the ANDOSL study is necessary.

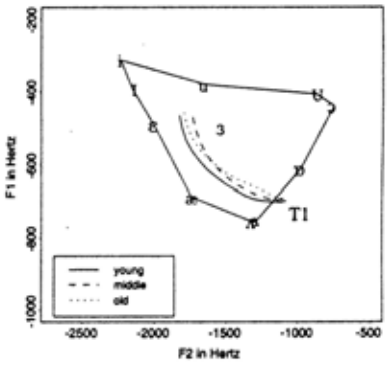
Figure 4.4(a) clearly suggests raising of /aɪ/ T1, while the female vowel chart from the ANDOSL study (figure 4.4(d)) indicate lowering of T1. This means that according to this set of data the entire trajectory of /aɪ/ is lowering as opposed to the tilting suggested by the male data in Cox (figure 4.4(a)). The ANDOSL male vowel chart in figure 4.4(c) does not show the same lowering of T1 as the female chart but remains more or less unchanged at T1. It does not show a convincing tilt of the trajectory but it does not move in the opposite direction either, as the female T1 does.



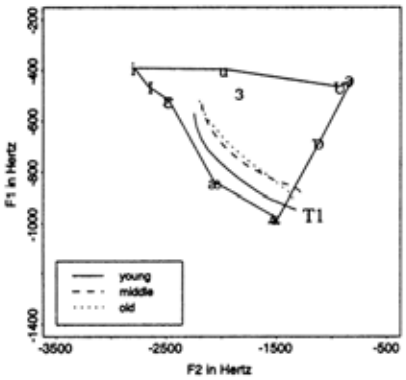
a) Male trajectories of /aɪ/ in 1970 and 1996. (Cox 1996, 185)



b) Male and female /aɪ/ in the 1996 data. (Cox 1996, 137)



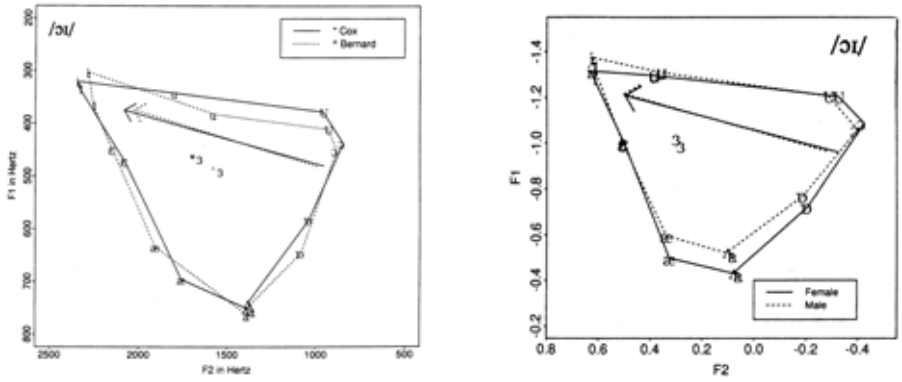
c) Male trajectories of /aɪ/ for three age groups. (Cox et al. 2001, 33)



d) Female trajectories of /aɪ/ for three age groups. (Cox *et al.* 2001, 33)

Figure 4.4 Development and Gender Differences of /aɪ/

Figure 4.5(a) shows the difference in /ɔɪ/. T2 appears to be slightly more fronted, but it is not significant according to Cox. The female data in the ANDOSL study suggests lowering and fronting of T1 as well as fronting of T2. Although the linguistic environment /hVst/ in the ANDOSL data is different from the /hVd/ environment in the Cox and Bernard data, this would not make a great difference in vowel quality as the place of articulation of /d/ and /st/ are both alveolar. The difference in final voicing may influence the length of the offglide, though, and thus the vowel /ɔɪ/ may have a longer offglide when followed by the voiced /d/.



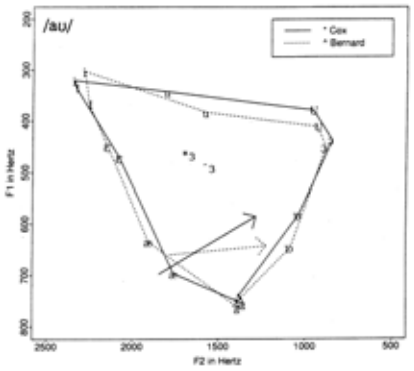
a) Male trajectories of /ɔɪ/ in 1970 and 1996. (Cox 1996, 185)

b) Male and female /ɔɪ/ in the 1996 data. (Cox 1996, 137)

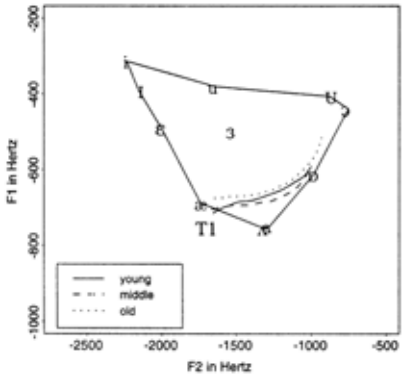
Figure 4.5 Development and Gender Differences of /ɔɪ/

/aʊ/ (figure 4.6(a)) has changed as it has a lowered and more fronted T1 and a raised T2 in the Cox data. This is not clearly supported by the ANDOSL data as the male data suggests a slight lowering of T1, with a more horizontal trajectory and a T2 close to /ɒ/ (figure 4.6(b)). This is lower than that of the older group of speakers in the ANDOSL study and lower than the T2 found in Cox (1996). There were no significant age effects in the female ANDOSL data to support the change suggested in the Cox data, but the gender differences in Cox indirectly support the suggested tilt. The female T1 and T2 are both significantly lower than those in the male data as seen in figure 4.6(c), but they are parallel suggesting that both trajectories have changed in similar ways. This is not evidence, though, and no study available provides information about the female trajectory in other age groups or at an earlier time, which prevents further comparisons.

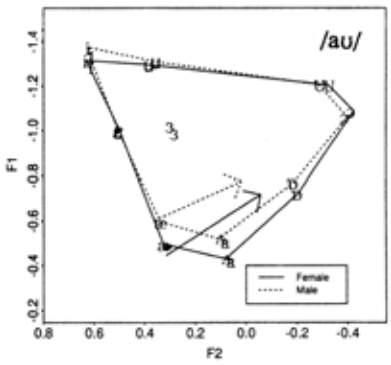
The inconsistency in the suggested changes of /aʊ/ in the two sets of data may also be due to the fact that the /aʊ/ in the ANDOSL data was collected in an open syllable, while collected in the /hVd/ environment in the Cox/Bernard data. The following /d/ in the Cox/Bernard data may have pulled the second target toward a more raised and fronted position.



a) Male trajectories of /aʊ/ in 1970 and 1996. (Cox 1996, 186)



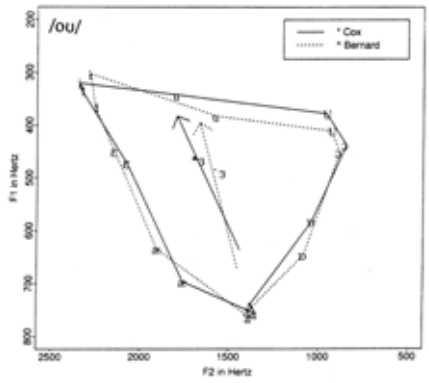
b) Male trajectories of /aʊ/ for three age groups. (Cox *et al.* 2001, 36)



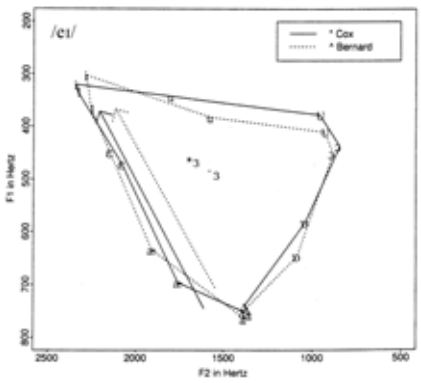
c) Male and female trajectories of /aʊ/ in the 1996 data. (Cox 1996, 137)

Figure 4.6 Development and Gender Differences of /aʊ/

According to Cox, the first target of /oʊ/ (figure 4.7(a)) has not changed much. It is only slightly more raised and retracted. T2 has become more fronted compared to the Bernard data and this finding is supported by the ANDOSL data, but as in the case of /aɪ/, the male data supports the suggested tilt of the vowel chart in Cox (1996), while the female data shows a retracted T1 but a less significant fronting of the second target. This relatively weak support may again be due to the coarticulatory effects. As in the case of /aʊ/ the tokens in the ANDOSL data were collected in open syllables as opposed to the /hVd/ environment in Cox/Bernard and thus the alveolar consonant may increase the fronting of the second target of the diphthong in the Cox/Bernard data. This is also the tendency suggested in the study by Harrington *et al.* (1997), which used open syllables as the environment for /oʊ/ as well, and the results suggest a realisation of the second target which is further back between /u/ and /ʊ/.



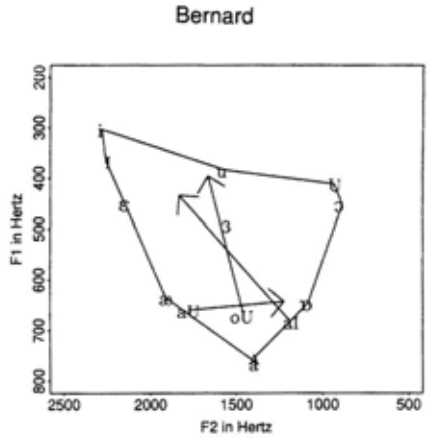
b) Male trajectories of /oʊ/ in 1970 and 1996. (Cox 1996, 186)



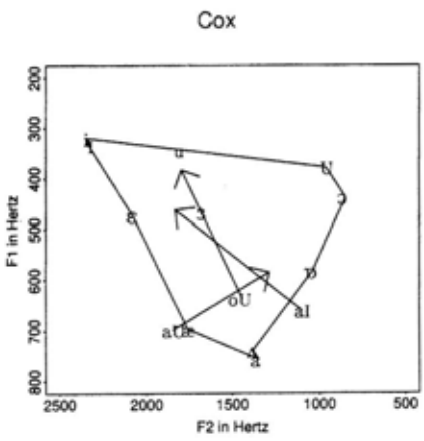
a) Male trajectories of /eɪ/ in 1970 and 1996. (Cox 1996, 184)

Figure 4.7 Development of /oʊ/ and /eɪ/

Figure 4.7(b) shows that the entire trajectory of /eɪ/ is more fronted in the Cox data and it has a lower first target. The lower T1 is supported by the ANDOSL data and the male data in particular shows a generally more fronted trajectory for the young speakers relative to the other age groups. The difference in linguistic environment (/hVd/ versus open syllable) is not likely to have any significant effect on the second target as there is little movement of the tongue involved in the move from /ɪ/ to the articulation of /d/.



a) The diphthong trajectories of /aɪ, aʊ, oʊ/ in the Bernard data. (Cox 1996, 219)



b) The diphthong trajectories of /aɪ, aʊ, oʊ/ in the Cox data. (Cox 1996, 219)

Figure 4.8 Interrelationship of /aɪ, aʊ, oʊ/

For the diphthongs /aɪ, aʊ, oʊ/ the individual targets follow the same pattern as the monophthongs moving counter clockwise in the vowel space as illustrated in figure 4.8. This clearly suggests, but does not document, interdependence between the individual vowels as well as between the monophthongs and the diphthongs (Cox 1996). The question is what kind of relationship exists between the different vowels?

One obvious question is to what degree this is a case of a chain shift in the AusE vowel system? If one vowel has moved, disrupting the balance of the vowel space, it is quite predictable according to linguistic theory, mentioned in section 2.3.1 about chain shifting, that other vowels would move accordingly as a consequence in order to restore the balance of the vowel space and secure the intelligibility of the individual vowels. This would then either be a push chain or a pull chain, or in this case more of a combination depending on whether the first or the second targets are the primary participants in the shift.

Some of the movements can be predicted according to Labov's principles about internal factors. These principles suggest that back vowels become more fronted, long vowels are raised, and short vowels as well as the nuclei of rising diphthongs fall. This means that the parallel shift of /u/ and /ɜ/ is predictable, and the raising of /ɪ/ and T1 of /ɪə/ is likely to be related and constitute a minimal chain shift involving only two sounds. The extended chain shift suggested by Cox (see below) involving the diphthongs /aʊ, aɪ/ and /oʊ/ as well as some of the monophthongs is not easily predicted by Labov's principles of internal factors, and the concept of peripherality does not seem to be particularly helpful either.

It certainly appears, though, that the different vowels affect one another as the targets of the diphthongs move in similar directions as the corresponding monophthongs. The clearest example of this is the relationship between /u/ and /oʊ/ as T2 of the diphthong and the monophthong move in similar directions. The questions are then: how do the vowels influence other vowels? which vowels have moved first, either dragging or pushing the others? and which vowel set off the whole shift?

Cox tried to determine what changes appeared first and thus which vowels may have influenced the others in the AusE vowel system initiating the possible chain shift. She did this in a synchronic analysis of the Bernard data dividing his subjects into three age groups. This allowed her to determine what changes were in progress already in the 1960s. The results seem to indicate that the movement of /oʊ/ T2 and the monophthongisation of /ɪə/ were in

progress at that time. The youngest speakers in the Bernard data exhibit a more fronted T2 of /oʊ/ and they use less offglide of /ɪə/ than the older groups (Cox 1996).

It is interesting that the fronting of /u/ does not seem to have been initiated in the Bernard data and this makes it likely that it is the change of the second target of /oʊ/ that has pulled the monophthong in the same direction to a more fronted position. It is quite plausible that a diphthong changes before a monophthong as there is more variation in the realisations of diphthongs. This provides better conditions for the change to occur (Cox 1999).

Thus Cox formed the hypothesis that /oʊ/ was the first vowel to move and then possibly caused the other changes that were discovered in her diachronic analysis. If /oʊ/ was the first of the vowels to move, it is likely that it affected the monophthong /u/ as mentioned above. The trajectory of /oʊ/ may have approached that of /aɪ/ and may have forced this vowel to move away from its original position to ensure the intelligibility between the two diphthongs. Thus its trajectory tilted, approaching a more horizontal glide as was seen in figure 4.4 above. In turn, the monophthong /ɒ/ may have moved up as a result of the raising of /aɪ/ T1. As seen in figure 4.6, the second target of /aʊ/ may also be connected to the raising of /ɒ/. This proposed chain shift is not completely convincing as not all the changes have been supported by the ANDOSL data, but it does signal that a relationship between the different vowels exist to some degree.

Furthermore, in her doctoral thesis, Cox made no connection between the lowering of /aʊ/ T1 and of /æ/, but in a more recent article, she and Palethorpe (2001) seemed to recognise this possibility. Such a minimal chain shift would be consistent with Labov's principle about the lowering of short monophthongs in chain shifts.

4.2.2 Summary of Changes

It is clear that the vowels in AusE have moved in more or less predictable ways. Some of the changes support the principles of linguistic change proposed by Labov about internal factors while others may be related to external factors, which will be discussed below. The fronting of /u/ and /ɜ/ is an example of a parallel shift, as is the raising of /ɪ/ and the first target of /ɪə/. There is a possible chain shift affecting several of the diphthongs and possibly some monophthongs, but the relationship is difficult to determine for certain.

Table 4.2 Summary of Proposed Changes

Old changes Changes that were found to be in progress in the data set from the 1960s	Mid-range changes Based on both the ANDOSL data and the comparison between the 1960s and the 1990s data.	New changes Changes suggested only by female data in the ANDOSL data.
M/F	M/F	M/F
M+F /oʊ/ T2 ←	M+F /æ/ ↓	F /a/ ↓
M /ɪə/ reduced offglide	M /u/ ←↑	F /ʊ/ ↓←
	M /ɜ/ ←	F /i/ ←
	M /ɪə/ T1 ↑←	F /ɔɪ/ T1 ↓←
	M /i/ decreasing onset	F /ɔɪ/ T2 ←
	M /aʊ/ T1 ↓←	
	M /aʊ/ T2 ↑(↓)	
	M+(F) /aɪ/ T1 →↑ (↓)	
	M+F /aɪ/ T2 ↓	
	M+F /eɪ/ T1 ↓←	
	M /ɒ/ ↑	
	M /ɪ/ ↑	

M/F: Signals if the changes are found in male or female data.
Arrows indicate direction of movement: ← (fronting) ↑(raising) and so on.
( ) indicate uncertain changes and inconsistencies between the different studies.
Social significance according to Cox 1996.

At this stage it is only possible to speculate about when the suggested changes have been initiated and what stage the changes have reached. This has been summarised in table 4.2, where old changes are those found to be in progress already in the 1960s and the mid-range changes are those found in both the Cox/Bernard data and the ANDOSL data. The new changes are categorised as such based on the fact that they were only found in the female data and the theory that women are more innovative in changes from below. In the following sections all these changes will be related to social factors, which will allow a more detailed analysis of what affects the different vowels, and it will be possible to determine more accurately the stage of the different changes and then revise table 4.2.

V Social Factors

The aim of this chapter is to achieve a greater understanding of the social influence on linguistic change in Australia. It will involve a critical survey of the research available for this study and an evaluation of the results and theories in the various studies as well as an evaluation of the traditional sociolinguistic categories that have been used in the studies but are not necessarily directly transferable to the Australian society.

As an introduction, the development of an Australian identity will be discussed, as this is likely to influence the general linguistic tendencies in Australia. The concept of prestige will also be reintroduced in more detail before the actual social variables can be discussed. Age and gender will be discussed first and the rest of the social factors will be dealt with under the two categories "global" and "local" factors introduced by Cox in her thesis. The global social variables are related to patterns of prestige in the wider society, while the local variables are related to the immediate speech community (Cox 1996).

The primary source of the following discussion of the social factors will be Cox's doctoral thesis (1996) as this is the most extensive study of linguistic change in Australia and social correlations of these in the last decade. This is on a phonetic level and on a more general level Horvath's theory of a bi-directional change in the AusE continuum, C $\rightarrow$ G $\leftarrow$ B will remain the primary hypothesis to be tested with the findings of the general research.

In conclusion, this survey will form the basis for an evaluation of the descriptive system of Australian English. Some revisions of the sociolectal system will be discussed and different approaches in future studies will be suggested. A change in foci may prove valuable in order to achieve a better understanding of language in Australia.

5.1 The Australian Identity in the Make

During the last two centuries, Australia has developed from being a penal colony into the Commonwealth of Australia of today. The penal colony developed into a number of British colonies that later became eight states, which formed a federation (the Commonwealth of Australia) in 1901 and a nation was born. This federation remains part of the British Commonwealth of Nations, but the British influence has diminished significantly. Only a few

years ago, the question was raised whether Australia should become a republic or remain part of the Commonwealth and have the British monarch as head of the nation. A small majority voted to remain under the British crown but there were strong forces that had advocated for independence.

The Australian national identity has changed along with this development of the country – one might even say that the Australian identity was born with the nation. For a long time it was not very prestigious to be Australian because of the convict history, among other things, and there was a great focus on remaining British in every possible way. The strong sense of Britain being the cultural centre, while Australia was at the periphery of the world created a kind of dual identity that made sense in a strange way but also gave rise to a cultural insecurity because of the feeling of being inferior to the British. This cultural inferiority complex has been decreasing during the last century, though, and the Australians are beginning to embrace their convict history and take pride in their culture and peculiarities. Australian legends and icons are developing, giving Australians a sense of national pride and this development is also reflected in the language as Australian English is becoming more and more accepted and is shaking off its Cockney heritage and the low prestige associated with it (Bambrick 1994).

5.1.1 Australian Values

The values that were brought to Australia reflected the ideologies that were prevalent in Europe in the late eighteenth century. There was the traditional class based social structure, but also the utilitarian ideology, which was becoming very influential in Europe with its aim as ‘the greatest happiness for the greatest number’ (Bambrick 1994, 232). In Australia this was combined with individualism and ideals such as comradeship and solidarity, which were necessary during colonial times in order to survive in this faraway unfamiliar and rough environment. This combination resulted in a strong sense of egalitarianism and a utilitarianism interpreted as the right to political freedom and the right to achieve material security. For an Australian the first priority is to achieve the security of owning a home and secondly comes family life and time to enjoy this. Hedonism is also very important and is reflected in stereotypical images of tanned surfers and bushmen like the character in the film *Crocodile Dundee* (Bambrick 1994).

Thus the Australian values seem quite dualistic. The European cultural heritage is very immediate although it has been modified significantly by the Australian ethos. The way these values are reflected in the language in Australia will become clear in later sections but the general tendency is that the values that are very important in Australia, such as individualism and toughness, are associated with B AusE while the more British inspired values like class based social status and respectability is associated with the RP like variety, C AusE.

5.1.2 Attitudes to Australian English

Identity and values are reflected in the attitudes to AusE and the fact that newsreaders and politicians to a larger extent turn their backs on the Cultivated RP-like variety of AusE and use the General and Broad varieties instead clearly signals a change in attitudes. Mitchell was one of the first to promote AusE as an acceptable variety of English and a public debate was initiated in order to settle with all the prejudice aimed at AusE (Reeve 1989). Attitudes have clearly changed, which was demonstrated in a study made by Bradley/Bradley (2001). In this study they investigated the general attitude to AusE using the methods described in section 2.2.2 on psycholinguistics. In a diachronic study they interviewed a number of people twice, with a fifteen-year period in between, and the results of their study indicates that the attitude to AusE has become more positive as a greater proportion of speakers preferred AusE to RP in the most recent of the interviews. The number of interviewees in the study (27) was not large enough to give anything but a suggestive result, but in can be considered indicative of changing attitudes.

Identity and attitudes also influence the choice of sociolects, which is shown by another part of the Bradley/Bradley study. They used a subject reaction test to show how people would judge speakers of C, G and B AusE on scales of status and solidarity. B was rated lowest and C was shown to still be highest on the scale of status although there was a clearly more positive attitude to G AusE. Furthermore, the gap between the C and G varieties has diminished, and while C is rated lowest on the scale of solidarity, it is significant that G is rated higher than B on this scale.

The study could be criticised for the use of linguistic students as subjects to be tested. This may have influenced the result as they have a greater awareness of language than people who have not received the same kind of schooling. No information about these listeners' preference of variety has been included in the article so there is no way of determining what

influence this may have had on the results. The results of the study are not particularly significant but they do indicate an increasingly positive attitude to the G variety, and this may reflect the general tendency in Australia, suggested by Horvath, to prefer the G variety to a larger extent than before.

Horvath investigated the social factors as well as other motivating factors for the change in order to find support for her hypothesis. She suggested that the motivation is likely to be partly related to the change of identity that may be going on in Australia, and thus the move from C → G could be explained by a growing Australian nationalism and a decreasing amount of overt prestige being associated with C AusE, which is most similar to RP. The move B → G could be an avoidance of the low prestige associated with B AusE, but Horvath has considered the influence from non-Anglo ethnic groups the most important motivating factor for the reversal B → G. This rather questionable suggestion will be discussed later in section 5.5.3 on ethnicity.

Collins/Blair supported the theory that the bi-directional change might be related to several changes in the Australian society. The decreasing British bonds could account for most of the C → G tendency, but Collins/Blair suggested that the move B → G may be related to an increasing level of education as well as a greater urbanisation, which means that the use of Broad AusE, often associated with rural communities, is likely to decrease (Collins/Blair 2001).

Finally, Horvath concluded that the G variety of AusE with its growing popularity may be developing into an Australian standard variety, which may eventually replace RP that previously enjoyed the status as the external standard resulting in the greatest amount of prestige being associated with C AusE.

5.1.3 External Influence

Other cultures than the British might also have influence on the Australian identity and Australian English. Apart from the obvious influence from RP and British English in general, there has been some impact of other languages on AusE. This foreign influence is found primarily in the vocabulary, though. Even American English has not been shown to have much influence on the phonetics of AusE despite huge exposition to it through the media – primarily films, television and the Internet (Sussex 1989; Taylor 2001). In public debates in

Australia, concern has been expressed about the corruption of AusE, but as the influence is on the vocabulary it will not be pursued any further in this thesis.

5.2 Prestige

The notion of prestige is extremely important in the discussion of the social factors and a brief introduction to its function in a linguistic context is considered relevant for the further discussions in this chapter. Prestige is often associated with a standard language, for instance RP in British English, but in fact this is not always the case. While a standard variety of a language is functional, the prestige is subjective and can be associated by individuals to any variety of a language (Milroy 1992). In some cases, standardisation of a certain variety or dialect may motivate a collective association of prestige and this standard variety may achieve a symbolic value and signal independence or even national pride (Aitchinson 1991). Whether this could be the case in Australia is subject for discussion later in this thesis.

There are different reactions or responses to prestige on the personal level and they range from a dismissal of any value judgements on language to the juxtaposition of a prestige model and "correctness", which renders non-conforming language deviant. Most people are well aware of the associations between language and prestige which is revealed in their ability to switch to "more prestigious" language in formal situations, or to put on a "posh" voice for fun or ridicule (Eagleson 1989).

Cox has suggested three definitions or different kinds of prestige: 'a) global prestige which reflects the values of mainstream society, b) covert prestige which reflects values that are in opposition to those of the standard, c) local prestige which reflects the values of the smaller local community' (Cox 1996, 58). The fact that there are different kinds of prestige and that they are in fact subjective, complicates the research of the motivation for change and linguistic behaviour in general. In the following sections, prestige will be part of the discussion of several of the factors and it is relevant to include information about the Australian society in order to reach the most accurate version of the system of prestige in Australia.

5.3 Age and Gender

The importance of age effects in general has already been discussed in relation to studies of changes in apparent time, as a strong age effect can indicate change in progress. A few more

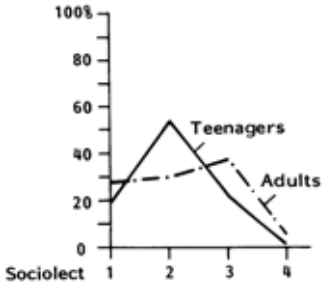
examples will show how age is used in the studies of linguistic change in Australia and how it supports the theories that have been previously proposed.

It is also quite clear from the comparison of the findings in Cox 1996 and the results of the ANDOSL study that it is important to have both male and female data included in a study of sound change. As discussed in chapter two, male and female speakers generally respond to different social pressures and it was also established how female speakers are known to be more innovative than males when early stages of changes from below are concerned, and more conservative with respect to stable sociolinguistic variables, while most receptive in connection with changes from above. It is to be expected that these gender effects will be detectable in the various studies of Australian English and section 5.3.2 will be an attempt to determine if they are present in the Australian material.

5.3.1 Age

Age has been used above to identify changes in progress in the ANDOSL data. These were changes on the phonetic level, which were subject to generational change. On a more general level it was suggested earlier that there is a tendency in Australia to prefer the General variety of AusE, and this change, which is bi-directional (C $\rightarrow$ G $\leftarrow$ B), is supported by the age patterns of the teenagers and adults with a British (Anglo) background in Horvath's study (1985). In figure 5.1 the teenagers clearly dominate sociolect 2 (SL 2), while adults constitute the majority of speakers in the other three sociolects. The reason this figure shows a different age pattern than figure 3.8 on page 40 is due to the fact that Greek and Italian teenagers have been left out of this comparison. There were no Greek and Italian adults in the core sociolects and thus no comparison of the age patterns were possible for these groups.

However, Horvath was not able to offer strong evidence for her hypothesis because of her choice of method. She concluded that the variable rule analysis is not very efficient in testing for a bi-directional movement of vowels as the movements are neutralised and thus her evidence is mainly circumstantial.



Anglo teenagers and adult speakers across the four core sociolects. (Horvath 1985, 84)

Figure 5.1 Age Patterns of Horvath's Sociolects

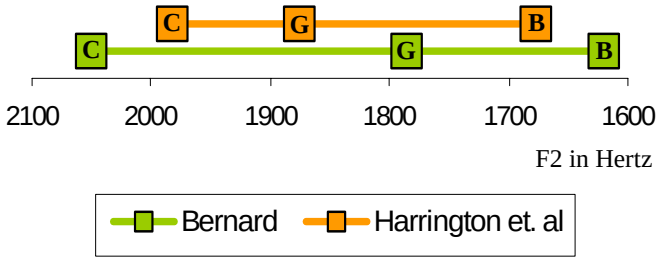
If Horvath's hypothesis were to prove valid, a relatively strong age effect and an interaction between age and accent would be expected. However, in Harrington *et al.* (1997) the only significant age effect interacting with accent was found in connection with onglide of /i/, as the younger C speakers preferred the highest F2 value as well as the lowest proportional target time. For the older C speakers there was a tendency to approximate the onglide typical of the B speakers, which indicated that in the case of /i/ the age effect was parallel to the accent effect, with younger and Cultivated at one end and the older and Broad speakers at the other end. The data used to support this was not altogether convincing, though, and there were no similar effects for the other vowels. Thus no clear association between age and accent can be claimed based on the Harrington *et al.* study, neither does it offer any immediate support for Horvath's theory.

It may be too soon, though, to dismiss the usefulness of the Harrington *et al.* study with respect to Horvath's theory. Upon closer examination of the results, a pattern appears which was not revealed in the original analysis. The question is whether the Harrington *et al.* study was designed in a manner that would reveal the bi-directional change suggested by Horvath? If the actual F2 onset values are compared to those of Bernard's study in 1970, the result may actually support Horvath's theory. The studies from 1997 (Harrington *et al.*) and 1970 (Bernard) are easily compared as the vowels have been acoustically measured in the same linguistic environment. Only male data was included and both studies chose the same approach, classifying the subjects in advance as speakers of C, G or B AusE according to Mitchell and Delbridge's categories (1965). The speakers in Bernard's study were adults, while those in the Harrington *et al.* study was divided into three age groups. This means that

the Bernard data should be comparable to the middle group in the Harrington *et al.* study and this comparison shows that the three accent groups show less spectral variation in 1997 than in 1970 (table 5.1).

Table 5.1 Variation in F2 Values (Hertz) for Onset of /i/ in 1970 and 1997.				
Accent	Bernard (1970)	Harrington *et al.* (1997)		
	Male adults	Male middle age group	Young	Mean of all age groups
Cultivated (C)	2050	1983	2135	1996
General (G)	1785	1876	1991	1949
Broad (B)	1620	1677	1798	1783

The comparison of the F2 values for the onset of /i/ has been illustrated in figure 5.2 below. The difference seems quite significant and it definitely suggests a move away from the extreme variants and a move to the part of the spectrum centred around the General variety. It would be interesting to make a similar comparison for the rest of the vowels, but unfortunately not all the raw data from Harrington *et al.* was published in the article as it was for /i/, which makes further testing impossible. Naturally, this simple comparison is not sufficient to confirm Horvath's theory of the bi-directional move but it may suggest that there is some interesting effects to be found in the Harrington *et al.* data that are not revealed by the multivariate analysis used for the examination of the data.



Values for the onset of /i/ for Bernard's male group and the male middle age group in Harrington *et al.* in the three classical sociolects C, G and B. (Based on data from Bernard 1970; Harrington *et al.* 1997).

Figure 5.2 Variation in F2 Values for the Onset of /i/

5.3.2 Gender

According to Labov's second and third principles, discussed in section 2.3.2.2, women use more prestigious language than men. The Australian material supports this in general as females use the C variety more than men (Mitchell and Delbridge 1965; Cox 1996; Horvath 1985). C AusE is the variety traditionally associated with high global prestige, as it is the variety closest to RP, which traditionally carries most prestige qua its status as the standard variety in Britain as well as in Australia to a large extent.

Eisikovits (1989) suggested that Australian adolescents respond to different patterns of prestige according to gender. She studied the speech of Australian adolescents in Sydney and she was able to show that boys and girls respond differently to different levels of formality, which is likely to be related to the different patterns of prestige. Despite the fact that the linguistic variables in her study were grammatical, it is possible to gain knowledge from this study of the tendencies in adolescent speech in Australia, if not about the AusE vowels that are the actual objects of the present study.

Eisikovits was able to show that the adolescents exhibit reversed style shifting in different contexts. They were interviewed in couples in order to allow observation of communication with the interviewer as well as peer influence and while boys chose less formal forms when addressing the interviewer and more formal forms when speaking to their peers, the girls showed the opposite tendency. This suggests that girls are more willing to conform to the more formal style of the authority present – in this case the interviewer.

Thus the Eisikovits study supports the claim that female speakers use more standard forms than males, and that males prefer the non-standard to a larger extent than females. The distinction between global and covert prestige mentioned previously may offer some explanation for this. The standard forms are generally associated with high global prestige and as females are more likely to conform to the norms of society, they will most likely choose the forms that are more globally prestigious. The explanation for this may be that women use language as a means to move to a higher level in the socio-economic hierarchy. They will speak in a manner that will cause them to be associated with higher socio-economic classes (social mobility will be discussed below). Male speakers do not respond to the same social pressure to conformity. They have their own pattern of covert prestige and for them the non-standard forms are associated with solidarity and they signal masculinity as well as anti-middle class values (Eisikovits 1989).

Eisikovits (1989) and Pauwels (1991) both mentioned the rigid divisions between the sexes in Australia as one of the factors influencing the different linguistic behaviour of men and women, and it is not at all unlikely that the influence is rather considerable. It is of course not a case of segregation in any way, but there certainly is a tendency for men to meet with their "mates" at the pub, while women often are excluded from this company and meet in different fora – a tendency which decreases in urban settings and younger generations. There also remain strong gender roles and divisions with relation to social status (Bambrick 1994). According to Pauwels, the alleged inferior social status of women and their more limited opportunities for acquiring higher status compared with men may be part of the explanation for women's greater use of standard forms. Language is a way for women to gain more prestige in society.

The strong gender differences in Australia may also result in a more specific influence from social networks. Pauwels suggested that it could be valuable to study social networks in Australia in order to examine whether there is a similar influence on language as that found in the studies of Labov and Milroy, which were discussed in chapter two. If there is a relatively strong tendency to meet within single-sex groups, the influence from social networks may be slightly more imbalanced and the influence from the social networks would then reinforce the linguistic behaviour of the respective groups as there would be significantly less influence from the opposite sex. This is of course speculative as there are no studies to support it, but it would be interesting to explore this effect further.

The findings in Cox (1996) support the claim of different patterns of prestige for men and women in Australia. She showed that male vowels are best predicted with the local social factors – area and school, while women are more socially aware, choosing their vowel realisations according to the global social factors. Women are thus more influenced by the norms of society and their position in society. Language is one of the means with which women create their social identity, to a larger extent than it is for men. This difference may offer some explanation for a curious lack of social association with F2 values for male speakers. According to Cox's data, no variation in F2 for males can be predicted with any significance by social factors (see table 5.2, p.68). Labov claimed that social correlations are found primarily in the second formant and thus differences in F2 appear to be used for establishing social identity (Labov 2001). There are significant social associations for F1 values in Cox's data, though, which means that Labov's theory of the associations of the

formants is not generally applicable, but the lack of social significance for male F2 values is a peculiar coincidence, which Cox left uncommented.

Thus Cox (1996) also associated gender with the choice between more prestigious forms and non-standard forms with less prestige as well as with clear speech strategies, for instance the degree of offglide for the centralising diphthongs. As mentioned, this tendency for women to choose more standard forms is associated with social mobility and the desire to gain more social prestige. Therefore, the deliberate effort to use a more "proper" language, often resulting in hypercorrect behaviour, is symptomatic of a linguistic insecurity, which may in turn reflect a social insecurity. In studies of attitudes to language, women are often reported to correct themselves and criticise certain types of language associated with low global prestige, for example Broad realisations of vowels or use of slang. No studies available about attitudes have reported men to have expressed similar sentiments or exhibited the same awareness of correct versus incorrect linguistic behaviour in the Australian material available. The group of women who exhibit the highest degree of linguistic insecurity were found, in section 2.3.2.3, to be those in the second highest status group according to Labov and this partly formed the basis for his curvilinear principle, which is to be discussed further in section 5.4.

So far it has been established that the linguistic behaviour of men and women is very different as they respond to different patterns of prestige resulting in a female preference of standard forms and a male tendency to choose the non-standard forms. This is all related to language on a level above social awareness. There is still the question of linguistic behaviour when the object of study is language below the level of social awareness. What are the responses to linguistic change from below? Do women exhibit a more innovative behaviour than men in relation to change from below as suggested by Labov's fourth principle (page 18)?

The changes suggested by the female data only in Cox and Palethorpe (2001) were listed as new changes in table 4.2 above (page 53) based on the theory of women being more innovative than men in changes from below. The fact that the changes are not yet present in the male data may indicate that they are not recognised in the wider community and are still below the level of social awareness. Thus there should be no social correlations with the use of these vowels. In Cox (1996) all vowels in her study were tested for social significance and

even though these two studies from 2001 and 1996 are not based on the same set of data, a correlation of the two studies may provide some information about the suggested changes.

For the suggested changes of /a, i, ɔɪ/ there are no social associations and the same is the case for the suggested fronting of /ʊ/. The lowering of /ʊ/ is related to the local factor school in the male data, yet there is no association in the female data. It is important that this vowel is associated with a local social factor, and not a global factor, indicating that there is no global prestige associated with the variation of /ʊ/ and thus it is not yet a recognised change above the level of social awareness. In fact, the local association may actually support the status as a new change. Cox suggested that changes are likely to begin as local variation and then develop into general changes (see section 5.5.2). However, the fact that the association is only found in male data may merely reflect local prestige in a male social network.

It can be concluded that the changes found only in the female data are possible new changes as they are not yet associated with global prestige and thus have not reached a level of social awareness. It is not possible to determine at this point if they are in fact changes that will develop further or are just coincidental variation. This can only be tested in later studies that will reveal if the changes have progressed or assumed social significance.

The changes listed as mid-range changes have been suggested by both male and female data and they should have reached a level above social awareness and show associations with global factors, yet only a few of them show relations to social factors in Cox's data and they are not all associations that could be expected. There is found social significance in the female data for F2 values of /ɜ/ and /aʊ/ T1, and according to Cox, the social associations for F2 values of /u/ are important despite the fact that they are below significance. /æ/ also shows social association but it behaves in a slightly surprising manner, which will be discussed below. The male data exhibits associations for the onset of /i/ and F1 values of /aʊ/ T2. The rest of the suggested mid-range changes show no social significance, neither male nor female. There could be several reasons for this, which will be discussed later in the conclusion of this chapter.

The case of /æ/ is special in Australia as there is a well-known set of free variants involving a choice between /æ/ and /a/ in a large number of words. The choice between the two variants is found in pre-nasal environments like *demand* or *transport* in particular and the

choice has traditionally had social significance. The variant /a/ is associated with most global prestige as it is closer to the variant in the external standard RP. /æ/ is associated with Broad AusE and has very low prestige (Cox 1996). Due to this Cox considered the suggested lowering of /æ/ a case of hypercorrect behaviour and did not recognise it as part of the possible extended chain shift. However, if it were only hypercorrect behaviour due to the different patterns of prestige and the tendency of women, in particular, to chose the more prestigious forms, the lowering of /æ/ would be expected to be more advanced or exaggerated in the female data. This is not the case, however, as the ANDOSL data showed a lowering tendency for both male and female data. Furthermore, the lowering is associated with the global social factor school-type (SCH-TYPE) and it appears that girls from Independent Schools (IS), who would otherwise be expected to choose more prestigious variants in general, seem to prefer the higher realisation of /æ/ in this study. This is a strong argument against the theory of hypercorrection, which means that it is likely that the move is an actual change in progress for both male and female speakers. The choice of the higher variants of the IS girls could then actually be considered to be conservative behaviour. The explanation for this surprising behaviour of /æ/ may be found in the changing patterns of prestige and social significance, which will be discussed further in section 5.7.2.

5.4 Socio-economic Class and Other Global Factors

As discussed in chapter two, socio-economic class, along with gender, is considered to be one of the most important factors in sociolinguistic studies. Accordingly, it could be expected that the Australian data would be influenced by socio-economic class, as Labov's data collected in Philadelphia (2001) was. However, in her doctoral thesis, Cox included socio-economic class (SES) as a social variable in her multivariate analysis of her data, but surprisingly, her results do not suggest much significance of this variable in relation to any of the vowel targets. The reason for this might be found in the definition of this particular variable. Cox based her four socio-economic classes on an index developed by A. Daniel, but his index relies solely on parents' occupation and this may give a rather undifferentiated category. A number of professions have been rated on a scale of global prestige, including, for instance, leaders of powerful social institutions in the most prestigious end and unskilled workers in the least prestigious end. The scale was then divided into four levels that were considered to

correspond to four socio-economic groups: upper class, upper middle class, lower middle class and working class (Cox 1996).

As speakers in Cox's study were classified as belonging to a certain class based solely on the occupation of their parents or the "breadwinner" in the family, her study did not take into consideration other factors, which may affect the position of a speaker in the socio-economic hierarchy. Horvath (1985) pointed out the problem of classifying people according to occupation. For instance, milk bar owners are not considered by Australians in general to have much prestige despite the fact that they own their own business. However, owning their own business would place them relatively high on a scale of prestige based on occupation. Second generation Australians are also difficult to classify as their parents may have a high education from their home country and may have had quite a prestigious job before they emigrated to Australia. Upon arrival in Australia, however, they were most likely forced to accept work below their qualifications in order to put food on the table and thus they may be classified as belonging to the bottom end of the scale of prestige and social class, regardless of their education and their own opinion of their social status.

According to Cox, Daniel has mentioned several other factors that may have influence, but are quite difficult to observe and measure, for instance social participation and culture. In his study of linguistic change in Philadelphia, Labov used a much more varied socio-economic index based on occupation as well as education and residence value. He even included information about the upkeep of the house, which is a sign of social status in the different neighbourhoods in his study (Labov 2001).

Apart from socio-economic class based on the breadwinner's occupation (SES), Cox studied three other global factors; mother's education (MED), father's education (FED) and school type (SCH-TYPE), and these factors are more straightforward, as MED/FED range from the category of "not having completed school" to "Postgraduate University Degree". SCH-TYPE covered three kinds of schools – Government, Catholic, and Independent – reflecting social status with Independent Schools (IS) as the more prestigious and Government Schools (GS) with the least global prestige. This association of school type with prestige is based on the Mitchell and Delbridge study where pupils from IS were more likely to choose the Cultivated forms and those attending GS would use variants from the Broad end of the C – G – B continuum (Cox 1996).

All of these global factors have been tested for correlation separately and table 5.2 below shows the results of Cox's multivariate analysis of variation (MANOVA). (The local factors school and area will be discussed below). As seen in table 5.2 the factor that best predicts F2 values is father's education whereas F1 values are best predicted by MED and SCH-TYPE.

Table 5.2 Summary of Social Significance in Cox 1996

F1	Onset			T1			T2			Offset		
Significance	***	**	*	***	**	*	***	**	*	***	**	*
SES			/ʌ/								/æ, ɜ/	/ʊ, aʊ/
MED					/ɪə/			/ɔɪ, oʊ/		/ɜ/	/ɛ, ɪ, ɔɪ, oʊ/	
FED						/oʊ/						
SCH-TYPE			/i/			/æ/			/aʊ/		/aʊ/	/ɔ/
SCHOOL		/ʊ, ɪ/	/u, ʌ/		/i, ʊ/						/i, ʊ/	
AREA		/oʊ/			/oʊ/							/ɜ/

F2	Onset			T1				T2			Offset		
Significance	***	**	*	***	**	*		***	**	*	***	**	*
SES													
MED			/a/								/a/		
FED	/aʊ/	/ɜ/			/ɜ, aʊ/	/ɒ, ɔ/	(/u/)				/ʌ, ɒ/		/ɔ/
SCH-TYPE													/a/
SCHOOL			/a/			/ɔ/							
AREA													

Significance: *** p≤.001 **p≤.01 *p≤.05
( ) Just below significance
Male data
Female data
Changed vowels with social association
Supplementary information that is not included in the discussion.

(Based on information from Cox 1996, chapter 7)

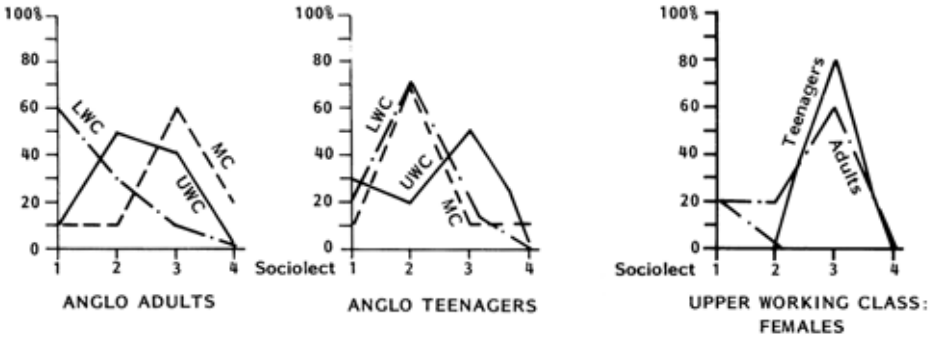
To start with the changes identified in section 4.2, the old changes, fronting of /oʊ/ T2 and decreasing diphthongisation of /ɪə/ do not show any social association. This supports the theory that they are in fact old changes and it may indicate that they have reached a state of almost completed changes or are becoming stable, loosing the social significance that has

been associated with them earlier, and if information about stylistic difference were available, these vowels would be expected to show a monotonic function of the global factors, which is a sign of stability. Information about style has not been included in any of the studies that form the basis for this thesis and thus the influence of style cannot be explored further.

As opposed to the presumably stable vowels or old changes, there are the mid-range changes that could be expected to show signs of instability in their relation to the social factors. As discussed in chapter two, Labov's studies showed that the central groups in the socio-economic hierarchy can be expected to be the most innovative and this is the basis of his curvilinear principle. Women in these groups, in particular, are likely to use the largest number of innovative forms of variables that are at early stages of a change and this use is inclined to decrease as the change becomes socially recognised. This is due to the tendency to avoid stigmatised and non-standard forms that have reached a level of social awareness. Unfortunately the data in Cox's study is not suitable for testing the curvilinear principle as there are no associations of SES with the changed targets.

Instead the curvilinear pattern could have been found in some of the other global factors if the central groups on the scales that form the basis for these factors were equalled with the central socio-economic classes. In such an experiment, the female speakers whose parents had a relatively long education, but not a university degree, would be expected to use more innovative forms of a relatively new change at the stage where it is only just assuming social significance. A review of the data does not suggest that this is the case for any of the changes, which means that either the changes are too advanced to exhibit the curvilinear pattern or no evidence for this principle is present in Cox's data.

Horvath's study of the Sydney sociolects offered little support for the innovative behaviour of the central classes and it should be stressed that her study was on a more general level and not on the phonetic level discussed above. She stated that the upper working-class females in her study were leading the move from the Broad end of the C – G – B continuum to the central part, yet earlier in the same study she used a comparison of Anglo adults and teenagers in the study to show that the LWC and MC were the ones involved in the bi-directional change, while the UWC was the conservative force. This seems slightly inconsistent, but her presentation of the data is not particularly clear.



a) (Horvath 1985, 82) b) (Horvath 1985, 82) c) (Horvath 1985, 92)

Figure 5.3 Socio-economic Class Across Horvath's Four Core Sociolects

In fact, when looking at figure 5.3 a) and b) the change to the central sociolects is clear, but it is also clear that the UWC females only shift from preferring SL2 to SL3 (figure 5.3(c)). The number of speakers in SL1 and SL4 remain the same. In conclusion, the claim that females in the central social classes form the innovative group is not supported by Horvath's study.

The reason for the lack of evidence and support for the curvilinear principle is likely to be related to the lack of material that is comparable to Labov's studies, such as the inclusion of stylistic variation that is absent from both Cox's and Horvath's studies. However, it is important to keep in mind that it is Australian English that is the object of study and the social categories used may not fit the Australian society well enough to provide the expected results.

As mentioned earlier the Australian society has slightly different values due to its special history and its recent development into a nation, and this has to be taken into consideration when studying social influence on linguistic behaviour in Australia. There is an extreme insistence on egalitarianism and the idea that everyone has the right to a "fair go". A social position is not a given, and it is up to each individual as to which social grouping he or she ends up belonging to. Thus the social position of parents is less influential and the class divisions in Australia are more blurred than in Britain, where it is possible to be born into a social class in a completely different way.

Social divisions do exist in Australia, though, and to a large extent global prestige does in fact depend on wealth and income, but it is also extremely important how this wealth has been obtained and occupations with much influence and authority carry the most prestige (Bambrick 1994). This means that global prestige is relatively easy to achieve through

education and hard work and thus there is a high rate of social mobility, which adds to the blurring of the class divisions and the social description of the groups in society. Earlier, in connection with gender, social mobility was considered one of the motivating factors for linguistic change, and based on the material available, it is safe to conclude that in Australia gender is much more effective than SES in predicting linguistic behaviour and change. It appears that social mobility and acquiring more global prestige is an objective for women in general, regardless of social groupings.

Despite the fact that the social correlations in Cox do not offer clear support of Labov's curvilinear principle, they may give some indication of the stage of the different changes. The changes that do in fact have social associations cannot be completely new changes, but they may not all be at the same stage. It is interesting that for the onset of /i/ and the suggested raising of /aʊ/ T2, the global social associations with SCH-TYPE are found in the male data. As these are social markers of the traditional sociolects, C, G and B, as well as the two old changes in /oʊ/ T2 and offset of /ɪə/, it may be suspected that they are actually old changes on the verge of completion. Supporting this theory is the relatively low social significance and the fact that no correlation is found in the female data. Furthermore, as will be discussed below, the traditional social markers seem to be loosing their social significance and this may also be the destiny awaiting these two remnants of the old sociolects. They may be more of a set of stigmatised variants that carry more covert prestige in male usage.

The other changes that have global social significance, /æ, u, ɜ/ and /aʊ/ T1 may be categorised correctly as mid-range changes as their social associations are relatively new – that is, they have not been found to have social correlations in earlier studies available. As discussed earlier /æ/ is special, and it was suggested that the lowering of this vowel is not only due to hypercorrection but may actually be a change to a lower position. The hypercorrect behaviour may have set off the change and it will be discussed at a later stage how the social associations may have changed resulting in a different situation for /æ/.

The rest of the changes listed under mid-range changes in table 4.2 did not show any social correlations and Cox offered four possible explanations for this (1996, 270). Firstly, it may be that the changes are general and that all the social groups exhibit the same behaviour in relation to the particular vowels. This could be suspected for the raising of /ɪ/, which may be a general feature, and the reduced offglide of /ɛə/, which is a general tendency in

Australian English and not a specific feature in any one social group. Secondly, factors not included in Cox's study may influence the vowels, whereas the factors discussed above show no significance. Thirdly, there may have been social significance earlier that has now been generalised, and lastly, the changes may have been caused by internal factors and may be part of a shift with no social associations. This last explanation suggested by Cox may account for the raised /ɒ/, which was mentioned in section 4.2.1, as a possible participant in a chain shift involving both diphthongs and monophthongs. The movements of /aʊ/ that show no social associations could similarly be related to the same internal changes, but there is no way to determine what has in fact caused the changes.

The changes listed as new changes have been categorised as such based on Labov's claim that women are more innovative than men in changes that have not yet reached a level of social awareness. The new changes have not been found in the male data, they are not known as vowels with variation and they do not have any social correlations in Cox's analysis. Thus they fit well with Labov's theory about incipient changes, but they cannot be used to support it as such argumentation would be circular. Only if confirmed as changes in progress by future studies can they be useful in further studies of very new changes.

The material available for this thesis is not sufficient to determine if a change is in progress in the case of /aɪ/, but if it is assumed that there is a raising and retraction of the first target in progress, the counter reaction suggested by the female data may be explained by the fact that /aɪ/ is one of the vowels traditionally used as a sociolinguistic marker (see page 35) As a raised and retracted T1 has been considered a marker of the Broad variety, it is quite likely that females would choose a lower and less retracted variant which would be conservative behaviour and a possible case of hypercorrection. It would have been extremely interesting to see the results of a multivariate analysis of the ANDOSL data as it might provide some information about the motivation for the suggested lowering of /aɪ/ T1 in the female data, but unfortunately this has not been included in the Cox/Palethorpe study.

5.5 Local Social Factors

5.5.1 Social Networks

As mentioned earlier in connection with the strong division of men and women in Australia, social networks may be very important when discussing linguistic changes in AusE. As far as is known, no thorough investigation has been conducted in Australia similar to those of Labov in Philadelphia and Milroy in Belfast, but there is no doubt that Australian linguistic studies would benefit from studies of this kind. The correlations with social factors in Cox (1996) indicate that the local factors are very important for the prediction of linguistic behaviour, especially in the male data. These factors are school and area (referring to three parts of Sydney). This indicates that the peer influence, and thus the immediate social networks, is of the utmost importance. This material is only indicative, though, as the definitions of the specific local factors are too broad to reveal the exact factor with influence. This is of course the price that is paid for the benefits of quantitative studies, and a study like Cox's would have to be supplemented by more qualitative studies of smaller and more clearly defined speech communities in order to determine the function and status of the individual members in the community.

5.5.2 Regional Variation

Cox and Palethorpe (2001) suggested that more attention should be paid to regional effects as this factor may be of more value than previously thought. In their study, as well as in Cox 1996, regional data was restricted to information about the suburbs of Sydney, and it might be more suitable to discuss these differences in terms of "area", as Cox called it in her thesis, while "region" will refer to the different states or urban centres in Australia.

5.5.2.1 Region

It is quite extraordinary that a country with such vast distances between the urban centres has not developed stronger regional dialects. In most studies regional variation in Australia is considered to be restricted to the composition of the different speech communities according to the number of speakers of the three sociolects (Cox/Palethorpe 2001). Mobility has been mentioned as one of the most important factors for explaining the homogeneity of Australian English and the high rate of mobility in Australia may also prevent future development of

regional variation. There are some very interesting studies, though, which claim that significant regional variation already exists (for example Bradley 1989) but since no clear relation with changes in progress has been shown this will not be discussed further in this thesis.

5.5.2.2 Area

Cox and Palethorpe's analysis seems to indicate that some of the discrepancies between the two sets of data in their study (the diachronic and synchronic studies used in chapter four to identify changes) can be explained if area is controlled as a variable. It appears that there are areal effects for the fronting of /u/ and /ɜ/ as well as for the retraction of /oʊ/ T1. Cox and Palethorpe's analysis is not a thorough investigation though, only examples offered to illustrate the need for further research on the effects of area.

In an earlier study of Sydney suburbs, Cox and Palethorpe (1998) actually tried to control area as a variable and the results clearly suggest quite a significant effect. There appears to be a clear variation in F1 for /ɛ, ɜ, æ/ and /ɔ/ and common to all four monophthongs is that the Western Suburbs in Sydney have the lowest F1 values and thus the most raised vowel realisations compared to the Northern Beaches that have lower realisations, and the Northern Suburbs which have the lowest. Variation is also found for /u/ and /ʊ/ as the Western Suburbs have the most fronted variants of /u/ and the most retracted realisations of /ʊ/. The diphthongs /aɪ, ɔɪ, oʊ, aʊ/ also show variation according to area and for some of them this variation resembles the variation according to accent documented in Harrington *et al.* (1997), however as all the speakers used in Cox/Palethorpe (1998) were categorised as speakers of General AusE in advance the accent effect cannot be significant. There is also the possibility that other social factors could have some concealed influence, as speakers of one socio-economic group, for instance, might be dominant in some of the three areas in the study. However, the global factors MED, FED and SES have been tested for significance but none of them proved significant. In conclusion, Cox/Palethorpe (1998) supports the position which is critical towards the homogeneity theory that has dominated studies of Australian English for decades.

In her thesis, Cox (1996) showed that the local social factor, area, had the strongest influence on male speech. This influence did not seem overwhelming, though. The female data in the thesis only showed correlation with area in connection with the variation of F1 of

the onset and first target of /oʊ/, and according to Cox this may indicate the beginning of a new change as changes in language may develop in one place and then spread to different areas over time. This has been suggested in connection with the fronting of /oʊ/ T2, which may have originated in Adelaide, renowned for the use of a variant of /oʊ/ with a very fronted second target. It may also be relevant to note that the lowering of /ʊ/, suggested by the female data and considered to be a potential new change, is associated with the local factor school in the male data. The male data did not support the actual change, but it appears that the variability of /ʊ/ can be accounted for to some extent by this local factor. This can either support the claim that it is a change developing from local variation to a change in progress or it can argue against it, owing to the fact that the correlation is found in the male data, which is inconsistent with the claim that women are the most innovative in new changes.

5.5.3 Ethnicity

Horvath suggested that there is a connection between her suggested variety Ethnic Broad (EB) and the linguistic change that appears to be going on in Sydney AusE. As mentioned in chapter three, the EB variants are only used by Greek and Italian adults. If a change were going on in the natural direction C→G→B→EB, it would be expected that a number of the Greek and Italian teenagers would use a larger proportion of EB variants than their parents, yet none of these teenagers were shown to use other than the classical C, G and B variants and they primarily used the G variants. Horvath explained this as a reaction against the non-Australian English variants used by their parents. The teenagers with a Greek or Italian background probably wish to sound Australian and the safest way to do so is to aim for the central part of the AusE continuum. Quoting Labov, Horvath called this ‘a version of the “hypercorrect” or reverse influence that appears to play a major role in linguistic change’ (1985, 94).

It is significant to note that the Greek and Italian teenagers in Horvath’s study actually moved from EB to G – that is two steps in the opposite direction of what was expected, towards the central part of the AusE continuum. To understand this relatively extreme reaction it is important to be aware of the social situation of the many Australians with non-Anglo (non-British) Australian backgrounds. Their linguistic behaviour may be due to an increased awareness of the fact that they are not “real” Australians and that they have to make

an effort to become integrated into the Australian society. Immigration from southern Europe has increased during the last thirty to forty years and these immigrants have experienced much racism (Bambrick 1994), so in order to get by in Australia it may have been an advantage to sound Australian. This would correspond well with the data in Horvath's study and her conclusion, which suggests that the non-Anglo ethnic groups are leading the reversal from the Broad end of the continuum to the central part.

It is positive that Horvath included speakers with a non-Anglo ethnic background in her study, but her conclusion is rather questionable as this would imply that immigrant groups would be the trendsetters in a country dominated by people with a British background (Anglos) and where racism is high (Bradley 1986), but as suggested in Collins/Blair (2001) it is very likely that people with different backgrounds are shifting to the General variety for different reasons. Speakers with a Greek or Italian background may be distancing themselves from this non-Australian ethnicity, while Anglos may be reacting against the low prestige associated with the Broad variety.

Horvath actually noted that the sociolinguistic variables differ in relevance from Anglos to Greeks and Italians. For instance, the Italian and Greek teenagers in the different socio-economic classes do not deviate from each other in the same way as Anglo. The pattern of the Anglo speakers in the three socio-economic classes illustrated in figure 5.3 is absent from the Italian social groups and barely present in the Greek data. Therefore Horvath suggested that Greeks and Italians might make use of other sociolinguistic differentiators than those used by Anglos. Thus there may also be a need to study these social groups separately in order to determine to what extent they respond differently to the various social factors.

5.6 Conclusion - Social Factors

In this chapter, the vowel changes that were suggested in section 4.2 have been correlated with a number of social factors and the vowels have been shown to have diverse social associations. Some vowel realisations are predicted well by global social factors indicating strong influence from external factors, while other changes do not exhibit any association of this kind. Furthermore, the traditional sociolectal markers of social identity have not exhibited the expected social associations. The consequences of these findings will be discussed in the following sections.

5.6.1 Social Factors and the Phonetic Changes

Based on the discussion of the different social factors in each of the previous sections some alterations can be made in the table of proposed phonetic changes (table 4.2). In table 5.3 below, /oʊ/ T1 has been added to the list of new changes based on Cox's theory that local variation may be the very first stage of more general changes. Thus, due to the association in the female data with the local social factor area, Cox suspected that /oʊ/ T1 may develop into a new change and therefore it has been categorised as an incipient change. It will be interesting to follow its development in the future and to observe if it will actually change.

The two changes in /i/ and /aʊ/ T2 have been moved to the list of old changes under the subheading "almost completed changes" due to the fact that social association was only found in the male data, and that these changes are well known and almost stigmatised stereotypes associated with the sociolects C, G and B. The remaining mid-range changes have been left in this category as the material available offers no reason as to why they should be categorised otherwise. Those that are marked as being associated with social factors are not the vowels that normally show social significance and it is difficult to say why these vowels have assumed this association. Cox suggested three possible explanations for this. Either the changes happened due to local prestige and then developed to more generally recognised changes with social significance, or the change is a change from above which means that the vowel has always had social significance and has changed as a consequence of this. Finally, the changes may have been part of a shift conditioned by internal factors and subsequently assumed social significance (Cox 1996). The mid-range changes with no social association in the Cox data were discussed in section 5.3.

Table 5.3 Revision of the Proposed Changes					
Old changes		Mid-range changes		New changes	
M/F		M/F		M/F	
M+F	/oʊ/ T2 ←	M+F	/æ/ ↓	F	/a/ ↓
M	/ɪə/ reduced offglide	M	/u/ ←↑	F	/ʊ/ ↓←
		M	/ɜ/ ←	F	/i/ ←
		M	/ɪ/ ↑	F	/ɔɪ/ T1 ↓←
		M	/ɪə/ T1 ↑←	F	/ɔɪ/ T2 ←
		M	/aʊ/ T1 ←↓		
Almost completed changes		M+(F)	/aɪ/ T1 →↑ (↓)	Incipient changes	
M	/i/ decreasing onset	M+F	/aɪ/ T2 ↓		/oʊ/ T1 (variation in F1)
M	/aʊ/ T2 ↑(↓)	M+F	/eɪ/ T1 ↓←		
		M	/ɒ/ ↑		
M/F: Changes found in male or female data. Arrows indicate direction of movement: ← (fronting) ↑(raising) and so on. ( ) indicate uncertain changes and inconsistencies between the different studies. Social significance according to Cox 1996.					

5.6.2 Proposed Changes in the System of Prestige

The general tendency seems to be that the traditional sociolinguistic indicators are loosing their social significance and the ability to locate speakers in the socio-economic hierarchy (Horvath 1985; Cox 1996). Thus not only the realisations of the vowels have changed, but also their social significance. The reason suggested for this by Cox is the tendency to choose the General AusE accent and this development supports Horvath's theory of the move away from the C and B varieties in favour of the central part of the continuum.

It is possible, then, to form the hypothesis that the traditional system of prestige has been replaced by a new one, which alters the foundation for a sociolectal system and its function as marker of social identity. There is much material indicating that the traditional system of prestige has been based on an opposition between British values and the sense of being tied to Britain as the mother culture on the one hand, and Australian values that have developed despite the ever-present British cultural heritage on the other.

I have tried to illustrate the traditional system of prestige in figure 5.4 below, with the reservation that the illustration is too simple to represent all nuances of a very complex system. It is divided vertically into two halves according to gender. The top represents women and the bottom part represents men. On these two separate areas the two inverted scales of prestige, global and covert, are superimposed on the basic horizontal division of the figure into three parts according to the traditional sociolects. Thus the figure is a grid of six squares with the white areas marking low prestige and the dark grey areas the high prestige. The gender specific conflict of prestige found in the extreme parts of the continuum is clear, while the central part is the shared neutral zone. Some examples of values and characteristics that may be associated with speakers in the different groupings have been added.

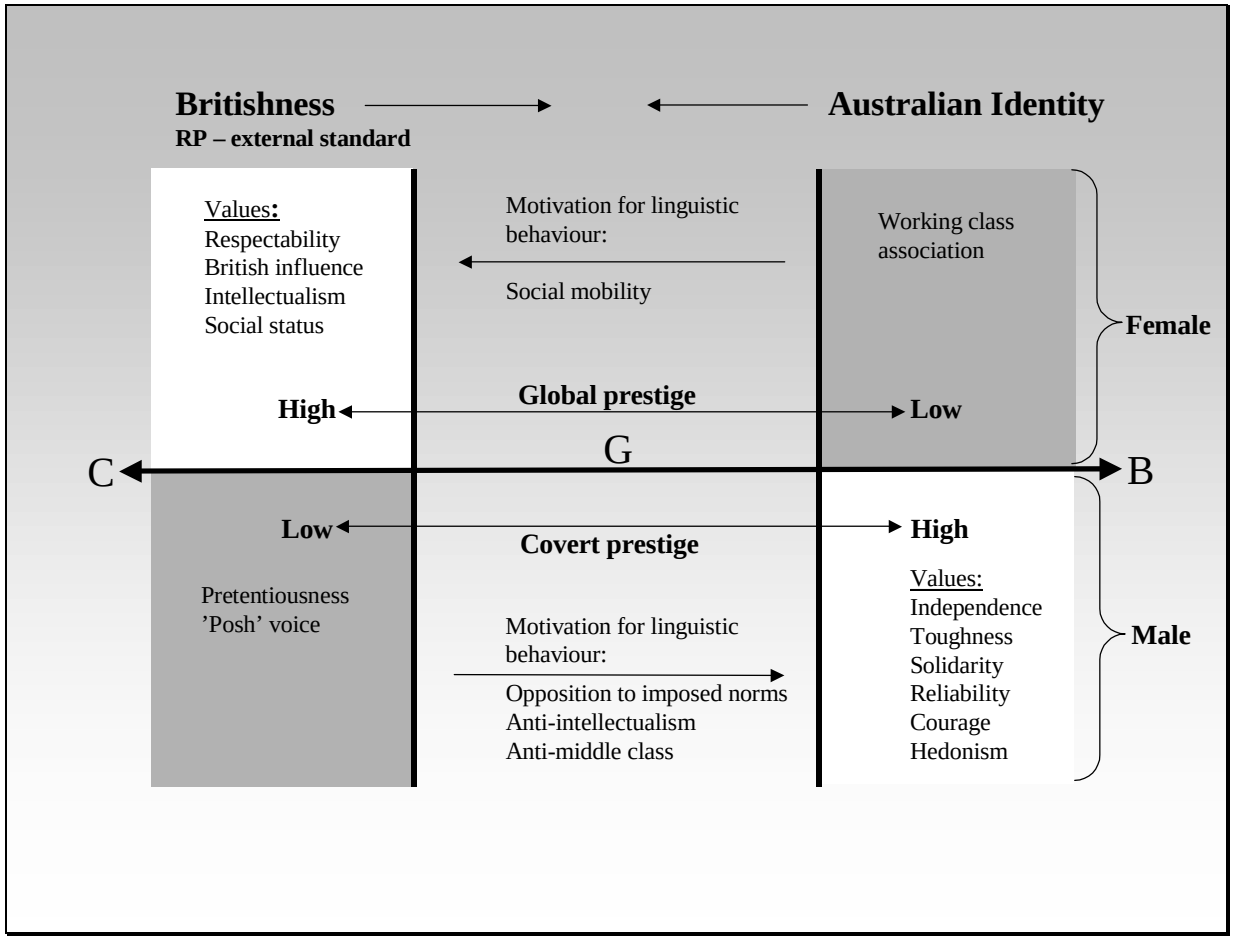


Figure 5.4 Traditional System of Prestige

Figure 5.5 below is a suggestion of an alternative system of prestige where the Australian identity forms the foundation of the central part of the system. This is of course also very simplistic, but it is meant as merely an illustration of the ultimate situation if the tendencies described in this thesis reflect reality and were to continue in the suggested direction.

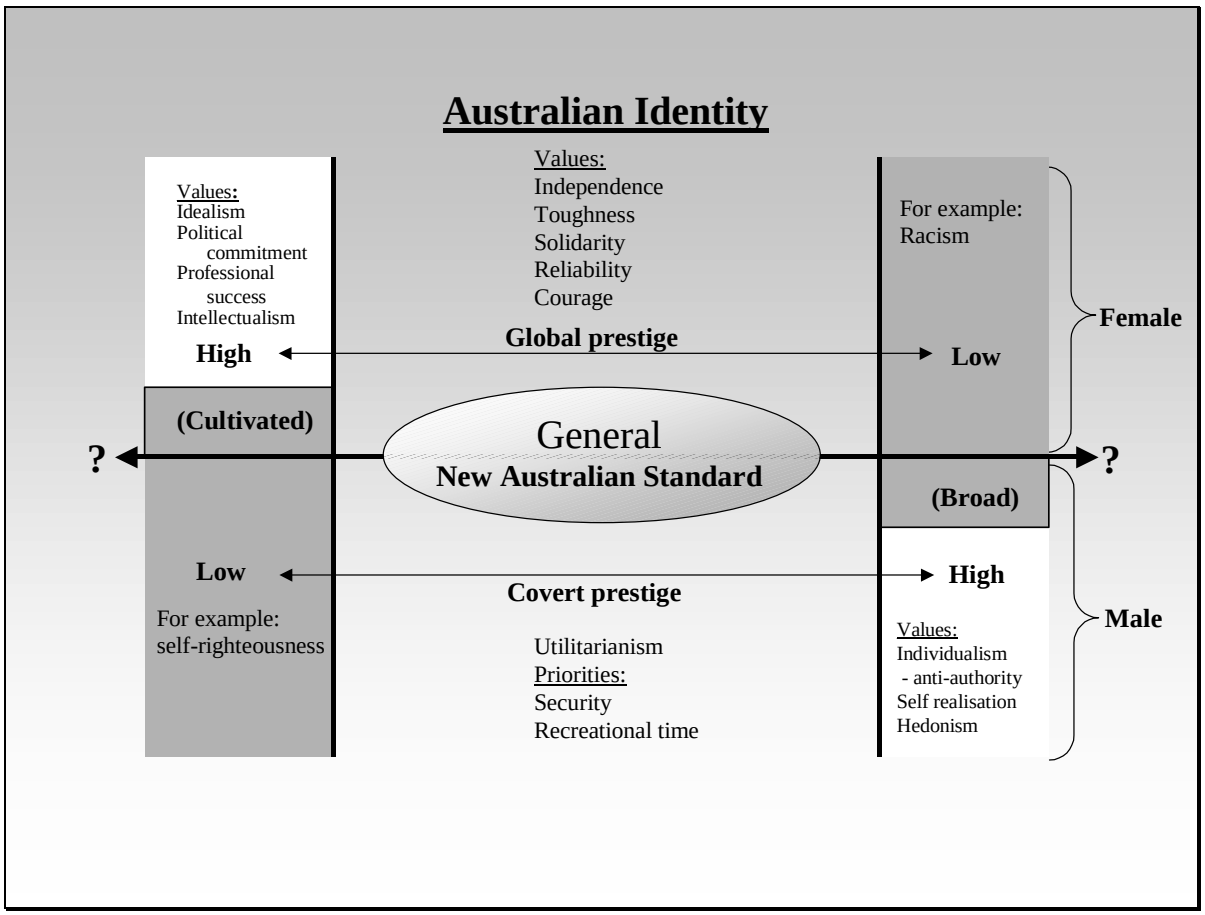


Figure 5.5 Possible New System of Prestige

General AusE is still found in the central part, whereas Cultivated and Broad are more difficult to place in this figure. They are both associated with less prestige but they have not moved to the opposite ends of the continuum. Such an inversion of the system would imply that the Cultivated variety would assume high prestige for male speakers and the same would be the case for the Broad variety and female speakers. This is definitely not the case and what

is more likely to have happened is that females have begun to adopt the negative associations of the male system of covert prestige in connection with accent, whereas the opposite would then be the case for male speakers who are more likely to associate less covert prestige with the broad variety than previously. This has been illustrated by allowing the area of low prestige to expand into the high prestige area of the opposite gender.

If General AusE develops into a new standard variety in Australia as suggested, replacing RP as the standard, it would leave some gaps for non-standard varieties or forms to substitute the C and B varieties that would be used less. However, this has not been discussed in any of the material available and speculating about non-standard opposition to a developing Australian standard is probably taking this experiment too far.

The values in figure 5.5 have also changed compared to the traditional system in figure 5.4. The values previously found in the male high prestige area have been moved to the central part along with the Australian identity with which they are associated. “Priorities” have also been added at the bottom. A survey of the priorities of Australians has shown that the security of owning their own home was most important and that having time to relax with their family came in second place. This may be reflected in the system of prestige in values such as independence and being in charge of one’s own life. It should be clarified that these values and priorities listed in the central area of this figure are not considered to be gender specific despite the positioning in the top and bottom part of the figure, which otherwise correspond with gender.

The values that are suggested to be high on covert prestige are very personal, while the values high on the scale of global prestige are more oriented towards society. This is consistent with the gender differences discussed above where women were shown to be more socially aware, or at least more sensitive to the social pressures. The difference is that with the decreasing British influence, the social awareness is more domestically orientated, with, for instance, an increasing tendency to be politically committed to Australian issues.

The proposed alternative system of prestige above is very speculative, but it seems certain that there have been some changes of values and prestige in Australia and these changes may offer an explanation for the more surprising changes of AusE vowels. The clearest example of a vowel that may be influenced by this changing pattern of prestige is probably /æ/. Assuming that this vowel is actually changing as discussed in section 5.3.2, it also seems that its social significance is changing. As mentioned before, Cox considered the

lowering of /æ/ hypercorrect behaviour due to the traditional association of the lower variant with more global prestige as it is closer in realisation to the RP version /a/. The hypercorrect behaviour may have motivated the lowering, but the pattern of prestige forming the basis for the hypercorrection may be outdated and in the process of being substituted by the new tendencies discussed above. One could theorise that the choice of variant is influenced by the changes in identity and the general tendency to choose the central parts of the sociolectal continuum. The rejection of the Cultivated variety, which may be related to the rejection of British values and RP as the external standard, may have caused an inversion of the prestige associated with /æ/ versus /a/. The fact that the IS girls tend to choose the variant traditionally associated with low prestige may be a result of the embracement of the Australian identity as well as the linguistic variants that signal this identity as opposed to the British.

5.6.3 New Sociolects?

It is clear according to both Horvath's and Cox's studies that the classical way of describing the traditional Australian sociolects is outdated. Both society and the vowel sounds have changed, and therefore the relations between the social factors and the linguistic variables are no longer the same. In Horvath's study her linguistic groupings were poorly described by the traditional sociolects and were best described by proportional use of vowel variants of the different sociolects. Cox suggested that the traditional markers are no longer valid as they showed little or no social association and therefore cannot be used in the same way to signal distinctiveness from other social groups. An alternative design might be to retain the traditional distinction between Cultivated, General and Broad AusE but update them with the new social markers that were shown by Cox to have social significance. These alternative social markers (/æ, u, ɜ, ɪə, aʊ, oʊ/) have been illustrated in figure 5.6 where green signals high prestige and red is used for vowel realisations with low prestige. Figure 5.6 has been generated using raw data from Cox (1996) and can be compared with figures 3.4 and 3.5 (page 36) that illustrated the traditional sociolectal markers according to Bernard's data from 1970.

The introduction of these alternative social markers would only be an updated version of a classificatory system, though, and some of the problems with this system remain. The disadvantage of updating the sociolects is also that the retention of the names of the traditional

sociolects may confuse the correspondence between old and new research as the content of the categories would be different and prevent immediate comparison. A safer way to approach the problem could be to create completely new categories, but this would only prevent erroneous confusion with the old categories and not solve all the problems with the existing system.

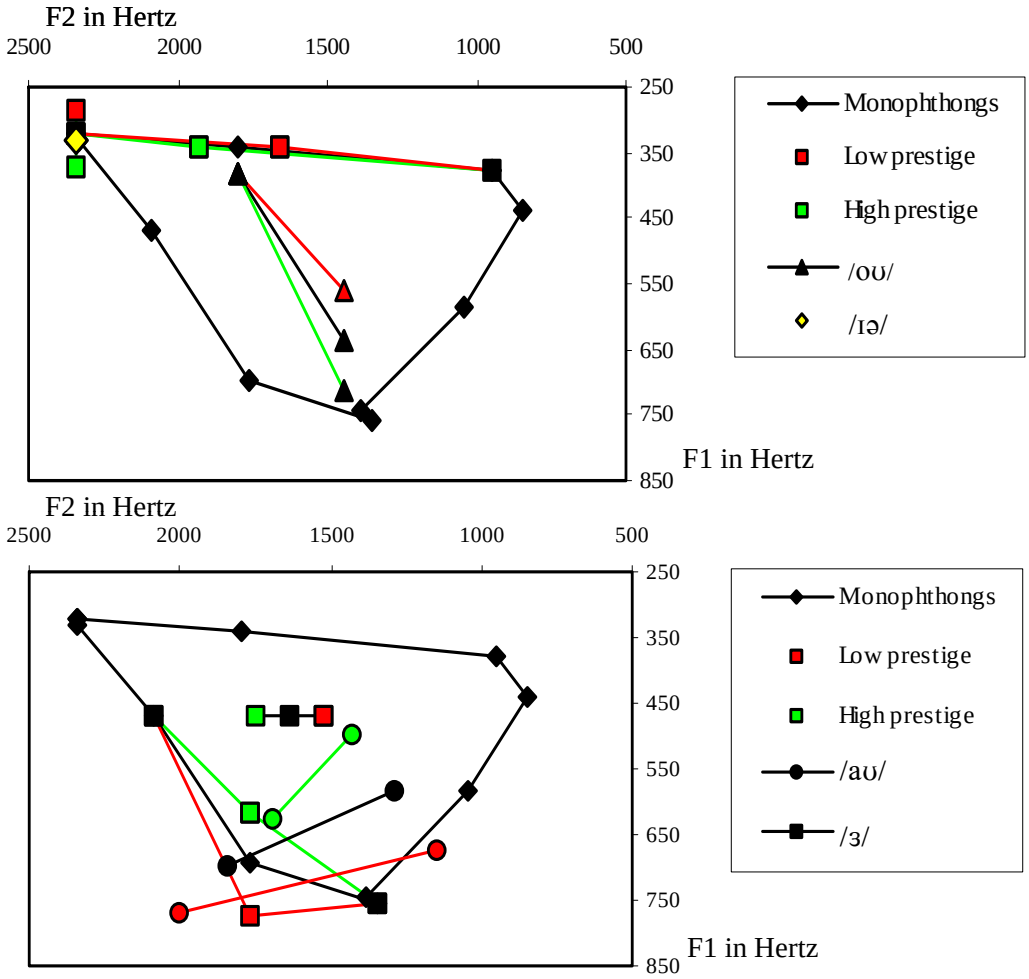


Figure 5.6 Markers of Social Prestige According to Cox
(Based on data from Cox 1996)

It is important to take into consideration that the updated sociolects would still rely on the same social groupings, the traditional social factors and the same system for associating prestige with the different variants. There may be a need for a complete revision of the

descriptive system for AusE – not only a new set of social markers, but also a new set of social variables and a new foundation for these.

First of all it would be necessary to create a system with separate parts for the genders in order to take into account the different systems of prestige in connection with the linguistic behaviour. As the motivations for linguistic choices are different depending on gender, a general set of social markers cannot have the same social meaning for both groups. However, there need to be some relation between the two systems for people to communicate successfully prestige-wise. It may be useful to examine a listener's use of prestige and not only the prestige motivating the linguistic behaviour of a speaker.

As discussed earlier, and illustrated in figures 5.4 and 5.5, there is a conflict of prestige as the scales of global and covert prestige are inverted for males and females. It could be expected that male and female listeners would also judge speakers according to these different patterns of prestige, but this may not necessarily be the case. It could be hypothesised that if a listener's use of prestige is monitored it would show that a person, regardless of gender, is quite capable of using both global and covert prestige in response to speech, while mainly responding to one kind of prestige when speaking themselves. This means that a female listener can associate covert prestige with a male speaker and a male listener can judge a female speaker according to the global prestige that has influenced her linguistic behaviour. In this way the listener's response is to some extent determined by the prestige traditionally associated with the gender of the speaker. This has been illustrated in figure 5.7 where green arrows represent the use of global prestige when judging a speaker and red arrows represent the use of covert prestige. The colour of the circles indicate the prestige that would normally influence the manner of speech of the listeners as well of the speakers. This may seem trivial, but it is important to include listeners as well as speakers in the description of a language in order to achieve a more complete understanding.

Figure 5.7 is of course an abstraction and very theoretical, but it may explain why for example, a male Broad speaker might be associated with more prestige than a female speaker of Broad AusE regardless of the gender of the listener. Broad AusE is associated with high covert prestige and with low global prestige according to which the male and female Broad speakers will be judged respectively. A male listener would not necessarily associate the female Broad speaker with high prestige based on the covert prestige influencing his own manner of speech.

This way of responding differently according to the gender of the speaker might be reflected in a study of attitudes to the sociolects in Australia if gender is controlled in the study for both speaker and listener. In their study from 2001, Bradley/Bradley concluded that there are 'substantial gender differences in rankings' (280), but the differences are certainly not significant enough to reflect an inverted system of prestige. Actually, the behaviour of the listener just suggested above might explain why the gender differences in the Bradleys' study are not larger than they are. Finally, it should be noted that in their study, only male speakers were judged and thus there is no way of knowing how female speakers would be judged or if the same gender differences would appear as when the male speakers were judged.

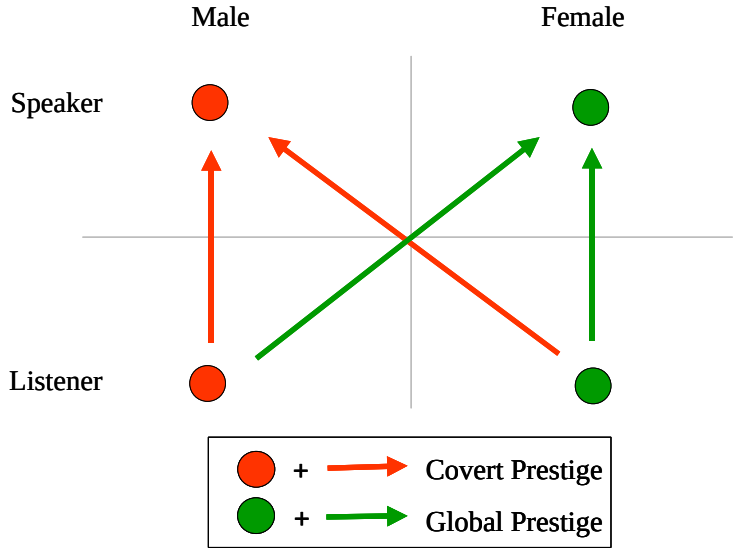


Figure 5.7 Listener's Association of Prestige when Judging a Speaker

Thus there definitely seems to be a bi-directional association of prestige to be taken into consideration, but in addition to this there may also be a need for new social variables that are more efficient in the prediction of linguistic behaviour in Australia. As was discussed earlier, socio-economic class is surprisingly inefficient when predicting the use of different vowel variants, and it may be interesting to explore the possibility of other social factors being more relevant for predicting vowel use in Australia. These could be the degree of individualism, self-realisation, values, goals and ambitions, dependency on others, functions of institutions

such as “mateship”, ethnicity and so on. Cox also suggested factors like ‘social aspiration, willingness or desire to embrace adult norms, country/city affiliations, educational aspiration… specific peer influence, sex orientation or overt expression of gender’ (Cox 1996, 274). Some of these factors may be valuable for the study of linguistic behaviour and if they showed significance, they may in turn cause the discovery of a completely new set of social markers that are much more efficient in predicting the choice of vowel variants of new social subgroups in the Australian speech community (Cox 1996).

VI Conclusion

6.1 Variation and Change in Australian English

Variation in Australian English is normally described in terms of sociolects which are differentiated by more or less Broad realisations of a number of vowels. These vowels were traditionally /eɪ, aɪ, i, aʊ, oʊ, u/ in particular, but Cox's studies showed that the social significance of this set of vowels has changed and thus the vowels no longer function clearly as social markers. This may be related to the fact that the phonetic realisations of the Australian English vowels have changed as was summarised in table 4.2. The second target of /oʊ/ appear to have become more fronted, and it has possibly affected /u/ which has also become more fronted. /ɜ/ is also more fronted while /ɪ/ and the first target of /ɪə/ have become more raised. The onset of /i/ appears to be decreasing. /æ/ has moved down while the back vowel /ɒ/ appear to have moved up. The trajectories of /aʊ/ and /aɪ/ were suggested to have tilted counter clockwise in the vowel space and this could be a result of a chain shift initiated by the fronting of the second target of the diphthong /oʊ/. The trajectory of /oʊ/ may have approached that of /aɪ/ forcing this diphthong to move. The raising of the first target of /aɪ/ may then have pulled the second target of /aʊ/ to a higher position. These are the most important of the changes suggested in chapter four.

They have reached different stages of change and only some of them showed social significance in Cox (1996). All changes categorised as old and almost completed changes were traditional social markers but social significance was only found for some of them and only in the male data. The mid-range changes of /ɪ, aɪ, ɒ/ and /eɪ/ T1 showed no social association while there was found some correlation with social factors for /æ, u, ɜ/ and the first targets of /ɪə, aʊ/. The changes in /a, ʊ, i, ɔɪ/ that were suggested to be new changes were found in the female data only and no social significance was found for these vowels in Cox (1996). Local social significance was found for /oʊ/ T1 but there was only little change in T1 of this particular diphthong. Cox suggested that the change of the first target of /oʊ/ could be a change at the very earliest stage based on the association with the local factor, area,

and the theory that linguistic change may begin as local variation and then develop into general changes in the larger speech community.

The lack of the expected social significance for the traditional sociolinguistic markers and the finding of different vowels with sociolinguistic variation led to the suggestion of a different set of social markers that could be used in the prediction of linguistic behaviour in Australia. This set of sociolinguistic markers was identified by Cox as /æ, u, ɜ, ɪə, aʊ/ primarily, and possibly /oʊ/ that may develop further, assume general social significance and become a sociolinguistic marker.

This change in social significance of the vowels may be related to the general tendency suggested by Horvath: the move away from the extreme varieties in the sociolinguistic continuum, Cultivated → General ← Broad. It was suggested that there is an increasing preference for the General variety of Australian English and though many studies support this theory, the evidence is mainly circumstantial. However, it is quite plausible that if the extreme sociolinguistic varieties are abandoned to a certain extent there would be less need for the social markers of the traditional sociolectal system and they would then loose their significance. The new sociolinguistic markers mentioned above would fill the gap of markers that could differentiate social subgroups in the speech community. The problem is then to identify these subgroups since the traditional groupings, such as socio-economic class, show little or no relevance. This will be an object for future studies.

6.2 The Most Influential Social Factors

In the studies available for this thesis gender is without comparison the sociolinguistic variable found to predict linguistic behaviour most effectively. Socio-economic class was strikingly inefficient and could not predict any target values in male or female data, while parents' education could be used to predict both F1 and F2 values for several vowel targets (summarised in table 5.2). It was also observed that global social factors are most efficient in predicting female linguistic behaviour while local social factors are more relevant to male data.

6.2.1.1 Social Variables

The inefficiency of the social variables, socio-economic class in particular, may indicate that the social categories are not altogether appropriate for the description of the Australian

society. The categories for social classification are based more or less on Labov's sociolinguistic studies, and they may be more suitable for the American society where he is conducting his studies. Other variables may be more relevant for a study of the factors influencing language in Australia. Australian values, degree of individualism, social aspiration, overt expression of gender are some of the social factors or categories suggested as factors with possible relevance in further studies of Australian English. Evidently a study has to be tailored to meet the wishes of linguistic studies in a particular speech community such as Australia. The possibility of universal sociolinguistic categories is definitely questioned as there seems to be a need for these categories to be adapted to the community which is the object of study.

6.3 Sociolinguistic Method

With the little significance of the variable socio-economic class in the Australian material it proved difficult to find evidence to support some of Labov's theories. For instance, little support was found for his curvilinear principle concerning the alternative linguistic behaviour of the central socio-economic classes. Labov's theories regarding gender and his principles about women's behaviour in particular, otherwise seemed to be quite useful and were generally supported by the Australian material. The use of age for the identification of changes also seemed rather straightforward in the Australian studies. The usefulness of these two factors might be due to gender and age being less culturally specific than some of the other social factors. As mentioned these other factors may not be directly transferable to the study of Australian English.

The testing or use in general of Labov's theory was further complicated by the lack of stylistic information in the Australian data. Style of speech and the different levels of formality are quite important for Labov's studies and without this, any direct comparison of his results with those in the studies of Australian English is quite difficult.

6.4 Identity and Prestige

Identity and prestige have been shown to have great influence on linguistic behaviour. The two are closely related as the former can be considered part of the foundation for the latter. As the Australian identity has developed there has been increased focus on Australian values as

opposed to the British. The British culture will always be part of the Australian history, but the British heritage may become less important and influential.

The cultural memory is very immediate for Australians. They embrace their convict history, and the sense of being rejected and sent to the other side of the world where they had to survive on their own in a tough environment has accentuated the awareness of values such as solidarity, reliability and mateship. The Australian identity has become as unique as any other cultural identity and this is bound to have influence on the pattern of prestige. As the British values are abandoned to a certain extent, the British RP is associated with less prestige. Instead the General AusE variety carries more prestige, which may signal a greater accept of being Australian.

The Broad variety that traditionally carried least global prestige and most covert prestige also seem to loose ground to the General variety. This may be due to a higher level of education or just a general avoidance of the low prestige variety. Broad AusE has been subject to much stereotyping which also might motivate the choice of the General variety that also clearly signal Australian identity.

Thus it was suggested that the General variety is developing into a new standard language in Australia replacing the external standard Received Pronunciation, and consequently Cultivated Australian English, as the most prestigious variety. Studies of attitudes to the Australian English varieties support that there is a tendency to prefer the General variety to a larger extent but they also show that this change is still in progress and has not yet been completed. Cultivated still remains the more prestigious variety but not as exclusively as earlier.

These general changes as well as the changes in social significance call for a revision of the system of prestige. An alternative system has been suggested illustrating how it might look if the tendencies mentioned continue to develop as proposed (figure 5.5), but further studies are necessary to create a system that describes the Australian use of prestige as accurately as possible. Australian values have to be studied in order to understand the basis of the prestige used to judge speakers.

Furthermore, as illustrated in figures 5.4 and 5.5 the system of prestige is clearly gender specific. As the scales of global and covert prestige are inverted relative to gender the study of male and female linguistic behaviour within the same system is complicated. The same

linguistic feature may signal very different social values and this should be taken into consideration in further studies.

6.5 Future Studies

6.5.1.1 Qualitative Studies

Studies of Australian English would certainly benefit from a combination of quantitative and qualitative studies. It was suggested in section 5.5.1 that further studies of social networks would be beneficial to the study of Australian English due to the indication that local factors have more influence than previously expected. It could also be useful for specifying the real factors which have influence on linguistic behaviour. The local categories used by Cox in her thesis, school and area, are very general and they may conceal other subgroups that may be the real factors with influence.

Prestige may also need to be studied more qualitatively as this might increase the understanding of its function. This is especially called for if the entire system of prestige is changing as suggested and the foundation as well as the use of the different kinds of prestige is altered.

Another object of study that has been neglected in the studies of Australian English available for the present study is code switching. It would be extremely interesting to explore the function of language and the different use of the varieties or even levels of formality. It was discussed in section 5.3.2 how adolescents respond differently to the presence of an authority according to gender, and thus studies of language in Australia may benefit from qualitative studies of a symbolic use of different varieties of language in order to signal certain attitudes.

6.5.1.2 Psycholinguistic Studies

Psycholinguistic methods described in section 2.2.2 may be quite useful in some of the qualitative studies suggested above, but the study of attitudes may also be helpful with respect to the identification of more suitable social variables. Attitudes expressed by speakers of a certain variety may reveal which factors influence their linguistic choices. Thus such studies may ease the identification of alternative social groupings and divisions in Australia, which will increase the chance of finding the social variables that best predict linguistic variation and change in Australian English.

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