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September 1998
The Southland Variety of New Zealand English: Postvocalic /r/ and the BATH vowel

Christopher Bartlett

A thesis submitted for the degree of
Doctor of Philosophy
at the University of Otago, Dunedin,
New Zealand.

13 December 2002
ABSTRACT

This thesis is concerned with the study of the main regional variety of New Zealand English, the Southland variety, spoken in the far south of the country. Three main questions regarding the variety are addressed:

(1) In what ways is the Southland variety distinctive?
(2) What are the sources of this distinctiveness?
(3) Is this distinctiveness being maintained?

In order to answer these questions a two-stage social dialect survey was undertaken, using established sociolinguistic methodology. A pilot survey identified the existence of a number of phonological, lexical, and syntactic features which characterise the variety.

On the basis of their salience and the wide range of variation associated with them, the following two phonological variables were selected for study in a larger survey:

(1) Postvocalic /r/
(2) Phonological variation involving /a/ and /æ/ in a restricted set of words.

It was found that the consonantal form of postvocalic /r/ is steadily dying out, but that a rhotic NURSE vowel is increasing in usage amongst younger speakers. However, the majority of the variety's source dialects do not possess this feature. It is hypothesised that a NURSE merger and coalescence of vowel and post-vocalic /r/ has taken place as a result of the mixing of the various Scots English, English English, Irish English, and Australian English dialects spoken by the original settlers.
PREFACE

Many people contributed to this thesis. First and foremost I would like to thank the people of Southland who agreed to be part of the project. Their willingness to talk about themselves and their lives is greatly appreciated. In order to protect their identities, all names used throughout this thesis are pseudonyms. I also want to thank the Southlanders who opened their homes to a complete stranger and showed me such wonderful hospitality: Graeme and Robyn Winter, Amy and the late Norman MacIntosh, Audrey and Harold Searle, Gary and Wendy Drayton, Elizabeth and Lyndsay Wards. A number of others helped with finding people to interview, but I would especially like to thank Bernard O’Meara.

My supervisor, the late Donn Bayard, sadly passed away shortly before this thesis was finally submitted. I regret he did not see it in its finished form. He would have been relieved. Donn was a gentle, kind man who cared deeply about his students. His enthusiasm kept me going at times when my own flagged. I wish he was still here to thank.

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This research was supported financially by the University of Otago’s Bamforth Postgraduate Fund. My thanks go to the University of Otago for their assistance.
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In her short time with us, our daughter, Asha, gave me a perspective on life and things important that has ultimately helped me to finish this thesis.

My final and greatest thanks go to my wife, Simi Desor, who kept saying “You can do it” and put up with an awful lot while I did. Thank you for your support and for not giving up.
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CHAPTER 1
INTRODUCTION

New Zealand English has been noted for its relative lack of regional variation, but for years the existence of a regional variety in the south of New Zealand's South Island has been commented on. However, no attempt has been made to carry out a survey to determine what the variety's features and likely prospects for survival are. This is largely a result of the comparatively late development of social dialect studies in New Zealand—it was not until the mid-1980s that such large-scale investigations of New Zealand English began, pioneered by Donn Bayard (Bayard 1985, published in summary form as Bayard 1987). Prior to that time, descriptions of New Zealand English were often based on the informal observations of a small group of people with varying degrees of expertise in the field. With very few exceptions, the data to support what was written simply did not exist.

In 1989 I began planning a research project on the Southland variety. I carried out a pilot study that year, consisting of tape-recorded interviews with fifteen Southlanders from various parts of the region, with the aim of gathering more reliable and up-to-date information (reported in Bartlett 1992). The interviews were supplemented with several weeks' worth of informal observations gathered while I was staying in different areas of Southland during the period in which the pilot survey data were collected. The pilot survey data was then analysed and the findings were used to design another, larger study.

In late 1991 and the first half of 1992 I made several trips to Southland to collect the data for the main study, again by way of individual interviews. I interviewed the male subjects and three female interviewers were employed to interview the female subjects. Seventy-nine interviews were conducted in total; ten of these were put aside because the speakers did not match the required criteria, so there are sixty-nine interviews in the data set that this thesis is based on. Then the interviews were transcribed and analysis of the variables was undertaken.

The time gap between the period when the data was collected and when the results have been written up has grown to be quite large (ten years or so). This means the results presented here provide a historical snapshot of the Southland variety from the early 1990s. The study has nonetheless turned out to have captured information about the variety at a very interesting point in its history. The general feeling among linguists before I began my research seemed to be that the distinctive features of the variety were disappearing and that the variety's chances of survival were uncertain. What I found was more complex, and also more encouraging, than that.
The thesis is organised as follows:

The next chapter provides an overview of the study of New Zealand English, with particular emphasis on the development of research over the years and what this has meant for the study of regional variation in New Zealand.

Chapter 3 introduces the Southland region and provides the background information that is required to understand the characteristics of the region and its people. Issues that affected the study and decisions that were made as a result are discussed. The chapter concludes with a description of the sample frame that was designed for the main study.

The features of the Southland variety are outlined in chapter 4. Findings from the pilot study are presented alongside earlier sources of information. The variables that were selected from the main features of the variety are identified.

In chapter 5, the methodology used for this study is described. Key issues that had to be resolved and the decisions that were made as a result are discussed.

Chapters 6 and 7 present the results of the analysis of the two main variables that were selected for this study. Chapter 6 investigates postvocalic /r/, the Southland variety’s most famous distinctive feature. Issues with the analysis and the eventual methods used are covered in detail. Because postvocalic /r/ is the Southland variety’s primary distinctive feature, it is treated in some depth. Chapter 7 presents the results of the investigation of variation between /a/ and /æ/ in words of the BATH lexical set.

The thesis concludes with chapter 8, which considers the development of the Southland variety, with particular emphasis on postvocalic /r/. Why is it currently distributed as it is? What are its possible future prospects?

Additional material in the appendices includes information on the interview format and materials, sample data analyses, some key data for the individual speakers who were interviewed, and a brief presentation of the results of an analysis of a minor feature of the Southland variety.
CHAPTER 2
THE STUDY OF NEW ZEALAND ENGLISH

2.1 Introduction

This chapter has two main aims: firstly, to provide an overview of the study of New Zealand English (NZE), and secondly, to examine the nature of the evidence linguists have provided in support of the common claim that there is little regional variation in NZE (e.g. Bauer 1986b: 227–28; Holmes and Bell 1990: 5; Wells 1982: 605–6). I will argue that the study of NZE has evolved in a way which has precluded serious consideration of regional variation in NZE.

The chapter is organised chronologically for the period until 1984. From 1985 on, the field of NZE studies developed rapidly, so this account will treat works from that period by topic.

2.2 The establishment of English in New Zealand

The history of English in New Zealand begins in 1769 with the arrival of James Cook’s Endeavour. Cook encountered the ancestors of the present-day Maori population, a society of East Polynesian origin that had developed in New Zealand in near-total isolation for well over five hundred years. Although the date of their first arrival is still being debated (see Belich 1996: 27–36; McGlone et al. 1994), the Polynesians were well-established here by about AD 1200 according to archaeological evidence (Davidson 1984: 26). Dutch explorer Abel Tasman had sailed in 1642 from the East Indies to New Zealand over a century earlier than Cook, but the immediate effect of this initial contact between Europeans and Maori on the future of New Zealand was minimal. After four members of his crew were killed by Maori in an incident in Golden Bay, Tasman wrote in his journal that “no friendship could be made with these people” (quoted in Lloyd Prichard 1970: 6), and his reports seem to have led others to believe that prospects for European expansion and trade in New Zealand were not good. When Cook visited New Zealand a century and a quarter later, he formed the opinion that British colonisation was possible; he believed that the lack of unity among the Maori tribes, among other things, would make this a relatively easy task (Owens 1992: 30). Cook’s accounts of his voyages to New Zealand—which included a map of the coastline—ultimately led to the migration of English speakers to the country.

At the end of the Eighteenth Century, settlement was underway in Australia and when in 1787 “a Royal Commission appointed a Governor for New South Wales, ...New Zealand was included as part of British territory” (Lloyd Prichard 1970: 7). A few years after this, whaling and sealing gangs
based in Australia started exploring New Zealand waters, particularly the southern areas, and set up stations at places like Dusky Sound in Fiordland. The peak period of sealing was 1803–10, but whaling continued to flourish until the early 1830s (Owens 1992: 32). Throughout this period trading between Maori and Europeans steadily increased, as did settlement in New Zealand, particularly via Australia in the late 1830s. A formal arrangement was needed to continue settlement, so the Treaty of Waitangi was signed in 1840 by Maori Chiefs and representatives of the British Crown. The Treaty had an immediate impact on the size of the European population in New Zealand: by 1842 the population had increased to approximately 10,000 from approximately 2,000 in 1838. European immigration, particularly British, continued to increase steadily throughout the Nineteenth Century. The linguistic consequence of this was that English quickly became established as the main language of New Zealand.

2.3 The first reports on English in New Zealand: 1880–1900

2.3.1 Introduction

The form of English spoken in New Zealand first attracted professional attention in the 1880s. The period from 1880 to about 1900 can be characterised as one when material on pronunciation was published by educationalists who were concerned with evaluating the speech of school children. There are three main sources of published information from this period:

(1) School inspectors, whose comments on the pronunciation of school children were part of Parliamentary Reports on Education and are recorded in the Appendices to the Journal of the House of Representatives (AJHR), beginning in 1880;

(2) Samuel McBurney, a singing teacher and school principal who documented the pronunciation of school children in the Australasian schools he visited in 1887;

(3) Lexicographers interested in emerging Australasianisms.

2.3.2 The school inspectors’ reports

The earliest known examples of professional interest in English as spoken in New Zealand come from school inspectors. Their reports in the AJHR have been studied by Elizabeth Gordon as a means of discovering aspects of early English pronunciation in New Zealand (see Gordon 1983a, 1983b, 1991, 1994, 1998; Gordon and Deveron 1989; Gordon and Abell 1990). From 1880 to about 1900 the inspectors wrote favourably of the school children’s “correct pronunciation”, which was free from “marked accents or provincialisms” (Gordon 1983a: 35). Because they were concerned with evaluating the speech they heard, the inspectors also noted features they felt should be eradicated. Their “complaints mainly concerned ordinary conversational assimilations and elisions...and features of pronunciation which would be associated with non-standard varieties of British English” (Gordon
and Abell 1990: 22). Two features in particular were frequently commented on: /h/-dropping and the reduction of word-final /ŋ/ to /ŋ/ (Gordon 1983a: 33–34). Gordon concludes that in the school inspectors’ reports prior to 1900 “there was almost no reference at all to anything that suggests a distinctive New Zealand variety” of English (1983a: 33).

2.3.3 The observations of Samuel McBurney

The question of a specifically New Zealand variety of English was explored by Samuel McBurney, who in 1887 made the first known attempt to apply formal linguistic methods to the study of English pronunciation in New Zealand. McBurney was a visiting singing teacher and school principal who was engaged in examining singing classes in Australasian schools (see Turner 1967: 84–85 for further details). He had taught himself phonetic transcription by reading Melville Bell’s Visible Speech and A.J. Ellis’s Pronunciation for Singers (Ellis 1889: 248), so he was able to provide a technical description of the speech of the children in schools he visited. Such description, which is lacking from the school inspectors’ reports discussed above, is one reason why McBurney’s work has been described as “the earliest trustworthy account of NZE pronunciation” (Bauer 1994: 391, after Turner 1967: 84 and Wall 1939: 8). Another key reason is that McBurney’s observations are based on data he collected from different regions of New Zealand; his method was:

to take a number of test words, and record the pronunciation in glossic [a phonetic transcription system], and then mark by symbols whether these were general, in the majority or minority, about half, or sporadic. In some cases he...even found it expedient to separate the habits of boys and girls in schools. (Ellis 1889: 237)

However, Gordon and Abell caution that McBurney commented on some features of colonial pronunciation only after they had been brought to his attention (1990: 35), which is perhaps why Trudgill et al. consider McBurney is “not a particularly reliable witness” (1999: 9). Furthermore, it is not possible to assess his ability as a phonetician.

McBurney wrote a summary article for The Press, Christchurch (McBurney 1887) and also forwarded his data to Alexander Ellis, a dialectologist. Ellis published a full account of McBurney’s findings in his major work on English dialects (Ellis 1889). Specific details of these findings are beyond the scope of this brief overview, but some are incorporated where relevant below. McBurney summarises his observations on colonial pronunciation by commenting that it is inexplicable “why there should be a general tendency, as there undoubtedly is in Australia, to a Cockney pronunciation” (1887: 5). Although he noted seven phonological features of “modern Cockney” in Australasian English, McBurney indicates that all but one (the reduction of word-final /ŋ/ to /ŋ/) are relatively infrequently heard in New Zealand (1887: 5). He concluded that there was “another type” of English in New Zealand; that is, he gained the impression that a distinctive variety of English which still exhibited traces of other English dialects was emerging in New Zealand. He added that the variety was “difficult to define” (McBurney 1887: 5), which perhaps suggests that there was a high degree of

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1 This newspaper article was reprinted in Turner (1967).
variability to be heard throughout New Zealand; his data tables indicate this was the case. McBurney’s findings have until recently been the main source of information on Nineteenth Century English in New Zealand (see discussion of The Origins of New Zealand English Project, below).

2.3.4 Records of Australasian words

Although many of the early reports on English in New Zealand focussed on pronunciation, there was also significant interest in Australasian contributions to the English lexicon. These new features were the result of European immigration to a new environment and extended contact with Maori and Aboriginal cultures. The main record of such words is Morris (1898), which tends to highlight the similarities between the history of New Zealand and Australia and the resultant similarities in the speech to be heard in the two countries. Although the lexical developments in Australasian English are of interest, they do not enable conclusions to be drawn regarding the development of a New Zealand variety of English.

2.3.5 Summary

The reports on the pronunciation of English in New Zealand during the period 1880–1900 were for the most part written by people with no linguistic training. Furthermore, their aims were primarily evaluative, rather than descriptive. Although McBurney was a relatively neutral observer, he too was interested in assessing the state of colonial pronunciation; his article in The Press begins: “I think it may be admitted that the pronunciation of the colonies, as a whole, is purer than can be found in any given district at Home” (1887: 5); the article ends: “I think, therefore, that we may hope for a very fair average pronunciation throughout the colony, which will compare favourably with that of any home district” (1887: 5). These comments may have been tailored for his audience, but they do establish a frame of reference, which is the relative “purity” of the New Zealand accent with respect to standard British English.

2.4 Reports on the developing NZE accent: 1900–1935

2.4.1 Criticism of the new variety

The school inspectors’ reports continued to appear in the AJHR. From 1900 onwards the inspectors’ views of the pronunciation of school children were comparatively negative, particularly following the 1912 Cohen Commission on Education in New Zealand (Gordon 1983a: 33). Others in the education system also commented on the rise of “impurities” in the children’s speech. Their reports were published in the New Zealand Journal of Education (1899–1918), which became National Education in 1919, and later in The New Zealand Education Gazette (1921–). The educationalists increasingly deplore the pronunciation of unstressed /ɪ/ and the closing diphthongs /ai/, /ei/, /ou/, and /au/ (Gordon 1994: 6). Although these attracted the most comment, a number of other features of
pronunciation are also criticised. An informative source of information is an article in *The Triad* (August 10, 1910), a popular-literary magazine, which gives an account of a speech on “New Zealand English” by E.W. Andrews of Napier Boys’ High School. The title “New Zealand English” itself is significant because it indicates that the changes in pronunciation were of such a magnitude that one could now talk about a national language variety:

> Lest... I may appear to speak rather too comprehensively, let me at once acknowledge that very many New Zealanders born and bred do speak the King’s English with propriety and euphony; there is nothing to distinguish their speech from that of a highly cultured Englishman in England... I am merely just now observing that a dialect, and that not a defensible one, is gradually becoming fixed in the Dominion among the children and younger adults. (*The Triad* 1910: 37)

Andrews goes on to comment on the various “faults” which characterise New Zealand English pronunciation. Gordon notes that favourable comments on school children’s pronunciation were “most rare” after 1900 (1983a: 35). Shortly after this time, speech lessons in schools were proposed as a corrective measure (Gordon and Abell 1990: 28-31). However, they had little effect. The educationalists’ negative attitudes towards New Zealand English also continued; Harry Orsman recalls:

> I had looked forward to reading a copy of a thesis completed in 1930 by J.W. Shaw, a lecturer in English at Auckland Teachers’ Training College... The thesis *New Zealand speech—a study in development and tendency* was...rejected as an unsuitable topic by the University of Auckland Department of Education, and was then destroyed by its disappointed author. (Orsman 1995: 12, fn 2)

### 2.4.2 Recent evidence on the development of the NZE accent

The written evidence discussed above indicates that a distinctive NZE accent was discernible from about 1900 (Gordon 1983a), although McBurney’s systematic investigation showed that features of the variety could be heard in the 1880s. Recently, spoken data has become available. The *Origins of New Zealand English Project* (ONZE) at the University of Canterbury is currently working with a database of recordings of New Zealanders born in the latter half of the Nineteenth Century (see Lewis 1996 for further details). The results from the ONZE project will enable more substantive conclusions regarding the development of NZE to be drawn, although it is already clear that the NZE accent developed before 1900 (Gordon 1998). Furthermore, the ONZE data indicates there is “a time lag of about 30 years between first occurrence [of a feature] and first written comments, and in some cases even longer” (Gordon 1998: 81), which needs to be borne in mind when interpreting the written evidence discussed above.
2.5 The characterisation of general NZE, stage one: 1936–1965

2.5.1 Introduction

NZE had been treated as a homogeneous language variety by most commentators (McBurney is the notable exception) when its first characteristics were identified by educationalists in the early Twentieth Century:

In New Zealand the dialect is not a matter of locality and occupation, not even of social position nor education. You hear the same peculiarities wherever you go; the university graduate has the same faulty vowels as the bushman... (E.W. Andrews, quoted in The Triad, 1910: 37)

The few individual scholars who began to bring knowledge of NZE to a wider audience from 1936 onwards also treated it as a homogeneous variety. They identified salient features of NZE, but for the most part did not attempt to give a comprehensive description of the phonological system, nor did they employ the data-collection methods developed by nineteenth-century European dialectologists. However, their observations provide valuable information on the defining characteristics of NZE.

The first stage of the characterisation of general NZE spans the years 1936 to 1965; these years are significant because in 1936 Arnold Wall, the single most important figure in this period, published The mother tongue in New Zealand, his first book on English pronunciation, and in 1966 a number of key works appeared that marked a significant advance on what had already been published (see section 2.6, below).

2.5.2 Arnold Wall, 1 (1936–1939)

Arnold Wall is the main source of information on NZE in the early to mid-Twentieth Century (Wall 1936, 1939, 1951a, 1958, 1959, 1964, 1966). Wall was an Englishman who emigrated to New Zealand in 1899 to take up a position in the English Department at the University of Canterbury. He noticed changes in pronunciation from 1910 to 1930 as the NZE accent developed (Wall 1951b) and began publishing his observations after he retired as Professor of English in 1931. He initially wrote newspaper columns (collected as Wall 1958, 1964) and gave broadcast talks in which he indicated where NZE diverged from Standard English and educated the general public about the differences. Wall’s intention was: to teach people the “correct” way to pronounce words (e.g. Wall 1936, 1939), so he can be described as a prescriptivist—he was primarily influenced by Daniel Jones in his recommendations of “good” and “bad” pronunciations. Even though he claimed he did not want to “criticize New Zealand speech unkindly” (Wall, 1939: preface, n.p.), he nevertheless made value judgements about NZE:

This book is designed for use by residents in New Zealand who wish to speak ‘good’ English, or ‘standard’ English, as spoken by the ‘best’ speakers in the old land; it is not intended for those who wish to develop a new dialect of English in this country, nor for those who openly say that they care nothing for standards or authorities but mean to pronounce English words as they please. (Wall 1939: 1)

Wall noted many features of NZE pronunciation, although he labelled them “essential faults in New Zealand speech” (1939: 15) and “prevalent errors in New Zealand pronunciation” (1939: 16).
Specific features he identified include the centralisation of /i/ when unstressed or preceding /l/, use of [iː] instead of [i] word-finally (e.g. city [ˈsɪtɪ]), diphthongisation of /i/ and /u/., fronted /a/, and shifting of the four closing diphthongs /ai/, /ei/, /ou/, and /au/. The main consonantal feature he identified was the use of a ‘dark’ pre-vocalic /l/ and vocalisation of post-vocalic /l/.

Wall was of the opinion that “in most cases, where a sound varies from the standard in New Zealand speech, it is simply Cockney” (1936: 136). He notes that some New Zealanders “speak English as correctly and with as pure an accent as the best speakers in the Old Land”, but that “about eighty percent of the population, at a rough guess, speaks English with a more or less marked London, or ‘Cockney,’ accent” (1939: 8). Wall says his own speech was modified in the direction of Cockney when he was a schoolboy (1951b), so his judgements are based on his memories from that period of his life. However, his claims about the Cockney element in NZE seem to have been somewhat exaggerated.

Wall’s later works are dealt with in sections 2.5.6 and 2.6.2, below.

2.5.3 Sidney Baker (1941a)

At around the same time that Wall published his first books on NZE, Sidney Baker investigated Australasian speech. Baker published several items on Australian English (e.g. 1941b, 1947) and one book on NZE, *New Zealand Slang* (1941a), the final chapter of which gives Baker’s impressions of the New Zealand accent. He notes that he undertook “several years of close study of the subject, during which [he took] many tests of speech in New Zealand, Australia, and England” (1941a: 93); however, he gives no further clues regarding his methodology. The main point is that this implies he carried out some kind of formal investigation, which contrasts with Wall’s indirect observations.

Regardless of how detailed his investigations were, Baker focusses on the “general characteristics” of NZE because his aim is “to make [his account] as easily understandable as possible” (1941a: 103). He notes that the NZE accent is characterised by: a tendency to diphthongise short vowels (as per Wall’s observations, section 2.5.2); “a general sharpening of vowel values” ; “a strong tendency to give the various vowels in a word the same value; an equalization of stress”; “rapidity of speech”; and “a much longer word-grouping than in English speech” (1941a: 103–104). Perhaps one of the most interesting points is that Baker claims direct influence of Maori (particularly via place names) on NZE pronunciation as the reason for a number of the distinctive features of the latter.

Although Baker refers to Wall’s prescriptiveness and claims he himself is “as concerned as far as humanly possible only with presenting the facts” (1941a: 94), he also evaluates the NZE accent. He notes “the emergence of (i) an educated and (ii) a vulgar New Zealand speech, the former being clear, decisive, and pleasant, though tending to sharp nasalization” (1941a: 104), which implies that the “vulgar” speech is perhaps not so pleasant. Baker also comments that the diphthong /au/ is commonly nasalised and that it “is probably the only seriously unpleasant sound to be found in common use” (1941a: 102) in NZE.
2.5.4 J.A.W. Bennett (1943)

Jack Bennett was a medievalist; his motivation for publishing just one article on NZE (in *American Speech*, 1943) is unclear. The aim of his article was “to indicate some of the modifications which so-called Standard British English has undergone in the dominion furthest removed from Britain” (1943: 70). The bulk of the article consists of a discussion of the distinctive vocabulary of NZE, particularly slang items. This is probably because the article was written for an American audience—comparisons between NZE and American English showing similarities could be made more readily by considering lexical items rather than pronunciation. As a result, Bennett perhaps overstates the degree of American influence on NZE.

Bennett discusses just those few phonological features of NZE which he claims “are quite marked, and shared by the majority of speakers” (1943: 70). These are: fronted /a/; the fronted and raised first element of the diphthong /au/; diphthongisation of /u/; the pronunciation of word-final /i/ (e.g. in *fifty*) as [i]; the retention of aspirated *wh* (e.g. /w/ in *which*). There is no attempt to give a systematic treatment of the complete phonemic system.

2.5.5 Overseas interest in NZE

There seems to have been a certain amount of overseas interest in NZE at the time of World War II; it was possibly generated by the stationing of American soldiers in New Zealand. As noted above, Bennett (1943) was intended for an American audience. The United States Army also included information on NZE in its guide for soldiers going to New Zealand (United States Army 1944). Pei’s work on languages of the world (1946) included a brief one-and-a-half pagesummary of NZE. Soljak (1946) deals with New Zealand in general and includes a brief section on NZE. As in the other overseas reports from this time, most of the overview of NZE deals with vocabulary items. Partridge and Clark (1951) is notable because local experts were invited to contribute first-hand knowledge of the features of NZE. Brook (1963) includes a brief summary of NZE in its survey of English dialects. The overseas reports on NZE that appeared in the years 1940–65 can be characterised as being sparse and sometimes not entirely accurate. They each choose different features in order to describe NZE pronunciation. Moreover, they contradict each other in some places, particularly in their assessments of the relationships between NZE and both British and American English.

2.5.6 Arnold Wall, 2 (1958–1964)

Wall (see section 2.5.2, above) continued writing columns on NZE for *The Press* and the *New Zealand Listener* for a number of years and in 1958 published a collection of them (Wall 1958); its title *The Queen’s English* indicates that Wall’s intention was still to compare NZE with a standard form. In the following year, an expanded version of his earlier work on NZE (Wall 1939) was published (Wall 1959). Wall added comments on the correct pronunciation of about a hundred lexical items, but did

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2 The material on NZE in the guide is reproduced in the *New Zealand English Newsletter* 5: 40–41.
3 This material is reproduced in the *New Zealand English Newsletter* 5: 42–44.
not update his discussion of the features of NZE pronunciation. However, in Wall (1964), he does add a significant new piece of information: in a section entitled ‘Ut Ut’, he indicates that the centralisation of /i/ had spread to all stressed positions. In 1939 he had noted that /i/ was centralised in unstressed positions and before /l/ (e.g. in Wall (1939: 16) he transcribes is it as [iz st]) and in Wall (1951b) he noted that it had spread to monosyllabic words: “Monosyllables having the short i are similarly pronounced [i.e. centralised], ut uzz, uzzn’t ut (it is, isn’t it), and such words as ‘did’” (Wall 1951b: 91). Wall’s feelings on this development were characteristically prescriptive:

Some, if not all dialects of Scottish and Anglo-Irish exhibit this same peculiarity, but I should not attribute the New Zealand ‘i’ to the influence of either of those dialects—no, I should make it due to original sin. Why ‘sin’? Well, it is sheer laziness, a reluctance to make a very slight effort and I make bold to call that a sin in the everyday, not the biblical, sense. (Wall 1964: 138)

2.5.7 Concern with Maori English

Several items on Maori English appeared from 1965–70 (Anderson and Aitken 1965, Barham 1965, Benton 1966, Richards 1970). They were written by New Zealand educationalists concerned with the lower levels of achievement of Maori school pupils (see Benton 1991). At this time, Bernstein’s ideas on language deprivation were influential (see e.g. Bernstein 1961), so it was thought by some within New Zealand’s education system that language difficulties could be the cause of Maori students’ lower attainment. These works on Maori English mainly considered the students’ performance in general NZE.

2.6 The development of the study of NZE, stage 2: 1966–1984

2.6.1 Introduction

1966 was a significant year in the development of the study of NZE; a number of items appeared that marked a notable step forward from what had been published up until that point. One item in particular was indicative of the growing interest in NZE: a bibliography of previous work on NZE (Coleridge 1966) was published for the benefit of teachers. Further evidence of the interest in NZE at this time is the re-publication of McBurney’s newspaper article of 1887 (see section 2.3.3, above) in Turner (1967). It seems likely that the main impetus came from advances in research on Australian English, particularly the landmark study by Mitchell and Delbridge (1965). Around this time, “plans for a survey of New Zealand English [were] beginning to be discussed” (Turner 1966: 213). This statement turned out to be a somewhat premature hope that large-scale research into NZE was about to be carried out in a systematic and co-ordinated manner. Nevertheless, the quality of work on NZE increased in this period.
2.6.2 Arnold Wall, 3 (1966)

Wall’s final article on NZE was published in *An encyclopedia of New Zealand* (1966). Wall continues to push the notion that NZE is largely derived from Cockney: “New Zealand speech has a basis of this London character, and although many changes have since appeared in it, the speech of the New Zealander still retains many characteristic pronunciations of early and middle Victorian London English” (1966: 677). Wall gives a small number of examples which involve the diphthongs /ei/, /au/, /ou/; he claims these are the Cockney sounds which McBurney “particularly noted” here (1966: 679), but, as is discussed above, McBurney actually demonstrated that Cockney is not really prevalent in New Zealand. Wall notes a few further features of vocabulary and pronunciation which are generally mentioned in his earlier works.

2.6.3 Notable advances in the study of NZE

Orsman (1966) was also published in *An encyclopedia of New Zealand*; it immediately follows the above article by Wall. It is a discussion of the features of “The Southland dialect”, a regional variety of NZE. Until that point, little had been said by previous writers about regional variation in NZE. Orsman’s article gives the most comprehensive list of features of the Southland variety, covering pronunciation and lexical items, but it is based on anecdotal observation once again. Orsman’s comments are referred to in detail throughout chapter 4, below.

Kelly (1996) is a brief paper on NZE pronunciation, published for a Canadian audience. L.G. Kelly was a New Zealander who had a post at Laval University in Canada as a graduate fellow carrying out research in language teaching. The source of his information is not stated—it is possible that his paper was based on coursework he carried out when in New Zealand. The main contribution of the paper to the development of the study of NZE is the inclusion of a complete vowel quadrilateral diagram showing the location of general NZE vowels, along with detailed discussion of the individual vowel phonemes. However, some of the details must be incorrect, given what was already known about NZE. In particular, Kelly notes that NZE /e/ (e.g. in bed) is lowered to the point where it overlaps with raised versions of /æ/; he claims that “extreme forms” of /e/ and /æ/ “can often be found in the same speaker, so that the two vowels become identical” (Kelly 1966: 80–81). This seems to be highly unlikely, and is certainly not supported in any other evidence prior to this time—NZE /e/ is normally characterised as being raised when NZE is compared with other English varieties. In summary, Kelly’s paper is significant in that it attempts to give a systematic overview of NZE pronunciation. However, the errors indicate that there were still gaps in knowledge, perhaps as a result of the lack of fieldwork and actual data-based studies of NZE.

Brosnahan (1966) is one such systematic, if small-scale, data-based study. It investigates the allophones of /1/ in the speech of a “few adult educated native speakers” of NZE (1966: 230). Brosnahan assumes that NZE is homogeneous; even though the sample was very small, he comments that “the main features of the description…probably have fairly wide applicability to educated New Zealand English” (1966: 230). This claim is hard to support because in no research prior to Brosnahan’s
study is it established that NZE is homogeneous; it is only ever assumed on the basis of limited personal observations. Nevertheless, the paper is a significant one because it is based on analysis of collected data, a method which was not to become the norm in the field of NZE studies for about 20 years.

2.6.4 George Turner (1966–72)

George Turner was one of the first linguists to begin investigating NZE:

In the 1950’s George Turner taught the language component in the Stage One English class at the University of Canterbury. Here he presented NZE as a variety in its own right and suggested that it was a fascinating subject for study. (Gordon and Abell 1990: 34)

His publications on NZE are based on personal observations rather than data, like the work of most of those who wrote on NZE before him. What sets him apart from most earlier writers is that his overviews of NZE pronunciation in particular were systematic, thorough, and detailed.

In Turner (1966), his first work, NZE is treated alongside Australian English (AusE), although more attention is devoted to the latter, partly because the study of AusE was at a more advanced stage. Turner tends to discuss AusE and then note where NZE diverges from it. He justifies this as follows:

But though New Zealand has had to be specifically mentioned often, and many details have applied to one of the two countries alone, a great deal is shared and, so far as language is concerned, the term Australasian could well be revived to refer to a single variety of English with two major subdivisions. (Turner 1966: 164)

The treatment of pronunciation in Turner (1966) is comprehensive (it comprises the whole of its fifth chapter): there is a systematic discussion of voice quality, speech rhythm, stress, intonation, all the vowel and diphthong phonemes of Broad AusE (and of Educated AusE and NZE where they differ), and those consonants which Turner considers are the “few genuinely current deviations from RP pronunciation” (1966: 105). The vowel and diphthong phonemes of RP form the framework for an overview of those of Broad AusE; these two varieties are contrasted because they are at “two ends of a cline” (1966: 96). Turner considers Educated AusE and NZE to be “nearer to the English end” of the cline (1966: 96) and he discusses them at the various points where they differ from Broad AusE. Turner further considers variation in Australian and NZE in a chapter entitled “Regional Variation”. However, most of this discussion focuses on NZE vocabulary items; that is, NZE is treated as a regional variety of Australasian English. There is very little in the way of comment on regional variation within NZE (oddly, the Southland variety of NZE is not mentioned here at all) and what there is (1966: 178–80), is again limited to lexical items.

Turner arranged for the re-publication of McBurney’s (1887) article from The Press, to which he added a few comments concerning the source of the article and something of McBurney’s background (see Turner 1967). In 1970 he published a paper solely on NZE, which appeared along with a reprint of Bennett (1943) in a collection of papers on Australasian English (Ramson 1970). Bennett’s paper was re-published without significant modifications after nearly 30 years simply because there had been very little work of note on NZE carried out in the interim; there is a parallel here with the re-
publication of Wall (1939), *New Zealand English*, in 1959 with no additional information on pronunciation, even though it was an ‘updated’ edition. Turner (1970) is essentially a condensed version of the information on NZE in Turner (1966), again with most of the discussion focussing on vocabulary items. As far as the study of NZE is concerned, Turner (1966) can be considered to be a summary of the state of the art at the time, extended by Turner’s own numerous observations.

2.6.5 Studies of pronunciation: defining NZE (1973–82)

Although most of the discussion in this chapter to this point has centred on NZE pronunciation, it must be noted that material on NZE published prior to the early 1970s deals primarily with the distinctive vocabulary of NZE. It was not until the 1980s that most of the material on NZE pronunciation prior to 1935 was uncovered, by Elizabeth Gordon. Peter Hawkins cites this focus on vocabulary as a key reason for his studies of NZE pronunciation, adding that:

Lexical...features which are characteristic of New Zealand usage...are, however, few in number and may be relatively infrequent in occurrence; what characterises a speaker as a New Zealander is not his use of particular lexical items so much as his accent, the study of which has hitherto been rather neglected. (Hawkins 1973b: 1)

Turner (1966, 1970) had outlined the features of NZE pronunciation in the context of an overview of broad AusE, but Hawkins aimed to give a more thorough description of the NZE, noting that:

I am assuming that there is such a thing as “a N.Z. accent”. I have mentioned elsewhere [Hawkins 1973b]: (a) that there is a characteristically New Zealand pronunciation; (b) that this accent can vary along a continuum from ‘broad’ to ‘modified’, rather as Turner (1966) suggests for Australian English; (c) that the ‘modified’ end approximates RP, which is regarded by New Zealanders as the standard accent even though it is used only rarely; and (d) that there is relatively little regional variation of any significance within New Zealand. (Hawkins 1973a: 18, fn 5)

Hawkins notes systemic and distributional differences between NZE and RP, including: NZE’s use of long /i/ word-finally in the city group of words; the status of /ə/, which he claims is merged with /i/ in NZE, thereby giving NZE one less phoneme in comparison with RP; the status of the centring diphthongs, especially /ua/, which exists in RP as a “somewhat marginal phoneme” and which “New Zealand has just about got rid of altogether” (1973b: 5); the possibility that ear and air are merging in NZE; the effect of /i/ on preceding vowels and also /i/ vocalisation in broad NZE. Hawkins also devised a phonemic transcription system for NZE (1973a), in which he proposes that transcription systems based on RP are not ideally suited for use in describing NZE because of key differences between the two varieties. He concludes:

The characteristics of New Zealand English have much in common with Australian English and with popular urban London accents (not Cockney, not RP, but something between). I believe that these three accents are not just different from RP, but are in the forefront of historical change in English sound patterns...So we may hazard a guess that the standard, RP, in a hundred years time will sound rather like New Zealand English today...Let me conclude, however, by dipping into my crystal ball and pulling out one more prophecy: the changes currently taking place in the diphthongs [of NZE] strongly suggest that the Great English Vowel Shift...is happening all over again, in exactly the same way. (Hawkins 1973b: 7)

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4 This claim was disputed by Northcote-Bade (1976: 148–49). It is certainly not true today (see e.g. Bayard 1995).
This notion of a new Great Vowel Shift in NZE is further discussed by Maclagan (1975), Bauer (1979, 1982), Matthews (1981), and Trudgill (1986).

Phonetician Margaret Maclagan discusses semantics, lexis, syntax, morphology, phonology, and phonetics in a brief overview of NZE (Maclagan 1975). She concludes that NZE “differs most markedly from the received pronunciation of Great Britain at the phonetic level” (1975: 10). In order to give a clearer sense of the NZE vowel system, Maclagan presents vowel quadrilateral diagrams of general and broad NZE, based on auditory impressions of the speech of unspecified New Zealanders. Most previous published works on NZE had similarly been based on informal observations (the exceptions are the studies carried out by McBurney (see Ellis 1889) and Brosnahan (1966), as above). Maclagan’s next study of NZE pronunciation (1982) marks a significant advance on what had come before; her aim “was to provide acoustic data so that more informed analyses can be made of New Zealand English” (1982: 20). This study could perhaps be considered to be ‘pre-modern,’ in the sense that I use the term ‘modern’ below, because Maclagan’s methodology is much more rigorous than that of any earlier papers, but on the other hand does not consider social characteristics of the sample (other than the sex of the speakers), as the ‘modern’ studies do (for further, see below). In order to describe general NZE pronunciation, Maclagan chose 50 speakers (25 males and 25 females), recorded them pronouncing “the New Zealand vowels in an /h_d/ frame [the standard for acoustic analysis of vowels] in the carrier phrase ‘Please say X again’” (Maclagan 1982: 20), and then analysed the data acoustically on a Kay sonograph. The results are presented diagrammatically as vowel formant charts that plot F1 against F2; Maclagan gives a detailed account of general NZE vowels, diphthongs, and the effect of post-vocalic /l/ on preceding vowels. She also compares the results with her earlier auditory analysis (Maclagan 1975) and concludes that “it can be seen that the auditory analysis underestimated the extent of the New Zealand vowel movements. In particular, /i/, /u/ and /u/ are centralised much more and /e/ and /æ/ are raised much higher than the auditory analysis indicated” (1982: 22). Where possible, she compares the results with acoustic analyses of AusE and RP, and so is able to discuss NZE pronunciation with a great degree of precision.

2.6.6 Renewed overseas interest in NZE

The “upsurge of interest in New Zealand English within New Zealand” in the decade from 1966 to 1976 (Northcote-Bade 1976: 147), as outlined above, was followed by renewed overseas interest in NZE. World Englishes were attracting more attention (e.g. Trudgill and Hannah 1982; Wells 1982; Lass 1987), and it is in that context that accounts of NZE appeared in overseas publications. The accounts in Trudgill and Hannah (1982) and Wells (1982) are notable steps forward in the characterisation of NZE in overseas reports because of their relative comprehensiveness and accuracy.

2.6.7 Summary

The second stage of the investigation of NZE (1966–84) is characterised by the descriptive approach of researchers, which contrasts with the prescriptiveness of earlier commentators. Turner
and Hawkins in particular consolidated what was known about NZE and established its general characteristics. The development of NZE as a field of study is illustrated by the nature of the work that appeared in this period (e.g. Gordon (1982), a position paper; a book on NZE: Gordon and Deverson (1985); several Masters-level theses: Durkin 1972; Hall 1976; Huygens 1979; Abell 1980).

2.7 Summary of findings to 1984: The features of NZE pronunciation

2.7.1 Introduction

This section provides a summary of the characteristic features of NZE pronunciation, concentrating on those features that are most relevant for this study; for descriptions of NZE vocabulary see Turner (1966) and Bauer (1994); for NZE grammar see Bauer (1987) and Bauer (1994).

2.7.2. NZE Phonetics and Phonology 1: Overall description

Bauer (1986b) provided a detailed summary of New Zealand phonology:

During the past few years a number of major works have appeared in which international varieties of English are discussed and compared from various points of view... Works of this nature seem to strike problems when it comes to the discussion of New Zealand English (NZE), and particularly the pronunciation of NZE, for a number of reasons. Firstly, many of the easily available sources are extremely sketchy in the material they provide on NZE. Secondly, most of the available sources describe NZE simply as a variant of AusE. Thirdly, much of the available material is either out of date or of uncertain accuracy (1986b: 225).

Bauer's aim, therefore, is to "present some kind of overview of the phonetics and phonology of NZE" (1986b: 225). Bauer indicates that the phonemic system of NZE is very similar to RP. RP is the overtly (but not covertly) prestigious standard, even though RP is seldom heard in NZ so that it is easy to "describe NZE in terms of variation away from RP" (1986b: 226). He notes that the similarity to AusE is possibly a result of influence from AusE on NZE. NZE is said to be geographically homogeneous except for Southland /r/. Bauer mentions Maori English and notes that there is considerable social variation. Bauer also notes that Mitchell and Delbridge's three strata of Cultivated, General and Broad have generally been assumed to apply to NZE as well (Mitchell and Delbridge 1965). Bauer gives a comprehensive survey of the complete vowel system of NZE, citing earlier evidence. He provides evidence from acoustic analyses to support the description and includes a discussion of lip positions (rounding etc.) for the vowels. He also gives a thorough discussion of the effect of /l/ on preceding stressed vowels. Bauer updated the material for an overview of New Zealand English published a decade later (Bauer 1994); the following summary list of New Zealand vowel pronunciation is taken from the later work.

The stressed vowels of NZE (not before /r/ or /l/; for which, see Bauer 1994):

FLEECE [ij], [ai]
DRESS [ɛ], [ε]
KIT [i], [e]
2.7.3 Phonetics and Phonology 2: Consonants

Linguists have not yet studied NZE consonants to any great extent. Hence, any overview of the consonant system of NZE is of necessity incomplete and heavily reliant on anecdotal evidence. Previous overviews of the phonetics and phonology of NZE identify a few non-RP consonantal features of NZE. In doing this, the underlying assumption is that “the main differences between NZE and RP reside in the realisation of the phonemes rather than in a different phoneme inventory” (Bauer 1990: 7). Although there does not appear to be any obvious reason to doubt this assessment, what is required is the evidence that systematic investigation can provide. In response to the clear lack of research in this area of NZE pronunciation, consonantal features are increasingly being investigated by linguists. Those features that have been identified thus far are summarized here:

1. The pronunciation of the primary allophone of the voiced alveolar lateral approximant /l/ is said to tend to be ‘dark’ regardless of the phonetic context if it is actually realised as a lateral. Non-prevocalic /l/ is commonly vocalised. (Bauer 1986b: 231). This feature has been commented on since 1938 (see Wall 1951) and is perhaps the most common distinctive consonantal feature of NZE.

2. wh-retention. While NZE has been reported as “one of the last strongholds of a which/witch distinction, …it is not thriving” (Bauer 1986b: 229). See also Bayard (1987).

3. Comments have been made on the lack of pre-vocalic /r/ and also on the presence of linking and intrusive /r/ (see, for example, Wells, 1982). Full details of the analysis of /r/ are presented in chapter 6 below.
(4) /t/ glottalisation and flapping have been noted (Holmes, 1994a; Holmes, 1994b).
(5) Consonant cluster reduction has been considered (Holmes and Bell, 1994).
(6) The labialisation/palatalisation of /tr/ clusters is discussed by Maclagan (2000) and Gordon and Maclagan (2000)
(7) h-dropping is studied by Bell and Holmes (1992).
(8) -ing reduction is also studied by Bell and Holmes (1992).

2.8 Theories concerning the homogeneity of NZE

2.8.1 Introduction

The general characterisation of NZE is that it is of the South-Eastern branch of English; e.g., NZE and AusE are treated as varieties of South-Eastern English in Ellis (1889). The phonemic system and grammar have the most in common with those of South-Eastern English varieties. NZE normally has /a/ rather than /æ/ in the DANCE set of words, although the situation is variable for the GRAPH set of words, and has /ʌ/ rather than /u/ in the STRUT set of words. Furthermore, NZE is normally non-rhotic, except for: linking and intrusive /r/ in word-final position. The question is then: How did NZE develop? This question is considered briefly in the following section.

2.8.2 Theories on the development of New Zealand English

The first theory on the development of NZE is that it is a form of Cockney. As noted above (section 2.3.3) McBurney considered that there was a general tendency in New Zealand to a Cockney pronunciation. However, there are some contradictions between his data and his comments. McBurney indicates that AusE was more like Cockney than NZE was.

A second theory is the Mixing Bowl theory (see Trudgill 1986, Trudgill et al., 2000), which holds that the final variety of NZE results from new-dialect processes that operate when speakers of different dialects are brought together in a new situation. From this theory, we could well ask why are there so few differences between NZE and SdE, given that the mix of source accents is significantly different? This theory was first proposed by McBurney on the basis of his observations and also suggested by Turner (1966: 10).

Some have interpreted the similarity of New Zealand English to the varieties of the southeast of England to mean that New Zealand English comes directly from this English dialect (for example, Wall 1938; Bauer 1994; cf. Hammarström (1980) for a similar claim about Australian English).

New Zealand English has also been regarded as a dialect of Australian English (see, for example, Gordon and Deverson 1998, Bauer 1994; Woods 1997). The main problem with arguments that consider the relative homogeneity of NZE to be evidence that NZE is derived from AusE is that the New Zealand population has always been very mobile. The ONZE Project suggests that late-
nineteenth century NZE pronunciation was quite variable, although early traces of modern NZE could also be heard.

2.9 Modern studies of NZE, 1985–

2.9.1 Introduction

The nature of reports on NZE changed significantly in the 1980s. The key factor is that researchers aimed to collect representative data samples. In particular, the social characteristics of the speakers involved were taken into account in a principled way.

2.9.2 Large-scale NZE studies

The first large-scale data-based studies of NZE were Bayard (1985) and Gordon and Maclagan (1985). These studies stimulated interest in the study of NZE within New Zealand. Or perhaps more accurately, they stimulated interest in carrying out rigorous studies of NZE. Participants at linguistics conferences in New Zealand during the years 1985–87 in particular discussed ideas for large-scale studies of NZE (see New Zealand English Newsletter 1, 1987; Davy 1988: 4; Holmes and Bell 1988: 19).

The first tangible result was the establishment of the first periodical concerned solely with the study of NZE, the New Zealand English Newsletter (published as the New Zealand English Journal from 1996 onwards), which was first published in 1987 and has appeared annually since. The intention of the New Zealand English Newsletter was to provide annual updates on work on NZE so that “the left hand of research in New Zealand English may become better acquainted with what the right hand is doing” (Editor’s Note, New Zealand English Newsletter 1, 1987: 2).

At the Sixth New Zealand Linguistics Society Conference (1985) it was proposed that the various New Zealand universities should co-operate on the collection of an organised corpus of spoken and written samples of NZE (for details see Davy 1988).

2.9.3 Studies of social variation

In more recent times, linguists have increasingly given recognition to the social variation to be found within NZE and this has produced a number of quantitative studies of NZE, particularly since c. 1985 (e.g. Bayard 1985, 1987, 1990b, 1991; Bell and Holmes 1992; Britain and Newman 1992; Gordon and Maclagan 1985, 1989; Holmes, Bell and Boyce 1991; Holmes and Bell, 1992). NZE is now characterised as being regionally homogeneous, with the notable exception of the Southland variety, but not socially homogeneous as it once was.
2.9.4 The Porirua Project (later called The Wellington Social Dialect Survey).

The linguistics conferences of 1985–87 mentioned above also spurred interest in social dialect surveys. The pilot study to develop the methodology for what was initially called The Porirua Project is described in Holmes and Bell (1988). The data from that survey was used for a thesis on grammatical features of NZE (Jacob 1990) and a follow-up paper (Jacob 1991). Jacob’s work was a precursor to The Porirua Project (Holmes, Bell and Boyce 1991), which investigated an urban social dialect of NZE.

2.9.5 Conclusion

The study of NZE gained in vitality in the mid-1980s. Clear evidence of the extent of this is provided by the following: a comprehensive bibliography of all known published work on NZE (Deverson 1988) was published to assist researchers working in this field, and of the 159 items listed (this number excludes the list of specialised glossaries) 85, or slightly more than half, were published in the years 1980–1987. One feature that is centrally important is that the nature of the studies changed too: prior to the 1980s, nearly every study of NZE was based on the personal impressions of the writers themselves without the presentation of supporting evidence; the importance of using a methodically-collected database, and reporting its characteristics, was recognised and ‘modern’ studies of NZE came into being. However, although social features of the subjects used in such studies have been considered, and greater attention has been paid to linguistic factors, one topic has received little attention: regional variation in NZE. This will be considered next.

2.10 Studies of regional variation

2.10.1 Introduction

It has to be said from the outset that part of the reason why regional variation has been “hitherto somewhat neglected” is that the (small number of) linguists working on NZE have clearly limited experience of such variation. There are two possibilities: either such variation does not exist, or linguists have not had access to suitable data. Linguists remark that lay people in New Zealand are convinced that there are regional varieties of NZE, but they doubt the lay assessment of the extent to which such variation exists (e.g. Bell and Holmes, 1991: 156). I will argue that the evidence that linguists have thus far provided is insufficient. It may be that the linguists are right, as the anecdotal evidence they provide seems to suggest, but there are very good reasons for abandoning the notion of homogeneity as part of the working hypothesis of the nature of NZE.

2.10.2 Regional variation in the literature

In the conclusion to his discussion of the pronunciation of NZE, Bennet comments: the general uniformity of speech from area to area and from class to class reflects the cultural and social homogeneity of the young nation; indeed it is misleading to talk of classes in a
society in which almost all the education is in the hands of the state, and in which inequalities of wealth have been steadily reduced (1943: 72).

This echoes the statement made in the Triad article discussed above regarding the assumption which has repeatedly acted as a theoretical justification for the treatment of NZE as a homogeneous variety (from this the notion is frequently repeated until research of the 1980s). Note that it is not demonstrated that the features Bennett describes are in fact found in the speech of the majority of New Zealanders—a list of the type provided by McBurney is not given, for example.

Wall notes: “I know of no case of undoubted Scottish influence upon New Zealand speech in spite of the very large proportion of the Scottish element in our population” (1958: 50). Nevertheless, he comments on the retention of the *which-witch* distinction in NZE: “here in New Zealand it has stoutly resisted the forces of decay and most New Zealanders stick to it religiously as do the Scots and the Irish” (1958: 22).

There is one notable exception to this apparent disagreement: the speech of people from Southland and parts of Otago—the Southland variety—is the only example of a variety recognised by both lay people and linguists as a distinctive regional variety of NZE: “the only regional difference universally acknowledged by both linguists and the public is the occurrence of postvocalic */r/ in Southland and part of Otago” (Bell and Holmes 1991: 155). These are the main areas where the variety is thought to be spoken, according to previously published accounts: South Canterbury (Orsman 1966: 680) and Westland (Hawkins 1973a: 3) are also possibilities. The exact geographical spread of the variety is not known because no dialect survey has been undertaken.

Wall (1936) makes no mention of the Southland */r/ in a section titled “English R” and similarly he does not mention Southland in a section called “Chance, dance”. However, in a brief section on dialects of NZE, Wall points out a few localisms—“certain idioms which are peculiar to certain districts” (1966: 678). He again fails to mention Southland and suggests that it is probably unlikely that regional accents will develop here. He certainly gives the impression that none exist at the time of writing: “In Otago, too, people say *whenever* for ‘when’ and a few other such Scotticisms are observed, but these are rather in the nature of vestigial remnants of traditional idioms of the old land than signs of any new provincial speech” (Wall 1966: 678). Wall clearly implies there is no regional variety—he gives only “trifling variants from standard speech” (1966: 678)—but in the same volume Orsman (1966) outlines the features of the Southland variety (see chapter 4).

In a discussion regarding regional variation in Australia and New Zealand, Eagleson (1982) quotes Hawkins (1973a; see above), who claims that there is virtually no regional variation in NZE except for the postvocalic */r/ which is central to the Southland variety (Eagleson repeats the erroneous statement that it is a uvular fricative).

Australia and New Zealand still await thoroughgoing investigations of variation at the lexical and grammatical levels, similar to those conducted in Great Britain and the United States. In the meantime, what seems to be the pre-eminent characteristic of these two forms of English is their overall uniformity, particularly on a regional basis, which may partly be explained by the heavy concentration of the population in a few centers” (Eagleson 1982: 426–427).
Eagleson then gives a few exceptions (lexical items associated with different regions). Finally, he makes a brief statement regarding the “minuscule” changes made to the grammatical structures of British English.

Trudgill and Hannah note that “in some parts of Otago and Southland, centring on Invercargill, rhotic forms may still be heard” (1982: 19) However, the information is limited—there is no indication of the characteristics of the speakers concerned, for example. Trudgill and Hannah also indicate that NZE “may have Will I put out the light? … rather than EngEng Shall I put out the light?” (1982: 21); crib (bach, holiday cottage) is said to be “used from Christchurch southwards” (1982: 24). The use of will in place of shall in questions with a first person subject in NZE is not reported in the literature prior to Trudgill and Hannah, so it is uncertain what evidence this claim is based on.

Wells comments on regional variation in NZE: “This is the ‘Southland Burr’ of Otago and Southland, the southernmost provinces of the South Island. Its distinguishing characteristic is that it is rhotic” (1982: 605-606). He acknowledges that he has not heard “this accent spoken, nor as far as [he is] aware does there exist a phonetic account of it” (1982: 606), and implies that he therefore cannot attempt to give a description of the variety. He quotes Turner’s (1966) description of the quality of the /t/ (see above) and is sceptical of Bennett’s (1943) claim that the accent is “a modified form of Scots”.

2.10.3 Regional variation in Nineteenth Century New Zealand: McBurney (1887) & Ellis (1889)

McBurney attempted to record “observations on the pron[unciation] of each particular school with different classes, examined where possible in every town visited”, and because of the large body of information McBurney supplied, “the main features of each district only are given” (1889: 239) by Ellis. The pronunciations heard in ten towns/cities in Australia and six cities—a[ugh]rough they are grouped in such a way that there are four categories—in New Zealand are listed. They show that the pronunciation of many of the test words does not vary greatly throughout New Zealand (but that there is some variation), although wh-retention tends to be stronger in Dunedin than in other parts of the country, with Christchurch and Nelson speakers exhibiting a slightly lesser degree of retention. McBurney does not come across much ing-reduction. There is some variability in dance (a significant point for this study), with Dunedinites and boys in Auckland more likely than others to use /æ/. Perhaps of greatest interest is the sheer number of variants which McBurney records for my might, and in particular now and town, which have five variants which are all heard in all the areas of New Zealand that McBurney lists. Postvocalic /r/ is also investigated; what is evident from the tables is that there is variation in the degrees of rhoticity to be heard in NZE at the time, particularly throughout the South Island.

2.10.4 Recent Studies

Bennett (1943) makes the unsubstantiated claim that there are “slight regional differences” in NZE: “a modified form of Scots is widely heard in the province of Otago…; the ‘rolled’ r is most frequent there” (1943: 72). This statement appears to be the first explicit recognition of a regional
variety of NZE (as opposed to minor lexical regional variants). He also implies that postvocalic /r/ is heard less frequently elsewhere, but gives no details, and makes comments concerning the Englishness of Canterbury, mentions Dannevirke and Austrians north of Auckland. Again, this is an arbitrary list—for example, he does not mention the possibility of a French accent at Akaroa.

Durkin (1972) and Hogstad (1995) found no features of a West Coast accent. However one point that needs to be made is that Durkin’s study was prompted by what others said about her own ‘West Coast’ accent. The fact that she did not find any distinctive West Coast accent features does not as yet prove anything, because she looked at reading styles only. Her commentators were responding to her ‘casual’ accent. Furthermore, she pre-selected the variables to be studied. It may be the case that these are not the features noted by others in her own speech. In her defence, it is highly likely that the commentators commented on her ‘West Coast’ accent after they found out that that is where she is from. What they possibly noticed is that she spoke with a broader accent than was common for her social peers in Christchurch. Thus, the evidence is inconclusive.

2.10.5 Summary

Although McBurney’s findings (Ellis 1889: 236–248) indicate that slight regional differences in NZE could be heard in the late-nineteenth century, what is in all probability the first clear mention of a regional variety of NZE is found in Bennett (1943): “slight regional differences [in NZE] exist, but have not yet been analysed in detail. A modified form of Scots is widely heard in the province of Otago, originally a Presbyterian settlement; the ‘rolled’ r is most frequent there” (1943: 72). The “modified form of Scots”, a description which is in all probability not at all accurate, is termed the Southland variety of NZE for reasons which will be explained in due course; this variety will be shown to be the only regional variant of NZE that linguists unequivocally recognise. What is therefore surprising, given the traditionally high level of interest in varieties of English, is that no systematic attempt has been made previously to determine the features of the Southland variety.

2.11 Conclusion

Findings in the field of NZE studies have been heavily dependent on methods and assumptions. Linguists must be wary of generalising from a study conducted in one location to the whole of NZE. It could be the case that features that are differentiated socially by the degree to which speakers use them are also involved in regional differentiation of the same kind. If the necessary research is not carried out now, but is postponed until regional developments are obvious (i.e. reach the critical point of awareness), the opportunity to examine change on a regional level will have been missed.

There is clearly a need for more work on regional variation within New Zealand. The original view was that there was little variation of any kind in NZE. Recent research has shown that this is not an accurate assessment of NZE as it now is. Although it certainly appears to be the case (on the
strength of what has been done so far) that the only regional variety that can be identified because of a systemic difference is the Southland variety, linguists need to provide empirical evidence that speakers in various regions do not distinguish their speech from that of speakers in other regions by their choice of proportions of features. The evidence that varieties do not exist is simply not of a rigorous nature, even though all the anecdotal evidence supports the viewpoint of the linguists.

Research on NZE is still in its infancy; studies based on empirical data have only been carried out for the last decade or so. Current research is attempting to address the shortcomings of the work done up until the mid-80s, but as yet has not tackled the issue of regional variation in New Zealand. Future research on NZE should attempt to answer the following questions:

(1) Are features that traditionally have been identified as characteristic of NZE as a whole found to varying degrees in the speech of different regions?

(2) Are regional varieties developing at the present time?
CHAPTER 3

THE DEMOGRAPHY OF SOUTHLAND AND THE SAMPLE DESIGN

3.1 Introduction

This chapter introduces the Southland region, outlines its current demographic patterns, and concludes with a description of the structure of the sample that was designed on the basis of those patterns. The specific demographic topics discussed below are: population, ethnic groups, labour force, and social stratification. The numerical information presented on these topics is based on New Zealand’s twenty-ninth national Census of Population and Dwellings (5th March, 1991) and is taken from selected publications produced by Statistics New Zealand (formerly the Department of Statistics), which is the government department responsible for the administration and analysis of the five-yearly census. Various problems and issues associated with the demographic facts and figures are treated in detail in order to explain their impact on the design of the sample. Methodological topics, such as the actual selection of subjects to fill the sample, are covered in chapter 5.

3.2 The Southland region

3.2.1 A note about terminology

Throughout this thesis I refer to ‘Southland’ or ‘the Southland region.’ It is common within New Zealand today to talk about ‘provinces’ such as Canterbury, Otago, Southland, and so on, which is a convenient and perhaps habitual way of labelling a given region. Strictly speaking, ‘province’ is a misnomer because the provincial governments that were in force throughout New Zealand in the mid-nineteenth century were abolished in 1876. Southland had a provincial government for only a brief period in its history (see section 3.2.3, below).

3.2.2 The location of Southland

Southland is New Zealand’s southern-most region. Figure 1 shows its location in relation to the rest of New Zealand. Roughly speaking, Southland is bounded to the north by a line from Awarua Point on the West Coast to the Old Man Range, just north-west of Roxburgh. The line is curved in such a way that Queenstown and Lake Wakatipu are outside the Southland region, although in the

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5Figures from the 1991 Census, rather than a more recent census, are used here because the data for this study were collected in 1990-1991.
Figure 1

Map of New Zealand, showing the location of the Southland Region
past Lake Wakatipu has been part of Southland. From the Old Man Range, Southland’s boundary continues almost due south until it reaches the coast, just to the east of Curio Bay. Southland is bounded to the south and west by the coastline of the South Island, but also includes Stewart Island and the various small islands close by. The region is now much larger than the original Southland Province of 1861–70, as figure 2 shows.

3.2.3 European settlement in Southland

By 1840, when the Treaty of Waitangi was signed and British Sovereignty over New Zealand was proclaimed, there were already small, but thriving, European settlements in Southland. These had been established by men associated with the sealing and whaling trades. James Cook had noted large seal populations in Dusky Sound during a stopover there on his second voyage to New Zealand in 1773, so when sealing in Bass Strait (between Tasmania and the Australian mainland) became less profitable in the first years of the nineteenth century, sealers moved on to New Zealand waters. From 1803, sealers initially worked Dusky Sound then went south to the coastline of Southland, Stewart Island, and also to various island groups much further south (e.g. Antipodes Is., Auckland Is., Macquarie Is., Campbell Is.). By about 1830 the seal population was greatly reduced and sealing activity tapered off. Towards the end of this period in Southland’s history, small permanent settlements at Bluff (1824), Codfish Island (1824–25), Pegasus (1826), and later at Stewart Island, were established in order to provide services for visiting vessels. Deep-sea whaling ships had called in to southern harbours during the sealing period and had discovered significant numbers of whales closer to the coastline of the South Island. This led to the development of whaling from shore-based boats, which in turn resulted in the establishment of several whaling stations along the south coast during the 1830s. The most significant of these was the one at Jacob’s River, which later grew to become the settlement of Riverton. The settlers were predominantly Englishmen; some of them settled with Maori women, thus acquiring rights to land, while others were allowed to occupy the land with the permission of local Maori. The whalers in particular became long-term residents. They initially continued their whaling activities and then began cultivating the land; some imported livestock and established sheep and cattle runs.

The period between the Treaty of Waitangi of 1840 and the purchase in 1853 of the Murihiku Block, of which Southland is a part (see figure 2), was characterised by little change in Southland’s settlements, although ultimately these events led to increased settlement in Southland. Frederick Tuckett of the New Zealand Company had been to Southland in 1844 when looking for a site for New Edinburgh (i.e. Dunedin), but he seems to have been deliberately steered towards swampy areas and away from the rich pasture land by the existing settlers, who were looking after their own interests. Tuckett’s report resulted in the purchase of Otago in 1844 and the establishment of Dunedin in 1848, so attention was diverted away from Southland for most of the decade. In 1850, Captain Stokes was

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6 Unless otherwise noted, the material in this section is taken from Hall-Jones (1945), which draws on many early sources in order to give a comprehensive and accessible account of the early history of Southland.
Note: TLA = “Territorial Local Authority” (refer to section 3.3)

Figure 2

Map of the Southland Region, showing major cities, towns, and historical boundaries
surveying the South Island, so he made more thorough investigations of Southland (he recorded the European population of Southland as 107, and the Maori population as 280). Accompanying him was W. Hamilton, who was a New Zealand Company official looking for potential settlement sites. Both were impressed with the natural advantages of the area. As a result of their favourable reports, the Murihiku Block was purchased from its Maori owners by the Crown in 1853.

The Murihiku Block became part of Otago Province, so was administered from Dunedin by the Otago Provincial Council (provincial governments were in force in New Zealand until 1876). The first Europeans to take up land (or obtain licences for their current holdings) in the Murihiku Block were run-holders, predominantly the original whaler-settlers and Highland Scots who migrated south from Otago. Until the declaration in early 1856 of Bluff as an official port of entry for livestock, and the establishment of Invercargill later that year, all livestock had to be landed at Otago Harbour (Dunedin) and then walked to Southland. Difficulties in getting concessions from the Otago Provincial Council, and legislation passed by the Council to sell parts of Murihiku in a way that would favour investors rather than farmers, caused many of the run-holders in Southland to feel they were subsidising the development of Dunedin and surrounding areas (see Hall-Jones 1945: Chs 7 & 10). This became a major source of conflict that led to the birth of a separation movement in 1857 and ultimately resulted in the declaration of Southland as an independent province in 1861. Until Southland separated from Otago, immigrants were required to land at Dunedin (and pay associated fees there) before travelling further south. Although this probably slowed the development of Southland, the region’s population nevertheless grew steadily in both Invercargill and the rural areas in the late 1850s as the region moved towards independence. When Southland Province was created in 1861, the population was around 1,500, with 400 in Invercargill. Southland’s European population thus increased by a factor of about ten during the 1850s.

The population of Southland continued to increase rapidly in the 1860s as a result of the discovery of gold in central areas of Otago in 1861. Immigrant ships could now land at Bluff, so the rate of settlement increased as miners and long-term settlers arrived: “In 1862–63 2795 settlers arrived from overseas, and nearly as many from other parts of New Zealand. The Southland population grew from 1820 in December, 1861, to 3455 in 1862 and 9545 in 1863” (Hall-Jones 1945: 139)7. Invercargill was the point of entry to the goldfields and was the main source of supplies; by the end of 1863, its population was 5,161 (Hall-Jones 1945: 144). However, the lure of gold ultimately worked against the new province. The high rate of development led to financial trouble in Southland, essentially because the expectation of large amounts of income related to the goldrush was not realised (see Hall-Jones 1945: 145ff.). The export duty on gold went to the province in which the gold was found, so because the vast majority of the gold was discovered in Otago, Southland received relatively little income from this source. Southland’s main gold-related earnings came from the service industries (e.g. supplies, accommodation) and from transport and escort services from the goldfields to Invercargill. In order to

7 The figures Hall-Jones cites are based on early censuses conducted throughout New Zealand. Although he gives precise figures, they should be seen as being approximate, particularly for the 1860’s, because of the large movements of people at this time.
increase income from these sources, Southland’s railway was to be extended; this was the main reason the province found itself £400,000 in debt by early 1865. 1864 was the worst year for the province, and this was reflected in the drop in population (down 1,500 to 8,085), which was probably linked to changing fortunes on the goldfields and the discovery of gold in Marlborough and Westland; nevertheless, long-term immigrants had continued to arrive in Southland. For the remainder of the decade, Southland’s administration actively tried to reduce its debt while also continuing public works.

Reunion with Otago was proposed by the Otago Provincial Council as a solution to the problems and was finally accepted and put into place in 1870. It was advantageous for both provinces—Otago was very wealthy and Southland’s resources and assets had great potential. In his appraisal of the period of Southland’s independent provincial status, Hall-Jones concludes that “separation secured for the district benefits and progress that could not have been otherwise achieved” (1945: 155, because Otago was primarily concerned with the development of Dunedin and the goldfields. The relative underdevelopment of the district to the east of Southland, which was part of Otago (see figure 2), is perhaps evidence of this. The population of Southland increased significantly during the provincial period because Otago was no longer able to disallow direct immigration via Bluff. As a result, agriculture and pastoralism were well established by the time of reunion—“over half a million acres in Southland were settled under private owners in holdings large or small” (Hall-Jones 1945: 155). Table 1 shows that nearly half of Southland’s workforce in 1871 was involved in farming.

Table 1

Southland’s workforce, 1871

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade, commerce, manufacturing</td>
<td>336</td>
<td>12.3</td>
</tr>
<tr>
<td>Agriculture and pastoralism</td>
<td>1,263</td>
<td>46.2</td>
</tr>
<tr>
<td>Mechanical and skilled workers</td>
<td>489</td>
<td>17.9</td>
</tr>
<tr>
<td>Mining</td>
<td>154</td>
<td>5.6</td>
</tr>
<tr>
<td>Labouring</td>
<td>492</td>
<td>18.0</td>
</tr>
<tr>
<td>Total</td>
<td>2,734</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Census of New Zealand, 1871

Note:
The census reports figures for a large group (5,360 people) who did not give an occupation, but because it primarily consists of women and children it has been excluded from this table.
At the 1871 census, the Southland population was recorded as 8,769 (see table 2). Otago’s population at this time was 60,722, which gives an indication of the different rates of settlement in the two provinces. Both regions had high numbers of Scottish immigrants because the Free Church of Scotland was the primary organisation associated with settlement in Otago. Large groups of Scots were emigrating to North America, Australia, and New Zealand in the mid-1800s because of population pressures, rapid industrialisation, and increasing urbanisation brought about by the transformation of Scotland “from an agrarian, pre-industrial into an urban-industrial society” between 1770 and 1840 (Olssen 1984: 37). These changes also roughly coincided with the Disruption within the Presbyterian Church, which led to the formation of the Free Church (Olssen 1984: 37). Although Scottish-born residents formed a large proportion of the Southland population in 1871, their numbers had been overtaken by New Zealand-born residents by this time (see table 2). However, many of the New Zealand-born ones were presumably children, and many of them would have had Scottish parents. Together, these groups comprised 69.5 percent of the region’s population, which has important ramifications for the development of speech patterns in Southland. This point will be considered in later chapters.

Table 2

Population of Southland by place of birth and sex, 1871

<table>
<thead>
<tr>
<th>Place of Birth</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>1,645</td>
<td>1,667</td>
<td>3,312</td>
<td>37.8</td>
</tr>
<tr>
<td>Scotland</td>
<td>1,622</td>
<td>1,160</td>
<td>2,782</td>
<td>31.7</td>
</tr>
<tr>
<td>England</td>
<td>733</td>
<td>371</td>
<td>1,104</td>
<td>12.6</td>
</tr>
<tr>
<td>Ireland</td>
<td>363</td>
<td>269</td>
<td>632</td>
<td>7.2</td>
</tr>
<tr>
<td>Australia</td>
<td>384</td>
<td>306</td>
<td>690</td>
<td>7.9</td>
</tr>
<tr>
<td>Other</td>
<td>173</td>
<td>76</td>
<td>249</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>4,920</td>
<td>3,849</td>
<td>8,769</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Census of New Zealand, 1871

The 1870s and 1880s saw an increase in the development of farmland in the Southland region (see Brookes 1961: 27-30). This was a direct result of land-development schemes that were initiated by the central legislative council in the 1870s. The schemes led to further extension of Southland’s railway, particularly to the north and west of Invercargill, which opened up those areas of Southland for more intensive farming. The need for organised processing of farm products developed out of this growth, so in 1881 New Zealand’s first dairy factory was built at Edendale (between Invercargill and Gore, see figure 2 above) and in the following year the Southland Frozen Meat Company was started. The pattern of future development in Southland was thus well-established by the late-1880s (Brookes
1961: 29). The following decades are characterised by steady growth in population numbers, both of people and livestock, but little fundamental change.

### 3.2.4 The characteristics of Southland

This section consists of an overview of the major features of Southland. It focuses on the region’s settlement structure, its main industries, particularly agricultural, and its natural resources. Agricultural facts and figures are taken from various Department of Statistics (now called Statistics New Zealand) publications, particularly the annual ‘Agriculture Statistics’ series and its precursors (see references), unless otherwise noted.

Southland is characterised as a farming region. It consists of one city—Invercargill—and large rural areas dotted with small settlements that have developed as service centres for the surrounding farms. The town of Gore is a major service centre that was established to meet the needs of farmers in the Mataura River area and other areas to the north which are a significant distance away from Invercargill. The most intensively farmed area is the Southland Plain, which spreads inland from Invercargill. This pattern of settlement gives an indication of how the railway fanned out from the city as the region developed (see Brookes 1961: 27–30) and also reflects the nature of the terrain. The Southland Plain is flat or rolling, with small areas of low hills, which is partly what makes it so suitable for widespread farming. There are large uninhabited mountainous areas to the west that form part of Fiordland National Park, and sparsely-populated hills to the south-east. Northern Southland is predominantly mountainous, but there are a few settlements in river valleys.

Southland is noted for its fine farmland. One of the major reasons for this is that the paddocks are lush and support excellent growth of grass. There is enough rain in summer to ensure that paddocks do not dry out as they do in other regions. It took some effort to prepare inland areas of the central Southland Plain when they were opened up for settlement because of the lack of drainage—the Plain was initially "inordinately wet" (Hall-Jones 1945: 106). Drainage operations were eventually successful in lowering the water table by about a metre, which allowed widespread farming to be developed, but it took some time to achieve. When I interviewed Will L., he talked about the years he spent putting drains in paddocks when he started work on the family farm at the age of 13 in the 1920s.

Sheep farming for both wool and meat has always been the main component of Southland’s farming industry. By the time of Southland’s Centennial in 1956, the Makarewa Freezing Works was killing “well above a million lambs for a season,” which was more than “any other single works in the world” (Southland Centennial Association 1956). There are currently far more sheep in Southland than there are in any other region in New Zealand: in 1993 Southland had 16 percent (7.8 million sheep) of New Zealand’s total sheep population, which was 50.3 million. Southland seems to be well-suited for sheep; for example, it has a much higher lambing percentage\(^8\) (115 percent in the main

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\(^8\) The lambing percentage is the proportion of live lamb births per ewe, averaged over the total sheep population.
farming areas) than other regions. However, at the time of my fieldwork in the region, sheep farming was in decline. There was a 6 percent decrease in sheep numbers from 8.3 to 7.8 million in Southland from 1991 to 1993. This is a further reduction from the 1983 figure of 9.1 million, which was Southland’s peak sheep population figure. This reduction is a nation-wide trend. Sheep farming in New Zealand has declined significantly: in the ten years from 1983 to 1993, the number of sheep farms decreased by 50 percent in the North Island and 20 percent in the South Island. This decrease is partially a result of the New Zealand government’s removal of farm subsidies in the mid-1980s and the economic collapse of 1987. A major effect was the closure of a number of Southland freezing works as the number of lambs being slaughtered dropped markedly and earnings fell. There was also a reduction in the value of wool; e.g. from 1992 to 1993 the price of wool fell by $0.04 per kilogram.

36,900 tonnes of wool were produced in Southland in this period—this quantity is more than twice that produced by any other region in New Zealand and is about 17 percent of New Zealand’s total. The downturn in the sheep industry led to farmers either walking off the land because of increased difficulty in meeting mortgage payments, converting to dairying, or diversifying, particularly into deer farming.

Dairying was initially prominent and successful in Southland. Butter and cheese were significant export products for Southland from around the turn of the century, but from about the 1920s onwards dairying declined significantly as sheep farming became more lucrative. When interviewed, Andrew A. commented on major changes in the central Southland Plain area as sheep farms increased in number:

about ten dairy factories used to be within about ten miles of here. there’s none now . there was Winton, Otautau, yeah. well I’d . can remember the Drummond one must have closed in the nineteen fifties . might have been just about nineteen fifty and the other ones, well you can see the carcasses of them around . you know . the old buildings

Recently, dairying has been on the increase again, particularly in eastern parts of Southland, as it has yielded increased returns. In the year from 1992 to 1993 when the value of wool declined, the price of milkfat increased by 17 percent. Southland’s dairy cattle population increased by over 80 percent from 1991 to 1993. Jim A. was one farmer I talked with who had successfully converted to dairying from sheep farming. He noted that a number of North Island dairy farmers were selling their farms and buying farms in Southland because of the lower cost of land in the south. Although Southland now has more dairy cattle (59,000 in 1993, which is an increase of 83 percent in the three years from 1991 to 1993) than any other South Island region (432,000 total), the number is small compared with the North Island regions (3.5 million dairy cattle total). The beef industry in Southland is roughly comparable to the dairy industry in scope. The number of deer has also increased dramatically—Southland had over 140,00 deer in 1993, which is nearly three times as many as there were in the Ashburton District, the region with the next-highest number, and represented about 13 percent of New Zealand’s total.

Southland is also noted for a number of other significant industries. There are extensive forestry operations, particularly in western areas, and large limestone deposits that are used in the manufacture of fertiliser. The Ohai-Nightcaps area (to the west of Southland Plain) has sizeable
reserves of sub-bituminous coal. Southland’s coastline supports a major fishing industry as it did in the first days of European settlement; the whale and seal populations have been decimated—the most highly-prized seafood commodity is now the Bluff Oyster. The Tiwai Point aluminium smelter near Bluff was opened in the 1970s and now generates large export earnings. Fiordland National Park's fine scenery has stimulated the growth of the tourism industry that centres on Te Anau and Milford Sound.

In summary, Southland is a very productive region. The value of its export earnings is very high on a per capita basis: Southland has about 3 percent of New Zealand’s workforce yet generates about 10 percent of the country’s total export earnings. In the agricultural domain, the region does even better as it provides about 20 percent of New Zealand’s earnings. It remains to be seen what the future of farming in Southland will hold. More recently, there has been a recovery following the crisis that resulted from the downturn of the 1980s. Although the balance of farming has shifted back towards dairying somewhat, sheep farming is still Southland’s most important industry.

3.3 Population

Southland is a relatively sparsely-populated region. Its population at the 1991 Census was 99,777, or just three percent of New Zealand’s population of 3,373,926. Southland’s population density is about 3 people per square kilometre, which is the second-lowest of New Zealand’s fourteen regions. On an international scale, this density is similar to Canada’s. Both regions have a proportionately large amount of uninhabited land—the main component of this in Southland’s case is Fiordland National Park, which covers 1.25 million hectares and so comprises about one-third of Southland’s land area. Another factor that contributes to Southland’s low population density is the large rural component in the population. Overall, the population of Southland is 70 percent urban and 30 percent rural, which is significantly more rural than New Zealand as a whole: from 1981 to 1991 the proportion of rural-dwellers in New Zealand was about 15 percent. Only the Northland and West Coast regions are less urbanised than Southland.

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9 Statistics New Zealand uses three types of population measure: the “De facto population,” the “Resident population,” and the “Usually resident population.” The “De facto population” is defined as “the population enumerated according to its actual place of residence at a given time [i.e., census night]” and thus includes visitors from overseas; it is also referred to as the “Total population.” The “Resident population” excludes overseas visitors, but does not take into account temporary movements of people within New Zealand. The “Usually resident population” figures for the different regions are calculated in such a way that “people normally resident in New Zealand...on census night are relocated back to their usual address” and people normally resident overseas are excluded (Statistics New Zealand, 1994: 63-64). All three population measures do not count New Zealanders temporarily out of the country on census night. Statistics New Zealand generally presents figures based on the “De facto population” or the “Resident population,” depending on the aims of a given publication. The figures given throughout this chapter are based on the “Usually resident population” because the permanent residents of Southland are the focal point of the discussion and because Southland District, especially Fiordland National Park, attracts high numbers of tourists from both New Zealand and overseas who can significantly affect the apparent size of the region’s population. For example, the 1991 “De facto population” figures for Southland District presented in some of Statistics New Zealand’s publications do not reveal the fact that 8 percent of this population was normally resident overseas; similarly, in the 1986–91 intercensal period Southland’s Inlet-Milford Sound area unit experienced a 9,910 percent “population increase” from 10 to 1,001 persons, most of whom must have been tourists.
The Southland region is divided into three Territorial Local Authorities for administrative purposes: Invercargill City, Gore District, and Southland District (see figure 2 and table 3). The population of Invercargill City is made up largely of urban-dwellers who live in the Invercargill urban area (pop. 51,300) and Bluff, a minor urban area (pop. 2,400). There is a relatively small number of people (1,800, or 3 percent) living in the semi-rural areas on the outskirts of these urban areas. Gore District comprises the town of Gore itself (pop. 8,400), the minor urban area of Mataura (pop. 2,000), and surrounding rural areas mainly to the north and east (pop. 3,100). Although the district is predominantly urban, there is a much larger proportion of rural people within its boundaries than there is in Invercargill City: a little over 20 percent. The third Territorial Local Authority is Southland District in which approximately 25,300 people live in rural areas, including small communities. Stewart Island is also part of Southland District, but was not included in this study (although it appears in all figures for Southland District). The remaining 5,400 live in the three minor urban areas of Winton (pop. 2,100), Te Anau (pop. 1,500), and Riverton (pop. 1,800); the proportion of rural-dwellers is slightly more than 80 percent, which is much higher than it is in Invercargill City and Gore District.

Table 3

<table>
<thead>
<tr>
<th>Territorial Local Authority</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invercargill City</td>
<td>27,309</td>
<td>28,254</td>
<td>55,566</td>
</tr>
<tr>
<td>Gore District</td>
<td>6,780</td>
<td>6,747</td>
<td>13,527</td>
</tr>
<tr>
<td>Southland District</td>
<td>16,062</td>
<td>14,601</td>
<td>30,663</td>
</tr>
<tr>
<td>Outside Local Authorities</td>
<td>18</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Southland Region Total</td>
<td>50,166</td>
<td>49,608</td>
<td>99,777</td>
</tr>
</tbody>
</table>

Source: Department of Statistics, 1991 New Zealand Census of Population and Dwellings

Notes:
(1) The 18 males in the “Outside Local Authorities” category were in the Southland Region in coastal or inlet waters on census night. Although they were technically outside the Territorial Local Authorities, they are included in the Southland District figures in subsequent tables for convenience. They appear in a separate “Outside Local Authorities” category in Statistics New Zealand’s publications.
(2) Figures in table cells do not always add exactly to row and column totals. This is because Statistics New Zealand employs a “confidentiality assurance” technique of randomly rounding numbers up or down to a multiple of 3 (if they are not already multiples of 3).

The number of males and females in Southland follows the general New Zealand pattern. The sex-ratios for different settlement types throughout New Zealand show a clear trend. The more urbanised an area is, the fewer males there are per female living there: main urban areas in New Zealand averaged 946 males per 1,000 females in 1991. The sex-ratio is reversed in rural areas, which have significantly higher numbers of males than females: there were 1,109 males per 1,000 females in
rural areas in 1991. Table 3 above shows that Southland’s three Territorial Local Authorities follow this pattern. Invercargill City is the most highly urbanised area, so has relatively more females, and Southland District is the least urbanised, so has relatively more males. This partially reflects the job opportunities in rural areas: farm work provides more employment for men than it does for women.

New Zealand’s population has always been highly mobile. One in eight New Zealanders moved from one region to another between 1986 and 1991 (almost half changed their place of residence). The general trend was for people to move away from southern areas of both the North and South Islands (see figure 3). Table 4 shows that 10.6 percent of Southland’s population aged over five years old in 1991 was not resident in Southland in 1986. Although 10.6 percent seems like quite a high proportion of non-Southlanders, it should be borne in mind that an unknown number of these people were possibly Southlanders (e.g. students) returning to their original place of residence after moving elsewhere for a while. It also needs to be noted that Southland’s in-migration and out-migration figures have been high for some years: 9,585 people moved to Southland from elsewhere from 1971 to 1976, while 14,322 left the region, and 9,378 people moved to Southland and 12,960 left from 1976 to 1981. These population movements have ramifications for the speech patterns to be found in Southland, and were also a factor in the selection of interviewees, as discussed in chapter 5.

Table 4

| Previous place of residence for Southland population aged over 5, 1991 |
|-----------------------------|-----------------|----------------|
| Place of residence in 1986  | Number          | Percentage     |
| Southland                  | 81,813          | 89.4           |
| Otago                      | 2,781           | 3.0            |
| Other South Island regions | 2,205           | 2.4            |
| North Island regions       | 2,244           | 2.5            |
| Overseas                   | 1,515           | 1.7            |
| Not adequately defined     | 951             | 1.0            |
| Total population over 5 years old | 91,509 | 100.0 |

Source: Department of Statistics, 1991 New Zealand Census of Population and Dwellings

In recent years, Southland has been significantly affected by the combined effects of a reduction in New Zealand’s population growth rate and the high mobility of the New Zealand population. The country’s growth rate is now at around 1 percent, which is a marked change from the post-war ‘Baby Boom’ period (1946–65) when it was a little over 2 percent. As a result of these factors, Southland’s population declined by 3,933 (3.8 percent) between 1986 and 1991. Only the West Coast (3.9 percent) experienced a larger proportionate decrease in population in this period; Gisborne (3.2 percent), Taranaki (1.1 percent), and Hawke’s Bay (0.6 percent) were somewhat less affected. Of these five
Figure 3

Migration within New Zealand, 1986–91: Net migrations greater than 1,000 people

Source: Statistics New Zealand (1994b: 50): figure 9.1
regions, only Southland had also experienced a population loss in the 1981–86 inter-censal period. Statistics New Zealand (1994a: 121ff) has projected that although the population of New Zealand as a whole is likely to increase by 19 percent in the quarter-century between 1991 and 2016, with the North Island contributing about 92 percent of this increase, the downward trend in Southland's population will probably continue. Southland is one of only four regions—those mentioned above, with the exception of Hawke's Bay—that are likely to experience reductions in population, and it is ranked at the bottom of all the regions in the growth projection statistics: the highest population growth Southland can expect is actually a 1 percent decline, and the lowest is a 26 percent decline. The decline is expected to be more pronounced in Southland’s rural areas than in its urban areas, which might make slight population gains.

Several decisions regarding the sample designed for this study of speech patterns were made as a result of Southland's population characteristics as described above. Firstly, the limitations on the sample size (see section 3.7 below) and the desire to investigate rural speech patterns adequately meant that it was decided to include even numbers of interviewees from urban and rural areas, rather than to attempt to represent the actual proportion of these people in the region. Secondly, the areas selected for investigation were the Invercargill urban area and rural areas close to Winton and Mataura. Invercargill was chosen because it is the largest urban centre; the speech patterns found in major urban areas can be an indication of changes to come in speech in surrounding hinterland areas (see Chambers and Trudgill 1980; Trudgill 1983). Although the town of Gore seems to be stereotyped as the heart of rural Southland (see P. Gordon 1995; Bayard and Bartlett 1996), it was not possible for it to be included in the study without compromising the sample size from Invercargill and rural areas, or making the sample impractically large. Two rural areas—in the vicinity of the key service towns Winton and Mataura—were chosen because of suggestions from rural Southlanders that farmers in Central Southland (around Winton) and Eastern Southland (around Mataura) speak with different accents. Finally, although there are more males than females in rural areas, the numbers of males and females interviewed would be equal to enable investigation of sex-related speech patterns.

3.4 Ethnic groups

Although Statistics New Zealand collects information on the ethnicity of New Zealanders via the census, analysis of this census data is sometimes problematic. Recently, the census question concerning ethnicity has changed, possibly in order to reflect a different understanding of the basis of ethnicity (see Bayard 1995, Ch.7 for an extended discussion of "what ethnicity is"). In the 1986 census this question was: "What is your ethnic origin?" For the 1991 census the wording was changed to: "What ethnic group do you belong to?" The 1986 question bases ethnicity on ancestry, while the 1991 question is ambiguous because it could be interpreted as asking about either ancestry or personal identification, although it seems that the latter is intended. Statistics New Zealand comments that "these two different questions are likely to have prompted different responses" (1994b: 35). While it is
certainly possible to give different answers to these questions, it seems unlikely that an individual would give fundamentally different answers. When completing the 1986 census, an individual may have felt obliged to indicate all ancestral links, however minor; their 1991 answer, on the other hand, could have consisted of just the particular ethnic group they identify with. It is possible that the 1991 question would be interpreted differently from person to person, so strictly speaking the census answers would not be directly comparable.

The significance of this issue centres on the way in which Statistics New Zealand uses the census data and the nature of the figures reported here. For example, Statistics New Zealand sometimes resolves the problem of how to count people who indicate they belong to both the European\textsuperscript{10} and Maori ethnic groups by counting them twice—once in each ethnic group, which then over-reports the number of people in New Zealand (see Statistics New Zealand 1994b: 35). Sometimes Statistics New Zealand uses three separate categories: “European”, “NZ Maori”, and “NZ Maori & European”. The final method is to give preference to one group over others; in this example, people who say they are both European and Maori are counted by Statistics New Zealand as being Maori, but not as being European, which may tend to over-report the number of those who identify as Maori (discussion of the possible reasoning behind this is beyond the scope of this brief overview). In order to simplify the discussion below, figures based on this final method are used for the most part—basic distinctions between European, Maori, and Pacific Island Polynesian ethnic groups are made, except for a few instances where it is revealing to consider the number of people who are ‘bi-ethnic’ (i.e. those who said they belong to two ethnic groups). The problem of classification suggests that statistics on ethnic groups in New Zealand should be seen as being approximate.

Table 5 shows that the population of the Southland region is predominantly comprised of Pakeha of European descent, with most of the remainder being Maori. Southland has the lowest proportion of overseas-born residents (6.2 percent) of all the regions in New Zealand (NZ mean: 15.8 percent). The proportion of Maori is significantly lower in Southland than it is for New Zealand as a whole, which is not surprising because the majority of Maori live in the North Island. It is, however, higher than the South Island mean. The numbers of Maori are particularly low in rural areas in Southland District. One-third of the Maori ethnic group in these areas consists of people who described themselves as both Maori and European, so the proportion of those who identify as Maori may be less than 6.4 percent, as per the discussion above.

\textsuperscript{10} Statistics New Zealand has used the label ‘European’ in preference to ‘Pakeha’, possibly because the latter is somewhat controversial (see Bayard 1995: 152–160). They may also wish to distinguish between European and non-European ethnic groups, and ‘Pakeha’ theoretically encompasses all non-Maori New Zealanders. I say ‘theoretically’, however, because it appears that ‘Pakeha’ is in practice synonymous with New Zealanders of European (particularly British) ancestry (Bayard 1995: 157).
Table 5

Proportions of ethnic groups in Southland compared with major New Zealand areas, 1991

<table>
<thead>
<tr>
<th></th>
<th>European</th>
<th>Maori</th>
<th>Pacific Is.</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invercargill City</td>
<td>85.7</td>
<td>10.9</td>
<td>2.3</td>
<td>0.7</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>(47,607)</td>
<td>(6,801)</td>
<td>(1,275)</td>
<td>(396)</td>
<td>(55,566)</td>
</tr>
<tr>
<td>Gore District</td>
<td>91.0</td>
<td>7.9</td>
<td>0.2</td>
<td>0.6</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>(12,315)</td>
<td>(1,065)</td>
<td>(30)</td>
<td>(75)</td>
<td>(13,527)</td>
</tr>
<tr>
<td>Southland District</td>
<td>92.7</td>
<td>6.4</td>
<td>0.3</td>
<td>0.3</td>
<td>9.6</td>
</tr>
<tr>
<td></td>
<td>(28,428)</td>
<td>(1,962)</td>
<td>(87)</td>
<td>(87)</td>
<td>(30,663)</td>
</tr>
<tr>
<td>Southland Region</td>
<td>88.6</td>
<td>9.1</td>
<td>1.4</td>
<td>0.6</td>
<td>9.9</td>
</tr>
<tr>
<td></td>
<td>(88,359)</td>
<td>(9,105)</td>
<td>(1,395)</td>
<td>(561)</td>
<td>(99,777)</td>
</tr>
<tr>
<td>South Island</td>
<td>91.4</td>
<td>5.5</td>
<td>1.1</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>(778,260)</td>
<td>(46,851)</td>
<td>(9,492)</td>
<td>(11,880)</td>
<td>(851,511)</td>
</tr>
<tr>
<td>North Island</td>
<td>74.6</td>
<td>15.4</td>
<td>5.7</td>
<td>3.5</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>(1,880,478)</td>
<td>(387,996)</td>
<td>(143,310)</td>
<td>(87,546)</td>
<td>(2,522,418)</td>
</tr>
<tr>
<td>New Zealand</td>
<td>78.8</td>
<td>12.9</td>
<td>4.5</td>
<td>2.9</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>(2,658,738)</td>
<td>(434,847)</td>
<td>(152,802)</td>
<td>(99,426)</td>
<td>(3,373,929)</td>
</tr>
</tbody>
</table>

Source: 1991 NZ Census of Population and Dwellings

Notes:
1. ‘Pacific Is.’ means Pacific Island Polynesian.
2. Figures in rows do not add exactly to the totals because incomplete census data (where people have not specified their ethnicity) have been excluded.
3. Raw population figures are given in parentheses.

Within the territorial local authority areas, there are three main places with significantly higher-than-average proportions of Maori. These places are:

(1) Bluff (pop. 2,397; part of Invercargill City). This is a small settlement on the south coast (see figure 2). The Maori population is 843, which is proportionately very high at 35.2 percent; note that 234 people in this group (9.8 percent of the overall population) are self-described as “Maori and European”. The European population is 1,362, or 56.8 percent. There is a significant population of Pacific Islanders—it is 165, or 6.9 percent of Bluff’s population, which is considerably higher than the 1.4 percent mean for the Southland region as a whole. Occupational figures suggest that the higher numbers of Maori and Pacific Islanders here are associated with the presence of a fishing industry. Bluff also has a long history of Maori settlement.

(2) Riverton (pop. 1,824; Southland District). This is another small coastal settlement on the south coast (see figure 2). The Maori population is 276 (15.1 percent of the total)—of these, 90 (4.9 percent of the total population) are “Maori and European”. The European population is 1,512, or 82.9 percent. The Riverton area has been settled by Maori for centuries.
(3) Mataura (pop. 2,028; Gore District). In this small town on the Mataura River (see figure 2), the Maori population is 435, or 21.4 percent of the total. This is much higher than the mean proportion of Maori in Gore District as a whole (7.9 percent), and represents nearly half of the District’s Maori population. The Maori ethnic group includes 51 “Maori and European” people, or 2.5 percent of the total. Mataura’s European population is 1,569 (77.4 percent).
The figures in table 5 therefore suggest that the proportion of Maori in the rest of the local authority areas is greater than it actually is.

Ethnicity has been a key variable in some recent studies that have considered the question of a Maori variety of NZE (e.g. Benton 1991; Holmes, Bell, and Boyce 1991; Jacob 1991; King 1993; Holmes 1997). For this reason, it was initially planned that Maori interviewees would be included in this study. The decision was made to include urban Maori from Invercargill, but to exclude rural Maori because of the low proportion of Maori in rural areas, as indicated above. In order to obtain data from Maori interviewees, two Maori interviewers were located and trained. However, they later withdrew from the project before they had carried out any interviews; a third interviewer was found and a few interviews were completed. These difficulties and the size of the total sample required to compare the urban and rural Pakeha groups prevented the completion of this part of the study. The possibility of ethnic variation in the Southland region remains a topic of considerable interest.

3.5 Labour force

The distribution of the Southland region’s labour force in each of the three Territorial Local Authority areas is summarised in table 6 (the basic characteristics of the Local Authority areas were indicated above). Invercargill City is highly urbanised, so its labour force is that of a civic centre: there are roughly even proportions of all employment categories (allowing for different proportions of males and females in each category) except for agriculture, which is barely represented. Gore District is a mixture of rural areas with a small town (Gore) as its primary service centre, so the distribution of its labour force is roughly similar to Invercargill City’s except that there are significantly more agricultural workers. Southland District is predominantly rural, which is very clear from the figures for the agricultural and fishing occupational category in table 6: 50.6 percent of the District’s male workforce and 34.3 percent of the female workforce are engaged in this kind of work—very few of them work in the fishing industry. The figure for females probably underestimates the number of women in this sector of the workforce by not taking into account women on farms who work within the home and also on the farm.

If Southland is considered as a whole, and the differences in the occupational structures of its Territorial Local Authorities are disregarded, the proportion of the workforce in the region’s agriculture and fishing occupational group is double that of the national average. All occupational groups, with the exception of the mechanical group, are consequently under-represented compared with the national average. This is a further indication of the relative lack of urbanisation in Southland.
### Table 6

The distribution of Southland’s labour force by Territorial Local Authority, occupational group, and sex, 1991

<table>
<thead>
<tr>
<th></th>
<th>Invercargill City</th>
<th>Southland District</th>
<th>Gore District</th>
<th>Southland Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td><strong>Admin.</strong></td>
<td>1,470</td>
<td>627</td>
<td>504</td>
<td>318</td>
<td>327</td>
</tr>
<tr>
<td></td>
<td>10.8%</td>
<td>6.7%</td>
<td>5.5%</td>
<td>5.6%</td>
<td>9.2%</td>
</tr>
<tr>
<td><strong>Prof.</strong></td>
<td>1,107</td>
<td>1,389</td>
<td>342</td>
<td>666</td>
<td>168</td>
</tr>
<tr>
<td></td>
<td>8.1%</td>
<td>14.8%</td>
<td>3.7%</td>
<td>11.8%</td>
<td>4.7%</td>
</tr>
<tr>
<td><strong>Tech.</strong></td>
<td>1,344</td>
<td>936</td>
<td>453</td>
<td>288</td>
<td>234</td>
</tr>
<tr>
<td></td>
<td>9.8%</td>
<td>10.0%</td>
<td>5.0%</td>
<td>5.1%</td>
<td>6.6%</td>
</tr>
<tr>
<td><strong>Clerks</strong></td>
<td>594</td>
<td>2,574</td>
<td>123</td>
<td>849</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>4.4%</td>
<td>27.4%</td>
<td>1.3%</td>
<td>15.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Sales</strong></td>
<td>1,047</td>
<td>2,232</td>
<td>270</td>
<td>957</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>7.7%</td>
<td>23.8%</td>
<td>3.0%</td>
<td>16.9%</td>
<td>5.4%</td>
</tr>
<tr>
<td><strong>Agric.</strong></td>
<td>651</td>
<td>207</td>
<td>4,632</td>
<td>1,941</td>
<td>807</td>
</tr>
<tr>
<td></td>
<td>4.8%</td>
<td>2.2%</td>
<td>50.6%</td>
<td>34.3%</td>
<td>22.8%</td>
</tr>
<tr>
<td><strong>Trade</strong></td>
<td>2,895</td>
<td>114</td>
<td>789</td>
<td>39</td>
<td>510</td>
</tr>
<tr>
<td></td>
<td>21.2%</td>
<td>1.2%</td>
<td>8.6%</td>
<td>0.7%</td>
<td>14.4%</td>
</tr>
<tr>
<td><strong>Mech.</strong></td>
<td>3,018</td>
<td>426</td>
<td>1,449</td>
<td>183</td>
<td>864</td>
</tr>
<tr>
<td></td>
<td>22.1%</td>
<td>4.5%</td>
<td>15.8%</td>
<td>3.2%</td>
<td>24.4%</td>
</tr>
<tr>
<td><strong>Elem.</strong></td>
<td>1,383</td>
<td>774</td>
<td>522</td>
<td>306</td>
<td>318</td>
</tr>
<tr>
<td></td>
<td>10.1%</td>
<td>8.2%</td>
<td>5.7%</td>
<td>5.4%</td>
<td>9.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13,650</td>
<td>9,393</td>
<td>9,147</td>
<td>5,667</td>
<td>3,543</td>
</tr>
</tbody>
</table>

Source: 1991 NZ Census of Population and Dwellings

Notes:
1. ‘Admin.’ = administrative and managerial; ‘Prof.’ = professional; ‘Tech.’ = technical; ‘Agric.’ = agricultural and fishing; ‘Mech.’ = mechanical (machine operators); ‘Elem.’ = elementary (unskilled).
2. The figures for those who did not adequately define their occupations are not given (519 total, or 2% of the workforce). Consequently, row totals are greater than the sum of the cell figures.

At the time of the 1991 census, Southland had the lowest unemployment rate of any New Zealand region. 8.5 percent of the available workforce was unemployed, which is significantly lower than the New Zealand mean of 10.5 percent. This might appear to be linked to Southland’s lack of urbanisation. However, the New Zealand region with the highest unemployment rate was Northland (14.1 percent unemployed), which is also largely rural. It is unclear what the reason for Southland’s low unemployment rate is, although it could be related to the general migration of people away from the south of both the South and North Islands as discussed above in section 3.3.

The main decision that was made on the basis of these occupational figures is that rural interviewees would all be from the agricultural occupational group, or more specifically, they would all be from a farming background. Further discussion of this point follows in the next section.
3.6 Social stratification

Investigation of the co-variation of linguistic factors and social stratification developed into a major branch of linguistics following the publication of several key pieces of work by Labov in the 1960s, especially Labov (1966) and the papers which are collectively reprinted as Labov (1972a). This study of the Southland variety of NZE also set out to consider social stratification and its relationship with the linguistic variables, but because of limitations on the sample (see the following section) the conclusions will necessarily be tentative. The remainder of this section will briefly consider the issue of the measurement of social stratification.

Social dialectologists have tended to employ a relatively simple conception of ‘social class’. Even when they have attempted to create complex indices of social stratification (e.g. Trudgill 1974), the somewhat arbitrary nature of the indices has not escaped criticism (e.g. Romaine 1980: 172–181; Williams 1992). The central problem is that it is very unclear what the social meaning of such indices and measures is (Milroy 1987: 29). That is, what is the reality that lies behind such classifications? It should, however, be noted that in research in the social sciences in general there is no single agreed-upon notion of ‘class’, nor are there standard ways in which to apply a measure to it (Guy 1988), so linguists can perhaps be excused for tending to use unsophisticated methods owing to the lack of clear models to follow.

Social stratification was not considered in any detail in studies of NZE until the mid-1980s (Bayard 1985, 1987; Gordon and Maclagan 1985). This is probably because the few people who were actively engaged in studying NZE were trying to determine its general characteristics, but it could also partly be because there has been a long-standing myth that New Zealand is a classless society (see Wilkes 1994). Some recent social dialect studies in New Zealand (e.g. Holmes, Bell and Boyce 1991; Britain 1992; Holmes and Bell 1992; Holmes 1995) have made a two-way distinction between the ‘Middle Class’ and the ‘Working Class’ as a method of controlling the number of variables that need to be accounted for and simultaneously allowing a broad view of social variation. Holmes notes that the limitations of this approach are generally borne in mind by New Zealand researchers (1995: 439).

In order to classify speakers into groups, the index of socio-economic status developed by Elley and Irving (1985) is widely used in New Zealand.\textsuperscript{11} This index is based on New Zealand Census data supplemented by an adaptation of the International Standard Classification of Occupations produced by the New Zealand Department of Statistics (Elley and Irving 1985: 115). Elley and Irving summarise the rationale behind the index as follows:

Socio-economic status is defined by the authors in terms of an equal weighting of the median educational and income levels for workers in each specific occupation group, as reported in the 1981 Census. It is thus an objective index of occupational status and is descriptive, not evaluative. It is not, and could not be, an index of social class... When scaled according to conventional educational and income criteria, occupational level appears to correlate highly with many other social status variables. Certainly, it shows the same kind of relationship as

\textsuperscript{11} An updated version of the scale is also available (New Zealand Ministry of Education 1990) and this has been used in recent research in New Zealand (e.g. Maclagan, Gordon and Lewis 1999).
social status with many dependent variables widely used in social science research, making it a very useful ‘marker’ variable in regional surveys. (Elley and Irving 1985: 116)

In discussing the efficacy of the index, they note that “the contents and the rationale of the indices have been subjected to regular scrutiny in journals, theses, conferences and university classes” (Elley and Irving 1985: 115).

The Elley-Irving scale was used to determine the socioeconomic status of the interviewees from Southland. The rural sample was to include people from a farming background only (see the previous section). Although this appears to reduce variability in the sample, it actually masks a difficulty that is not easily dealt with: farmers are “an extremely heterogeneous group with respect to income and education” (Elley and Irving 1985: 118). When the results from the rural sample are analysed in later chapters, factors such as education will be considered in order to partially solve this problem. The urban sample was subdivided into two broad groups. The first consists of people with occupations ranked 1–3 on the Elley-Irving index, and could loosely be equated with the ‘Middle Class’ used in other studies of NZE (e.g. Holmes, Bell and Boyce 1991), bearing in mind that Elley and Irving note that the index does not measure social class, as above. The second group consists of people with occupations ranked 4–6 on the Elley-Irving index, which could be considered to be the ‘Working Class.’ The appropriateness of this division will be discussed in a later chapter in connection with the results of the investigation. Finally, school pupils in the urban sample were classified using the higher of their parents’ rankings12.

3.7 The sample

It was intended that about 70 to 80 interviews would be conducted in order to collect the data for this study. This is comparable with the sample sizes of previous sociolinguistic studies that involved analysis of free speech (e.g. Trudgill 1974, Milroy 1980, Holmes, Bell, and Boyce 1991, Britain 1991). It was also felt that a larger sample would not be manageable because of limitations on resources.

A number of decisions were made above regarding the structure of the sample. To recap, they are:
(1) The number of rural and urban interviewees would be the same;
(2) Two rural areas (around Winton and Mataura) would be investigated;
(3) Invercargill City would be the only urban area to be investigated;
(4) Equal numbers of males and females would be interviewed;
(5) Ethnic variation would not be investigated—the sample would consist of Pakeha;
(6) Only people from farming backgrounds would be interviewed in rural areas;
(7) Urban interviewees would be from a range of social backgrounds, divided into two groups according to socioeconomic status.

12 See Fergusson and Horwood (1979) for an interesting discussion of variable socio-economic status within families.
The final decision regarding the sample is:

(8) Three age groups would be investigated. These are: 15–20 years, 40–50 years, and 65 years and over.

The data collected in the pilot study (see chapter 4) showed considerable variation in the use of postvocalic /r/ from generation to generation, which indicated that it would be necessary to investigate three age groups rather than two.

Thus, the sample would ideally consist of 24 cells with 3 people in each in order to give a total sample size of 72. Table 7 shows the actual sample of 69 people that was obtained. There are several points where it does not match the target sample structure. The reasons for this and problems with finding suitable interviewees are discussed in chapter 5.

### Table 7

The Sample

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>40–50</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>65+</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>6</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Note:
'Socioec. 1–3' stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale. 'Socioec. 4–6' similarly stands for interviewees with socioeconomic status values of 4–6.

Perhaps the most significant feature of the sample is the high number of cells and the correspondingly low number of speakers in each cell. The figure of five interviewees per cell has come to be seen by sociolinguists as a suitable minimum to allow statistical analysis of linguistic data (e.g. Horvath 1985; Holmes, Bell, and Boyce 1991; Holmes 1995). There have been studies which have had smaller cell numbers (e.g. Macaulay (1976) used 2 people per cell), and it was necessary in this case to have low cell numbers to allow three different regions and three different age groups to be investigated. This does not preclude the possibility of combining cells in order to allow more basic comparisons to be made. For example, the two rural samples could be combined into one, which would give six cells (three age groups x female/male) with five or six speakers in each, thus allowing a basic urban-rural contrast to be made. It partly depends on the trends that are discerned in the data, which are treated in the results chapters below.
The way in which people were selected to fill this sample structure is described in chapter 5, which discusses methodological issues. Chapter 4 is about the Southland variety of NZE and the selection of variables.
CHAPTER 4
THE SOUTHLAND VARIETY OF NEW ZEALAND ENGLISH: SELECTION OF VARIABLES

4.1 Introduction

This chapter gives a brief overview of the distinctive features of SIdE and identifies the variables that were selected for study. The selections were made on the basis of previous reports on SIdE and the findings of a pilot study that was carried out. It will be shown that the previous reports are a limited—and at times misleading—source of information, primarily because of their anecdotal nature. The pilot study was designed to supplement and check the information in these reports; its aims and methods are described briefly below. The features of SIdE are then discussed in three sections that cover phonology, lexis, and grammar. These sections also include mention of a few features which were identified in the course of conducting the main study and analysing the data, and which could prove to be characteristics of SIdE. The chapter concludes with an outline of the variables investigated in this study. For details of the history and current distribution of these variables in both international English and NZE, see the presentations of results in chapters 6 and 7.

4.2 Sources of information on the Southland variety of NZE

4.2.1 Previous reports

Few of the early publications on NZE mention regional differences. A distinctive Otago accent is identified by those that do; it could perhaps have been heard in Southland too, given the close links between the two regions in the early years of European settlement (see chapter 3.2.3). McBurney’s notes on New Zealand pronunciation show that some regional differences existed in the 1880s (see chapter 2.3.3). Of particular significance, given what is now known about SIdE, is that McBurney heard “a peculiar final r” (1887: 5), most commonly in Dunedin, but also less frequently in Nelson and Christchurch (Ellis, 1889). The presence of postvocalic /r/ in Otago is the main example Bennett gives in a brief discussion of “slight regional differences” within New Zealand (1943: 72). Although Wall documented many features of NZE in various publications during the period 1936 to 1966 (see chapter 2.5–2.6), it is somewhat surprising that he makes no mention of SIdE. A section entitled “English R” in Wall (1936) contains no reference to Southland or Otago, and in a later publication he comments: “I know of no case of undoubted Scottish influence upon New Zealand speech in spite of the very large
proportion of the Scottish element in our population” (1958: 50). It was not until the study of the NZE accent began to develop in the mid-1960s (see chapter 2.6) that SIdE was mentioned as the main regional variety of NZE.

To the best of my knowledge, SIdE was first explicitly treated in two publications that appeared in 1966: Orsman (1966) and Turner (1966). Orsman (1966) is the fullest account of SIdE prior to the publication of preliminary findings from the pilot study I carried out (Bartlett 1992). Orsman briefly discusses four phonological and five lexical features (see below). Turner notes the “more frequent occurrence” of postvocalic /r/ in Southland and Otago (1966: 105). SIdE has since been identified as the main regional variety of NZE in a number of publications (e.g. Hawkins 1973a; Northcote-Bade 1976; Gordon and Devenor 1985; Bauer 1986b, 1989, 1994; Bayard 1990b; Bell and Holmes 1991; Holmes, Bell, and Boyce 1991). The evidence provided in these publications, with the exception of Bayard (1990b), is entirely anecdotal. Postvocalic /r/ is always singled out as the main distinguishing characteristic of SIdE, but few, if any, other features are mentioned. Bayard (1990b) is the first published quantitative investigation of postvocalic /r/ in NZE (see chapter 6.2.2); Bayard’s results are based on /r/-pronouncing speakers selected from his earlier work on NZE (see Bayard 1987)—there are only 8 Southlanders in the sample (the majority of the informants are from Dunedin). In the written sources there was insufficient information on which to base a study such as the present one. To supplement these sources, and to attempt to determine how accurate they are, I carried out a pilot study.

4.2.2 The pilot study

The aim of the pilot study was to obtain a broad overview of the speech patterns of a small sample of speakers of SIdE. The areas investigated were Invercargill and Gore—Southland’s two main urban centres—and rural areas immediately surrounding Edendale, which is a small rural community situated approximately mid-way between Invercargill and Gore in Eastern Southland (see figure 2). Interviews that consisted of free conversation and formal reading tasks were conducted with 15 Southlanders aged from 19 to 87. The interviewees were from a range of backgrounds (urban and rural; professional and non-professional occupational groups). The interviews were analysed qualitatively. Informal observation of the speech of Southlanders during the period in which the pilot study was carried out also added some further information. The aim was to determine which of the known features of SIdE would be worth studying quantitatively and also to see whether there might be other features of SIdE that had not been identified previously. The findings were reported in Bartlett (1992) and are incorporated in the discussion of the features of SIdE below.
4.3 Phonological features of SIdE

4.3.1 Consonants

There are four consonantal features that are likely to be distinctive features of the Southland variety. The most important feature of the four is postvocalic /r/. It is the most salient diagnostic feature of SIdE. The other consonantal features that are discussed are the contrast between /w/ and /m/, voicing of /s/, and devoicing of /ð/.

1. Postvocalic /r/

As noted in section 4.2.1 above, the majority of previous reports and comments on SIdE make reference to postvocalic /r/ only. Speakers of SIdE can be distinguished from speakers of other varieties of NZE solely by the presence of postvocalic /r/ in their speech (see Bayard and Bartlett 1996). The pilot study indicated that /r/-usage varies greatly from speaker to speaker, which suggests that a rapid process of change could be underway. These factors made postvocalic /r/ the prime candidate for study, and it receives the most detailed analysis of the variables I investigated.

2. Contrast between /w/ and /m/

Bauer notes that “NZE is regularly reported as being one of the last strongholds” (1986b: 229) of the contrast between /w/ and /m/ (e.g. in minimal pairs like weather and whether), but that “while it is probably more common in New Zealand English than it is in RP, it is far from being as ubiquitous as it is in Scottish standard English” (1994: 388). There is, however, an indication that the contrast might be more frequently maintained by speakers of SIdE than by speakers of General NZE: this possibility is suggested by the results of Bayard (1987), but requires further investigation. The /w/ - /m/ contrast in SIdE will be the topic of a future publication.

3. Devoicing of /ð/

The lexical item lathe was pronounced with /ð/ on the few occasions I heard it while carrying out fieldwork in Southland. Whether this devoicing occurs with other lexical items (e.g. swathe, bathe) has yet to be determined. It seems unlikely that it would occur inter-vocally (e.g. bother). Bauer (1986b: 252) notes that the use of /θ/ in place of /ð/ occurs in General NZE usage in with and variably in word-initial position in this/ð/. Because I heard /ð/-devoicing so infrequently, it was not included in the final list of variables I set out to investigate.

4. Voicing of /s/

A few tokens of words like Mossburn (a community in north-western Southland) and Josephi with a voiced fricative /z/ in place of the more usual /s/ were heard during the course of the pilot study. These examples are proper nouns, so it could be that this is a relatively rare feature that has been lexicalised in a few cases. As with /ð/-devoicing, this feature is so uncommon that it was not included in the final list of variables for study.
4.3.2 Vowels and diphthongs

The primary vocalic feature of SldE involves variation between the phonemes /a/ and /æ/ in the BATH lexical set. The diphthongs /au/, /ei/, both mentioned in Orsman (1966), and /ou/, which has not been reported previously, will also be discussed.

1. Variation between /a/ and /æ/ in the BATH lexical set

Orsman notes that speakers of SldE use /æ/ before “n and m + consonant … and, less regularly, before f, s, and th” (1966: 680); he gives the following as examples: dance, chance, and example; after, Castle Street, path (1966: 680). These environments form the BATH lexical set (as defined by Wells 1982); see chapter 7.1 for details. The General NZE norm in this lexical set is /a/, although Bauer comments that /æ/ can still be heard in the speech of “a few older speakers” (1986b: 238). The pilot study suggested that /æ/ is still fairly common in SldE, but that its use is irregular (possibly involving lexical diffusion). Although it is used more often by older speakers, there were some younger speakers who occasionally used it too. Variation between /a/ and /æ/ in the BATH lexical set is the second variable I selected for study.

2. Non-rounded /a/ following /w/

Historically, /a/ after /w/ (e.g. in want) has become rounded in most English accents (Wells, 1982: 212). Non-rounded forms are sometimes heard in the speech of older, mostly rural, speakers of SldE. Brief results for this feature are presented in Appendix D.

3. Diphthong /au/

Orsman reports that “diphthong au of cow has a first element like the e of very, and a fronted second element — eu. Some speakers turn it into a triphthong [sic] eiu by inserting a glide between the first and second elements — (abaut, abaut) rather than (about) for about” (1966: 681). Many of the older rural speakers in my sample pronounce /au/ with a mid-front to central starting element and a significantly fronted second element (approximately [e:u]) which is what Orsman is indicating. The location of the starting element is variable from speaker to speaker. Because only older people use this form, /au/ was not selected for study.

There are many variants of /au/ when it occurs before /r/ (e.g. hour). These range from long-glided diphthongs followed by /r/ to monophthongs without a following /r/ (i.e. hours is pronounced [ɛ:z]). The high degree of variability of this feature was not discovered until the interviews for the main study were well underway because it occurs so infrequently. It was not selected for study because of the limited amount of data available, but it would be of some interest to collect more data on this to see whether the variants are socially significant or not.

4. Diphthong /ei/

Orsman also mentions that “the first element of the diphthong ei of day tends to be lowered to near the e of very” by speakers of SldE (1966: 681). This was not something that I encountered while
carrying out the pilot study, but one older speaker from the main study pronounces a number of /ei/ diphthongs as [æ].

5. Diphthong /ou/

A few of the older rural speakers I interviewed sometimes pronounced this as a monophthong in the vicinity of [o], or as a diphthong with a very short glide. The lexical item go in particular is sometimes pronounced as [go]. It may be that this pronunciation occurs solely in open syllables. Because only a few of the older speakers produced /ou/ in this way, it was not selected for study.

4.3.3 Miscellaneous item

1. Ingressive 'yeah'

The pronunciation of yeah (i.e. yes) using a brief, predominantly voiceless ingressive airstream was quite common amongst SIdE speakers. More data would need to be collected in order to determine whether there was any social significance attached to this feature, or whether it is found in other parts of New Zealand.

4.4 Lexical features of SIdE

The existence of regional words in NZE has been acknowledged for some time (see Turner 1966: 178–180, Gordon and Deverson 1985: 59–60), but no systematic study along the lines of dialect investigations carried out in the British Isles has been attempted. As yet there is no evidence for regional lexical variation in New Zealand on more than a relatively minor scale. At the time the interviews for this investigation were carried out, the literature on NZE identified just nine lexical items that were thought to be found only in southern areas of New Zealand. These are listed below. Since then, dictionaries of distinctive New Zealand English words (Orsman and Orsman 1994; Orsman 1997) have appeared; information from The Dictionary of New Zealand English (Orsman 1997; hereafter DNZE) has been incorporated below. Additional items which have arisen in the course of carrying out fieldwork in Southland and which are possibly found only in SIdE are also discussed.

Of the nine lexical items below, there are five that Orsman (1966) specifically associates with SIdE. Orsman comments that they are “not found, or not used so frequently, in general New Zealand speech” (1966: 681). These words are:

1. ashet (a large meat-plate or platter) [DNZE: found in Otago and Southland]

2. shaws (potato tops/stalks, possibly withered)

3. wee (small). Most reports (e.g. Turner 1966: 126; Wall 1966: 679; Gordon and Deverson 1985: 59) suggest that wee is heard throughout New Zealand, especially in the expression a wee bit. [DNZE: “in frequent general use in New Zealand”]
4. crib (bach, holiday cottage, etc.) [DNZE: mainly southern South Island]

5. sulky (a child’s pushchair) [DNZE: Otago-Southland]

   Turner lists three words which “are more likely to occur in Otago than elsewhere” (1966: 178). It is probable that these are also used in Southland, given that other features of the Southland variety can be heard in Otago, but Turner does not state this. The three words are:

6. slaters (wood lice) [DNZE: no region specified]

7. nogging (a builder’s term for what is called dwanging elsewhere in New Zealand) [DNZE: no region specified]

8. bolt (soldering iron)

   The final item is mentioned by Bennett, who notes that it is used “in the south of the South Island” (1943: 73):

9. byre (a cowshed) [DNZE: Otago-Southland; also heard as cowbyre]

   The other items encountered in interviews, and which may also be diagnostic of SIdE, are as follows:

10. Belgium/Belgium roll/Belgium sausage (a specific type of luncheon sausage, also used as the generic term). The adjectival form Belgian is occasionally heard. Belgium was known as German sausage until c. World War I. [DNZE: no region specified]

11. girdle (a hot-plate used for cooking; hence girdle scones). This is probably found in other parts of New Zealand, but perhaps less commonly than griddle. However, none of the Southlanders I asked about this item used griddle. Note that girdle is the northern English dialect word and griddle is southern dialect.

12. superheater (hot water cylinder) [DNZE: Southland]

13. lux (vacuum cleaner) [DNZE: no region specified]

14. messages (shopping; e.g. I’m off to do the messages) [DNZE: no region specified]

15. crossing (occasionally used for a ford in a river, although most speakers use ford)

16. tailing (removing/docking lambs’ tails) [DNZE: no region specified]

17. like (kind, type; e.g. What like is it?)
A final item that is only found in DNZE is:

19. glut (a wooden wedge used in sawmilling) [DNZE: Southland]

Of the words listed above, only superheater and glut are considered by DNZE to be features of SIdE exclusively. The lexical items are not analysed further here.

4.5 Grammatical features of SIdE

4.5.1 Introduction

To the best of my knowledge, there were no published reports on the grammar of the Southland variety before I carried out the pilot study (Bartlett 1992), as above. In this section I will briefly describe several grammatical features heard in the speech of speakers of SIdE. It must be borne in mind that there has been very little research on NZE grammar (see chapter 2), so I am largely dependent on my intuitions as a native speaker of General NZE as to what constitutes a distinctive grammatical feature. However, the items below are not mentioned in Bauer (1987), which lists a large number of grammatical items "that appear to be variable within New Zealand" (1987: 12). Unless otherwise noted, they all occur in Scottish English (ScotE), according to either Miller (1993) or Trudgill and Hannah (1985: 85–86). It is probable that they can also be heard in Otago, because of the high proportion of Scots settlers in that region and the connections between Southland and Otago during the years of European settlement (see chapter 3.2.3). Several of the features listed below were investigated formally in the interviews that were conducted—the results will be presented in a future publication.

4.5.2 The verb phrase

The majority of the distinctive grammatical features I encountered are associated with the verb phrase, and in particular the auxiliary and modal system.

1. Needs and wants

Following needs and wants, and also the past tense forms needed and wanted, a past participle is often used by speakers of SIdE (e.g. The plant needs watering; the baby wants fed; the tap needed fixed). General NZE speakers use the present participle, just as speakers of English English do (e.g. The plant needs watering). Both SIdE speakers and General NZE speakers use the past participle after an infinitive (e.g. The plant needs to be watered). The use of the past participle in all the above environments appears to be the standard form in SIdE, as it is in ScotE (Miller 1993: 130), and is probably the most widespread grammatical feature of all those discussed here.
2. **Have**

When it is a full verb, *have* sometimes acts more like an auxiliary in the speech of some (predominantly older) speakers—in both the present and the past tense it can contract (e.g. *He'd a leather bag with him*). The contracted present form can be heard in conservative forms of NZE (e.g. *We've some Beethoven and Vivaldi this evening*) and according to Trudgill and Hannah this is common, “if somewhat formal or older,” in English English (1985: 52). However, the past tense contracted form may be more common in the Southland variety than it is in General NZE, if it is in fact used by speakers of the latter.

3. **Will**

*Will* is commonly used in questions with first person subjects (e.g. Hattie B.: *Will I give them a ring?*) where NZE has *shall* or perhaps *should*. Trudgill and Hannah (1985: 21) note that this may not be uncommon in NZE, which Elizabeth Gordon (p.c.) concurs with, so if SldE differs at all from General NZE it could be in the degree of usage.

4. **Would**

I heard a few examples of what appears to be an unusual use of the modal verb *would*: the simple past tense verb is replaced by *would* plus an infinitive form of the verb. For example:

David I.: ...*but most Maoris would know where another Maori would come from.*

Sharon D.: ...*and we wouldn't be finished when they would want us to come.*

David I.’s use of *would know* is predictive (see Quirk et al. 1985: 228), and as such is not unusual, but he seems to have used *would come* in place of *came*. Sharon D. is relating a single specific incident, so her usage of *would* in both cases is not habitual, but is also a sequence of *would* plus an infinitive. The General NZE equivalent of her utterance, with simple past tense forms, is: ...*and we weren't finished when they wanted us to come.* According to Miller (1993: 124), this replacement can occur in conditional clauses (usually introduced by *if* or *suppose*) in Scottish English. However, the examples from SldE do not occur in conditional clauses; it is possible that the SldE construction is derived from the ScotE one, but has been extended to clauses other than conditionals. There is not enough available data from which to make any conclusive statements about the distribution of this feature.

5. **Negation**

There is a tendency for many of the SldE speakers I interviewed to use the full negative element *not*. For example, a common reply to a negative statement was: *Did you not?*

4.5.3 **Other grammatical features**

1. **Deletion of prepositions**

Older speakers in particular sometimes delete prepositions. This appears to turn an adverbially-functioning prepositional phrase into a direct object. For example:

Sharon D.: *He came out hospital.*
Norm D.: We'll check Val on that one.
The deleted prepositions are of and with respectively.

2. Wh-interrogative clauses: ‘all’ as a plurality marker

In some SlDE interrogative forms, all is employed following wh-pronouns, notably who and what, predominantly to indicate plurality. Examples are:

Frank W.: Who all's going?
Lyn W.: Who all wants some ice cream on their custard?
Ann S.: What all's happening?
Ann S.: So where all did you go?

I have not found any reference to this construction in descriptions of Scottish or Irish English varieties; it is current in some varieties of North American English (Trudgill and Hannah 1985).

The only reference I have found to this in the New Zealand context is made by Turner, who reports: “I heard a Maori bus driver in Christchurch call to some children, ‘Come on, who's all coming?’” (1966: 171). Turner comments that “there are probably a number of expressions of this kind attributable to a Maori substratum, though they are sporadic and not general among Maoris” (1966: 171). However, Turner clearly knew nothing of the bus driver’s origins, so could not say for sure whether the feature was indicative of a regional or a social variety of NZE.

3. ‘Ones’ as a plural pronoun

Speakers of SlDE commonly use ones as a plural pronoun (similar to ScotE yins), roughly equivalent to people, although it seems to indicate familiarity too. It can be combined with you to create a plural second-person pronoun. For example:

Liz S.: The ones down the road could tell you that.
Ann F.: Are you ones going tonight?

Note the similarity between the example from Ann F. and ScotE youse yins.

4. Measure phrases

A singular measure noun can be used after a numeral in constructions where General NZE speakers would probably use a plural noun. For example:

Annie C.: It's ninety-two year old.
Arthur R.: About six mile up the road.

4.6 The variables

Many of the features discussed above occur infrequently in conversational speech, or are clearly confined to a small section of the Southland community, particularly older rural people. I was primarily interested in determining what the future development of SlDE might be in terms of maintenance of any of its distinctive features, so the focus of this study is on those features that are
used in varying degrees by a wide range of people. It is of course of interest if any previously characteristic features are no longer used by young SldE speakers, but quantitative analyses of variables which score zero frequency of use in all social groups, apart from the older rural one, are not particularly enlightening.

The variables selected for study are:
1. Postvocalic /r/
2. Variation between /a/ and /æ/ in the BATH lexical set

The following chapter discusses the methodology that was employed in the investigation of these variables.
CHAPTER 5
DATA COLLECTION AND ANALYSIS

5.1 Introduction

In this chapter I discuss methodological issues associated with data collection and analysis. Following the design of the speaker quota sample frame, several key decisions had to be made. The data-collection method had to be determined; it was decided from the outset that face-to-face interviews of some kind would be carried out in order to avoid the ethical problems associated with surreptitious data collection, and also because of their relative efficiency. Owing to the limited human and financial resources available, the data would be collected in a series of one-off interviews; there would be no return visits to collect additional data. The structure of the interviews and the nature of the data to be collected had to be considered before any interviews could be conducted. Then interviewers had to be selected and trained, and interviewees had to be located. Once the data had been collected, decisions about processing and analytical methods had to be made. These issues are discussed below. The chapters that follow give a detailed analysis of the variables.

5.2 The interviews

5.2.1 The sociolinguistic interview

The sociolinguistic interview was developed by Labov in the late 1960s (see Labov 1966), based on the methods used in traditional dialectology. By including a range of language tasks in the interviews, Labov aimed to use the social and stylistic variation in the speech samples he collected to determine the social patterning of language change. The clarity with which he presented his methods and results, and the apparently high explanatory power derived from his study of speech styles, greatly influenced subsequent sociolinguistic research. Following the publication of Labov’s early work (especially Labov 1966, 1972a), sociolinguistic interviews have tended to consist of a mixture of formal and informal sections designed explicitly to investigate the correlation of social and linguistic factors. The formal sections in these interviews consist of language-oriented tasks, such as reading passages and word-lists, that are intended to elicit different speech styles (see e.g., Trudgill 1974: 46–52). The goal of the informal sections is usually to collect free speech that approximates the ‘vernacular’ (see the discussion in Milroy 1987: 57–64).
Researchers aiming to collect vernacular speech need to deal with the issue raised by Labov’s well-known formulation of the ‘observer’s paradox’: how can one observe people’s linguistic behaviour when they are not being observed? However, the only situation in which people are not being observed in some way, and know that to be the case, is when they are alone and thus not interacting. That is, people modify their behaviour—and this includes their linguistic behaviour—to suit the social situation they are in (see Bell 1984). Labov’s paradox cannot be resolved because even the least-monitored speech style occurs in a social setting which affects the individual’s behaviour. The key for researchers is to understand the nature of the social situation in which data is collected.

Attempts to overcome the relative formality of the interview situation in order to obtain data that more closely approximate the ‘vernacular’ have led to the development of a number of methods that aim to reduce the influence of the investigator on the speech of the subjects under investigation. In individual face-to-face interviews, techniques that are intended to change the dynamics of the situation have been used (Labov’s ‘danger-of-death’ question is the standard example). For later research, Labov developed topic modules that could be used by interviewers as a method of imitating a conversation (Labov 1981), although this method has been criticised because the discourse topics are still controlled by the interviewer and so the situation cannot be said to be the same as a ‘real’ conversation (see Milroy 1987: 70–73, 82). Group interviews have also been used as a way of changing the dynamics between the interviewer and the interviewee(s); the interviewer has less influence because he or she is effectively outnumbered (see e.g. Labov et al. 1968). The use of participant-observation techniques employed by Boissevain (1974) became more widely used following the research of Jim and Lesley Milroy in Belfast (Milroy 1980). Their investigation of pre-existing social networks has been influential on subsequent research, partly because of the quality of the data obtained.

5.2.2 The Southland interviews

The constraints on this study of the Southland variety of New Zealand English were the main factors in deciding what method of data collection would be used. Neither the time nor financial resources that would enable the use of methods other than individual interviews were available. Although it would have been possible to set up group interviews, it was felt that they probably would have been artificial because the necessary background attachment to a social network would have been absent. There was not just one community under investigation. Face-to-face interviews are an efficient means of collecting speech samples because a single interviewee is the focus of the interaction. This is less true of the interviews with female subjects carried out for this study because of the insider status of the interviewers (see below). For the sake of consistency, one-on-one interviews were carried out where possible—at times family members were present for parts of interviews and this was not discouraged unless it was clear that the interviewee was becoming marginalised in the interaction.
It was decided to begin the interviews with personal questions because it was felt that these are typical questions people use when they first meet a stranger. Note that potentially sensitive questions were not asked—for example, there were no questions about income, which in any case is often, though not always, likely to be correlated with occupation and hence with socioeconomic status. The scales for socioeconomic status used (Elley and Irving 1985; Irving and Elley 1977) explicitly use income as one factor when determining the socioeconomic strata (see section 3.6 for further details).

From these questions, the interviews proceeded to the formal reading tasks, as outlined below, and then to the less structured conversational part. By conducting the formal tasks first in one block, people were perhaps put at ease earlier and settled into the role of interviewee. Placing these tasks early in the interview also helped the ‘face validity’ of the interviews, in that they are the sorts of tasks that people expect of a linguistic interview. The interviewers tended to ask questions, depending on the willingness of the interviewee to contribute without being prompted.

The approach taken was to attempt to develop a rapport with the interviewees and then to apply the principle that, over the course of an interview, people progressively relax and consequently monitor their speech less over time. Douglas-Cowie (1978) suggests that this takes place after about an hour in an interview situation, although this figure is actually an arbitrary one resulting from her analysis.

In summary, the interviews were structured as follows (see Appendix A for the complete interview schedule):

1. Collection of personal information
2. Questions about lexical items
3. Test reading words
4. Reading passage
5. Word List 1: minimal and near-minimal pairs
6. Grammatical tasks
7. Word List 2: isolated lexical items
8. Unstructured conversation

If the interviewee moved to conversational speech at any point, they were not discouraged. This happened frequently because people generally found the questions interesting.

The majority of the 69 interviews were between one and two hours in length; for the most part they were about one-and-a-half hours long. It should be noted that interviewees were not rushed in any way, and were encouraged to talk freely once the conversational part of the interview had been reached. Rather than the somewhat artificial topic-shifting employed by the modules method, we simply attempted to find out what the interviewees’ main interests were and tried to get them to discuss those topics. That this is capable of excellent results is demonstrated by the interview with Andrew N. (urban male, aged 15). I knew that he was interested in music, so asked him directly about it when the conversation was starting to feel a bit forced. The discussion about rugby was not
particularly interesting to him, as indicated by his speech rate and length of turn, which both increased markedly when the topic changed to music:

Interviewer: Is it [schoolboy rugby] very competitive?
Andrew N.: Yeah it is cause they’re really tough -- like they they really means heaps to them and there's some really big boys in it too
Interviewer: They’d be a bit bigger than you
Andrew N.: Yeah but my mate who plays in it he’s my size but he’s really gutsy like he he'll tackle anyone who’s coming for him. yeah I’m a useless tackler but he’s like really good and he always gets there. really annoys me
Interviewer: What position do you play?
Andrew N.: I like to play I like. play a lot in the back line and winger or something cause I’m just. once I get going I can I can go pretty fast but but I wouldn’t want to play in the forwards or anything I’m just too small yeah
Interviewer: You’d get wasted
Andrew N.: I’d say
Interviewer: You can see why they get so much
Andrew N.: Oh if I was getting three million dollars a year I’d do it too. hey
Interviewer: Those guys must be absolutely knackered after a game
Andrew N.: I’d say . have to be pretty fit
Interviewer: Tell me about your band
Andrew N.: O.K. well. [speech rate increases] I was sitting in history this was about two months ago and I was talking to my friend and and. Mrs Edwards our teacher she’s Scottish and sometimes she really annoys us so and we were really annoyed with her so Brian he’s my mate he um he goes we should be famous so we wouldn’t have to go to school and I go I know and he goes let’s make a band and I said can you play anything and he goes and and he goes can you and I go yeah I play guitar and he goes. and then he just said o.k. I’ll play drums so then from then um we sort of . we walked up we went up town that night that that day after school and we were just walking around town and we were deciding where we’d do our first illegal rooftop top concert like U2 did one day and they made a video out of it so we decided we’d do that and we it was just like sort of a joke from the start but then we just decided to get serious and then after that he moved in he moved in with these people put his. caravan in their back yard and like the guy was a member of this band he’s got amps guitars and drums and everything his next door neighbour’s got drums so . then decided we’re going to. become serious but we’re just trying to get hold of some sheet music at the moment
Interviewer: What sort of music do you want to play?
Andrew N.: Well Crowded House. U2 and stuff like that cause. um he’s saying that um get into some Exponents stuff and like that’s that’s not too hard to play and that sounds good so that’s what we’re doing at the start and I’m going to like I write my own music but he’s he does really
want to go into that he just wants to do some covers at the moment so we do busking and stuff like that
[conversation continues]

One of the potential difficulties is that some interviewees talk more than others. At first I was tempted to ignore the interviews that didn’t seem to go ‘well’. But I came to realise that by ‘well’ I meant interviews where the interviewee had done a lot of talking. This might in fact be related to the personality type of the interviewee, or the fact that one-on-one interviews suit some better than others; discarding ‘bad’ interviews on the basis of lack of apparent long turns from the interviewee is probably unjustified and based on a false assumption that all people talk effusively and that if they don’t in an interview then the interview has been a failure.

5.3 The interviewers

There were two main issues concerning the selection of the interviewer (or interviewers). Firstly, should the interviews be carried out by more than one person? Secondly, should each interviewer be an insider—a member of the community under investigation and hence a native speaker of SdE—or an outsider?

It was decided that it would be advantageous to use more than one interviewer in order to match the interviewers and interviewees by sex and ethnicity. The primary benefit was that possible cross-sex and cross-ethnic linguistic effects would be avoided (see Cameron and Coates 1985). My experiences while carrying out the interviews for the pilot study showed that, as a 26-year-old male, I would have mixed success at best at interviewing teenage girls! Durkin (1972: 20) and Hogstad (1995: 41–42) noted similar difficulties that affected their investigations of varieties of NZE. It was hoped that by reducing the social distance between the interviewers and interviewees, and so helping the latter to feel more at ease, the quality of the interviews would be improved.

The second issue concerned whether the interviewers should be insiders or outsiders relative to the communities being investigated and needs to be considered with regard to several different aspects of a research project. Firstly, the initial planning stages, including the approach to the community under investigation, benefit from an insider’s knowledge. Milroy (1987: 64ff) stresses the need for the outsider to study community norms before beginning fieldwork (for a discussion of this in the New Zealand context, see Holmes, Bell and Boyce 1991: 25–26, 39–40). Secondly, the collection of the speech samples may also benefit from the use of insiders or of outsiders who attach themselves to a community, gain a measure of the status of insiders, and so become participant observers (Milroy 1987: 60ff). The main reason for this is that insiders are likely “to have access to types of language different from those observable to outsiders” (Milroy 1987: 64). Thirdly, the analysis of the speech collected can benefit from an outsider’s perspective—it is possible that insiders would be more likely to overlook distinctive language use (because of its perceived ordinariness) that outsiders could
identify. Factors such as these led Labov to recommend that “no serious study of a speech community should be planned without including both kinds of investigators from the outset” (1972b: 115).

For this study of SIdE the issue of interviewer selection was resolved more by necessity than by design. In order to keep the cost of the research down, I had to carry out as many of the interviews as possible, which meant that I interviewed all the male subjects. Because the interviews were conducted in Southland, the interviewers needed to live in the region until the interviews were completed, or at least to spend a significant amount of time there. Again in order to keep costs down, it was only possible to employ female interviewers who were already living in the area in which the interviews were to be carried out. They were employed on a casual basis, which meant they could only interview people when they had spare time. It was simply not possible to pay them a full wage and employ them until they had conducted all of their interviews. As a result of these constraints, three different female interviewers were used, one for each area to be investigated. Jenny M. carried out the interviews in Central Southland—she is not from the area, but was working there as a shearer, so she could best be seen as a participant observer; she does not speak SIdE. Sue W. was the interviewer in Eastern Southland—she grew up there, but had been living away from the area for several years while attending university; her SIdE accent has been modified in the direction of General NZE. Karen F. carried out the interviews in Invercargill, which was her home city—she too had been living away from home while at university; she speaks SIdE. I chose these three interviewers because they were people known to me who had extensive local contacts. They were all able to find suitable female subjects to interview, as well as acting as gatekeepers and helping me to find suitable males to interview in the three communities. Once the interviews had been completed, I carried out all of the data analysis. As I am not a Southlander, the research was therefore conducted primarily by an outsider. The main advantage of my outsider status is that as a speaker of General NZE, I am able to make judgements about the relative distinctiveness of speech features in the interviews.

There are two problems with the composition of the team of interviewers. Firstly, the possibility that the four sets of interviews vary somewhat according to the differing insider/outsider status of each of the interviewers—and their corresponding differences of accent—cannot be ruled out. Secondly, all the interviews with males were carried out by one person, but the interviews with females were carried out by three different people, which might lead to greater variability in the nature of the interviews with females. There is no simple way to test for any effect, given that there are a number of other variables under consideration, so these problems have been disregarded at this stage.

5.4 Sampling: The selection of interviewees

One of the main issues any research project that seeks to investigate aspects of society must overcome is the problem of obtaining a sample that is representative of the population being studied. Sociolinguists who have set out to produce descriptions of speech communities have used two main
methods of sampling: random sampling and judgement sampling. Over time, the notion of representativeness has become less strict as the methodology of social dialect studies has developed. This is a key point in the following discussion.

Random sampling was initially an important part of the methodology of sociolinguistics. Two of the foundational studies in the field are Labov (1966) and Trudgill (1974); both Labov and Trudgill discuss their sampling procedures in terms of how closely they match ideal random sampling, but their claims about the representativeness of their samples have not gone unchallenged (e.g. Romaine 1980: 166–172). Although studies that followed have attempted to use random sampling methods (particularly with a stratified sample frame), there has been a shift away from statistical representativeness because it seems that truly random samples are impractical, if not virtually impossible, to obtain. A case in point is the Survey of Vancouver English (SVEN), which at the time was “the world’s largest urban socio-dialectology survey” (de Wolf and Hasebe-Ludt 1988: 55). A target of 240 interviews was set for SVEN’s main study. Although a stratified random sample was designed and collected, “the acceptance rate in the initial informant selection by telephone was only 7%” (de Wolf and Hasebe-Ludt, 1988: 56). A large number of the rejections resulted from SVEN’s aim to use native English Vancouverites, but the questions that must be asked are: what are the characteristics of the people who refused to participate and how were these people replaced?

Bhattacharyya and Johnson state:

Another primary source of bias emerges when there are [sic] a large number of nonrespondents to a survey. Nonrespondents typically differ from respondents regarding the characteristic being surveyed, making the population actually surveyed quite different from the target population. (1977: 533–54)

Although there are statistically valid techniques for replacing non-respondents (for a discussion relevant to the field of linguistics, see Romaine 1980: 167), there is still no way of knowing whether certain groups de-select themselves by refusing to participate in social dialect studies.

Even in cases where issues such as low response rates have not been problematic, other difficulties with random samples have arisen. Linguistic surveys can produce large amounts of data that then need to be processed. Because of this, samples are required to be small and consequently are often technically non-representative. Or, large projects end up with many unanalysed speakers, which effectively negates the purpose of having a random sample (Milroy 1987: 16, 22–23). Milroy concludes her survey of sampling methodology by commenting that “there appears to be a point where careful sampling actually becomes counterproductive” (1987: 23).

The difficulty of achieving true randomness when selecting informants appears to be one reason why sociolinguists have turned to judgement sampling in recent years. The main method of judgement sampling involves the design of a structured sample frame which is then filled by non-random selection of informants. The target sample consists of cells that are defined by sociological parameters. To give a simple example, a sample frame might consist of 5 urban males and 5 urban females. Any informants who fit the desired characteristics can be chosen—in this case, the first 5 males and 5 females encountered who qualified as ‘urban’ could be chosen. Such ‘quota samples’ are
technically non-representative “and they generally do not lend themselves to any sort of formal statistical evaluation’ (Freund 1974: 454) because of the possibility that the informants who are chosen might form subgroups that are not representative of the wider population. The key to justifiable use of this sampling method is that the linguist must be able to “demonstrate that his or her judgement is rational and well-founded” (Milroy 1987: 26), both in the design of the sample and the way in which the informants are selected. The main issue for sociolinguists is that they need to avoid focusing on one group at the expense of others, as far as possible, or if the sample is drawn from a particular group then this needs to be clearly explained and its effect on the results taken into consideration (Milroy 1987: 20). However, it is not clear that it is possible for researchers to determine intuitively the extent to which a sample is biased and thus non-representative; this is the central problem with non-random samples.

It appears that at the time this study was designed and still today, researchers are placing less emphasis on the representativeness of their samples:

The range of sampling methods used in recent work suggests that researchers are now more relaxed than they once were about methodological issues such as whether or not their account should be technically representative or whether strict random sampling procedures should be used. This shift in attitude which comes with the maturing of sociolinguistics as a field of research enables researchers to select more freely than was once possible from a range of methods those which, within a defensible theoretical framework, will best enable them to achieve their goals. (Milroy 1987: 38)

Although Milroy suggests there are a number of other reasons why representativeness is not as important a consideration as it once was, the move away from random samples is likely to be partly in recognition of the difficulty of obtaining them. Judgement sampling in sociolinguistic research has become more popular following the work of James and Lesley Milroy in Belfast (Milroy and Milroy 1978; Milroy 1980), although there are earlier examples (e.g. Wolfram 1969; Labov 1972b). As well as showing the value of investigating pre-existing social groups, or ‘networks’, the Milroys demonstrated that the method of finding informants via these social networks is both efficient and capable of allowing the collection of rich data. These appear to be major factors in the increased use of judgement sampling in sociolinguistic research from about 1980 (see e.g. Britain 1991; Holmes, Bell and Boyce 1991). All data-based studies of NZE have employed judgement samples (e.g. Bell and Holmes 1992; Bayard 1987; Gordon and Maclagan 1985, 1990; Hogstad 1995; Holmes, Bell and Boyce 1991). This is largely a result of the recent emergence of sociolinguistic studies in New Zealand, the influence of contemporaneous research (especially Milroy 1980), and the limited resources available. Informants for this study of the Southland variety of NZE were also selected by way of judgement sampling in order to improve the potential quality of the data. The representativeness of a judgement sample is, however, still open to question. In strict statistical terms, such samples can never be representative of any wider population at all. Conclusions drawn from data collected in this way must necessarily be expressed tentatively, which is what will be undertaken here with respect to the data collected from the informants in this study.
The sample frame outlined in Chapter 3 was filled by finding people who were loosely 'friends-of-friends'. The interviewers all had contacts in the areas in which they carried out their interviews, so they acted as first points of contact (gatekeepers) with the community. We attempted to make sure that we did not rely too heavily on any one source of contacts. This was particularly easy in the rural areas because of the relative lack of mobility of the population—the farmers who came from families that farmed in the area all knew each other and could give information about how long people had been in the area. It also meant that each person who was spoken to could recommend other people who matched the criteria of interviewees I was looking for. On several occasions I drove up to farmhouses and introduced myself, and then attempted to secure interviews by saying something like: "X up the road said you might be able to help me." As a result, securing interviews in the rural areas was much easier than it was in Invercargill city.

As well as matching the demographic criteria for the sample (see section 3.7), interviewees must have lived in the same general area since the age of ten, although they were not excluded for having spent up to 5 years out of the region (e.g. to attend a university). As noted above (see section 3.3), high mobility is a feature of the New Zealand population, so this residency criterion is an artificial constraint. The intention was to reduce the possibly large effect of the interaction of another variable with the small cell sizes. Interpretation of the results will take this into account.

After the data was collected and the interviews had been reviewed, 3 speakers were removed from the sample because they did not match the sampling criteria. This reduced the number of older urban females from the sample's target of 3 per cell to 2 per cell, and reduced the Central Southland rural female 40–50 yr cell from 3 to 2 speakers. I also found that a few urban females had been assigned slightly incorrect socioeconomic rankings, so there are 2 speakers each in the 15–20 and 40–50 yrs cells for socioeconomic rankings 1–3, and 4 speakers in the corresponding cells for socioeconomic rankings 4–6. It was not possible to arrange for replacement interviews to be carried out.

5.5 Analytical methodology

The interviews were all transcribed orthographically to allow computer-based searching of data sets. Before the main body of analysis was carried out, a preliminary analysis was undertaken. On the basis of this, I selected the segments of the interviews where it appeared that the interviewees were most relaxed. I used topic clues, subjective impression of speech rate, and particularly length of turn to choose what I thought was the 'best' part of a given interview. In many cases it was obvious which part of the interview should be used.

The preliminary examinations of the interview materials to be analysed were also carried out in order to determine the numbers of potential token words. The transcriptions of the interviews were processed by a concordance program in order to carry out basic counts of the available token words. This led to the development of target token counts as outlined in the results chapters to follow. It also directly affected the decisions made regarding the amount of linguistic detail to be recorded for each
token: where large token numbers were available, as in the case of post-vocalic /r/, more information about the linguistic environment information was also available. The precise details of the linguistic information encoded for each variable is also covered in the relevant results chapter.

A potential problem with a database of this size, particularly when various features of the linguistic context are being coded, is the potential for typographical errors to lead to errors in the results. I developed a computer-based data-entry tool using the HyperCard application for the Macintosh computer. As a result, no data was entered by typing—selections were made from menus and the coding was handled by the program. Visual feedback of selections helped to keep the error rate low.

For consistency, auditory analysis of the data was carried out by a single person—the researcher. A transcription tape-recorder with high-quality headphones and foot-pedal control was used. The transcription file of an interview was used to locate tokens, which not only made it easy to locate token words on the tape recordings, but also meant that potential tokens were not missed. Once the process of entering the data was finished for a given speaker, the data was exported to a statistical program, which was then used to generate summary statistics, as described in the results sections below.

5.6 Summary: overview of methodology

• The sample frame was filled using a judgement sample, with interviewees located via the ‘friend-of-a-friend’ method.
  • Data was collected in face-to-face, one-off individual interviews.
  • Interviewers and interviewees were matched by gender and ethnicity.
  • The three female interviewers were members of the community under investigation, and thus insiders, but the male interviewer was an outsider.
  • Interviews were structured, comprising several formal sections followed by a general conversation section.
  • Computer-based analytical tools were used as far as possible, to reduce the number of potential errors.
  • Auditory analysis of the data was carried out by a single person for consistency.
CHAPTER 6
RESULTS 1: THE VARIABLE (R)

6.1 Introduction

Postvocalic /r/ is the most important variable in this study because it is the main distinguishing feature of the Southland variety of NZE (see section 4.2.1 above). The pilot study I carried out indicated that /r/-usage varies greatly from speaker to speaker, which suggests that a rapid process of change could be underway. In order to determine the key sociolinguistic patterns involved in this process, a detailed analysis of the data was undertaken. The analytical process is described in section 6.3 below.

6.2 The history of postvocalic /r/ in English

6.2.1 The realisation of postvocalic /r/ in English accents

There is currently a high degree of variation in postvocalic /r/ usage in English accents around the world (see Wells 1982). The major developments that led to this situation seem to be of relatively recent origin. In his discussion of the sources of modern-day postvocalic /r/, Gimson notes it is likely that

the quality of /r/ in [Old English and Middle English] was that of a linguo-alveolar roll or tap...Its vibratory nature is described by writers of the sixteenth and seventeenth centuries... By the seventeenth century it is probable that the roll or tap was used only before vowels and [the approximant] [ɪ], with or without friction, [was used] finally and before consonants. (1970: 210).

This change of quality in the production of post-vocalic /r/ applies chiefly to accents of South-East England. In an extended discussion of rhoticity in English, Downes argues against the view “that there was a very general ‘weakening’ in the pronunciation of r from the fifteenth century” (1984: 135). He contends that most of the examples cited by Wyld (1920) and Jespersen (1954) fall into three categories “where r fluctuates in rhotic accents without indicating a general loss of the sound” (Downes 1984: 135; emphasis his); these categories are: in unstressed syllables, pre-dentally, and “when two r’s appear in the same word” (Downes 1984: 135). It seems that the evidence most strongly supports the view that r-lessness was the prestige form in the speech of London as a result of changes during the eighteenth century (see Downes 1984: 135; Gimson 1970: 210; Wells 1982: 218).

Following this time, r-lessness spread further north. The precise dates are uncertain; Trudgill et al. (2000) suggest on the basis of evidence from Nineteenth Century NZE that a high proportion of
European New Zealanders was partially rhotic (see below), that the view that postvocalic /r/ had disappeared in South-East English by the early Nineteenth Century (e.g. Strang 1970; Lass 1992) is incorrect. Today most urban areas of England, with the notable exception of those in the south-west region, are non-rhotic. There are exceptions, such as the Northumbrian region, where a uvular fricative /tr/ can be heard, although this seems to be in the process of being displaced by the more common English approximant (Wells 1982: 368).

The English spoken in Scotland (ScotE) has remained largely unaffected by these developments and is still characterised as being fully rhotic (Trudgill and Hannah 1985: 83), although Romaine (1978) found variation in the speech of Edinburgh schoolchildren. ScotE /r/ is usually thought of as being rolled, but a tapped variant is also common and some speakers use an approximant (see Romaine 1978). The approximant /r/ has been associated with Highland ScotE in the recent past (Romaine 1978).

Both southern and northern Irish English accents have an approximant /r/ and are characterised as being fully rhotic (Trudgill and Hannah 1985). We can note in passing at this point the variability in /r/ pronunciation in Belfast and the NURSE merger (the merging of certain vowels before /r/; see below) that has taken place there, which is possibly a contact phenomenon linked to the influx of Scottish migrants to the region (see Milroy 1981).

Southern Hemisphere English is generally characterised as being non-rhotic, with the exception of SdE (Wells 1982). South African English lacks linking /r/ and intrusive /r/ (Trudgill and Hannah 1985: 15), which are both found in NZE and AusE. Postvocalic /r/ was one of the variables studied by Horvath (1985) in her investigation of AusE as it is spoken in Sydney. The results showed that the constricted variant “occurs overwhelmingly in one environment, i.e., preceding a word beginning with a vowel” (Horvath, 1985: 106), which is to say it is a linking /r/; the bulk of Horvath’s analysis focuses on vocalic effects of /r/. However, see Sutton (1989) for a brief description of a partially-rhotic variety of Aboriginal AusE spoken near Adelaide.

### 6.2.2 Postvocalic /r/ in New Zealand

The existence of postvocalic /r/ in New Zealand is first documented in Ellis (1889), based on information collected by Samuel McBurney during the latter’s travels in Australasia (see section 2.3.3 above). McBurney included the following items in his list of test words: here, dare, tore, floor, poor, pure, sure, more, morning, pearl. There is, however, a difficulty with interpreting the table of McBurney’s data in Ellis (1889): it is unclear what is meant when there are no recorded instances of the variants that are given. The symbol used for “no note made,” according to Ellis, indicates that McBurney did not record anything, which does not necessarily imply that these particular variants were not heard in the locations where McBurney’s observations were made, but could mean that he was not concerned with the variant at that particular time or did not hear any token words. Nevertheless, it is most probable that the pronunciations for which no note was made were rare, particularly where another variant is given as being generally heard in the speech of the schoolchildren McBurney studied. With this caveat
in mind, table 8, which is based on the table of McBurney’s data in Ellis (1889: 240–245), shows the proportions of schoolchildren in each area whose speech exhibited postvocalic /r/ in each of the test words.

### Table 8

**Summary of McBurney’s findings of the distribution of /r/ in late-nineteenth century NZE**

<table>
<thead>
<tr>
<th>Test words:</th>
<th>Auckland</th>
<th>Wgtn/Nap.</th>
<th>Nelson/Chch</th>
<th>Dunedin</th>
</tr>
</thead>
<tbody>
<tr>
<td>here</td>
<td>even</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>dare</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>some</td>
</tr>
<tr>
<td>tore¹</td>
<td>—</td>
<td>even</td>
<td>—</td>
<td>general</td>
</tr>
<tr>
<td>floor</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>unsure</td>
</tr>
<tr>
<td>poor</td>
<td>—</td>
<td>—</td>
<td>general</td>
<td>general</td>
</tr>
<tr>
<td>pure</td>
<td>—</td>
<td>—</td>
<td>some²</td>
<td>—</td>
</tr>
<tr>
<td>sure</td>
<td>few</td>
<td>—</td>
<td>some²</td>
<td>—</td>
</tr>
<tr>
<td>more</td>
<td>—</td>
<td>—</td>
<td>general</td>
<td>—</td>
</tr>
<tr>
<td>morning</td>
<td>—</td>
<td>—</td>
<td>general</td>
<td>general</td>
</tr>
<tr>
<td>pearl</td>
<td>—</td>
<td>—</td>
<td>even</td>
<td>many</td>
</tr>
</tbody>
</table>

**Key:**
- “—” means that McBurney made no note
- “even” = McBurney heard even numbers of the variants

**Notes**
1. It is uncertain whether postvocalic /r/ is heard in this word because the tabulated variants have an optional /r/. McBurney was here clearly more interested in the vowel quality.
2. This applies to ‘unnamed districts’ in the Nelson-Christchurch general area. In the cities themselves the general pronunciation was one without a final /r/.

The data summarised in table 8 suggest that postvocalic /r/ was probably rare in the North Island districts; recall that ‘—’ stands for “no note made”, and not necessarily for non-occurrence of the feature in question. However, the likelihood of the first interpretation being the correct one is supported by the high proportions of the other pronunciations (non-rhotic) which McBurney records in all instances for the test words, with the exception of dare, which is only tested in Dunedin, morning, which has no recorded variants for the Wellington/Napier region, and pearl, which has a limited proportion of variants recorded. We do not know enough about McBurney’s procedures to be able to say whether the instances he recorded are due to spelling pronunciations of the words, or whether
there were genuine rhotic or partially-rhotic accents to be heard in the North Island. More recently, data from the *Origins of New Zealand English* project suggest that postvocalic /r/ was much more widespread in the North Island than was previously thought (see Trudgill et al. 2000). What is clear from work published after McBurney’s data appeared is that rhoticity in the North Island soon disappeared. The South Island cities in McBurney’s data show a much higher degree of rhoticism.

There is a range of opinion regarding the current-day geographical spread of rhotic accents in New Zealand. Bell and Holmes note that “the only regional difference universally acknowledged by both linguists and the public is the occurrence of postvocalic /r/ in Southland and part of Otago” (1991: 155). These are the main areas where the variety is thought to be spoken, according to the majority of previously published accounts. South Canterbury (Orsman 1966: 680) and Westland (Hawkins 1973a: 3) have also been listed as possible regions where rhotic speakers can be heard.

The precise phonetic quality of the rhotic forms which characterise the Southland variety has yet to be conclusively established. A number of recent New Zealand linguists have usually referred to a ‘postvocalic /r/’ in the course of describing regional variation in NZE in the form of the Southland variety, but have not commented on its realisation (e.g. Bell and Holmes 1991: 155). The information circulated about the Southland variety has been based on informal observation or hearsay and there is very little in the way of analytical studies, particularly those based on tape recorded samples of spontaneous speech (the exception is Bayard 1990b), so the lack of precision is understandable.

McBurney heard two main rhotic variants of postvocalic /r/, symbolised by the palaeotype symbols [r] and [r], which are respectively a “reverted” variant [retroflex], which Ellis says seems to blend with the preceding vowel (1890: xxiv), and a “rolled” variant. In a newspaper article that was intended for a general audience, McBurney comments that “there is also in some places a peculiar final r, with introverted tongue modifying the previous vowel, especially e and u, as fern, furnish, taking the place of the rough Scotch r” (1887). This seems to indicate the presence of a retroflex variant of /r/. Furthermore, the fact that he describes it as “peculiar” suggests that what he heard was not like the ScotE /r/ that he was familiar with (McBurney was a Scot).

In the past, SlDE’s postvocalic /r/ has been variously described as “rolled” (Bennett 1943: 72), “burred” (Orsman 1966: 680), and as a “uvular fricative” (Hawkins 1973a: 3). Turner states that “the /r/ is not trilled or different—except in its frequency of occurrence—from /r/ elsewhere in New Zealand” (1966: 105), which is to say it is an alveolar approximant. More recently, the /r/ has also been described as retroflex, for example by I. Gordon (1985) who adds that several varieties of “sounded ‘r’” can be heard, and Bauer, who writes that “the auditory impression of this /r/ gained from radio interviews is that it is probably slightly retroflex” (1986a: 7). The lack of certainty highlights the fact that the pronunciation of /r/ as an approximant forms a continuum, which means it can be difficult to determine the degree of retroflexion, if any, precisely.

The lack of agreement about the phonetic quality of this /r/ has led to a certain amount of misinformation on the part of overseas writers too, who have often relied on the earlier New Zealand sources. Cases in point are Eagleson (1982: 426) who quotes Hawkins (1973a) (a “uvular fricative”), as
given above, verbatim, McCrum et al. (1986: 301) who talk of a rolled /r/, and especially Todd and Hancock, who refer to the rhotic speech of “a small community of Scottish settlers in the south of New Zealand’s South Island” (1986: 301)—a statement which is inaccurate and misleading. Wells (1982: 606) and Trudgill and Hannah (1985: 19) are more circumspect in their reports; they note the existence of a rhotic accent but make no specific claims about the nature of the rhoticism.

Variability in the rhotic community is not discussed in the literature to any great extent. Most of the reports on postvocalic /r/ imply that it can be heard in the speech of all Southlanders. Gordon and Deverson say it is found in the speech of “some people” in Otago and Southland (1985: 59). McBurney’s work also suggests that variation is, or was, likely. From the results of interviews conducted with 14 Southlanders as part of a wider study, Bayard tentatively concludes that the postvocalic /r/ is being lost by younger speakers (1990b: 154). He also reports the results of a brief study of the postvocalic /r/ carried out by one of his students (Richardson 1986). Richardson’s findings are based on short interviews with a sample of 30 speakers. Although there are limitations concerning the method (e.g. the data are based on note-taking only) and scope of the study, the following tendencies are noted. Firstly, Richardson proposes two main categories of /r/ realisation: ‘pronounced’ /r/ and ‘very pronounced’ /r/. Secondly, this variation is tied to variation in social variables (age, sex, socioeconomic status, and rural/urban location).

The pilot survey that was carried out to determine which features would be best suited to the purposes of this investigation indicated that further variation is found in the degree of rhoticity exhibited by speakers, ranging from fully rhotic speakers to non-rhotic speakers. This initially suggests that the pos.vocalic /r/ could well be in the process of being lost, as per Bayard (1990b). However, the key point is that it appears that phonological contexts in which /r/ occurs are significant. This is a central feature of my analysis of this variable.

6.3 Analysis of the variable

6.3.1 Introduction

The decisions made concerning the analytical procedures used in the analysis of postvocalic /r/ in SldE are described in this section. The focus is on the linguistic aspects of the analysis that needed to be resolved before any meaningful results could be generated.

6.3.2 Variants of /r/

Two variants of /r/ were analysed:

(r-1) constricted approximant [ɾ]
(r-0) unconstricted
The ‘constricted’ variant consists of all realisations that involve constriction of any kind (for further discussion, see below), including varying degrees of approximation, retroflexion, and length. The ‘unconstricted’ variant covers cases where there is complete absence of any consonantal realisation of /r/; this might in turn result in a centring glide or lengthening of the preceding vowel.

I considered whether a third, intermediate variant should also be defined. Most previous studies of postvocalic /r/ (e.g. McDavid 1948; Labov 1966; Levine and Crockett 1967; Romaine 1978; Bayard 1990b) have essentially treated approximant /r/ as a simple variable with two variants exhibiting either presence or absence of constriction, as above. Although Labov added a third variant which comprised partial constriction and doubtful cases, it was excluded from his final analysis (1966: 47). A brief investigation of postvocalic /r/ in SldE (Richardson 1986) employs three variants: no /r/, ‘pronounced’ /r/ and ‘very pronounced’ /r/. However, it is not clear precisely what the difference between a ‘pronounced’ /r/ and a ‘very pronounced’ /r/ is. Richardson’s notation indicates that the difference she heard is one of length, but on the evidence of the data being reported here it could well have involved differences in the degree of approximation or retroflexion too because all of these contribute to perceived /r/ ‘strength’; there is little accompanying discussion in her paper which clarifies the matter. Her analysis was of necessity highly impressionistic—the study was a university terms paper that was not based on a tape-recorded database—so, while it acted as a guide to the decision-making process here, it was not determinative.

I concluded that there was probably little extra benefit to be gained, and that there were significant problems, in coding three variants. There are two main reasons for this. Firstly, the difficulty in determining adequate phonetic criteria that would define three variants meant that I lacked confidence in my ability to code tokens consistently using a three-way distinction. Secondly, and perhaps decisively, the social significance of postvocalic /r/ in the wider New Zealand context is such that all tokens that are perceived as constricted potentially carry the same social meaning; they mark a New Zealander as a Southlander, so degrees of constriction become irrelevant at this level. This raises one final point for consideration: what defines a token as being constricted?

‘Constriction’ itself is ultimately a relative term because there is no clear articulatory point at which an approximal consonant changes from being constricted to being unconstricted. The implication of this for my analysis is that it effectively means I used my own non-rhotic NZE accent as a point of reference: if I heard a token as constricted, then I coded it as such. It should be noted that a rhotic analyst might have coded the marginal tokens differently (see Levine and Crockett, 1967: 82-84). Richardson is a native Southlander, so the possibility exists that the finer degrees of rhoticity she coded do in fact carry social meaning within the Southland community; some of her discussion makes this point (1986: 6-7). However, for this to be tested, experiments involving native judges and their assessments of native voices would be required. Although this is clearly a topic of some interest, it is beyond the scope of this study.

Allowance was also made for the possibility that other types of /r/ (e.g. rolled, tapped) might occur in the larger database, but in fact none did. In the discussion of the features of SldE in Chapter 3
above, it was noted that the popular perception of the ‘Southland R’ is that it is rolled, but that this is a mistaken notion. The only example of a non-approximal /r/ encountered was a single tapped /r/ in pre-vocalic position (in *branch*; reading list style). As this occurred in the very first interview conducted in the main study, the possibility that other variants might occur was certainly raised at an early stage of the investigation.

6.3.3 Environments analysed for /r/

The pilot study revealed much greater variation in the use of postvocalic /r/ than was expected on the basis of the previous reports on SIdE that were available, so it was decided to investigate the linguistic patterning of /r/ in as much detail as possible. This meant that a large number of tokens from the free speech of each speaker was required. The majority of the interviews contained about 30–40 minutes of relatively unstructured conversation, which is what was selected for analysis (see Chapter 5). Word counts carried out on a sample of interviews suggested that most speakers would produce between 250 and 300 tokens of postvocalic /r/ in this time, so the figure of 250 tokens per speaker was chosen. This gave a total of 17,250 tokens of postvocalic /r/ found in the free speech sections of the 69 interviewees. The word list provided a further 63 tokens per speaker (4,347 total) for comparison purposes. The results presented here are thus based on 21,597 tokens of postvocalic /r/.

There are two main methods that could have been used to fill the quota of 250 tokens per speaker: either a predetermined set of environments could have been established and equal numbers of tokens selected for each, or the first 250 tokens encountered could have been selected. The chief problem with the first method—and the one that ultimately meant it was not used—is that it was not immediately clear which environments, or which combinations of environments, would result in the most revealing analysis of the distribution of postvocalic /r/, because in this case there are a number of potentially significant preceding and following environments (see below). For any meaningful inter-speaker comparisons to be made, ideally something in the order of 30 tokens per environment would have to be found (see Milroy, 1987: 134–36), so only some eight or nine environments could be established prior to the analysis of the tokens, given the quantity of data available. The environments would also have to be defined in such a way that adequate token numbers for them all could be obtained from the speakers, which seemed unlikely, given that many speakers produced around 300 tokens in total. Hence, it was decided to select the first 250 tokens of postvocalic /r/ found in each interview, regardless of the environments involved. This is not to say that no decisions regarding environments were made at this stage; it is never possible to be free of prior theoretical biases. In this case, based on a segmental approach to what environmental factors that were thought could be determinative, details of the preceding and following environments were included in the process of coding the tokens, with the intention of seeking broader patterns after the coding was completed. Although this method resulted in some other problems, as discussed below, it more closely matched the aims of the research.

The environmental factors that were coded for each token of postvocalic /r/ are as follows:
(1) Preceding vowel (using those standard lexical sets as established by Wells (1982) that allow a following /r/ that is not intervocalic):

1-NURSE (e.g. work, first)
2-LETTER (e.g. paper, buttered)
3-NORTH (e.g. four, short)
4-START (e.g. car, dark)
5-NEAR (e.g. ear, beard)
6-SQUARE (e.g. air, cared)
7-PRICE (e.g. fire, tired)
8-FACE (e.g. they're, when pronounced like they and not like there)
9-MOUTH (e.g. hour, ours)
10-CURE (e.g. tour, cured)

(2) Stress level of the preceding vowel:

1-stressed
2-reduced

(3) Following segment:

1-consonant within same syllable coda (e.g. first, north)
2-syllable boundary + consonant (e.g. porter, airplane)
3-word boundary + consonant (e.g. four days)
4-word boundary + pause + consonant (e.g. four . days)
5-word boundary + pause + vowel (e.g. for . it)
6-word boundary + pause (e.g. It wasn't far ...)

The 'pause' as in cases 4 and 5 is a brief interruption of the speech flow. Normal linking /r/ is excluded from the analysis, but those examples where there is a brief pause followed by a word beginning with a vowel (case 5 above) are included to see whether there is in effect a kind of anticipation of linking which distinguishes such cases from cases 4 and 6. The 'pause' in case 6 is a full pause; e.g. at the end of an utterance.

For those cases where the following segment involved a consonant, these additional factors were coded:

(4) Voicing of following consonant:

1-voiceless
2-voiced
Place of articulation of following consonant:

1. Bilabial
2. Labio-dental
3. Inter-dental
4. Alveolar
5. Palato-alveolar
6. Palatal
7. Velar
8. Glottal

Manner of articulation of following consonant:

1. Plosive
2. Nasal
3. Fricative
4. Affricate
5. Approximant
6. Lateral

For example, card (if stressed) is coded as 4,1,1,2,4,1 when each of the factors above is scored in sequence.

Not all combinations of these factors were to be considered in the analysis at the outset. If they had been, that would give a theoretical maximum of 11,520 individual environments, which is clearly unmanageable; many of those could never be filled in practice because certain combinations do not exist in the language. Rather, the aim was to attempt to find broad patterns in larger sub-groups created from combinations of various cases. It was clear that in the first instance the various consonantal features (factors 4-6 above) would not be able to be investigated at all.

After the data for postvocalic /r/ had been coded and initial explorations of it were made, it became apparent that there was no statistical method that would easily find major patterns in the relationship between the realisation of postvocalic /r/ and the environments. Although the Principal Components method as used by Horvath (1985) would appear to be a suitable technique for reducing a large number of variables to a smaller number of significant ones, it was not able to be applied to this set of data at the outset because of the many missing values that resulted from the ways in which the environments were constructed and the 250 tokens for each speaker selected.

The possibility of devising a neural network to determine patterns in the data has since been suggested, but as yet I have been unable to try this. This technique could well prove to be a useful one for large-scale linguistic studies.
Furthermore, in order to carry out a Principal Components analysis it would have been necessary to devise a smaller number of environmental variables, which effectively would have negated the reasons for using the technique in the first place. The maximum number of environmental variables that could have been investigated in this study is about 15 to 20; this figure is derived from Horvath's discussion (1985: 56), which recommends that the speaker to variable ratio should be no greater than about 4:1 (there are 69 speakers in the present study). So, a Principal Components analysis would have imposed more structure on the data at this stage than was desirable, as explained above. Another technique that can be used is variable rule analysis as implemented by the VARBRUL computer program. Although VARBRUL is commonly used to identify key linguistic environments that lead to the application of a linguistic rule, it is not able to derive these from a complicated data set without considerable input from the analyst who must recode the data in order to test hypotheses. A variable rule analysis was trialled during the early stages of data analysis for this study, but it did not prove fruitful because of the large number of recodings of data (in this case, of the environments) required. Missing values also created problems for the analysis, as above. VARBRUL was also not suitable because of the way in which it requires speakers to be grouped together (usually by age, sex, and class) in order to provide aggregated data; there are too few speakers per cell in this study to allow meaningful aggregate scores to be generated. For a fuller discussion of these two techniques, see Horvath (1985: 52-66).

It is important to point out that I do not wish to claim that I was trying to find an analytical tool free of presuppositions which would allow the data to 'speak for itself.' That is clearly impossible; even if the environments have not been reduced to a simpler form, they are still those which have been hypothesised as being potentially significant. The key problem was to find a principled way in which to reduce the complexity of the data. Because it seemed there was no statistical technique that would achieve this result, it was decided that exploratory cross-tabulations of the data would be made as a first step towards identifying the key patterns in the data.

The first series of cross-tabulations was relatively simple: the effect of the preceding vowel on the realisation of /r/ was explored; the following phonological segments were ignored entirely. For each of the 69 speakers, the values of the 250 tokens of the variable (r) (constricted vs non-constricted) in free speech were cross-tabulated with the preceding vowels and the degree of stress of those vowels; these are environmental factors (1) and (2), as above. This resulted in 19 tables per speaker—two for each of the ten vowels (stressed and reduced), with the exception of LETTER which had only one because it is never stressed. The 2,622 cells which these tables were comprised of were compiled in such a way that speakers could be compared with others in the same age, sex, and regional groups. The only clear pattern to emerge was the degree of rhoticity in the environment where the vowel was a stressed NURSE vowel; this will be dealt with in more detail below. Other vowels exhibited no apparent consistent behaviour in the various speaker groups. It was clear that the analysis needed to be taken a step further.
The second series of cross-tabulations was much more revealing, but was also more complex to deal with. The environments investigated above were further cross-tabulated with the ‘following segment’ phonological environment, which is factor 3 above. This produced 15,732 table cells which were then compiled into a series of 69 individual tables, one for each speaker (see table 9 and also Appendix B for examples). Each speaker’s table was then examined for general patterns and compared with other speakers’ tables. The procedure was to look for cells which had ‘high’ degrees (over 75%) and ‘moderate’ degrees (50-75%) of rhoticity. These degrees were arbitrarily determined, but they allowed groupings of cells to be made so that it was relatively easy to look for cell groups in rows or columns that seemed to exhibit similar behaviour with respect to the percentage of rhoticity. The advantage of this tabular approach is that missing values (see the number of empty cells in table 9, for example) do not interfere with the ability of the analyst to grasp general patterns, given enough speaker tables to work with.
Table 9

Sample cross-tabulation for a speaker, showing proportion of [.]-usage in various environments

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse (Stressed)</td>
<td>25/26</td>
<td>9/9</td>
<td>2/3</td>
<td>2/2</td>
<td>1/1</td>
<td></td>
</tr>
<tr>
<td>North (Stressed)</td>
<td>0/14</td>
<td>0/9</td>
<td>0/9</td>
<td>2/2</td>
<td>1/1</td>
<td></td>
</tr>
<tr>
<td>Start (Stressed)</td>
<td>0/16</td>
<td>0/7</td>
<td>0/2</td>
<td>100%</td>
<td>2/2</td>
<td></td>
</tr>
<tr>
<td>Near (Stressed)</td>
<td>0/5</td>
<td>0/2</td>
<td>0/24</td>
<td>2/2</td>
<td>3/4</td>
<td>9/11</td>
</tr>
<tr>
<td>Square (Stressed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price (Stressed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face (Stressed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouth (Stressed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cure (Stressed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letter (Reduced)</td>
<td>6/20</td>
<td>0/9</td>
<td>5/30</td>
<td>3/4</td>
<td>1/1</td>
<td>3/3</td>
</tr>
<tr>
<td>Nurse (Reduced)</td>
<td>2/9</td>
<td>17%</td>
<td>75%</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>North (Reduced)</td>
<td>0/8</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start (Reduced)</td>
<td>0/1</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near (Reduced)</td>
<td>1/2</td>
<td>50%</td>
<td>0/5</td>
<td>1/1</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Square (Reduced)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price (Reduced)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face (Reduced)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouth (Reduced)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cure (Reduced)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. (+) = stressed vowel; (-) = unstressed vowel.
2. "P" in an environment means "pause", "$" = syllable boundary, "#" = word boundary; e.g. V_#pC = word-finally following a vowel, with a pause before a following word that starts with a consonant.
3. Fractions in table cells give proportions of tokens realised rhotically, with the total number of tokens to the right of the slant line; e.g. 12/34 = 12 postvocalic /r/ tokens out of 34 were realised rhotically.
4. For an explanation of the following environments (1-6), see the description of factor 3 above.
After the 69 tables had been explored in this way, it was clear that there was an interaction between the preceding vowel and the following segment at a very general level. Stressed NURSE vowels tended to behave consistently regardless of the following environment. All the other vowels were affected by the following segment, and word-final examples of /r/ were also affected by whether or not a pause followed the word. It should be noted that these observations were largely based on the data for the most highly rhotic speakers and the speech of these speakers ultimately determined what the broader environments for analysis would be.

In order to enable quantitative analysis of this information to be carried out, the environments were reduced to the following nine broader environments:

1. NURSE vowel (stressed) precedes /r/
2. NURSE vowel (reduced) precedes /r/
3. Other vowel (stressed) precedes /r/, consonant follows
4. Other vowel (stressed) precedes word-final /r/, no pause follows
5. Other vowel (stressed) precedes word-final /r/, pause follows
6. Other vowel (reduced) precedes /r/
7. LETTER vowel precedes /r/, consonant follows
8. LETTER vowel precedes /r/, word-final, no pause follows
9. LETTER vowel precedes /r/, word-final, pause follows

‘Other’ vowels are all those which are not NURSE vowels or LETTER vowels (see the list of preceding vowel environments, outlined in factor 1 above). Where no mention of a following segment is made (for cases 1, 2, and 6), all such segments are included in the one case because the following segment is assumed to have no determinative effect on the preceding /r/. Although the NURSE and LETTER vowels are said to precede /r/, they actually coalesce with the /r/ to form rhotic vowels; this is an important point which will be further developed in the discussion below.

There are some problems with this schema. There are relatively few reduced NURSE vowels in the data, so the following environments had to be collapsed in that case. Some speakers have notably higher degrees of rhotic realisation of /r/ after the PRICE vowel than after the other vowels; there are so few tokens of postvocalic /r/ preceded by this vowel that it had to be grouped with the other non-NURSE vowels.
6.4 Results: postvocalic /r/

6.4.1 Introduction

The results for the investigation of postvocalic /r/ in SIdE will now be considered in some detail. Each of the broader phonological environments derived from the exploratory method outlined above will be discussed in turn in separate sections. Each section has tables of figures giving mean group index scores, both for the sample cells (see section 3.7) and broader summary groups, and graphs showing results for individual speakers. The mean scores are discussed in relation to variation from speaker to speaker within each group.

Index scores were calculated by dividing the number of rhotic tokens a speaker produced by the total number of tokens. For example, if a speaker produced 15 tokens and 13 of them were rhotic, their index score would be 13/15, or 0.87.

Note that in the bar graphs showing individual speakers (below), urban speakers are arranged from left to right in order of decreasing socioeconomic status, according to their ranking on the Elley-Irving scale (see section 3.6). Rural speakers are arranged from left to right by region: the three left-hand speakers are from Central Southland and the three right-hand speakers are from Eastern Southland.

6.4.2 Rhotic stressed NURSE vowels

- Refer to figures 4–5 and tables 10–17
- Sample words: work, her, first, girl when stressed

The rhotic stressed NURSE vowel (i.e. /r/ variant 1 with constriction; see section 6.3.3 above) in SIdE is more a feature of rural speech than it is of urban speech, as shown by tables 10–13 and figures 4–5. Furthermore, its use is apparently increasing as younger speakers—both rural and urban—use it more than their elders; this result is the single most important finding of this study; its implications will be discussed further below.
Table 10

Mean group index scores for rhotic stressed NURSE vowels in free speech for sample cells

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban Invercargill Socioec. 1-3 Male</th>
<th>Female</th>
<th>Rural Invercargill Socioec. 4-6 Male</th>
<th>Female</th>
<th>Central Southland Male</th>
<th>Female</th>
<th>Eastern Southland Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>.34</td>
<td>.61</td>
<td>.93</td>
<td>.75</td>
<td>.98</td>
<td>.94</td>
<td>.99</td>
<td>.98</td>
</tr>
<tr>
<td>40-50</td>
<td>.17</td>
<td>.00</td>
<td>.92</td>
<td>.30</td>
<td>.80</td>
<td>.94</td>
<td>.95</td>
<td>.49</td>
</tr>
<tr>
<td>65+</td>
<td>.06</td>
<td>.09</td>
<td>.14</td>
<td>.00</td>
<td>.94</td>
<td>.51</td>
<td>.84</td>
<td>.72</td>
</tr>
</tbody>
</table>

Note:
'Socioec. 1-3' stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale.
'Socioec. 4-6' similarly stands for interviewees with socioeconomic status values of 4–6.

Table 11

Mean group index scores for rhotic stressed NURSE vowels in word lists for sample cells

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban Invercargill Socioec. 1-3 Male</th>
<th>Female</th>
<th>Urban Invercargill Socioec. 4-6 Male</th>
<th>Female</th>
<th>Rural Central Southland Male</th>
<th>Female</th>
<th>Rural Eastern Southland Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>.49</td>
<td>.56</td>
<td>.96</td>
<td>.97</td>
<td>1.00</td>
<td>.92</td>
<td>1.00</td>
<td>.67</td>
</tr>
<tr>
<td>40-50</td>
<td>.12</td>
<td>.06</td>
<td>.96</td>
<td>.34</td>
<td>.67</td>
<td>.81</td>
<td>.88</td>
<td>.33</td>
</tr>
<tr>
<td>65+</td>
<td>.25</td>
<td>.00</td>
<td>.42</td>
<td>.00</td>
<td>1.00</td>
<td>.71</td>
<td>.96</td>
<td>.75</td>
</tr>
</tbody>
</table>

Note:
'Socioec. 1-3' stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale.
'Socioec. 4-6' similarly stands for interviewees with socioeconomic status values of 4–6.
### Table 12

**Summarised mean group index scores for rhotic stressed NURSE vowels in free speech**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.96</td>
<td>.70</td>
<td>.98</td>
<td>.63</td>
</tr>
<tr>
<td>40–50</td>
<td>.67</td>
<td>.20</td>
<td>.88</td>
<td>.55</td>
</tr>
<tr>
<td>65+</td>
<td>.61</td>
<td>.05</td>
<td>.89</td>
<td>.10</td>
</tr>
</tbody>
</table>

### Table 13

**Summarised mean group index scores for rhotic stressed NURSE vowels in word lists**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.79</td>
<td>.83</td>
<td>1.00</td>
<td>.73</td>
</tr>
<tr>
<td>40–50</td>
<td>.53</td>
<td>.25</td>
<td>.77</td>
<td>.54</td>
</tr>
<tr>
<td>65+</td>
<td>.73</td>
<td>.00</td>
<td>.98</td>
<td>.33</td>
</tr>
</tbody>
</table>
Figure 4

/ɪə/ realisation: Stressed rhotic NURSE vowels in the speech of females (all speakers)

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Figure 5

/r/ realisation: Stressed rhotic *Nurse* vowels in the speech of males (all speakers)

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Rural females have a higher degree of use of the rhotic stressed NURSE vowel in free speech than their urban counterparts do: 13 out of 17 rural females (76%) have index scores for the rhotic vowel of more than 0.50 compared with 6 out of 16 urban females (38%). See tables 12–13 and figure 4.

For 11 of the 17 speakers in the rural female group, the index scores for the rhotic stressed NURSE vowel in free speech and word list speech differ by less than 0.1 (10%). This tends to be true for speakers with higher index scores. Apart from this, there does not appear to be a strong pattern in the degree of use of the stressed rhotic NURSE vowel when the free speech and word list speech of rural females is examined. Note that there are indications that older rural speakers tend to have a higher index score in the word list than in free speech, while the 40-50 yr age group tends to have a lower one and the 15-20 yr age group is mixed. Diane T. has an index score in word lists which is twice her index score in free speech, whereas speakers Ruth B. and Kathy B. both markedly reduce their use of the rhotic stressed NURSE vowel in the word list.

The younger female speakers from the rural and urban groups have a higher degree of usage of the rhotic stressed NURSE vowel than do speakers from the other age groups. This is particularly so in the urban area, where rhoticity is almost totally absent from the speech of the 65+ age group and 5 of the 6 speakers who have index scores of more than 0.50 are in the 15-20 yr age group.

The pattern of use of the rhotic stressed NURSE vowel exhibited by the data from the urban females is notably different from the pattern for rural females, although there is one point of similarity: younger females again have index scores which are higher than their older counterparts; in this case they are considerably higher.

It is also evident that there are greater differences between the free speech and word list styles of the urban females than of the rural females. Most of the 40-50 yr old and 15-20 yr old urban females have higher index scores for the word list style than for free speech. Rhoticity is almost completely absent from the free speech of the older urban females and it does not occur in the word list style at all.

The final point of interest is that it appears that other factors could have an effect on the rhoticity index scores of the urban females, and perhaps rural females, in the 40-50 yr age group in particular (refer also to tables 14 and 15). Urban females Ginny L., Mary W., and Miriam M. from this age group have index scores of 0.00 in free speech; they have socioeconomic status scores of 1, 3, and 4 respectively, which puts Ginny L. and Mary W. loosely in the ‘middle class’ group, whereas Miriam M. is ‘working class’. However, like Miriam M., Helen T. from this group also has a socioeconomic score of 4, but she has an index score of 0.71 for the rhotic stressed NURSE vowel. One difference between these two interviewees is that Miriam M. has a higher education score of 7 (=educated to tertiary level without a tertiary qualification) than Helen T., whose education score is 1 (=no educational qualification). The ‘middle class’ speakers Ginny L. and Mary W. (index scores 0.00) also have higher educational scores. The rural female from this age group with an index score of 0.00, Andrea L., has a high educational score and has also spent time out of Southland (see table 15). She
can be compared with Karen M., who has an index score of 0.95, has also spent time out of Southland, but has a low educational score, and also with Christina H., who has an index score of 0.93, also has a high educational score, but has not spent time out of Southland. It will be suggested below that attitudinal factors that are also linked with notions of personal identity are probably the most significant forces at work here. These derive from life experiences which include such things as level of education, socioeconomic status, and exposure to the ‘outside’ world. It is difficult to capture the net result of these in a variable comparable to, say, level of education.

Table 14

Stressed rhotic NURSE vowel index and scores for three social variables for urban females 40–50 yrs old

<table>
<thead>
<tr>
<th>Speaker</th>
<th>GL</th>
<th>MW</th>
<th>MM</th>
<th>HT</th>
<th>JN</th>
<th>EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE vowel index</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.71</td>
<td>0.32</td>
<td>0.18</td>
</tr>
<tr>
<td>Education (10=high)</td>
<td>9</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Socio-ec. Status (1=high)</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Time Away From Sld?1</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Table 15

Stressed rhotic NURSE vowel index and scores for three social variables for rural females 40–50 yrs old

<table>
<thead>
<tr>
<th>Speaker</th>
<th>KM</th>
<th>CH</th>
<th>RB</th>
<th>AL</th>
<th>SB</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE vowel index</td>
<td>0.95</td>
<td>0.93</td>
<td>0.67</td>
<td>0.00</td>
<td>0.81</td>
</tr>
<tr>
<td>Education (10=high)</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Socio-ec. Status (1=high)²</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Time Away From Sld?1</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

1. The ‘Time Away From Sld’ variable is an indicator of whether the interviewee has spent blocks of time out of Southland (greater than short-term holidays) in his/her teens or twenties, for example to attend an educational institution (commonly the university, polytechnic, and teachers’ college in Dunedin).

2. Recall that farmers are all given a socio-economic status ranking of 4.
It needs to be reiterated that the number of speakers per cell in this study is small, so observations such as the possible link with socioeconomic status, education, or time spent out of Southland are necessarily tentative, as discussed above in section 3.7. The possibility that other speakers with similar demographic characteristics would behave differently cannot be discounted. However, it would certainly be of interest to obtain data from more speakers to test whether this is in fact the case.

(2) Rhotic stressed NURSE vowels: Males

Figure 5 shows the index scores of rural and urban males for the use of rhotic stressed NURSE vowels in free speech and word list styles, summarised in tables 10–13. The pattern is broadly similar to that seen in the speech of females (figure 4), although males tend to be more rhotic.

Rural males have a very high degree of use of the rhotic stressed NURSE vowel. They also show less variability as a group than their female counterparts do. All but 2 of these speakers have an index score of more than 0.85 in free speech, and 10 of them (just over half) have index scores of 1.00 (100%). Most of the rural male speakers also have similarly high index scores for the rhotic NURSE vowel in the word lists.

Urban males show a similar pattern to urban females. Younger speakers again have higher index scores than older ones, most of whom do not use a rhotic stressed NURSE vowel to any great degree—only two urban male speakers aged 65+ were more than 50% rhotic in this environment, and that was only when reading from the word list. The 65+ and 40–50 yr old age groups are both quite variable.

Table 16

<table>
<thead>
<tr>
<th>Stressed rhotic NURSE vowel index and scores for three social variables for urban males 40–50 yrs old</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speaker</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>NURSE vowel index</td>
</tr>
<tr>
<td>Education (10=high)</td>
</tr>
<tr>
<td>Socio-ec. Status (1=high)</td>
</tr>
<tr>
<td>Time Away From Sld?</td>
</tr>
</tbody>
</table>
Table 17

Stressed rhotic NURSE vowel index and scores for three social variables for rural males 40–50 yrs old

<table>
<thead>
<tr>
<th>Speaker</th>
<th>FA</th>
<th>KP</th>
<th>AA</th>
<th>PD</th>
<th>PJ</th>
<th>CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE vowel index</td>
<td>0.39</td>
<td>1.00</td>
<td>1.00</td>
<td>0.90</td>
<td>0.96</td>
<td>1.00</td>
</tr>
<tr>
<td>Education (10=high)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Socio-ec. Status (1=high)</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Time Away From Sld?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

As was the case for the results for the females in the 40–50 yr age group (see above), there are indications in the results for the male speakers that there could be other significant social factors that correlate with the degree of rhoticity of the stressed NURSE vowel. The rural males in the 65+ age group are highly rhotic (index scores range from 0.88 to 1.00), with the exception of Sam Z., whose index score (0.51) is a little over half that of the others in his group; one of his distinguishing characteristics is that he is the only one of that group who has spent a significant amount of time out of Southland. In the rural male 40–50 yr age group, Frank A. has spent the most time out of Southland and his index score (0.39) is quite different from the other rural males of that age. His complete avoidance of use of the rhotic NURSE vowel when reading the word list was very noticeable at the time—he read slowly and deliberately, and was particularly careful to avoid introducing any degree of /r/-like constriction when pronouncing the NURSE vowel, which contrasted with his free-speech behaviour. A possible reason for this is that he spent a few years in his late-teens and early-twenties in other areas of New Zealand and during that time he no doubt would have received some comments about his pronunciation of /r/. He is perhaps aware of the negative social consequences of being a rhotic speaker in New Zealand (see Bayard and Bartlett 1996) and when he was placed in a situation in which he was interviewed by an outsider (i.e. myself), he was careful to avoid using a rhotic NURSE vowel as far as he was able. Note that Kevin P. (index: score 1.00) also spent time out of Southland, but this was at an earlier age than Frank A. and was at a South Island boarding school where a number of the pupils were from Southland.

The urban male 40–50 yr age group at first sight appears to show a correlation between the index scores for the rhotic stressed NURSE vowel and socio-economic status (see table 14). However, it is not possible to determine whether this is the significant factor. Brian L. and Arthur M. both have low index scores and socio-economic scores in the ‘middle class’ range (1–3), but they also have high educational scores and have spent time outside Southland. Comparing speakers Arthur M. and Duncan F. does not resolve the issue because although Duncan F. is more highly rhotic than Arthur M.
and they have the same socio-economic score (3), Arthur M. is more highly educated and has also spent time out of Southland.

The younger group of urban males tends to be highly rhotic in the stressed NURSE vowel environment: 4 of the 6 speakers have index scores of more than 0.85. David M. was far less rhotic in free speech than he was when reading the word list; he also has the highest education score (6 = Bursary) of the young urban males, which could perhaps be related, as above. Tim P. appears to be anomalous (index score of 0.00); his complete lack of rhoticity could be linked with his higher socio-economic status (score: 1), but is most likely due to personal circumstances: he moved to the Southland region at the age of 5, is one of the younger children of parents from other areas of New Zealand, has spent a considerable amount of time at home ill and unable to attend school, and so has spent most of his life interacting with people who are not Southlanders. It is interesting to note he commented that he is gradually “picking up the R”, yet there is only one rhotic /r/ token in the whole of his interview. It could be that he was virtually non-rhotic in the interview because he was interviewed by a non-rhotic speaker (cf. the interview with Frank A., as discussed above).

6.4.3 Postvocalic /r/ after unstressed NURSE vowels

- Refer to figures 6–7 and tables 18–19
- Sample words: her, were when unstressed

A serious limitation with this set of data is the low number of tokens obtained from each speaker: 26 of the 69 speakers produced 5 or fewer tokens and only 5 speakers produced more than 15 tokens. Michelle S. and Grant W. produced no tokens at all. There are also no data from word lists because of a lack of suitable token words. The data presented here should therefore be viewed very generally.
Table 18

Mean group index scores for rhotic unstressed NURSE vowels in free speech for sample cells

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Invercargill Socioec. 1-3 Male</th>
<th>Invercargill Socioec. 4-6 Male</th>
<th>Central Southland Male</th>
<th>Eastern Southland Male</th>
<th>Urban Female</th>
<th>Rural Female</th>
<th>Invercargill Socioec. 1-3 Female</th>
<th>Invercargill Socioec. 4-6 Female</th>
<th>Central Southland Female</th>
<th>Eastern Southland Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>0</td>
<td>.77</td>
<td>.70</td>
<td>.33</td>
<td>.05</td>
<td>.77</td>
<td>.25</td>
<td>.15</td>
<td>.49</td>
<td>.56</td>
</tr>
<tr>
<td>40–50</td>
<td>0</td>
<td>.34</td>
<td>.50</td>
<td>.43</td>
<td>.03</td>
<td>.34</td>
<td>.17</td>
<td>.15</td>
<td>.48</td>
<td>.48</td>
</tr>
<tr>
<td>65+</td>
<td>.17</td>
<td>.10</td>
<td>.49</td>
<td>.56</td>
<td>0</td>
<td>.10</td>
<td>0</td>
<td>.55</td>
<td>.63</td>
<td>.63</td>
</tr>
</tbody>
</table>

Table 19

Summarised mean group index scores for rhotic unstressed NURSE vowels in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.28</td>
<td>.18</td>
<td>.52</td>
<td>.13</td>
</tr>
<tr>
<td>40–50</td>
<td>.35</td>
<td>.12</td>
<td>.46</td>
<td>.17</td>
</tr>
<tr>
<td>65+</td>
<td>.59</td>
<td>0</td>
<td>.52</td>
<td>.39</td>
</tr>
</tbody>
</table>
Figure 6

/r/ realisation: Unstressed rhotic NURSE vowels in the free speech of females

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.

Figure 7

/ɪɾ/ realisation: Unstressed rhotic NURSE vowels in the free speech of males
The overall pattern associated with the pronunciation of /r/ when it coalesces with a preceding unstressed NURSE vowel is similar to the pattern associated with the stressed NURSE vowel. The main difference is that speakers’ index scores are generally lower for the unstressed vowel. The rural speakers as a group have higher index scores than the urban speakers, indicating a higher degree of use of the rhotic variant. There is not the same dramatic increase in use of a rhotic variant of this vowel among the younger speakers as there is for the stressed version, particularly among the young females, both rural and urban. Note that Adam F. appears to have a high index score (1.00), but he produced only one token of the unstressed NURSE vowel, so his score cannot be considered to be indicative of his usage.

It does appear that there is a slightly clearer relationship between the use of a rhotic variant of the unstressed NURSE vowel and the socioeconomic status of urban speakers in the 40–50 yr and 15–20 yr age groups; see table 16. Speakers with lower socioeconomic scores tend to have higher index scores. However, the low token numbers make it impossible to make more than a tentative statement—more data would need to be collected to confirm this.

### 6.4.4 Postvocalic /r/ following stressed other vowels

- Refer to figures 8–13 and tables 20–29
- ‘Other vowels’: NORTH, START, NEAR, SQUARE, PRICE, FACE, MOUTH, CURE (i.e. neither NURSE nor LETTER)
- Notes on environments: 
  - _C = pre-consonantal
  - _# = word-final
  - _#P = word-final with a following pause
- Examples: cart, car, hear, north, fire, when stressed

Tables 18 to 27 and figures 8 to 13 show that the rhotic postvocalic variant of /r/ (when following other vowels, as listed above) is more a feature of rural speech than of urban speech, just as the rhotic NURSE vowel was. However, in this case the feature is being lost as younger speakers use it less frequently than older speakers.

One urban male speaker stands out in this set of results: Henry S. (40–50 yr old, urban, male, socioeconomic status 4–6; HS in the figures) is notably more rhotic than others in his group. This can be seen clearly in figure 9 and also later in figures 17 and 23. This shows up one problem with the small cell sizes used in this study: it is possible for one speaker to skew group means significantly. It is also not possible to say whether other speakers would show similar high levels of rhoticity (see the discussion of representativeness in chapter 5). The possibility of wide intra-group variation is one reason that results were determined for both the groups and the individuals. The results will be interpreted with caution in the light of this.
Table 20

Mean group index scores for sample cells: postvocalic /r/ following stressed other vowels and before consonants (V_C) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Invercargill Socioec. 4-6</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>40-50</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td>65+</td>
<td>.04</td>
<td>.05</td>
</tr>
</tbody>
</table>

Note: In this table and those following below, 'Socioec. 1-3' stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale. 'Socioec. 4-6' similarly stands for interviewees with socioeconomic status values of 4–6.

Table 21

Mean group index scores for sample cells: postvocalic /r/ word-finally following stressed other vowels with no pause following (V_#) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Invercargill Socioec. 4-6</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
<td>.00</td>
<td>.01</td>
</tr>
<tr>
<td>40-50</td>
<td>.06</td>
<td>.00</td>
</tr>
<tr>
<td>65+</td>
<td>.00</td>
<td>.02</td>
</tr>
</tbody>
</table>
Table 22

Mean group index scores for sample cells: postvocalic /r/ word-finally following stressed other vowels with a following pause (V_#P) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Invercargill Socioec. 4-6</td>
</tr>
<tr>
<td>15-20</td>
<td>.01</td>
<td>.06</td>
</tr>
<tr>
<td>40-50</td>
<td>.04</td>
<td>.00</td>
</tr>
<tr>
<td>65+</td>
<td>.16</td>
<td>.16</td>
</tr>
</tbody>
</table>

Note:
In this table and those following below, 'Socioec. 1-3' stands for interviewees with socioeconomic status values of 1-3 on the Elley-Irving scale. 'Socioec. 4-6' similarly stands for interviewees with socioeconomic status values of 4-6.

Table 23

Mean group index scores for sample cells: postvocalic /r/ following stressed other vowels and before consonants (V_C) in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Invercargill Socioec. 4-6</td>
</tr>
<tr>
<td>15-20</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>40-50</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>65+</td>
<td>.10</td>
<td>.02</td>
</tr>
</tbody>
</table>
Table 24

Mean group index scores for sample cells: postvocalic /r/ word-finally following stressed other vowels and with a following pause (V_#P) in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Invercargill Socioec. 1-3</th>
<th>Invercargill Socioec. 4-6</th>
<th>Central Southland</th>
<th>Eastern Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
<td>.00</td>
<td>.00</td>
<td>.07</td>
<td>.27</td>
</tr>
<tr>
<td>40-50</td>
<td>.11</td>
<td>.00</td>
<td>.93</td>
<td>.14</td>
</tr>
<tr>
<td>65+</td>
<td>.33</td>
<td>.00</td>
<td>.07</td>
<td>.25</td>
</tr>
</tbody>
</table>

Table 25

Summarised mean group index scores for sample cells: postvocalic /r/ after stressed other vowels and before consonants (V_C) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>.02</td>
<td>.01</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>40-50</td>
<td>.01</td>
<td>.01</td>
<td>.16</td>
<td>.10</td>
</tr>
<tr>
<td>65+</td>
<td>.32</td>
<td>.03</td>
<td>.80</td>
<td>.08</td>
</tr>
</tbody>
</table>
Table 26

Summarised mean group index scores for postvocalic /r/ word-finally following stressed other vowels with no pause following (V_#) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.01</td>
<td>.01</td>
<td>.06</td>
<td>.01</td>
</tr>
<tr>
<td>40–50</td>
<td>.03</td>
<td>.01</td>
<td>.32</td>
<td>.13</td>
</tr>
<tr>
<td>65+</td>
<td>.36</td>
<td>.02</td>
<td>.60</td>
<td>.02</td>
</tr>
</tbody>
</table>

Table 27

Summarised mean group index scores for postvocalic /r/ word-finally following stressed other vowels and with a following pause (V_#P) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.17</td>
<td>.03</td>
<td>.34</td>
<td>.02</td>
</tr>
<tr>
<td>40–50</td>
<td>.31</td>
<td>.06</td>
<td>.52</td>
<td>.24</td>
</tr>
<tr>
<td>65+</td>
<td>.52</td>
<td>.13</td>
<td>.93</td>
<td>.11</td>
</tr>
</tbody>
</table>
Table 28

Summarised mean group index scores for postvocalic /r/ following stressed other vowels and before consonants (V_C) in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.16</td>
<td>.10</td>
<td>.27</td>
<td>.03</td>
</tr>
<tr>
<td>40–50</td>
<td>.18</td>
<td>.04</td>
<td>.43</td>
<td>.29</td>
</tr>
<tr>
<td>65+</td>
<td>.56</td>
<td>.01</td>
<td>.90</td>
<td>.15</td>
</tr>
</tbody>
</table>

Table 29

Summarised mean group index scores for postvocalic /r/ word-finally following stressed other vowels and with a following pause (V_#P) in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.37</td>
<td>.18</td>
<td>.53</td>
<td>.04</td>
</tr>
<tr>
<td>40–50</td>
<td>.38</td>
<td>.09</td>
<td>.67</td>
<td>.52</td>
</tr>
<tr>
<td>65+</td>
<td>.66</td>
<td>.12</td>
<td>.98</td>
<td>.20</td>
</tr>
</tbody>
</table>
Figure 8

/r/ realisation following other vowels in the free speech of females

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.

Figure 9

/rl/ realisation following other vowels in the free speech of males
Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.

Figure 10

/r/ realisation following other vowels and before consonants (V_C) in the free speech and word list styles of females
Figure 11

/r/ realisation following other vowels and before consonants (V_C) in the free speech and word list styles of males

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Figure 12

/ɪ/ realisation word-finally following other vowels with a following pause (V_#P) in the free speech and word list styles of females

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Figure 13

/\rl/ realisation word-finally following other vowels with a following pause (V #P) in the free speech and word list styles of males

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Postvocalic /r/ before a consonant is very close to disappearing from SIdE (see tables 18, 21, 23, and 26, and figures 10 and 11). Younger speakers all had index scores less than 0.10 (10%) in free speech.

(1) /r/ after stressed other vowels: Females

The rhotic variant of postvocalic /r/ is very infrequent in the speech of the urban females and is most common in the speech of older rural women, who are the only ones with index scores above 0.10 in the pre-consonantal and word-final (not followed by a pause) phonological environments. The three speakers with the higher index scores (AC, EH, and SD) are also those with the higher index scores for the rhotic stressed NURSE vowel (see figure 8).

The phonological environment in which /r/ is word-final in a word that is followed by a pause in the flow of speech (_#P) leads to the highest use of the rhotic variant for all but one female speaker.

(2) /r/ after stressed other vowels: Males

Males have higher index scores than females in the use of a rhotic variant of postvocalic /r/ when it follows other vowels. The rural males have higher index scores than the urban males, which mirrors the pattern found for the female speakers. The phonological environment in which /r/ is word-final in a word that is followed by a pause in the flow of speech (_#P) gives higher index scores than the other environments, as is also the case for the female speakers.

Another pattern that can be seen is that males are a generation or so behind females with respect to the process of loss of rhotic /r/ that seems to be underway. In particular, the 40–50 yr old rural male and 65+ y: old rural female groups show notable similarities, as do the 15–20 yr old rural male and 40–50 yr old rural female groups.

What is illustrated here is the familiar pattern of loss of a feature: younger speakers use it less frequently than older speakers, urban speakers use it less frequently than rural speakers, and females use it less frequently than males.

6.4.5 Postvocalic /r/ after unstressed other vowels

- Refer to figures 14–15 and tables 30–31
- ‘Other vowels’: NORTH, START, NEAR, SQUARE, PRICE, FACE, MOUTH, CURE (i.e. neither NURSE nor LETTER)
- Examples: cart, car, hear, north, fire, when unstressed

Tables 30–31 and figures 14–15 show that postvocalic /r/ after unstressed vowels other than NURSE and LETTER is probably disappearing from SIdE. Only two younger speakers, both rural males, have index scores greater than 0.1 (10%). The index scores for the various groups of speakers are very similar to those for the stressed other vowels when they occur before consonants (V_C).
### Table 30

**Mean group index scores for sample cells: postvocalic /r/ following unstressed other vowels in free speech**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban Invercargill Socioec. 1-3</th>
<th>Urban Invercargill Socioec. 4-6</th>
<th>Rural Central Southland</th>
<th>Rural Eastern Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
<td>.02</td>
<td>.00</td>
<td>.04</td>
<td>.01</td>
</tr>
<tr>
<td>40-50</td>
<td>.05</td>
<td>.00</td>
<td>.14</td>
<td>.03</td>
</tr>
<tr>
<td>65+</td>
<td>.01</td>
<td>.01</td>
<td>.09</td>
<td>.02</td>
</tr>
</tbody>
</table>

### Table 31

**Summarised mean group index scores for postvocalic /r/ following unstressed other vowels in free speech**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>.02</td>
<td>.01</td>
<td>.08</td>
<td>.05</td>
</tr>
<tr>
<td>40-50</td>
<td>.06</td>
<td>.02</td>
<td>.23</td>
<td>.09</td>
</tr>
<tr>
<td>65+</td>
<td>.29</td>
<td>.02</td>
<td>.50</td>
<td>.03</td>
</tr>
</tbody>
</table>
Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.

Figure 14

/r/ realisation following unstressed other vowels in the free speech of females
Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.

Figure 15

/r/ realisation following unstressed other vowels in the free speech of males
6.4.6 Postvocalic /r/ and the LETTER vowel

- Refer to figures 16–19 and tables 32–39
- Notes on environments: 
  - $\_C$ = pre-consonantal
  - $\_#$ = word-final (no pause in speech flow)
  - $\_#P$ = word-final with a following pause
- Examples: letter, butter, battered

The unstressed LETTER vowel, where there is a schwa in non-rhotic accents, also results in a potentially rhoticised vowel like the NURSE vowel. Tables 32–39 and figures 16–19 show that the feature seems to be disappearing—younger speakers use a rhotic LETTER vowel less frequently than older ones do and most urban speakers have low index scores. It is still very frequent in the speech of 65+ yr old rural males, and also moderately frequent in the speech of the 40–50 yr old rural males.

**Table 32**

**Mean group index scores for sample cells: rhotic LETTER vowels before consonants (V.C) in free speech**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban Invercargill Socioec. 1–3</th>
<th>Urban Invercargill Socioec. 4–6</th>
<th>Rural Central Southland</th>
<th>Rural Eastern Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15–20</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>40–50</td>
<td>.03</td>
<td>.00</td>
<td>.17</td>
<td>.00</td>
</tr>
<tr>
<td>65+</td>
<td>.06</td>
<td>.00</td>
<td>.14</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note:
In this table and those following below, ‘Socioec. 1–3’ stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale. ‘Socioec. 4–6’ similarly stands for interviewees with socioeconomic status values of 4–6.
Table 33

Mean group index scores for sample cells: rhotic LETTER vowels word-finally (V_#) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Invercargill Socioec. 1-3</th>
<th>Invercargill Socioec. 4-6</th>
<th>Central Southland</th>
<th>Eastern Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td>Male: .02 Female: .00</td>
<td>Male: .00 Female: .00</td>
<td>Male: .19 Female: .02</td>
<td>Male: .01 Female: .07</td>
</tr>
<tr>
<td>40-50</td>
<td>Male: .02 Female: .00</td>
<td>Male: .23 Female: .01</td>
<td>Male: .37 Female: .12</td>
<td>Male: .54 Female: .07</td>
</tr>
<tr>
<td>65+</td>
<td>Male: .10 Female: .08</td>
<td>Male: .03 Female: .00</td>
<td>Male: .46 Female: .27</td>
<td>Male: .69 Female: .41</td>
</tr>
</tbody>
</table>

Note: In this table and those following below, ‘Socioec. 1-3’ stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale. ‘Socioec. 4-6’ similarly stands for interviewees with socioeconomic status values of 4–6.

Table 34

Mean group index scores for sample cells: rhotic LETTER vowels word-finally with pause following (V_#P) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Central Southland</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>15-20</td>
<td>Male: .00 Female: .00</td>
<td>Male: .45 Female: .19</td>
</tr>
<tr>
<td>40-50</td>
<td>Male: .16 Female: .00</td>
<td>Male: .72 Female: .72</td>
</tr>
<tr>
<td>65+</td>
<td>Male: .16 Female: .05</td>
<td>Male: .75 Female: .61</td>
</tr>
</tbody>
</table>

Note: In this table and those following below, ‘Socioec. 1-3’ stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale. ‘Socioec. 4-6’ similarly stands for interviewees with socioeconomic status values of 4–6.
Table 35

Mean group index scores for sample cells: rhotic LETTER vowels word-finally with pause following (V #P) in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Invercargill Socioec. 1-3 Male</th>
<th>Invercargill Socioec. 4-6 Male</th>
<th>Central Southland Male</th>
<th>Eastern Southland Male</th>
<th>Urban Male</th>
<th>Rural Male</th>
<th>Urban Female</th>
<th>Rural Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>.00</td>
<td>.18</td>
<td>.83</td>
<td>.51</td>
<td>.00</td>
<td>.00</td>
<td>.18</td>
<td>.24</td>
</tr>
<tr>
<td>40-50</td>
<td>.26</td>
<td>.74</td>
<td>.69</td>
<td>.65</td>
<td>.03</td>
<td>.03</td>
<td>.74</td>
<td>.16</td>
</tr>
<tr>
<td>65+</td>
<td>.06</td>
<td>.08</td>
<td>1.00</td>
<td>1.00</td>
<td>.00</td>
<td>.00</td>
<td>.08</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: In this table and those following below, ‘Socioec. 1–3’ stands for interviewees with socioeconomic status values of 1–3 on the Elley-Irving scale. ‘Socioec. 4–6’ similarly stands for interviewees with socioeconomic status values of 4–6.

Table 36

Summarised mean group index scores for rhotic LETTER vowels before consonants (V_C) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>.03</td>
<td>.00</td>
<td>.10</td>
<td>.00</td>
</tr>
<tr>
<td>40-50</td>
<td>.08</td>
<td>.00</td>
<td>.47</td>
<td>.10</td>
</tr>
<tr>
<td>65+</td>
<td>.46</td>
<td>.00</td>
<td>.74</td>
<td>.10</td>
</tr>
</tbody>
</table>
### Table 37

**Summarised mean group index scores rhotic LETTER vowels word-finally (V_#) in free speech**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.04</td>
<td>.01</td>
<td>.10</td>
<td>.01</td>
</tr>
<tr>
<td>40–50</td>
<td>.09</td>
<td>.01</td>
<td>.46</td>
<td>.13</td>
</tr>
<tr>
<td>65+</td>
<td>.34</td>
<td>.04</td>
<td>.57</td>
<td>.06</td>
</tr>
</tbody>
</table>

### Table 38

**Summarised mean group index scores rhotic LETTER vowels word-finally with pause following (V_#P) in free speech**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.20</td>
<td>.03</td>
<td>.35</td>
<td>.00</td>
</tr>
<tr>
<td>40–50</td>
<td>.47</td>
<td>.05</td>
<td>.85</td>
<td>.33</td>
</tr>
<tr>
<td>65+</td>
<td>.66</td>
<td>.03</td>
<td>.84</td>
<td>.18</td>
</tr>
</tbody>
</table>

### Table 39

**Summarised mean group index scores for rhotic LETTER vowels word-finally with pause following (V_#P) in word lists**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.42</td>
<td>.16</td>
<td>.67</td>
<td>.09</td>
</tr>
<tr>
<td>40–50</td>
<td>.24</td>
<td>.12</td>
<td>.67</td>
<td>.50</td>
</tr>
<tr>
<td>65+</td>
<td>.71</td>
<td>.00</td>
<td>1.00</td>
<td>.07</td>
</tr>
</tbody>
</table>
Figure 16

/r/ realisation: LETTER vowels in the free speech of females
Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.

Figure 17

/r/ realisation: LETTER vowels in the free speech of males
Figure 18

/r/ realisation: LETTER vowels at the ends of words before pauses in the speech of females

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
Figure 19

/r/ realisation: LETTER vowels at the ends of words before pauses in the speech of males

Note: Speakers are identified by their initials. Refer to section 6.4.1 for details of their left-right ordering.
There are strong similarities between the patterns associated with the LETTER vowel in free speech and those for /r/ following stressed other vowels (i.e. all vowels other than NURSE or LETTER; see section 6.4.4). The same groups of speakers who have high index scores for /r/ following other vowels (rural speakers, especially males from the two older age groups and the 65+ yr old females) tend to have high index scores for the rhotic LETTER vowel. In fact, individual speakers have similar index scores for these variables.

Urban females have a very low incidence of use of the rhotic LETTER vowel in free speech—12 out of 16 do not use it at all and the other 4 have low index scores. There is a tendency for the rhotic variant to be associated with socioeconomic status in the urban sample: speakers whose socioeconomic status ranking is 4–6 generally have higher index scores than speakers in the group with a 1–3 ranking.

Many of the speakers show little difference between their index scores for the use of a rhotic LETTER vowel in the environment where LETTER is word-final with a pause following (_#P; see above) in free speech and word list styles. However, it is interesting that younger speakers often have noticeably higher index scores for word list tokens. Whether this apparent prestige will translate into longer-term maintenance of the feature or not remains to be seen.

The results show that the _#P environment is also the one in which the highest index scores tend to be found, just as it is for /r/ following the other vowels. That is, even though LETTER is a potentially rhoticised vowel like NURSE, it behaves more like the consonantal postvocalic /r/ that follows other vowels.

6.4.7 Overall rhoticity

- Refer to figures 20–23 and tables 40–41

The results discussed in sections 6.4.2 to 6.4.6 above show the patterns of use of postvocalic /r/ associated with individual environments, but do not give a sense of the overall, or perceived, degree of rhoticity of the interviewees. This is because no allowance is made above for the relative frequencies of occurrence of the different environments (recall that there were very few tokens of the unstressed NURSE vowel, for example). One of the reasons for selecting 250 /r/ tokens without specifying token numbers for each environment was to allow this measurement of the real degree of speakers’ rhoticity to be made. The problem to be overcome in order to be able to make this measurement is that if speakers’ raw scores for overall rhoticity are compared directly then misleading results occur because given speakers produce different numbers of tokens in the different environments, which can greatly affect their overall rhoticity scores. In order to normalise speakers’ scores to enable a direct comparison of their overall degrees of rhoticity, the following procedure was followed:

1. The mean number of tokens in each environment (across speakers) was calculated.

2. The distributions of the numbers of tokens in each environment were tested for normality to confirm that the mean would be the most suitable measure of the central tendency.
3. These means were divided by the total number of tokens per speaker (250) to get the relative frequency of occurrence for each environment.

4. Each speaker's /r/ index score for each environment was multiplied by the corresponding frequency of occurrence of that environment.

5. The weighted index scores for each environment were summed to derive a normalised figure for each speaker's overall index of rhoticity.

The relative frequencies of the environments are:

1. NURSE vowel (stressed) coalesces with /r/: 0.133
2. NURSE vowel (unstressed) coalesces with /r/: 0.031
3. Other vowel (stressed) precedes /r/, consonant follows (V_C): 0.205
4. Other vowel (stressed) precedes word-final /r/, no pause follows (V_#): 0.153
5. Other vowel (stressed) precedes word-final /r/, pause follows (V_#P): 0.079
6. Other vowel (unstressed) precedes /r/: 0.138
7. LETTER vowel coalesces with /r/, consonant follows (V_C): 0.086
8. LETTER vowel coalesces with /r/, word-final, no pause follows (V_#): 0.127
9. LETTER vowel coalesces with /r/, word-final, pause follows (V_#P): 0.048

This method results in a normalised overall rhoticity score for each speaker which is derived from the assumption that taking the mean frequency of appearance of the different environments in 250 tokens from the 69 speakers approximates what would be found in the speech of any individual in a larger time frame.

Tables 40–41 and figures 20–23 show the overall patterns of rhoticity in the sample. The graphs indicate the relative contribution of each of the nine environments listed above. An overall index score of 1.00 indicates that a speaker is rhotic 100% of the time. Several of the older rural male speakers approach this high degree of use, but the rapid decline in overall levels of rhoticity in rural Southland is evident. However, the data from the Invercargill urban area suggest that rhoticity is actually increasing amongst younger speakers there, particularly young females, irrespective of their socioeconomic status. The increase is almost entirely attributable to the rhotic stressed NURSE vowel. While rhoticity is mostly associated with lower socioeconomic status in the urban 65+ and 40–50 yr age groups, it now seems to be spreading to the higher socioeconomic groups. This will be considered further in Chapter 8.
Table 40

Mean group index scores for sample cells: overall use of postvocalic /r/ (normalised) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural: Female</th>
<th>Rural: Male</th>
<th>Urban: Female</th>
<th>Urban: Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.06</td>
<td>.05</td>
<td>.09</td>
<td>.16</td>
</tr>
<tr>
<td>40–50</td>
<td>.06</td>
<td>.16</td>
<td>.06</td>
<td>.27</td>
</tr>
<tr>
<td>65+</td>
<td>.08</td>
<td>.08</td>
<td>.05</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 41

Summarised mean group index scores for overall use of postvocalic /r/ (normalised) in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–20</td>
<td>.18</td>
<td>.11</td>
<td>.24</td>
<td>.11</td>
</tr>
<tr>
<td>40–50</td>
<td>.18</td>
<td>.05</td>
<td>.42</td>
<td>.19</td>
</tr>
<tr>
<td>65+</td>
<td>.42</td>
<td>.03</td>
<td>.71</td>
<td>.07</td>
</tr>
</tbody>
</table>
Figure 20

Overall rhoticity for rural females
Figure 21

Overall rhoticity for urban females
Figure 22

Overall rhoticity for rural males
Figure 23

Overall rhoticity for urban males
6.5 Summary of results

The results discussed above indicate that consonantal postvocalic /r/ is disappearing from the Southland variety of New Zealand English, although it is likely to survive a little longer word-finally when followed by a pause (environment V_#P). Similarly, the use of the rhotic unstressed LETTER vowel is also declining; rural males maintain it to a relatively high degree, but the younger age group still use it less than their elders. The apparent process of loss of postvocalic /r/ in SIdE is what others (e.g. Bayard 1990b) have noted. However, the most significant result from this study is that a rhotic NURSE vowel is being used to a higher degree by younger speakers than any other group. Figures 4 and 5 show that its use is increasing amongst the younger age group in all sectors of the community: rural and urban, female and male, and in higher and lower socioeconomic groups. Postvocalic /r/ thus looks likely to survive, at least in the medium term, but as a rhotic NURSE vowel rather than as a consonant. These developments will be discussed further in chapter 8.
CHAPTER 7
RESULTS 2: THE VARIABLE BATH

7.1 Introduction

The second variable investigated is the lexical set BATH and particularly its subset DANCE. The use of the TRAP or the BATH vowel in such words in the Southland Variety of NZE is the main point of interest.

7.1.1 Definition of the BATH and DANCE lexical sets

The standard lexical set BATH is defined by Wells “as comprising those words whose citation form contains the stressed vowel /æ/ in GenAm [General North American English], but /æ/ in RP” (1982: 133). So, words with the BATH vowel “belong phonetically with TRAP in GenAm, but with PALM and START in RP” (Wells, 1982: 133–34). This is illustrated by the following word pairs from the BATH and TRAP lexical sets, which rhyme in GenAm, but not in RP: staff, gaff; path, math; chance, romance; example, ample. Wells (1982) identifies four main subsets within the BATH set which are lexically as well as phonologically determined as a result of the incomplete nature of the historical changes described in the following section. The four subsets are illustrated by the following examples (from Wells, 1982: 135):

(1) BATH (a)
staff, giraffe; raft, craft; after; laugh
path, lath
brass, class; blast, cast; master, plaster
ask, mask; baske", rascal
castle, fasten
(2) BATH (b); for convenience, this subset will be referred to as the DANCE lexical subset.
dance, chance; grant, plant; branch, ranch; demand
example, sample
answer, Frances
(3) BATH (c)
calf, half, rather
can’t
Iraq, morale, banana
(4) BATH (d) (words which variably have the TRAP vowel in RP)
graph, chaff
plastic, elastic, exasperate
lather, stance, trans- (i.e., the prefix)
alto, plaque

7.1.2 The historical development of the BATH standard lexical set

The standard lexical set BATH is a relatively recent development in English that has come about as a result of a split in the standard lexical set TRAP, as summarised in figure 24, below. The open vowels /a/ and /o/ of Middle English underwent lengthening in the south of England when followed by a voiceless fricative (/a/ had already been raised to [æ]), so that by the end of the seventeenth century they were pronounced as [æ] and [ɛ], a change which “was presumably merely allophonic” initially (Wells, 1982: 204). At some point this change also affected some TRAP words where TRAP was followed by a nasal plus an obstruent (e.g. dance, chance). The long and short TRAP variants that resulted then underwent changes in quality, followed by the phonologization of the lengthened variant in RP, thus creating the BATH lexical set (Wells, 1982: 204). The precise timing of the change in quality and the phonologization is uncertain. The quality of the vowel in the BATH set then became the same as that of PALM and START sets. Finally, BATH, PALM and START all underwent backing in RP from [aː] to [aː] by the end of the nineteenth century. Wells concludes that the TRAP-BATH split is “a half-completed sound change, which seems to have come to a stop well before completing its lexical diffusion through the vocabulary which met the structural description of the lengthening rule” (1982: 233).

The pre-fricative lengthening that occurred by the end of the seventeenth century in the south of England and the eventual split of the TRAP set into TRAP and BATH did not occur in the north. Hence, northern and Scots accents are characterised as retaining the short vowel /a/ in TRAP, typically realised as [a], in this set of words (Wells, 1982: 205). Romaine notes that this is a simplification and that in fact there is a wide range of realisations of this vowel in non-southern varieties of English:

If we examine the records of phoneticians, dialectologists, and those now available from recent sociolinguistic studies, we can easily find the following range of vowels cited among the reflexes of ME a in Scotland, Northern Ireland and Northern England: [æ], [ɛ], [a], [a], [o] and even [ə]. (1985: 166)

Ellis (1889) and Bennett (1943) both cite /æ/ in some words of the BATH set in New Zealand English. Wall notes that “short ‘a’, as in hat, is very commonly used in New Zealand” (1959: 42); the examples he gives (chance, dance, branch) are all from the DANCE subset. More recently, Wells claims that NZE has the long START vowel in all BATH words (1982: 233). While this appears to be largely true of General NZE today, it is not yet universal—Bauer (1994: 394) comments that although the TRAP vowel has “virtually vanished,” it “can still be heard from (especially older) New Zealanders.” As will be discussed below, it is still common in the Southland variety of NZE.
7.2 Results: The variable BATH

7.2.1 Analysis of the variable

One key problem in investigating the BATH lexical set is that words that belong to it appear infrequently in conversation. A total of 2,850 words from the BATH lexical set was found in the speech from the interviews that were analysed; 901 of these words occur in free speech, which is an average of just 13 tokens per speaker (see table 42). Roughly two-thirds (626) of these 901 tokens are from the BATH (a) subset. The BATH (b) subset (DANCE) is proportionately over-represented in the more formal styles because these words were specifically targeted in this investigation; the pilot study I carried out identified DANCE as the most variable subset of BATH, so the interview materials for the main study were designed accordingly.

The lexical item salmon, although not a member of the BATH lexical set, was also included for investigation because it shows similar variation between the BATH and TRAP vowels in SdE.
Table 42

Token numbers for the BATH lexical set

<table>
<thead>
<tr>
<th>Speech Style</th>
<th>BATH (a)</th>
<th>BATH (b)</th>
<th>BATH (c)</th>
<th>BATH (d)</th>
<th>salmon</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free Speech</td>
<td>626</td>
<td>123</td>
<td>116</td>
<td>30</td>
<td>6</td>
<td>901</td>
</tr>
<tr>
<td>Word List</td>
<td>468</td>
<td>667</td>
<td>0</td>
<td>133</td>
<td>66</td>
<td>1,334</td>
</tr>
<tr>
<td>Minimal Pairs</td>
<td>0</td>
<td>276</td>
<td>0</td>
<td>69</td>
<td>0</td>
<td>345</td>
</tr>
<tr>
<td>Grammatical Test</td>
<td>0</td>
<td>134</td>
<td>0</td>
<td>0</td>
<td>69</td>
<td>203</td>
</tr>
<tr>
<td>Reading Passage</td>
<td>0</td>
<td>67</td>
<td>0</td>
<td>0</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>1,094</td>
<td>1,267</td>
<td>116</td>
<td>232</td>
<td>142</td>
<td>2,850</td>
</tr>
</tbody>
</table>

Note: See section 5.3.2 for an overview of the different speech styles represented in the database.

7.2.2 BATH (a) results

- Refer to tables 43–44
- The 7 BATH (a) token words from the word list are: castle, after, laugh, fasten, path, ask, contrast

A total of 1,094 token words were analysed (from the free speech and word list data): 1,021 cases of items from the BATH (a) subset other than the lexical item castle, for which there were 73 cases. Castle was treated separately because it did not follow the pattern exhibited by the other BATH (a) words.

1. BATH (a) words other than 'castle'

Although Orsman noted the use of TRAP “less regularly, before f, s, and th” (i.e. BATH (a) words) in SdE (1966: 680), the data collected for this study contained no tokens of BATH (a) words with TRAP, other than the lexical item castle.

2. The lexical item ‘castle’

Of the 73 cases of castle, 68 were in the word list (one token from each speaker, with 1 missing case) and 5 were found in free speech. The results for castle in the word list are shown in tables 43–44.
Table 43

Index scores for sample cells: TRAP realisations for the lexical item *castle* in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural</th>
<th>Urban</th>
<th>Rural</th>
<th>Urban</th>
<th>Rural</th>
<th>Urban</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>40-50</td>
<td>.33</td>
<td>.50</td>
<td>.67</td>
<td>.50</td>
<td>.67</td>
<td>.00</td>
<td>.67</td>
<td>.33</td>
</tr>
<tr>
<td>65+</td>
<td>.33</td>
<td>.50</td>
<td>.67</td>
<td>1.00</td>
<td>.33</td>
<td>.33</td>
<td>.67</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH

Table 44

Group mean index scores for TRAP realisations for the lexical item *castle* in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rural Females</th>
<th>Urban Females</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
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<td>40-50</td>
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<td>.67</td>
<td>.50</td>
</tr>
<tr>
<td>65+</td>
<td>.20</td>
<td>.75</td>
<td>.50</td>
<td>.50</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH

Although the token numbers are very low and interpretation thus requires caution\(^\text{14}\), the results indicate that the older SdE pronunciation of *castle* with TRAP is probably giving way to the General NZE norm of BATH, or at least that the overt prestige form for younger speakers is now BATH: all 24 of the younger speakers pronounced *castle* in the word list using BATH. A caveat is that there is very little data from free speech portions of the interviews, and none from the younger speakers, so it is not possible to determine whether the younger speakers’ pronunciation of *castle* varies stylistically. The nature of the interview situation itself might be a factor—the BATH variants seem to be salient to

\(^\text{14}\) For an interesting discussion of the limits and possibilities when investigating variables with low token counts, see Britain (2000).
speakers of SIdE (see comments below), so perhaps the younger speakers in particular were using BATH because they knew it to be the NZE standard.

The 5 tokens of *castle* in free speech were uttered by 4 different speakers. Two of the speakers were 40–50 yr old urban males from the higher socioeconomic group (status ranking 1–3); one speaker used BATH and the other used TRAP. The other two speakers were both 65+ yr old rural females; one used BATH and one used TRAP. The two speakers who pronounced *castle* with TRAP in free speech also pronounced it with TRAP in the word list. Similarly, the two speakers who pronounced *castle* with BATH in free speech also pronounced it with BATH in the word list. So, the intra-group variability found in the word list data also appears to be found in free speech.

### 7.2.3 DANCE results

- Refer to tables 45–48 and figures 25–27
- The 5 DANCE token words in the formal reading tasks are: *dance, chance, example, plant*, and *demand*.

There were 1,257 total tokens of the DANCE subset. Table 42 above shows the distribution of the tokens throughout the various speech styles represented in the data. Note that the DANCE subset is over-represented in the more formal styles. This was necessary because of the expected low number of tokens in the free speech portion of the data: there were 123 DANCE tokens in free speech, which is a little under 2 tokens per speaker. Thus, the analysis of the DANCE variable is largely based on more formal speech styles.

The low level of use of the TRAP vowel in the DANCE subset indicates that BATH, the general NZE norm, could well be displacing it. Younger speakers again tend to use BATH more often than TRAP, and women tend to have lower index scores than men. The older speakers do not tend to have very high index scores, so it may be that TRAP has not been widespread in SIdE for some time.

### Table 45

**Index scores for sample cells: TRAP realisations for the DANCE subset in minimal pairs**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban Invercargill Socioec. 1-3</th>
<th>Rural Invercargill Socioec. 4-6</th>
<th>Central Southland</th>
<th>Eastern Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15–20</td>
<td>.12</td>
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<td>.25</td>
<td>.06</td>
</tr>
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<td>40–50</td>
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<td>.25</td>
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</tr>
<tr>
<td>65+</td>
<td>.17</td>
<td>.12</td>
<td>.67</td>
<td>.12</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH.
Table 46

Index scores for sample cells: TRAP realisations for the DANCE subset in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Invercargill Socioec. 4-6</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
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<td>.00</td>
</tr>
<tr>
<td>40-50</td>
<td>.07</td>
<td>.50</td>
</tr>
<tr>
<td>65+</td>
<td>.17</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH

Table 47

Index scores for sample cells: TRAP realisations for the DANCE subset in grammatical tasks

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Invercargill Socioec. 4-6</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>40-50</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>65+</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH
Table 48

Index scores for sample cells: TRAP realisations for the DANCE subset in free speech

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Invercargill Socioec. 1-3</td>
<td>Invercargill Socioec. 4-6</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15-20</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>40-50</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>65+</td>
<td>.33</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH

Bradley (1991) indicates that in Australian English the TRAP–BATH distinction in the DANCE subset varies lexically and regionally. The lexical items dance and chance in particular tended to retain TRAP more often than other words in the DANCE subset. In the interviews with SlDE speakers, there are a number of examples where the minimal pair dance/chance is spoken with non-matching vowels, usually dance with TRAP and chance with BATH. Some speakers commented on their own apparently inconsistent pronunciation (sometimes just by laughing immediately after saying chance). Others did not seem to notice. The results for three lexical items (dance, chance, and example) are presented individually below.

1. The lexical item 'dance'

There were 234 tokens of the lexical item dance in the interviews. 31 of these were found in free speech, or less than 1 token per speaker. The main point of interest is that just 5 of these tokens were produced with the TRAP vowel—all 5 of these were in the speech of older rural speakers (3 females and 2 males).

The results for the lexical item dance in formal speech styles appear in figure 25 below. The overall result is that the TRAP vowel is being displaced by the BATH vowel in this word—younger speakers tend not to use TRAP. Most of the tokens that were pronounced with TRAP were produced during the minimal pairs test, which is the most formal of the three styles investigated. This suggests that TRAP still has a measure of overt prestige, even though BATH is making strong inroads.

Steve C. (urban male, 19 yrs old, socioeconomic status 4) made the point that his usage might vary, depending on the situation:

Steve C.: (reading minimal pairs:) duncedance (/æ/) chance (/æ/) - chance (/a/) dunno bit hard with those ones dance (/a/) and chance (/a/) sometimes I say dance (/æ/) and sometimes I say dance (/a/) mostly dance (/a/) and chance (/a/) I think . yeah dance (/a/) and chance (/a/)
Interviewer: Yeah I'm finding quite a bit of um both
Steve C.: Sometimes depends who you're with or what’s . story is
Interviewer: Mm that's interesting
Steve C.: Yeah
Interviewer: Thanks it'll give me something to think about for the next —
Steve C.: Yeah sometimes when I read it I think I say the dance (/æ/) more than I say dance (/a/).
I think it's cause of the 'a' in it I think . dan (/æ/)  

2. The lexical item 'chance'

There were 217 tokens of the lexical item chance in the dataset. Fourteen of these were found in free speech, which is well under 1 token per speaker. Two of these tokens were produced with the TRAP vowel, both by rural males. The results for the lexical item chance in formal speech styles appear in figure 26 below. The patterns seen there are similar to those for the lexical item dance: rural and older speakers have higher incidences of TRAP, particularly in the most formal of the speech styles, the minimal pairs. This again suggests that the older SIdE norm, TRAP, has some degree of overt prestige, which might slow the process of loss. However, the overall result is that the TRAP vowel is being displaced by the BATH vowel in dance because younger speakers tend not to use TRAP.

3. The lexical item 'example'

The results for the lexical item example in formal speech styles (see figure 27) show that it tends to have BATH, but older speakers use TRAP to a slightly higher degree than they do for chance. As for dance and chance, above, the retention of TRAP in the speech of these speakers is marginally higher in the most formal speech style, the minimal pairs, indicating a degree of overt prestige. However, the younger speakers interviewed for this study do not use TRAP in example at all, so it would seem that the transition from TRAP to BATH is complete for this lexical item, or not far from being complete.
Retention of TRAP in the lexical item *dance* in formal speech styles
Retention of TRAP in the lexical item *chance* in formal speech styles
Retention of TRAP in the lexical item *example* in formal speech styles
7.2.4 BATH (c)

- Examples: calf, half, rather

The pilot study I carried out indicated that there was no variation to be found in this subset of the BATH lexical set. Consequently, no BATH (c) words were included in the interview’s word lists or reading passage. There were 116 tokens in free speech sections of the interviews: all had the BATH vowel and not the TRAP vowel.

7.2.5 BATH (d)

- Examples: graph, chaff

This subgroup of BATH was not investigated because words that belong to it variably have both BATH and TRAP in many varieties of English.

7.2.6. The lexical item salmon

- Refer to tables 49–50

There were just 141 tokens of the lexical item salmon in the data. Only 6 of these tokens are in free speech sections of the interviews, so again there are limits on what can be concluded from the results. Of the remaining 135 tokens, 66 come from the word list and 69 come from the grammatical test questions. The instances in the interviews where speakers used the BATH vowel all had long [aː] vowels; although McClure (1994: 81) notes that salmon generally has the short vowel [a] in ScotE, this does not appear to be the case in SIdE.
### Table 49

Index scores for sample cells: BATH realisations for the lexical item *salmon* in word lists

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban Invercargill Socioec. 1–3</th>
<th>Rural Invercargill Socioec. 4–6</th>
<th>Urban Central Southland</th>
<th>Rural Eastern Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15–20</td>
<td>.00</td>
<td>.50</td>
<td>.00</td>
<td>.50</td>
</tr>
<tr>
<td>40–50</td>
<td>.33</td>
<td>.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>65+</td>
<td>1.00</td>
<td>.50</td>
<td>.33</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH

### Table 50

Index scores for sample cells: BATH realisations for the lexical item *salmon* in grammatical sentence tasks

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Urban Invercargill Socioec. 1–3</th>
<th>Rural Invercargill Socioec. 4–6</th>
<th>Urban Central Southland</th>
<th>Rural Eastern Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>15–20</td>
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<td>40–50</td>
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<td>65+</td>
<td>1.00</td>
<td>1.00</td>
<td>.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: An index score of 1.00 = consistent use of TRAP; 0.00 = consistent use of BATH
Figure 28

Comparison of group mean scores for use of BATH vowel in lexical item *salmon* for word list and grammatical task data

The lower index scores for the younger speakers indicate that the older SldE form of *salmon* with BATH could be giving way to the more general NZE form with TRAP. Charlotte C. (rural female, 40–50 yrs old, farmer) changed her mind when reading the test sentence containing *salmon* from the grammatical tasks:

Who’s going salmon (/a/) (pause) salmon (/æ/) fishing?

Note that the sentence the speakers were asked to correct, if required, was “Who’s all going salmon fishing?” (see the interview materials in Appendix A). So, when Charlotte C. left out “all” in her corrected version of the sentence, she had identified that as the focal point of the sentence. Her correction of *salmon* to the general NZE norm of TRAP was secondary, and might be a result of her being conscious of the nature of the interview situation. Certainly, BATH would seem to be her ‘usual’ preferred form.
Even if BATH is giving way to TRAP, the former might still be the prestige form, given that there is a slight tendency for speakers in the 40-50 and 15-20 yr age groups to use BATH more in word lists than they do in grammatical tasks; the word list tasks are more formal than the grammatical tasks as they require more conscious attention to pronunciation. Of the 69 speakers, all except 8 used the same phoneme in salmon for the word list and the grammar test questions. Of the 8 exceptions, 7 used BATH in the word list and TRAP in the grammar question, which would seem to support the idea that BATH is the prestige form in SIdE. Only 1 speaker used TRAP in the word list and BATH in the grammar question. Certainly, the two variants are well-known by the speakers, as Jan M. (urban female, 65+ yrs old, socioeconomic status 2) suggests when assessing the test sentence:

Who’s going salmon (/a/) fishing, or salmon (/æ/) - whichever school you go to.

She later read salmon in the word list, using TRAP.

Arthur M. commented that he and his workmates had once had a discussion about the correct pronunciation of salmon and that he had looked it up in a dictionary to resolve the issue. They found that BATH was the “correct” pronunciation; I have not seen a dictionary that gives BATH as the suggested pronunciation for salmon, so assume that Arthur misread the phonetic symbols the dictionary used.

7.3 Summary

Although the quantity of data available for this investigation of the BATH lexical set in SIdE was limited, especially in free speech, there is nonetheless a clear pattern: TRAP in the DANCE subset is now giving way to BATH, the general NZE norm. Comments from speakers make it very clear that this feature is above the level of consciousness. For example, when reading the minimal pairs, Mary W. (urban female, 40-50 yrs old, socioeconomic status 3) said:

dance (/a/) chance (/a/) . and I didn’t say dance (/æ/) (laughs)

The difference between rural and urban speakers was also commented on, for example, by Bob T. (a farmer who moved to Invercargill city when he retired):

Bob T.: But ah as as you can perhaps . must have picked up I sometimes say chance /a/ and then other times I say chance /æ/ whereas I’ve always said chance /æ/. real Scottish pronunciation. but eight years with mixing with a lot of people that pronounce it differently [i.e. in the city]. I don’t . I’m not too sure now (laughs). muddled in my old age. put it that way (laughs)

Interviewer: Well that’s . that’s interesting in itself

Bob T.: Yeah well that’s a fact . yeah I’m conscious of . whereas I’d pronoun—I say chance /æ/ without thinking of it but now I’m quite conscious of . of whether I . well which which way I should pronounce it, which is a bit of a pest at times (laughs). but we always talk talked about going to dances /æ/ in the country but now . I’m more likely to say dance /a/
Although younger SldE speakers are still using TRAP in the BATH lexical set to a small degree, it seems likely that those words in SldE that have variably had TRAP will eventually all use BATH (not counting the BATH (d) group which is variable in most varieties of English).
8.1 Summary of findings

The results of this investigation of the Southland variety of New Zealand English indicate that the variety’s most famous feature, postvocalic /r/, will likely survive for some time yet. Even though the consonantal variant of postvocalic /r/ is gradually disappearing, as is the rhotic unstressed LETTER vowel, there has been a striking resurgence in the use of the rhotic NURSE vowel; this will be discussed further below. The future of the TRAP vowel in the DANCE subset of the BATH lexical set is less certain, but it seems that it will disappear from SIdE within a few generations unless it too becomes part of the reassertion of SIdE forms that appears to be in progress.

The changes in the Southland variety parallel those found in areas such as Martha’s Vineyard (Labov 1972b), where a local form that appeared to be waning underwent a reversal as a result of the reassertion of local identity. In the case of the residents of Martha’s Vineyard, they were responding to the threat of a loss of identity as a result of increasing numbers of migrants from the mainland. It is possible that this is also the case in Southland.

8.2 The future of postvocalic /r/ in Southland

From the results of interviews conducted with 14 Southlanders as part of a wider study, Bayard tentatively concluded that postvocalic /r/ is being lost by younger speakers (1990b: 154). However, the relatively small token numbers collected of necessity meant that he had to group scores rather than looking at phonological environments, as has been done in the analysis above in chapter 6. The results presented in this thesis indicate that Bayard’s conclusion was premature. One reason for this could be that all his data were derived from reading tasks. We consider first whether the rhotic NURSE vowel in Southland is the result of a merger of sounds in the original input varieties and, secondly, its relationship to Southland identity.

8.2.1 NURSE merger in SIdE

Why has a rhotic NURSE vowel rather than some other variant of the SIdE /r/ been maintained? It possibly has to do with its ease of production, because in the context of NURSE vowels /r/ is not realised as a separate consonant—the vowel itself is rhoticised.
There are other cases in international English: “The mid-central vowels seem to behave idiosyncratically in respect of their influence on the retention or otherwise of the following /r/; many Americans whose speech is otherwise non-rhotic retain (or reacquire) /r/ in NURSE words and perhaps also in weak syllables (the letter words)” (Wells 1982: 221).

It has been thought that NZE was largely non-rhotic and that SIdE derived its rhoticity from Scottish English. However, recent work on the Origins of New Zealand English Project has shown that early New Zealand English was much more rhotic than previously thought. Furthermore, the nature of the rhoticity found in SIdE does not match that found in ScotE. I hypothesise that what has occurred in SIdE is that a NURSE merger has taken place as a result of the mixing and consequent levelling of a number of different varieties of English in Southland in the early years of European settlement there (see chapter 3 above). ScotE accents vary in the number of phonemes they have in this set of words, some having as many as five distinct phonemes, although this now seems to be rare (Romaine 1978); most have two or three, keeping distinct words such as fur, first, fern. If children in Southland one hundred years ago were confronted with accents that had differing numbers of phonemes in this set of words, it seems reasonable to propose that the vowel phonemes have been levelled and that the following /r/ (which would have been present in all the Scottish English and Irish English accents, and some of the English English accents) was maintained in such a way that it coalesced with the preceding vowel, so that the end result is a merged r-coloured vowel. In support of this hypothesis, note that Philip A. (74 yr old rural male) actually produced a few non-merged NURSE tokens: 3 out of 37 NURSE words were produced with the vowel-consonant sequence /er/ rather than a merged rhotic vowel (all three were the lexical item heard); the remaining 34 tokens all had the rhotic NURSE vowel. There are examples in the ONZE Project’s corpus of New Zealand-born speakers from the late nineteenth century who also maintain distinct vowel phonemes before /r/.

8.2.2 Southland identity and SIdE

Donn Bayard and I carried out an accent evaluation study (Bayard and Bartlett 1996), where listeners evaluated, among other things, the attractiveness of the SIdE accent and perceived speaker power and solidarity. We included two younger Southland speakers. The experiment was actually a matched guise experiment where both speakers spoke SIdE and general NZE. One of the ‘Southlanders’ was a genuine Southlander and one was not. Both created a Southland accent by using rhotic NURSE vowels as the only point of difference between their guises. A notable result was that the rhotic guises were viewed much less favourably by the listeners than the non-rhotic guises—the biggest difference in rating was for the “pleasantness of accent” variable, for which the rhotic speakers were significantly down-graded. Another key finding was that other New Zealanders could identify a SIdE accent, but had no success in attempting to determine which part of New Zealand the non-rhotic speakers came from. We concluded that a rhotic NURSE vowel is distinctive enough in New Zealand for a speaker to be able to mark where he or she comes from. It is possible that this, combined with the ease of articulation, is why young Southlanders are maintaining a rhotic NURSE vowel in particular.
It is also clear that rhoticity is sufficient to create negative stereotypes about the speaker. This could explain the general drop in rhoticity observed from the older to younger speakers in this study. One younger rural female speaker commented:

They do that. girl. they pick on girl. Gore. they go Gore. you roll your r's. but they do that and then you. you feel like really you know accenting it really. so I reckon it's better when they don't comment on it.

It also seems that some Southlanders are aware of the resurgence in rhoticity. When asked if the rhotic variant of /r/ was used more frequently by the younger urban Southlanders than by the older ones, one such young urban Southlander, Lee M. said:

I would say that would be true. Most of. like. none of the older people in my family would do it [i.e. use a rhotic NURSE vowel], but. like. all the younger ones would. Her comments are supported by the results above.

8.3 Future research

In many ways, this thesis has only scratched the surface of the variety that it attempts to describe. Issues with sample design and representativeness mean that it cannot be taken as the last word on the topic. In any case, at this point in time another generation of Southlanders is starting to develop its own version of its local variety. Some topics that would be of considerable interest, given what has been established by this thesis, are:

(1) An in-depth investigation of a single locality using a network-oriented approach to gain greater social depth. The town of Gore is one obvious candidate as it is a small urban centre that caters to the needs of the local farming communities. It would provide an interesting point of comparison with Invercargill city.

(2) A follow-up study with the younger speakers in this study. This would be of interest to see what effect their life paths have on their accents. Some of the younger speakers I interviewed said they intended to take over the family farm and stay in the area they were currently living in, while others were determined to leave Southland.

(3) A highly localised study of a small area. This would include non-native speakers too in order to consider factors such as migration (temporary or permanent).

(4) A study of ethnic variation. Do Maori speakers use postvocalic /r/ to any degree and, if so, how does their usage compare with Pakeha usage?
Appendices to the Journal of the House of Representatives. New Zealand Government.
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Britain, David. 2000. As far as analysing grammatical variation and change in New Zealand English with very few tokens <is concerned/er>. In Bell, Allan and Koenraad Kuiper (eds), *New Zealand English*. Wellington: Victoria University Press, 198–220.


Morris, Edward. 1898. Austral English: a dictionary of Australasian words and phrases, with those Aboriginal-Australian and Maori words which have become incorporated in the language and the commoner scientific words that have had their origin in Australasia. London: Macmillan.


Wall, Arnold. 1939. *New Zealand English: How it should be spoken*. Christchurch: Whitcombe and Tombs.


Wall, Arnold. 1951b. The way I have come. Radio talk: Radio New Zealand.


APPENDIX A

INTERVIEW SCHEDULE

Section 1: Demographic information

A. Residential history
1. To start with, how long have you lived here in _______?
2. Were you born in _______? or Where were you born?
3. Where else in New Zealand have you lived for at least 3 years?
   - Place: __________________________ Age: __________________________
   - Place: __________________________ Age: __________________________
4. Have you ever lived overseas for 3 or more years?
   - Place: __________________________ Age: __________________________
   - Place: __________________________ Age: __________________________
5. Are you or have you ever been married?
   Note we are also interested in de facto partners here and in questions on partners
6. If yes to question 5
   Where was your wife/husband/partner born and raised?
     If overseas,
     How old was s/he when s/he came to New Zealand?
7. Where was your mother born and raised?
     If overseas,
     How old was she when she came to New Zealand?
8. Where was your father born and raised?
     If overseas,
     How old was he when he came to New Zealand?
     If interviewee indicates their parents come from somewhere where English is not used as the mother tongue, then ask:
     Which language did you speak first in your home?
     If the answer is not English continue with the questions in this section, then ask only the questions in “Section 2: Lexical items” and then draw the interview to a close.

1 The interview schedule is based on the one developed for the Porirua Project (Holmes, Bell and Boyce 1991). Sections 1, 3, 4, 5, and 7 are very similar to parts of the Porirua Project’s (now the Wellington Social Dialect Survey) interview schedule in order to allow regional comparisons to be made at some stage. I would like to thank Janet Holmes and Allan Bell again for allowing me to use their material.
B. Gender, age, and ethnicity

9. Is the interviewee male or female?

10. Which of these age groups do you belong to?
   - 15-19
   - 20-24
   - 25-29
   - 30-34
   - 35-39
   - 40-44
   - 45-49
   - 50-54
   - 55-59
   - 60-64
   - 65-69
   - 70-74
   - 75-79
   - 80-84
   - 85-89
   - 90+

11. Which ethnic group do you identify with?
   - European (British ancestry)
   - Maori
   - Polynesian (specify)
   - Other (specify)

12. Which ethnic group does your wife/husband/partner identify with?
   - European (British ancestry)
   - Maori
   - Polynesian (specify)
   - Other (specify)

13. And what about your parents?
   - Mother:
     - European
     - Maori
     - Polynesian (specify)
     - Other (specify)
   - Father:
     - European
     - Maori
     - Polynesian (specify)
     - Other (specify)

14. Do you have any Scottish or Irish ancestry? What about your wife/husband/partner?

C. Education and occupation

15. How old were you when you left school?

16. Which secondary school did you go to?

17. Did you pass any school exams?

18. Have you passed any exams since you left school?

19. Are you working now?
   - What do you do?
     - If the interviewee is not working at the moment:
       - Have you ever had a paid job?
If yes, what was it? (be precise)

20. Is your wife/husband/partner working?
   What does s/he do? (be precise)

   If s/he is not working at the moment:
   Has s/he ever had a paid job?
   If yes, what was it? (be precise)

21. Ask only if the interviewee is a student
   What do your parents do? Are they working? (be precise)
   Father: ____________________________
   Mother: ____________________________

Section 2: Lexical items

1. What do you call a small house or cottage that people live in when they are on holiday?
   crib
   bach
   holiday house
   other

2. When you buy strawberries, they come in a small plastic container. What do you call it?
   punnet
   pottle
   chip

3. Can you tell me what the shaws of a potato plant are? Is a shaw of potatoes different? Do other plants have shaws?

4. What do you call the tool that is heated up and used for soldering?
   soldering bolt
   soldering iron

5. What do you call a shallow part in a river where horses or cars can get from one side to the other?
   ford
   crossing

6. Do you have a name for a large plate or dish that meat is carved or served on?
   ashet
   platter
   other

7. When you are building a house you use wooden struts to support the studs. Do you call them noggins or dwangs?

8. What do you call a building that cows are kept in?
byre

cowshed

other

Does it have to be made of stone to be called a byre?

9. What do you call the thing you push babies or toddlers around in?

sulky

pushchair

pram

stroller

other

10. You can buy a type of cold meat in slices or as a sausage. What do you call it?

Belgium

luncheon (meat/sausage)

11. Can you tell me what you use a thing called a scuffer for on a farm?

12. If you have to go down a long driveway to get to a house because the section doesn’t front onto the road, what sort of section is it?

back section

leg-in section

13. Can you think of any other words that are used here in _______ that New Zealanders from other parts of the country might not know or use?

Section 3: Test words

Now I’d like you to read some words onto the tape for me. We are just interested in how people here in _______ pronounce these words, so just read them as naturally as you can.

must

eat

howled

hour

during

enthusiasm

If they struggle or make an excuse (e.g. I’ve lost my glasses) just leave it at that and say ’that’s fine’, then move to general conversation. Do not ask them to do the reading tasks.
Section 4: Reading Passage

Now I’d like you to read a passage aloud onto the tape. You just read it as normally as possible but not too fast.

A scrape with death

Last summer we went touring around the East Cape area in our old van. We towed our boat behind us. One day we stopped at a small bay for a bite to eat. I checked the water, topped up the oil, and followed the family down to the beach. “The sea is just great for swimming,” said Carl. During lunch I decided to sail around a little island about half a mile off shore. Carl was sleepy and the girls were playing in a pool with their dolls, so I went alone.

It took about an hour with a fairly strong wind to get all the way round the island. By then I could see the shore again and I started to feel rather pleased with myself. That was when things began to go wrong.

The breeze which had blown me out so fast was getting stronger. I pulled in the sail tight, but the boat was so light that I was being blown out to sea. At first there had been plenty of people around, but now the sea was almost empty and there was no-one within hearing distance. I howled till my voice gave up, but it was a waste of time.

I was wearing only shorts and a T-shirt and the wind was cruel. The swell grew bigger but I tried not to panic. I said to myself, “Carl knows I’m out here. He’ll get help.” I decided to take down the sail and row, but still nothing happened. I made scarcely any progress. The wind got even fiercer and the sky grew dark. I was in real trouble and I felt awful. I began to pray.

I don’t usually believe in miracles but that’s how I felt about what happened next. A motor boat appeared round the island heading straight towards me. One of the men in it threw me a rope. “Catch pal,” he called. I tied it to a wire hoop on the hull and they towed me back to shore. A woman had spotted me through her binoculars. She saw I was in trouble and sent the boat out to get me.

And where was Carl? Well he’d driven round to the next bay. He thought I must have sailed in there by mistake. Lucky I hadn’t waited for him to rescue me!

I learnt a lot about sailing from that. I’ll give you a tip. Dress warmly and have a good idea of what the weather will do. You don’t want to take a chance out on the water like I did.
Section 5: Word List 1

Now I've got a list of words for you to read. This is a fairly long list. It might not be so interesting for you, but it will be very useful to us.

Please read across, one line at a time. Look at the whole line first and then read it. Please read nice and slowly.

| example | transplant | pulp | golf | peering | pairing | bearing | doll | dole | colt | fire | fireman | fire engine | tower | towers | towering | fewer | cure | curing | batted | battered | sense | cents | assume | presume | nuclear | nude | student | enthusiasm | boring | boar | board | bored | city | seedy | rule | gruel | fault | fort | tune | dune | wear | where | out | eight | oat | Pete | pit | pet | pat | put | pot | putt | baddy | daddy | bee | bay | buy | boy | which | witch | woman | women | no | now | bait | bite | boot | boat | bout | ferry | fairy | bird | bard | stirred | heard | herd | word |
Section 6: Correct the mistakes

I’ve got some sentences on cards that I’d like you to look at. Some of the sentences have got mistakes in them and some of them haven’t. I’d like to know what you think of them. I’m going to give you one card at a time. What I want you to do is have a good look at the sentence on the card and then read it to me the way you’d normally say it. You might have to make some changes.

1. He came out hospital last Thursday.
2. Had you a good time at the dance yesterday?
3. The plant needs watered.
4. Will I turn out the light?
5. Bye bye just now! I’m away home.
6. She’d a leather bag with her.
7. The baby need fed.
8. Who’s all going salmon fishing?
10. Did you not see the cows getting away?
11. I’m off to do the messages.
12. There’s six whales stranded on the beach.
13. Our cat wants stroked.
14. I haven’t even it made yet.
15. It’s just a gift some people’s got.
Section 7: Word list 2

This is the last word list that I’d like you to read. Please read down and read nice and slowly.

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<td>awful</td>
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<td>hearing</td>
<td>hoop</td>
<td>must</td>
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<td>voice</td>
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<td>hour</td>
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<td>wearing</td>
<td>tour</td>
<td>hull</td>
</tr>
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<td>where</td>
<td>howled</td>
<td>plant</td>
<td>pairs</td>
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<td>salmon</td>
<td>fiercer</td>
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<td>when</td>
<td>scarf</td>
<td>take</td>
<td>father</td>
<td>fears</td>
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<td>wither</td>
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</table>

This is the end of the reading tasks.

Section 8: General conversation

Engage the interviewee in conversation for at least 30 minutes (an hour or more is better). Try to find out what their interests are and talk about them.
APPENDIX B

SAMPLE POSTVOCALIC /r/ CROSS-TABULATIONS

In this appendix there are copies of six of the sixty-nine cross-tabulations I produced when analysing postvocalic /r/ in the free speech data. The tables were compared for general patterns and further decisions about the environmental variables were made as a result. There are many empty cells in the tables, sometimes because the combinations are not possible in the language and sometimes because the speakers produced no tokens when interviewed. See section 6.3.3 for further details relating to the analysis.

The tables begin on the following page.
Rhotic realisations in free speech: Philip A. (Rural male, 65+ yrs old, farmer)

<table>
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<th>Vowel:</th>
<th>V_C</th>
<th>V_$/C</th>
<th>V_#/C</th>
<th>V_#/PC</th>
<th>V_#/PV</th>
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<td>4/4</td>
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<td>5/5</td>
<td>4/6</td>
<td>2/2</td>
<td>5/5</td>
<td>5/5</td>
</tr>
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</tbody>
</table>

Notes:
1. (+) = stressed vowel; (-) = unstressed vowel.
2. "P" in an environment means "pause", "$" = syllable boundary, "#" = word boundary; e.g. V_#/PC = word finally following a vowel, with a pause before a following word that starts with a consonant.
3. Fractions in table cells give proportions of tokens realised rhotically, with the total number of tokens to the right of the slant line; e.g. $12/34 = 12$ postvocalic /r/ tokens out of 34 were realised rhotically.
Rhotic realisations in free speech: Emily H. (Rural female, 65+ yrs old, farmer)

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Rhotic realisations in free speech: Duncan F. (Urban male, 40–50 yrs old, socioeconomic status 3)

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Rhotic realisations in free speech: Peter D. (Rural male, 40–50 yrs old, farmer)

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Rhotic realisations in free speech: Dan W. (Urban male, 15–20 yrs old, socioeconomic status 3)

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APPENDIX C

SPEAKER INFORMATION AND INDEX SCORES FOR /r/

The table shows the core information for the people who were interviewed, and gives their index scores for the variables associated with postvocalic /r/ (see chapter 6 for a full description). Note that because of the size of the table it is split into several parts. No real names are used throughout this thesis—all interviewees are represented by pseudonyms.
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**Key:**
Numbers in cells are index scores
'+=' = stressed; '/=' = reduced (e.g. Nurse + = a stressed NURSE vowel)
'Other ' = the following vowels: NORTH, START, NEAR, SQUARE, PRICE, FACE, MOUTH, CURE (i.e. neither NURSE nor LETTER)
Environments: _C = pre-consonantal; _# = word-final, with no break in the flow of speech; _#P = word-final with a following pause.
APPENDIX D

UNROUNDED VOWELS AFTER /w/

The table below presents the results of the analysis of the lexical item *want*, focusing on the degree of rounding for the vowel. Stressed tokens only were counted. The use of an intermediate variant (neither fully rounded nor unrounded) by a reasonably wide spectrum of speakers can be seen. Although the table does not show it, some older speakers used an unrounded vowel consistently. It does appear, though, that this is a remnant form that will soon die out.

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<td>0.02</td>
<td>0</td>
</tr>
<tr>
<td>OUM 1–3</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MUM 1–3</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>YUM 1–3</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(Table continues on following page.)
OUM 4–6 & 21 & 0.76 & 0.10 & 0.14 \\
MUM 4–6 & 14 & 1 & 0 & 0 \\
YUM 4–6 & 24 & 1 & 0 & 0 \\
Total & 421 & & & \\

Notes:
1. The three-letter speaker group codes indicate these three dimensions (in order from left to right):
   1. O = old (65+ yrs old); M = middle (40–50 yrs old); Y = young (15–20 yrs old)
   2. R = rural; U = urban
   3. F = female; M = male
   4. Following numbers (1–3 or 4–6) indicate the socioeconomic status of urban speakers, as determined by the Elley-Irving scale.
      For example: ORF = Old rural female; MUM 1–3 = Middle urban male with socioeconomic status of 1 to 3.
2. Only stressed tokens of the lexical item *want* (and its inflected forms) were counted. The number of tokens per speaker ranged from 0 to 24.
3. The three variants are a rounded vowel in the vicinity of [ʊ], an unrounded vowel in the vicinity of [ɛ], and an intermediate vowel that was neither clearly rounded nor unrounded. The degree of rounding was assessed by an auditory analysis, not an articulatory one.
4. The index score is the proportion of the token count for a given vowel. 1 = 100%; 0 = 0%.