

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

Bell & Howell Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

UMI[®]

NOTE TO USERS

This reproduction is the best copy available.

UMI



Université d'Ottawa • University of Ottawa

**The Mormon Drawl:
Religious ethnicity and phonological variation in southern Alberta**

© Marjory Meechan

Thesis submitted to the School of Graduate Studies and Research in partial fulfillment of
the PhD. degree in Linguistics

University of Ottawa/Université d'Ottawa



National Library
of Canada

Acquisitions and
Bibliographic Services

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale
du Canada

Acquisitions et
services bibliographiques

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-45184-4

Canada

TABLE OF CONTENTS

FIGURES.....	v
TABLES.....	vi
ABSTRACT.....	viii
ACKNOWLEDGEMENTS.....	ix
CHAPTER 1: INTRODUCTION	1
Mormon ethnicity and southern Alberta English	3
The Mormon Drawl.....	4
The variables	5
Method of analysis.....	8
Indexing.....	8
Variable rule analysis.....	9
Acoustic analysis.....	9
General hypotheses and organization of the thesis.....	10
CHAPTER 2: ETHNICITY AND THE MORMONS.....	11
Introduction.....	11
The study of ethnicity	12
The definition of ethnicity.....	14
Religion as a focus for ethnicity in southern Alberta	18
Indicators of ethnic groups as they pertain to Mormons	20
An ethnic group is largely biologically self-perpetuating.....	20
An ethnic group shares fundamental cultural values, realized in overt unity in cultural forms.....	23
An ethnic group makes up a field of communication and interaction	26
An ethnic group has a membership which identifies itself, and is identified by others, as constituting a category distinguishable from other categories of the same order	29
Ethnicity as a sociolinguistic boundary.....	37
Conclusion.....	45
CHAPTER 3: THE SPEECH COMMUNITY IN SOUTHERN ALBERTA	47
The variationist framework	47
The speech community.....	48
Sampling methodology.....	49
The southern Alberta speech community.....	49
Characterization of the Lethbridge speech community	50
Social characteristics of Lethbridge from a Mormon perspective	56
Religious affiliation.....	56
Ancestry and linguistic origins	57
Urban/rural	58
Social class	60
Social Networks	63
Sex.....	64
Age	67
Sample universe.....	68

CHAPTER 4: METHODS OF ANALYSIS.....	69
Data collection.....	69
The social scene in Lethbridge	69
Fieldwork.....	72
Social characteristics of the sample	75
Ethnicity.....	75
Urban/rural	75
Social factors isolated for study.....	76
Sex, age and religious affiliation.....	76
Sex and age.....	77
Linguistic market.....	79
Social network	82
Attitudes.....	85
The interview.....	87
Style.....	89
Methods of analysis	91
The variable.....	91
Circumscribing the variable context	91
Sampling tokens	92
Analysis.....	93
Marginal statistics.....	93
Variable rule analysis.....	93
Indexing.....	94
Acoustic analysis.....	95
Sampling of speakers.....	95
Sampling of tokens	95
Predictions.....	98
The variables	99
CHAPTER 5: FRONT LAX VOWEL LOWERING.....	102
Introduction.....	102
The variable context	105
Analysis.....	107
Marginal statistics.....	108
Linguistic factors.....	108
Preceding environment.....	109
Manner of articulation	109
Point of articulation.....	110
Following environment	111
Variable rule analysis.....	114
Interaction between linguistic factors.....	114
Community factors	118
Index scores	124
Acoustic analysis.....	129
Conclusion.....	137

CHAPTER 6: THE LOW DIPHTHONGS — BACKGROUND AND METHOD	139
Introduction.....	139
Phonological representation	140
Origins of (ay) and (aw) in Canadian English	142
Current status of (ay) and (aw).....	144
Method of analysis.....	150
The variable context	151
Factors	153
Linguistic factors.....	153
Following segment	153
Stress on the diphthong	154
Style	155
Community factors	155
CHAPTER 7: (AW) FRONTING.....	156
Marginal statistics	156
Linguistic factors.....	156
Height	156
Following segment	156
Stress on the diphthong	157
Style	158
Community factors	158
Sex.....	158
Age	158
Variable rule analyses	160
Community factors	160
Linguistic factors.....	161
Analysis across religious groups.....	162
Indexing analysis	164
Fronters as a social category.....	170
Conclusion.....	174
CHAPTER 8: CENTRAL (AY) AND (AW)	176
Variable context	176
Marginal statistics.....	177
Linguistic factors.....	177
Fronting	177
Following segment	177
Stress on the diphthong	178
Community factors	179
Sex.....	179
Age	179
Variable rule analyses	180
Community factors	180
Central (aw)	182
Linguistic factors.....	182
Community factors	184
Central (ay)	185
Linguistic factors.....	185
Community factors	187
Acoustic analyses	188
Conclusion.....	199
Central (aw)	199
Central (ay)	199

CHAPTER 9: DISCUSSION AND CONCLUSION	201
Introduction.....	201
Summary of Results.....	201
Indications of language change.....	202
Indications of prestige.....	203
Religious affiliation and social contact	204
Confounding factors for ethnicity.....	206
Contact.....	206
Substrate effects.....	208
The origin and representation of central (ay) and (aw)	209
Predictions of assimilation theories as they relate to	
Mormons.....	214
Assimilation versus convergence	215
Ancestry.....	216
Boundary maintenance	218
Distinctions between markers of ethnicity	225
Mormons as an emergent or disappearing ethnic group.....	226
Future research.....	227
Conclusion.....	231
APPENDIX I	233
APPENDIX II	234
BIBLIOGRAPHY	259

FIGURES

Figure 1:	The Canadian Shift (Clarke et al., 1995: 212)	7
Figure 2:	Perceived linguistic and nonlinguistic boundary continua (Giles (1979: 275) .	40
Figure 3:	Two Hutterite women and a child on the streets of Lethbridge in their distinctive dress	40
Figure 4:	Degree of ethnic marker accentuation to perceived hardness-softness of linguistic and nonlinguistic boundaries (Giles, 1979: 279).	42
Figure 5:	Map of North America showing position of Lethbridge in relation to Third Dialect area, standard Canadian English area and Mormon culture realm.	51
Figure 6:	Map of Lethbridge and surrounding communities containing members of the sample.	60
Figure 7:	A popular downtown bookstore/coffee shop	69
Figure 8:	Connections between speakers as determined by recommendations for interviews	74
Figure 9:	Connections between Canadian-born speakers.	84
Figure 10:	Comparison of relationship between probability of lowering according to following voicing and following manner of articulation for (ʌ) and (ɛ) before obstruents	117
Figure 11:	Comparison of probability of lowering for (ʌ) across following manner/voice contexts between Non-Mormons and Mormons.	123
Figure 12:	Comparison of index scores for lowering of (ʌ) by sex, age and linguistic market across linguistic styles.	125
Figure 13:	Comparison of index scores for lowering of (ɛ) by sex, age and linguistic market across linguistic styles.	127
Figure 14:	Comparison of index scores for lowering of (ʌ) by network affiliation and linguistic market across styles.	128
Figure 15:	Comparison of index scores for lowering of (ɛ) by network affiliation and linguistic market across styles.	128
Figure 16:	California system (abstracted from Luthin, 1987: 314).	130
Figure 17:	Vowel system before stops of Margaret Morgan (age 32).	131
Figure 18:	Vowel system before stops of Steven Stryker (age 43).	132
Figure 19:	Vowel system before stops of Mike Mackenzie (age 21).	133
Figure 20:	Vowel system before stops of Julie Johnson (age 18).	133
Figure 21:	Vowel system before stops of Jane Jackson (age 42).	134
Figure 22:	Vowel system before stops of Colleen Cox (age 18)	135
Figure 23:	Vowel system before stops of Robert Brewer (age 30).	136
Figure 24:	Vowel system before stops of Edward Evans (age 18)	137
Figure 25:	Percentage of central (aw) along the front/back dimension.	149
Figure 26:	Comparison of (aw) fronting indexes for age and religion by style.	165
Figure 27:	Comparison of (aw) fronting index for age and sex by style: Mormons only	166
Figure 28:	Comparison of (aw) fronting index for age and sex by style: Non-Mormons only	167
Figure 29:	Comparison of (aw) fronting index for age and sex by height value of the diphthong.	167
Figure 30:	Comparison of (aw) fronting index for age and sex by height value of the diphthong for the Mormons.	168
Figure 31:	Comparison of (aw) fronting index for age and sex by height value of the diphthong for the Non-Mormons.	169
Figure 32:	Comparison of (aw) fronting index for linguistic market and social network affiliation by style	169
Figure 33:	Connections between Canadian-born speakers. Fronters are indicated with shaded circles.	172
Figure 34:	(aw) before stops (incl. nasals) of Steven Stryker (age 43).	188
Figure 35:	(aw) before stops (incl. nasals) of Margaret Morgan (age 32).	189

Figure 36: (aw) before stops (incl. nasals) of Michael Mackenzie (age 21).....	190
Figure 37: (aw) before stops (incl. nasals) of Julie Johnson (age 18).....	191
Figure 38: (aw) before stops (incl. nasals) of Jane Jackson (age 42).....	191
Figure 39: (aw) before stops (incl. nasals) of Colleen Cox (age 18).....	192
Figure 40: (aw) before stops (incl. nasals) of Robert Brewer (age 30).....	193
Figure 41: (aw) before stops (incl. nasals) of Edward Evans (age 18).....	193
Figure 42: (ay) before stops (incl. nasals) of Robert Brewer (age 30).....	194
Figure 43: (ay) before stops (incl. nasals) of Edward Evans (age 18).....	195
Figure 44: (ay) before stops (incl. nasals) of Jane Jackson (age 42).....	195
Figure 45: (ay) before stops (incl. nasals) of Colleen Cox (age 18).....	196
Figure 46: (ay) before stops (incl. nasals) of Steven Stryker (age 43).....	196
Figure 47: (ay) before stops (incl. nasals) of Michael Mackenzie (age 21).....	197
Figure 48: (ay) before stops (incl. nasals) of Margaret Morgan (age 32).....	198
Figure 49: (ay) before stops (incl. nasals) of Julie Johnson (age 18).....	198
Figure 50: Following segment probabilities for central (ay) and (aw) according to religious group.....	210
Figure 51: Percentage of central (ay) across following segment contexts for individual speakers by age and religion.....	211
Figure 52: Percentage of central (aw) across following segment contexts for individual speakers by age and religion.....	212
Figure 53: Style difference in central (ay) and (aw) across Mormon speakers by age.....	215
Figure 54: Percentage of central (ay) and (aw) across following segment contexts for individual Mormon speakers by ancestry:.....	217
Figure 55: Perceived linguistic and nonlinguistic boundary continua.....	219

TABLES

Table 1: Social acceptance for various religious denominations.....	34
Table 2: Phonological stages in the progress of assimilation (Wolfram, 1974).....	38
Table 3: Three stage model for the rise of ethnic sociolinguistic patterns (Laferriere, 1979: 611-612).....	38
Table 4: Comparison of educational levels across religious affiliation for Albertans (Statistics Canada, 1993b).	63
Table 5: Speakers by hometown and current place of residence ranging from furthest distance from Lethbridge to closest.....	76
Table 6: Stratification of Canadian-born speakers.....	76
Table 7: Distribution of speakers according to religious affiliation and network affiliation.....	83
Table 8: Sample types for acoustic analysis.....	96
Table 9: Templates for coding of diphthongs.....	101
Table 10: Variants of front lax vowels.....	107
Table 11: Percentage of lowering according to preceding voicing.....	110
Table 12: Percentage of lowering according to preceding point of articulation.....	110
Table 13: Factors contributing to the probability of lowering of (ʌ) and (ɛ) in Toronto (Clarke et al., 1995).....	112
Table 14: Percentage of lowering according to following voicing.....	112
Table 15: Percentage of lowering according to following manner of articulation.....	113
Table 16: Percentage of lowering according to following point of articulation.....	113
Table 17: Percentage of lowering according to phrase position.....	114
Table 18: Linguistic factors contributing to the probability of front lax vowel lowering in southern Alberta English.....	116
Table 19: Percentage of lowering according to religious affiliation.....	118
Table 20: Percentage of lowering according to network affiliation.....	119
Table 21: The contribution of sex, age, religious affiliation, linguistic market and style to the probability of front lax vowel lowering in southern Alberta English.....	120

Table 22:	Factors contributing to the probability of front lax vowel lowering according to religious group.....	122
Table 23:	Variants of the low diphthongs and the proportions in which they occurred.....	152
Table 24:	Percentage of front (aw) according to diphthong height.....	156
Table 25:	Percentage of front (aw) according to following segment.....	157
Table 26:	Percentage of front (aw) according to stress on the diphthong.....	157
Table 27:	Percentage of front (aw) according to style.....	158
Table 28:	Percentage of front (aw) according to sex of the speaker.....	158
Table 29:	Percentage of front (aw) according to age of the speaker.....	158
Table 30:	Percentage of front (aw) according to religious affiliation.....	159
Table 31:	Percentage of front (aw) according to network affiliation.....	160
Table 32:	The contribution of sex, age, linguistic market and religious affiliation to the probability of front (aw) in southern Alberta English.....	161
Table 33:	Linguistic factors contributing to the probability of front (aw) in southern Alberta.....	162
Table 34:	Factors contributing to the probability of front (aw) across religious groups.....	163
Table 35:	Speaker characteristics of fronters and non-fronters grouped according to speakers with extreme fronting scores above 15%.....	171
Table 36:	Percentage of raising according to manner of articulation of the following segment: all contexts considered.....	176
Table 37:	Percentage of central (aw) according to fronting.....	177
Table 38:	Percentage of central variants according to following segment.....	177
Table 39:	Percentage of central variants according to stress on the diphthong.....	178
Table 40:	Percentage of central variants according to sex of the speaker.....	179
Table 41:	Percentage of central variants according to age of the speaker.....	179
Table 42:	Percentage of central variants according to religious affiliation.....	179
Table 43:	Percentage of central variants according to network affiliation.....	180
Table 44:	The contribution of social factors and style to the probability of the central variant.....	181
Table 45:	Linguistic factors contributing to the probability of central (aw) across speaker groups.....	182
Table 46:	Social factors contributing to the probability of central (aw) across speaker groups.....	184
Table 47:	Linguistic factors contributing to the probability of central (ay) across speaker groups.....	186
Table 48:	Social factors contributing to the probability of central (ay) across speaker groups.....	187
Table 49:	Comparison of relevant social factors significantly favoring designated variants across variables.....	202
Table 50:	Percentage of central variants across contexts before voiceless consonants.....	205
Table 51:	Contribution of individual speakers to the probability of central (ay) and (aw) in the "fronter" network.....	207
Table 52:	Assessment of Mormon assimilation of (ay) and (aw) according to Wolfram's model (Wolfram, 1974).....	214
Table 53:	Assessment of Mormon assimilation of (ay) and (aw) according to Laferriere's model.....	214
Table 54:	Percentage of central variants according to American ethnic origin: Mormons only.....	216
Table 55:	Cross-tabulation of Mormon speakers for linguistic market and ethnic origin.....	217
Table 56:	Predictions and results based on boundary theory.....	221
Table 57:	Contribution of social factors to the probability of central (ay) and (aw) in the non-Mormon community (Network speaker excluded).....	222
Table 58:	Hypotheses regarding the southern Alberta speech community.....	230.

ABSTRACT

This thesis investigates the effect of ethnicity on phonological variation with a comparison of the speech of Mormons and non-Mormons in Lethbridge, Alberta, Canada. On non-linguistic grounds, Mormons are shown to be an ethnic group in southern Alberta. Using variationist methodology, the social and linguistic conditioning of five variables; front lax vowel lowering, (aw) fronting and the height alternation in the low diphthongs (i.e. Canadian raising), is compared. In particular, possible effects of Mormon ethnicity are explored. The results show that Mormon religious affiliation is a primary factor in height variation of the low diphthongs and only indirectly involved with other variables. The conclusion is that the use of low variants of the low diphthongs before voiceless consonants is a marker of Mormon ethnicity in this community although it is mediated by contact between groups. All other variation shows no direct evidence of ethnic significance and any differences can be attributed to the social isolation of the Mormons rather than their ethnic identity. Ethnicity is shown to be a factor in the potential for change across the community as a result of "linguistic pursuit" in the maintenance of the ethnic boundary between Mormons and non-Mormons in southern Alberta.

ACKNOWLEDGEMENTS

Nobody ever writes a thesis alone and I am no exception. Without the support and assistance of a virtual legion of people, I would not have been able to complete this work.

Over the years, I have benefited from many great teachers. In particular, I want to thank Lois Stanford and Bruce Derwing at the University of Alberta who first kindled my interest in linguistics. During my graduate studies, I found other excellent teachers like Doug Pulleyblank, Ian MacKay and Shana Poplack at the University of Ottawa who have not only helped me to gather the knowledge necessary to undertake and understand the research in this thesis but have inspired and supported me in numerous ways. Without Doug's strong encouragement and Shana's enthusiastic nudging, I'm not sure I would have even entered the doctoral program. Although I never followed any classes with them, André Lapierre, Eta Schneiderman and Phil Hauptman have also been very encouraging.

Of course, I could not have gone on without the support of many of my fellow students. Sali Tagliamonte, Keltie Purcell, Darlene LaCharité, Janet Bengert, Ejike Eze, Svitlana Budzhak-Jones, Margaret Ling, Moussa Ndiaye, Alicia Wells, Danielle Turpin and Gerard van Herk participated in many wonderful (and sometimes goofy) discussions and gave me lots of emotional support. I want to particularly thank James A. Walker and Dawn Harvie who not only helped me wrangle with the big scary questions but also kept me electronically connected to the U of O even when I was many miles away. Without this, I don't think I could have stayed with my husband in Barbados for the last two years. My husband greatly appreciated this and so did I. Of course, over the entire course of my graduate degree(s), I would have to say that nobody has been more there for me than my friend and co-author, Michele Foley. I never could have written that syntax paper without her.

Besides fellow students and teachers, there have been several other people who have contributed to the writing of this thesis. I am particularly grateful to the linguistic market judges, James Walker, Keltie Purcell, Charles Boberg, Jack Chambers, Sandra

Clarke and Sali Tagliamonte. Their participation was invaluable and greatly enhanced the thesis and I thank them. The Canadian linguistics community and, in particular, Jack Chambers and Sandra Clarke, has also provided me with a great deal of emotional support over the years. They encouraged me in my desire to study standard Canadian English when all others were bewildered as to why I should care about such a boring dialect. I hope this thesis rewards their faith in me. Marianna Di Paolo has also been extremely helpful, recommending references and alerting me to the possibility that Mormons could be considered an ethnic group. Her guidance was greatly appreciated. Greg Guy and William Labov also gave me many helpful suggestions. I especially want to thank David Sankoff for putting up with my interminably stupid questions about statistics in general and Goldvarb in particular. I think I've almost gotten it. I also want to thank Henrietta Cedergren for her advice regarding Signalyze and phonetic sampling methodology.

Of course, the person in my academic life who has been most influential is my supervisor, Shana Poplack. When confusion, boredom and loneliness reigned, she bucked me up, turned me in the right direction and set me back on the path. Working with Shana has been one of the most valuable experiences in my life. I can truly say that I have learned an enormous amount from her. As well as an opportunity for professional growth, Shana also provided me with a great deal of financial support by allowing me to work on her language contact project. In that regard, I would also like to thank the Social Sciences and Humanities Research Council of Canada for granting me graduate fellowship #752-92-0380. I greatly appreciated the money as did my husband who assumed much of the other funding of my studies.

Many people outside the academic community have also been very instrumental in keeping me (relatively) sane. My friends Pamela Branch, Philippe Chatelain, Allison Haupt, Don Lawryniuk and Cathy Olson, although they all live very far away, have been my link to the outside world and I know they will be happy for me now. I also want to thank my mother, Margaret Ross, and the rest of our family (both Ross and Meechan)

who, even though they have no idea what I am doing and harbour grave doubts that all this studying will ever lead to anything as important as a job or money, have remained supportive and have even expressed pride in my accomplishments (whatever they are). I also want to thank all our Barbados "cousins", particularly Alan and Hazel Ann Batson and all the rest of the Batsons, whose invitations up onto the "hill" have provided a welcome respite from the aggravations of thesis writing. Of everyone, though, I have to say that my husband David has been the true driving force behind this effort. Many times when I wanted to quit, he wouldn't let me and urged me on with the inspirational words; "just finish it!".

Last, but not least, I want to thank the wonderful people in Lethbridge, Alberta who agreed to talk to me about their lives, feelings, thoughts and opinions. This thesis could not have been written without them. I truly enjoyed meeting every one of them and although I cannot mention them by name since part of the agreement was that they would be anonymous, I hope that if they someday read this, they can know that they have made a very real and invaluable contribution to our understanding of human behaviour. I am particularly grateful to the ladies at the Lethbridge Family History Centre who introduced me to many of these people. Their work in connecting the past to the present is very important and I hope this thesis is a contribution to that effort.

CHAPTER 1: INTRODUCTION

"I look down at the immense width of prairie space, its fields and rivers and geological folds, and then I catch a glimpse, finally, of that strange improbable disc of population at its centre. Why of all places is it there and who is it that lives in this random spot? And then the thought comes to me; I do. This is my home, the place I come from." (Shields, 1997)

Horowitz (1975:34) asserts that the formation and maintenance of group identity is linked to two basic properties in the life experience and personality of every human being; a "sense of belongingness" and "self-esteem". As its connection to nation shows (Fishman, 1985), ethnicity is intimately tied to these qualities. Ethnicity is the way we connect ourselves to "home" and in that sense it is possibly at the heart of all human social organization.

The social expression of ethnicity can be accomplished in a myriad of ways, not the least of which is the use of language (Fishman, 1977). In multicultural settings, ethnicity can be expressed linguistically either by the use of different languages or by means of phonological or other grammatical distinctions between varieties in the same language (Labov, 1966/1982; La'ferriere, 1979; Wolfram, 1974). Phonological markers of ethnicity are most often variable and continuous rather than categorical and discrete (Giles, 1979). Furthermore they are "probabilistic" in the sense that not all members of the group will employ them and even individual members will not use them in all contexts (Giles, 1979: 266). In particular, how variable phonological markers of ethnicity are distributed can indicate both social *integration* as well as *differentiation*.

Ethnicity is frequently entangled with a complex of social characteristics, any or all of which may influence variation. For example, proposing ethnicity as an explanation of African American Vernacular English (AAVE) as a distinct variety of American English has been confounded by the possible effects of race, geographical distribution and social class. Substrate effects from a group's ancestral language or dialect especially where the ancestral language is not English may also play a role. Speech markers may arise in subordinate

ethnic groups either directly or due to hypercorrection¹ because of voluntary or involuntary influences from the substrate language or dialect (Giles, 1979). The study of ethnic variation in the English of Irish and Italian Americans in Boston (Laferriere, 1979), Cajuns in Louisiana (Dubois & Horvath, 1998) and Hispanic Americans in other parts of the country (e.g. Wolfram, 1974) has confirmed this.

These confounding factors aside, ethnicity is still a complex notion and embodies a number of properties that may or may not determine linguistic behavior. Intuitively, it seems likely that ethnicity signals social ties and allegiances in the community as a function of the extent to which individual members of an ethnic group define their identity in terms of the group. However, showing a direct relation between ethnicity and its marking in speech is an even more difficult task than found in the study of other social categories. As Giles (1979: 251) notes, ethnic groups "vary simultaneously on a vast range of dimensions, including history, territory, demography, institutional support and their economic and political relationships with other contrasting ethnic groups".

In this thesis, the effects of ethnicity on phonological variation will be studied by comparing the speech of Mormons and non-Mormons living in southern Alberta. According to Ursenbach and Jensen (1976), southern Alberta Mormons can be distinguished from their neighbours by their accent, locally referred to as the "Mormon Drawl". As we will see, Mormons in southern Alberta can be considered an ethnic minority but they differ from those studied elsewhere in that they are uncontaminated by many of the traditional confounding factors associated with ethnicity. Furthermore, unlike most minority ethnic groups, the fact that they hold some power in the community makes them an ideal study for examining the direct influence of ethnicity on linguistic behaviour.

¹Hypercorrection occurs when speakers use even more of the standard variant either overall or in relevant linguistic and social contexts than the group of speakers that they are emulating.

Mormon ethnicity and southern Alberta English

The data on which this study is based comes from speakers of Canadian English living in or around the city of Lethbridge, Alberta. Lethbridge is the third largest city in Alberta with a population of approximately 61,000 people, located about 400 kilometres south of Calgary and about 100 kilometres north of the US border. It was founded only a little over a hundred years ago as a coal mining town attracting migrants from all over Europe (den Otter, 1982; 1990) but most of those who ultimately settled the area were of British and northern European ethnic origin. Although some arrived directly from these places, the majority came from both eastern Canada and the United States and still do (Avis, 1978/1983).

Unlike other American immigrants to southern Alberta at that time, the Mormons constituted a cohesive group which held strong ties to a specific place of origin, Utah, where the seat of their faith resided (and still does). Further, their motivation to emigrate was not purely economic (although this was a consideration) and not necessarily for the long term (Louder, 1990; Tagg & Palmer, 1978; Ursenbach & Jensen, 1976)². Many Alberta Mormons had strong loyalties to the 'old country' (Utah) (Louder, 1990; Tagg & Palmer, 1978) and indeed, there is still a great deal of contact with and affection for Utah to this day (Ursenbach & Jensen, 1976).

Thus, the founders of the Mormon community were native English speakers of a dialect that is almost indistinguishable from the larger community in which they were situated. From the very beginning, they played a prominent role in the development of the region so their "immigrant" status is no different from that of other founding groups in Alberta. Furthermore, there are no strong social constraints that prevent them from participating fully in southern Alberta society. Physically, they are indistinguishable from their neighbours and in fact, for the most part, their ethnic classification (e.g. on the basis of the old world nationality of their ancestors) almost exactly mirrors that of the larger

²Lehr (1988) notes that Card (the leader of the expedition) always viewed the Canadian expedition as temporary exile and not settlement.

community. Although they originally settled in (self-) segregated communities, no one area of urban Lethbridge can currently be designated as "the Mormon part of town" so there is no synchronic reason for physical isolation to be a factor. In Chapter Two, we will argue that it is only with respect to markers of group membership that these speakers differ. Most notably, there are conflicting pressures within the group to conform to both the standards of behavior and influence of the Utah-centred Mormon Church³ as well as influences beyond the group to conform to the larger community.

The Mormon Drawl

In southern Alberta, Mormons are identified both by themselves and others as a group of people who speak a little differently as revealed in example (1) taken from an interview with a non-Mormon resident of Lethbridge.

- (1) There is a bit of a Mormon kind of a style of talking ... around here.
 It's sort of a drawl kinda that you hear. (Spkr 004, Cass 4:
 1.15.10)⁴

This distinction may be directly related to Mormon group identity centered around small rural Mormon communities. When asked about accent differences, a Mormon resident of Lethbridge explains it as in (2),

- (2) It's the same as if you're from Edmonton, you speak different than
 if you're from Cardston and you got the Mormon drawl. (Spkr
 003, Cass 3: 34.07)

At least three speakers indicated that they had either been identified as southern Albertans or (more often) as Americans in other parts of Canada. This may be related to the Mormon Drawl in that, as the Mormon woman notes in (3), there is reason to believe that it has American dialect features.

- (3) Americans talk differently and I'm not just talking about southern
 accents. Although in southern Alberta, we have more of an
 American quality in our voice. I know when I moved to Edmonton,

³Technically, it is incorrect to refer to the Church of Jesus Christ of Latter Day Saints as "The Mormon Church" but in the interest of clarity (and brevity), they are so referenced here. My apologies if this offends anyone.

⁴Examples are referenced by speaker number, cassette number, and time on the cassette where the example occurred. Hesitations and intervening remarks by other participants in the interview have been deleted from quotes.

several people commented on my southern accent. (Spkr 009, Cass 11: 59.28)

However, these testimonials to the Mormon drawl are by no means evidence of its existence, its origins or its relevance to social distinction in southern Alberta. Where social distinctions exist, linguistic distinctions may be ascribed to minority groups even where they may not actually occur. Giles (1979) suggests that where speakers have no recourse to actual differences in subordinate group speech, they may invent them perceptually.⁵ Furthermore, even if a distinction between Mormons and others did at one time exist, it may not now. Not all residents of southern Alberta are aware of the Mormon Drawl. This study will provide quantitative evidence using variationist methodology that phonological variation in southern Alberta is, indeed, tied to Mormon ethnicity.

The variables

A basic tool in variationist research is the *sociolinguistic variable* (e.g. Labov, 1963), an abstract construct defining a set of variants operating in some functional and/or structural domain. To study the relationship between Mormons and the larger southern Alberta community, a number of phonological variables will be examined to evaluate the degree to which patterns of variation mark Mormon ethnicity. The variables to be studied are height alternations in the low diphthongs (ay)⁶ and (aw) as well as fronting of (aw) and the lowering of the front lax vowels (ɪ) and (ɛ). These have been chosen because they can be compared to variable patterns found by previous research to occur in other standard North American and Canadian varieties of English. At least one case has been cited as a distinguishing feature between Canadian and American English.

Although the distinction is slight, Canadian and American English differ and Canadians in the United States can be identified by their accent. As Ursenbach and Jensen (1976: 299) note, the Canadian accent is "recognized by the shortening of the vowels,

⁵Williams, Whitehead and Miller (1971) found that White Americans shown a videotape of a Black child denigrated its speech even though they had substituted the voice of a White child.

⁶Following the standard conventions of sociolinguistics, variables are enclosed in parentheses. Variants will occur in square brackets, e.g. [ay] ~ [əy], and phonemes in virgules, e.g. ay .

especially the *ou* diphthong, and a frequent inclusion of the shibboleth "eh?" (Ursenbach & Jensen, 1976: 299-300). The fact that (aw) is singled out as a mark of Canadian speech in Utah is not surprising. The centralization of the diphthong (aw) (and also (ay)) before voiceless consonants (Bloomfield, 1948/1973; Joos, 1942), (popularly called "Canadian raising" (Chambers, 1973)⁷), is one of the most notorious features distinguishing Canadian English from American English. We assert that the distinction between Canadian and American low diphthongs has been adapted in southern Alberta Mormon speech as a marker of Mormon ethnicity.

However, as has been observed in other parts of Canada (Chambers, 1981; Chambers & Hardwick, 1986; Davison, 1987; Hung, 1987; Kinloch & Ismail, 1993), (ay) and (aw) are variable across the community in southern Alberta as shown in example (4).

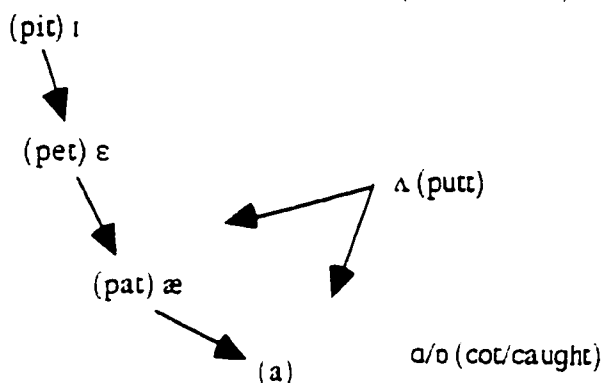
- (4) (a) It's wrong the way we say it but of course it's right [ay] the way they say it. But of course, if you look at it and you look at the word, they're not pronouncing their vowels right [ay]. (Mormon, Spkr 018, Cass 20: 2:00.00)
- (b) Yeah, I wanna build a *house* [ɛw]. I wanna buy a *house* [ɔw] soon, ... just a nice simple *house* [aw] for us. (Non-Mormon, Spkr 023, Cass 26: 43.50)

Speakers vary their pronunciation in the same discourse, same phonological environment and even in tokens of the same lexical type (*right* in (4a) and *house* in (4b)). These are classic indications of a sociolinguistic variable. Speakers may systematically alternate between one or more forms to say the same thing and this may reflect speaker attitudes and loyalties towards particular groups in the community (Hinton, 1987; Labov, 1963; Wolfram, 1993b). Although our main hypothesis is that distinct patterns of variation in (ay) and (aw) can be directly connected with affiliation with the Mormon community, the diphthongs are not the only part of the vowel system showing variation in southern Alberta.

⁷There is quite an assortment of names for this alternation (e.g. besides 'Canadian raising', we also have Diphthong Laxing (Chomsky & Halle, 1968), Diphthong Shortening (Jensen, 1993; Nespor & Vogel, 1986) and just 'Raising' (e.g. Karttunen, 1993; Lakoff, 1993). Trudgill (1986) noted that it might also be better represented as 'failure to lower'. For the remainder of the thesis, to avoid making a commitment to the nature of the rule, we will refer to it as height alternation.

Clarke et al. (1995), found that the vowel systems of young Torontonians show strikingly similar patterns of shift to those observed in California English (Hinton et al., 1987; Luthin, 1987). They speculate that this indicates a general change taking place in what has been termed the 'third dialect' of North American English (Labov, 1991) with variable fronting of back vowels and lowering of the front lax vowels /ʊ/ as in *bit*, *kid*, etc. and /ɛ/ as in *bet*, *friend*, etc. as shown in Figure 1.

Figure 1: The Canadian Shift (Clarke et al., 1995: 212)



Geographically, southern Alberta falls within this dialect area and so its speakers should also be subject to the vowel shift noted in Toronto. As shown by the excerpts from the data in (5) where the front lax vowels /ʊ/ and /ɛ/ are variably lowered, this appears to be the case.

- (5) (a) And to get to the university, it's about *fifty* [fʊtʰi] *minutes* [mɛnɛts], forty-five to *fifty* [fʊtʰi] *minutes* [mɛnɛts]. (Spkr 021, Cass 25: 20.26)
- (b) So you kinda *felt* [fælt] like there was something that should occur there but both of us were kind of "No. No." You know, you didn't want this to occur but- So, you kinda *felt* [fælt] like it was probably right, then. 'Cause, he *felt* [fælt] the same kind of a really funny feeling. (Spkr 012: Cass 14: 0.54.50)

The comparison of the low diphthongs where the alternation has a long-standing history of distinguishing dialects (i.e. Canadian English from American English) with front lax vowel lowering, a relatively recent innovation, will test the hypothesis that substrate influences are primary in ethnic differentiation. Despite differences across groups, we will see that only some of the variation in southern Alberta has implications for formation and

maintenance of ethnic boundaries although our study will show that other characteristics of ethnic groups may play a role in the incipient formation of "new" markers in the community.

Method of analysis

Given that the purported markers of social difference in southern Alberta are not categorically distributed, the variationist method is ideal for its study. By determining how the variants of these variables are distributed among the speakers in the sample, we can determine if there are, in fact, different patterns of variation between Mormons and non-Mormons in southern Alberta. To verify any difference, other social factors within groups will be examined to determine what properties in particular may account for any differentiation which may be observed. There is also the question of change. Is there any evidence that use of any particular variants is increasing or decreasing in southern Alberta English? In particular, is there evidence that these speakers are converging, diverging or maintaining a stable social distinction? A number of variationist methodologies will be employed in order to provide a multifaceted look at the data.

Indexing

Since variation need not necessarily involve alternation between easily discriminable discrete categories but rather occurs along a continuum (Berdan, 1978; Giles, 1979; Wolfram, 1991a) (particularly when the variable in question is a vowel), the researcher must impose categories (possibly arbitrary) on different areas of the continuum in order to associate degree of variation with any of the factors which may be relevant to its use. One method of quantifying variation in this situation is by assigning a value to points along the continuum. Each token uttered by the speaker is evaluated for this measure and then the mean value or index is calculated.

Using an index has the advantage of more closely capturing the fact that variation occurs along a continuum in each dimension but it can be cumbersome to associate with a wide variety of linguistic conditioning contexts. In any case, many previous studies of

height alternation in the low diphthongs have employed it (e.g. Britain, 1997; Chambers, 1981; Chambers, 1987; Chambers, 1989; Chambers & Hardwick, 1986; Cook, 1969; Davison, 1987; Hung, 1987; Hung et al., 1993). It has also been used in studies of front lax vowel lowering (e.g. Berdan, 1978). Thus, in the interest of comparability, the variables will be examined from an indexing point of view. However, in order to see more clearly the social and linguistic structure of the variation and to determine which factors are relevant a variable rule analysis (Sankoff, 1988b) will also be employed.

Variable rule analysis

The variable rule analysis is an important tool in the study of variation. Although it too requires arbitrary classification of the vowel space, multivariate analysis, in this case, using Goldvarb 2.1 for the MacIntosh (Rand & Sankoff, 1992), allows us to determine not only the probability that one variant or another will occur in any context but also if there is a statistically *significant* difference between those contexts. More importantly, we can also determine which of a number of (possibly conflicting) explanations is most likely in accounting for any variation. Thus, the social factors relevant to ethnicity and language change as well as linguistic factors can be simultaneously examined.

Acoustic analysis

Labov (1991) asserts that no examination of vowel variation is complete without an acoustic analysis of the entire vowel system of the speaker. An acoustic analysis of vowel systems will allow us to see how oppositions between items perceived as relatively high and relatively low are being maintained. Do speakers show consistent and, in particular, instrumentally measurable differences? Are the differences attributable only to acoustic qualities related to height, i.e. F1 values,⁸ or are other dimensions also involved? Furthermore, by examining the complete vowel system, we can determine to what extent these speakers show evidence of participating in a general Canadian vowel shift or if lax vowels are the only elements affected.

⁸F1 = the first formant, F2 = the second formant, etc.

General hypotheses and organization of the thesis

The principle hypothesis is that Mormon ethnicity is marked by distinct patterns of phonological variation. To show that this is the case, we will examine the patterns of variation across the community with particular attention to potential confounding factors. Thus, to establish that ethnicity as a social category is relevant to the distinct linguistic behaviour of the Mormons in southern Alberta, we will pay particular attention to the following competing hypotheses to ethnic boundary maintenance.

Phonological variation results from:

- (a) social isolation of Mormons.
- (b) substrate effects related to the American ethnic origin of Mormons.

By confronting the possibility that these explanations play a role in ethnic variation in southern Alberta, we can attempt to rule them out. We will see that even when these are taken into account, the factor of ethnicity alone still exerts an effect on at least some of the variation.

As a preliminary step, Chapter Two establishes on non-linguistic grounds that Mormons are an ethnic group in southern Alberta. Chapters Three and Four describe, in detail, the methodology employed in the thesis as well as a complete description of the speech community under study. Chapter Five provides an analysis of front lax vowel lowering. Chapter Six provides background to the study of the low diphthongs. In Chapter Seven, (aw) fronting is examined. Chapter Eight shows the analysis of the height alternation of (ay) and (aw). In Chapter Nine, the results are amalgamated and discussed. The results will support the conclusion that the Mormons have remained immune to "Canadianization" of their dialect in the form of "Canadian raising" as a direct result of their Mormon ethnic identity.

CHAPTER 2: ETHNICITY AND THE MORMONS

Introduction

A number of researchers have argued that the unique circumstances surrounding the formation and development of Mormon settlements in the West has led to the emergence of a Mormon ethnic identity (e.g. Baker, 1986; Dawson, 1936; May, 1980; O'Dea, 1957; Parry, 1990). In fact, Francis O'Dea called Mormons "the clearest example to be found in our [the USA] national history of the evolution of a native and indigenously developed ethnic minority" (O'Dea, 1957: 116). However, religion as the sole focus for ethnicity without direct reference to a corresponding national identity is controversial.¹ The Jews may constitute the clearest example but in that case there is some claim to ancestral ties with a specific homeland. The Mormon situation is not so straightforward since, on the surface, they lack what many consider to be the most important characteristics of an ethnic group, i.e. ancestral continuity from an ancestral homeland and distinct shared cultural values. Even so, Isajiw (1990) found that Jews in Toronto show a high degree of ethnic identity retention across generations indicating that religion can be a strong focus for ethnic identity.

Kaye (1991) has objected strongly to using religion as the basis of linguistic differences as reflected in terms like 'Jewish English' and 'Mormon English' stating that most of the evidence for linguistic difference between these minority groups and mainstream society involves terminology. He notes that while in some communities, Jewish ethnicity has been associated with distinct linguistic behaviour (e.g. Feinstein, 1980; Labov, 1966/1982; Laferriere, 1979), there is no indication that some world-wide, or even American variety of English exists that is specific to Jews, and the evidence is even more sparse for Mormons. In comparison, African American English, although it does show some regional differences, has a clearly identifiable core of features that are present in virtually all varieties (Wolfram, 1991a). Furthermore, even if social behaviour can be

¹Cases such as Catholics and Protestants in Northern Ireland (1998a; McCafferty, 1998b) are also confounded by geographical or national considerations.

unambiguously correlated with religious affiliation, it is not clear that some kind of religious ethnicity is necessarily the factor in play. Other kinds of social organization such as social class or as yet undetermined classifications may be more relevant. For example, Mauss (1990: 345) proposes that it would be of more use to label Mormons as a "subculture" or "cognitive minority" rather than an ethnic group because he claims that their social behavior and beliefs are not significantly different from non-Mormons.

The extent to which the study of the Mormons can contribute to our knowledge of ethnicity as a factor in linguistic differences depends very much on the validity of characterizing them as an ethnic group. Before examining the question of how Mormon ethnicity affects phonological variation in southern Alberta, we first need to establish that ethnicity is, indeed, the relevant factor in Mormon social organization. In this chapter, we examine definitions and theories of ethnicity and show how they can be applied to characteristics of southern Alberta Mormons.

The study of ethnicity

In the last century, there has been an increasing interest in ethnicity as an organizing force for social groups. Such varied disciplines of the social sciences as psychology, philosophy, sociology, anthropology as well as linguistics have all made contributions to our understanding of ethnic group behaviour. In fact, work in anthropology and sociology has dominated the study of ethnicity (e.g. Banton, 1978; Barth, 1969; Dashelsky, 1975; Isajiw, 1974; 1990; Le Page & Tabouret-Keller, 1985; Reitz, 1980; Ross, 1979; Tajfel, 1978a; Turner, 1982; Vogt & Albert, 1966).

Early anthropological studies of ethnicity approached it with the primary goal of identifying distinctive cultures. In this "objectivist" view, where two societies exhibit distinct institutions and cultural practices, they are generally regarded as distinct ethnic groups. Alternatively, work in sociological frameworks has taken a more "subjectivist" view, considering symbols of ethnic identity to be the *result* of group loyalties, not just indicative of them. For example, Ross (1979: 3) characterizes ethnicity as "a shared we-

feeling among a collectivity that may be internally differentiated along several objective dimensions". In this approach, language and religion, although possible markers of a particular ethnic identity, are only some ways that an ethnic group may find expression and not identifying features of ethnicity *per se*.

The objectivist approach has been sharply criticized as a method for defining the concept of ethnicity *both* for the purpose of identifying ethnic groups and for determining the intrinsic properties of ethnicity. As Barth (1969) noted, the objectivist approach fails to take into account the effects of change on a society. Defining an ethnicity purely in terms of changeable cultural markers may lead the researcher to designate the same ethnic group as two distinct groups over time or vice versa. Barth also rejects the utilization of "overt institutional forms" for identifying an ethnic group since they can be determined both by ecology² and transmission of culture. This could also lead to the classification of a single ethnic group ranged over a variety of ecologies as more than one.

In particular, Barth observes that there is a special danger of circularity in the objectivist approach because how ethnicity is defined has implications for what distinctive properties we then observe in ethnic groups. For example, if we determine a distinctive language to be a defining property of ethnicity and as Fishman (1985) points out, they are undoubtedly linked, it will not be surprising if we then discover that all ethnicities can be distinguished in some way by linguistic behaviour. Discovering the relationship between ethnicity and its linguistic expression requires that we define them independently of one another. As Fishman (1977: 41) states, "the recurring link between language and ethnicity cannot be fathomed without greater systematic familiarity with the nature, the mutability and the manipulability of ethnicity *per se*."

Ross (1979) asserts that both the objective and subjective approaches have utility depending on the type of group to be analyzed. Isolated communal groups³ whose

²By "ecology", he means different social and geographical circumstances in their physical environment.

³For example, the Hutterites in Alberta could be such a group, as we discuss later.

behaviour requires little reference to relationships with other groups for interpretation can be analyzed objectively. In the case of *minority* groups (classified as such due to relative powerlessness in the general society), a subjective approach is required since their identity is determined both internally within the minority and externally by their relationship with the majority group and thus, at least *some* aspects of their role and identity are not completely within their control. This notion of internal and external determination of ethnic identity is repeated again and again across theories of ethnicity. Obviously, it is central to the definition of ethnicity in that it captures the fact that ethnicity as an organizing force is meaningless without an element of contrast between ethnic groups. In fact, this contrastive aspect is probably the only truly objective criterion by which ethnic groups can be identified. With this in mind, we now turn to a more detailed examination of the question of defining ethnicity and, by extension, identifying an ethnic group.

The definition of ethnicity

Defining ethnicity and, by extension, an ethnic group, has turned out to be a gargantuan task (Fishman, 1985; Ross, 1979). Fishman (1985) notes that although ethnicity has been recognized as a major factor for thousands of years and despite decades of study in this century alone, a clear operational definition of ethnicity has remained elusive. Gordon (1964), perhaps most eloquently expressed the intuitive sense of ethnicity in his characterization of ethnicity as "a shared feeling of peoplehood" (reprinted in Dashelsky, 1976: 30). He surmised that,

- (6) *"early man identified himself as a member of a group, his 'people', and that this 'peoplehood' was, roughly, coterminous with a given rural land space, political government, no matter how rudimentary, a common culture in which a principal element was a set of religious beliefs and values shared more or less uniformly by all members of the group, and a common racial background ensuring an absence of wide differences in physical type."*

Based on this view of ethnicity, the ideal anthropological definition of an 'ethnic group' as summarized by Barth (1969) is shown in (7).

- (7) An ethnic group is "a population which:
- (i) is largely biologically self-perpetuating
 - (ii) shares fundamental cultural values, realized in overt unity in cultural forms
 - (iii) makes up a field of communication and interaction
 - (iv) has a membership which identifies itself, and is identified by others, as constituting a category distinguishable from other categories of the same order." (Barth, 1969: 10-11)

Of course, as Barth (1969) notes, while this definition may objectively *describe* most ethnic societies, it has methodological problems for the *study* of ethnicity (emphasis mine). In the first place, it implies preconceived ideas as to ethnic expression and, more importantly, it skirts the general question of why and how ethnic groups remain distinct.

Isajiw (1974), in his careful summary of the literature on ethnicity offered the modified definition in (8) as the most accepted by general consensus and this, to some extent, remains the case although not all researchers accept it in its entirety.

- (8) **ethnic group:** *"an involuntary group of people who are the same culture or ... descendants of such people who identify themselves and/or are identified by others as belonging to the same involuntary group."* (Isajiw, 1974: 24)

The main problem with this definition is the requirement that membership in the group be involuntary even while acknowledging the influence of in-group self-identification. Barth (1969) asserts that only by recognizing the voluntary aspect of ethnic groups, can the socially relevant factors associated with the maintenance of social boundaries between them and the majority society be revealed as the true diagnostics of ethnic group membership. He states:

- (9) *"It makes no difference how dissimilar members may be in their overt behaviour — if they say they are A, in contrast to another cognate category B, they are willing to be treated and let their own behaviour be interpreted and judged as A's and not as B's; in other words, they declare their allegiance to the shared culture of A's."* (Barth, 1969: 15)

This voluntary aspect of ethnicity is clearly shown by Le Page and Tabouret-Keller's (1982) real time study of ethnic self-identification in Belize. They noted that individuals of a village who had originally identified themselves predominantly as Maya, after a mere eight year time span, claimed to be Spanish even given that their physical

characteristics like hair type and skin colour were more consistent with Maya rather than Spanish descent.

More recent definitions have refined or excluded the requirement of involuntary membership. Isajiw (1990: 35) attempts to take the voluntary aspect of ethnicity into account by redefining ethnic origin as coming from *either* ancestral membership (via real or symbolic ancestors) *or* by socialization in an ethnic group. Giles (1979: 253) reiterates Barth's (1969) definition and includes the requirement that the speakers must share cultural and symbolic norms.⁴ In both cases, the core requirement remains that if an individual says s/he is a member of the group, we must accept that s/he is. Several empirical studies have verified the importance of the sense of belonging to ethnic identity (Doucette & Edwards, 1987; Lavender, 1975). Allport (1976) considers this in-group sense of belongingness to be the most important component of ethnicity. He states, "although we could not perceive our own in-groups excepting as they contrast to out-groups, still the in-groups are psychologically primary" (Allport, 1976: 85).

However true these observations are, incorporating them into an operational definition of an ethnic group is problematic. Individuals may identify themselves in a number of ways that do not pertain to ethnicity and not all groups of people who show distinct behaviour from others can or should be defined as an ethnicity. For example, socioeconomic class is a well-known factor in social variation but there are few (if any) situations where researchers would suggest that class, alone, defines distinct ethnicities even where the classes are sharply delineated as in caste systems or where there is social conflict between classes.

As noted above, the central problem is that while membership in an ethnic group depends strongly on how a group and its members perceive themselves, it is also dependent on the perceptions of the out-group. In this sense, ethnicity must have some involuntary aspects since the perceptions of the out-group are often (if not always) beyond

⁴Although Giles' theory does make recourse to social group comparison when determining how ethnic distinctions are maintained, it is not explicitly stated in his definition of an ethnic group.

the control of the ethnic in-group. Furthermore, while common culture and racial background may *promote* a feeling of 'peoplehood', ethnicity is surely only brought to the fore under conditions of contrast.

Ideally, we must adopt a definition of ethnicity which allows us to identify an ethnic group independently of symptomatic cultural behaviours and fuzzy notions like "belongingness" and focus only on those factors which overtly reflect a *contrastive* "sense of peoplehood". As noted earlier, this is more difficult than it appears. As Tajfel (1978b: 30) asks, "(h)ow can this membership be ascertained outside of its behavioural effects, and what can therefore be meant by its cognitive, evaluative and emotional aspects preceding these behavioural events?" However, in order to study the properties of ethnicity, it is still necessary to first formulate some typology of ethnicities. Specifically, in order to isolate factors in the formation and maintenance of ethnic groups, we first must be able to identify the ethnic groups in question.

Isajiw (1990) approaches this problem by including both external (or objective) aspects⁵ and internal (subjective) features⁶ as necessary aspects of an ethnic group. Fundamentally, we concur that deciding if a particular social group constitutes an ethnicity requires the consideration of all available indications including individual and group behaviour of both the ethnic group in question and a relevant out-group. As Isajiw (1990) notes, the objective and subjective approaches really define two different facets of ethnicity; (1) social organization *and* (2) identity, or belongingness. As Le Page and Tabouret-Keller state, "(e)thnicity is a concept each of us has learned, an extension of 'family' or 'clan' or 'tribe', but, like our language, it is a concept which may mean something slightly different to each member of a group, and its defining characteristics are *composite*" (my emphasis)

⁵For example, "(1) speaking an ethnic language, practicing ethnic traditions, and so on; (2) participation in ethnic personal networks such as family and friendship; (3) participation in ethnic institutional organizations, such as churches, schools, enterprises, media; (4) participation in ethnic voluntary associations, such as clubs, 'societies', youth organizations; and (5) participation in functions sponsored by ethnic organizations such as picnics, concerts, public lectures, rallies, dances" (Isajiw, 1990: 36).

⁶For example, cognitive - self images and images of one's group as in stereotypes, moral - group obligations such as teaching a language to one's children or marrying within one's group, affective - feeling of attachment to the group (Isajiw, 1990: 36-37).

(Le Page & Tabouret-Keller, 1985: 244). Thus, in the identification of an ethnic group, we must be careful to consider only 'external' objective criteria which are relevant to the entire community (i.e. "those consistently used in relation to a selected group by *other* groups in any multi-group social organization" (Tajfel, 1978b: 31).

Therefore, while acknowledging the importance of the subjective approach to the study of ethnicity, to determine if the Mormons constitute an ethnic group, we will organize our discussion around the criteria in (7) above but only insofar as they function as *contrastive* expressions of Mormon ethnic identity. With this composite approach we will show that southern Alberta Mormons show classic signs of an ethnicity. As noted above, it is not only the characteristics of the Mormons which are important for their classification as an ethnic group. The attitudes and behaviours of the out-group are also paramount. Before discussing characteristics of Mormons, and, in particular, their relationship to mainstream society in southern Alberta, we first consider the possibility that religion has relevance in the entire community as a focus for ethnicity.

Religion as a focus for ethnicity in southern Alberta

There is reason to believe that religion in general has a social significance in southern Alberta beyond its more prosaic association with spiritual belief and practice. In the first place, ethnicity has a strong association with religion in Canada (Millett, 1975). Bainbridge and Stark (1982: 353) suggest that religion in Canada "may more often play the conservative role of supporting traditional secular culture and socioeconomic structures" than in the United States.

Early immigrants to Alberta (as in other prairie provinces) tended to settle in ethnoreligious clusters (Dawson & Younge, 1940). People grouped according to "shared religion, language, lifestyles and attitude" (Bennett & Sherburne, 1992: 206). Despite this, there was considerable pressure for most ethnic groups to conform to English Canadian norms (Bennett & Kohl, 1995; Bennett & Sherburne, 1992) and ethnic expression was often confined to the home and the church. Thus, ethnicity and religion became even more

intertwined. Some sectarian communities, however, were exceptional with respect to cultural assimilation. As Bennett and Sherburne (1992) note,

- (10) *"Ethnicity for these people is really a religio-politico-economic system, something entirely different from the nostalgic, heritage-oriented ethnic persistence process seen in the settler-descendant population."* (Bennett & Sherburne, 1992: 211)

The fact that Mormons settled in sectarian communities like those described by Bennett and Sherburne (1992) may have led to Mormonism carrying even stronger ethnic overtones, especially in southern Alberta, which became so associated with the Mormons that it has become known in some circles as "Mormon country" (Card, 1990; Dawson, 1936). Thus, in Alberta, religion (and, in particular, more sectarian religions like the Mormons) may be more often equated with traditional types of ethnicity as revealed by the anecdote in (11) told by an American-born non-Mormon resident of Lethbridge.

- (11) "One of my client's guardians had the nerve to ask me, 'well, what are you?' ... I said, 'you mean, Canadian, American?' I said, 'I'm an American.' 'No, no. Where do you go to church? What are you?'" (Spkr 008, Cass 8: 23.10)

This association between religion and ethnicity and its possibly special significance for Mormons is shown by the interchange shown in (12) between the same speaker quoted in (11) (who is married to a lapsed Mormon with a locally recognized Mormon last name (see below)) and her daughter who came home from school with what the informant considered to be an unusual question.

- (12) "Well, when we first moved down here, (my daughter) came home one day and said, 'Mom, am I half-Mormon?'. (she replied) 'Honey, it's not a race.'" (Spkr 008, Cass 8: 20.45)

While Mormons are undoubtedly not a race, we can tentatively suggest they constitute an ethnicity.

We now return to the criteria in (7) as a guide to other indications that southern Alberta Mormons are an ethnic group. We discuss each of these in detail as they may indicate contrastive properties of an ethnic group in general and in relation to the particular situation of southern Alberta Mormons.

Indicators of ethnic groups as they pertain to Mormons

An ethnic group is largely biologically self-perpetuating

We first must make it clear that there is no justification for a general biological basis for ethnic identity involving racial characteristics, e.g. height, head size, size of vocal tract, skin colour, etc.. Studies in genetics, as well as family background experiments have found no evidence for clear ethnic divisions on the basis of race (see, for example, Labov et al., 1968; Le Page & Tabouret-Keller, 1982; Rickford, 1985 for discussion). However, genetics aside, ethnicity undoubtedly has a connection to an individual's birthright. Isaacs (1975: 30), pointing to characteristics like body image, name, history and origins, nationality, language, religion and value system, describes ethnic identity as "made up of what a person is born with or acquires at birth". Chrisman (1981: 271) claims that common ancestry, like other factors promoting an "*expectation of continuity*", is important in the formation and persistence of ethnicities. Isajiw (1974) found a common ancestral origin to be the most frequently stated attribute of ethnic groups across studies of ethnicity.

However, Horowitz (1975) points out that since it is possible to change one's identity through such mechanisms as religious conversion and geographical or social boundary changes, *ascription* (as implied by ancestry) versus *voluntary affiliation* (conversion) constitutes a continuum rather than a dichotomy (also see Fishman's (1977) distinction between paternity and patrimony). While ethnicity may frequently be passed down from generation to generation, there are still *degrees* to which group membership is ascribed or is the result of voluntary affiliation. For example, it is possible to voluntarily convert to Judaism, but for the most part one acquires ethnic identity as a Jew as a result of it being ascribed due to facts of birth. Furthermore, even for more traditional ethnicities, individuals may be able to lay claim to more than one ethnic origin if their parents or grandparents intermarried.⁷ In other words, ethnic identity is not necessarily based on any

⁷Although Alba and Chanlin (1983) found that younger generations with mixed ancestry are more likely to identify with only one ethnic group than their elders in the same situation. Since education increased the effect, they attributed this to the ethnic resurgence in the U.S. Also see Waters (1990) and Kraft (1990).

actual claim to ancestry even though ancestral continuity is usually present to some degree in any ethnicity, even when based on religion.

Ancestral continuity would seem to be problematic to the characterization of Mormonism as an ethnicity since the Mormon church, unlike Judaism, is a very young religion and very actively recruits new members. Decidedly, no-one need be 'born' a Mormon and given that the Mormon church is only 150 years old, no Mormon can claim a genetic ancestry that is completely unsullied by non-Mormons. However, as contrary as it may seem, ancestry plays a strong role in claiming a Mormon identity even for the converted. From its inception, establishing a common ancestry has been an important component of Mormonism.

Unique characteristics of Mormon family organization offer a way for Mormons to establish this ancestral continuity. Up until the 1890's, the Mormon church practiced the "law of adoption" (May, 1980) whereby converts were adopted into the families of local church leaders taking on all familial obligations and forming associations with them for life. While this practice has died out, the justification of Mormon 'ancestry' still plays a role in the modern Mormon family. While, for the most part, Mormon families are very similar in structure to those of other North Americans (Campbell & Campbell, 1976; 1988), a central distinction is that Mormon families can be institutionally bound together for eternity by means of a ritual called 'sealing'. Sealing is a feature of temple⁸ marriages which is one reason why they are more highly regarded in Mormon society as shown by the fact that, among Mormons, temple marriages result in divorce significantly less than non-temple marriages (1.8% vs. 10.2%) (Christensen, 1972).⁹

⁸There are three types of church buildings associated with the Mormons. Regular meetings take place in churches or meeting houses similar to those found in other Protestant faiths. These meeting houses serve as places where 'wards' can meet. Wards are organized into 'stakes' which are administered from 'stake houses' which will often feature large auditoriums for holding bigger meetings, basketball tournaments, dances and other social events. The 'temple' is exclusively associated with the most sacred rituals of the church such as marriage, etc (although marriages may also be performed in meeting houses or stake houses). While both stake houses and meeting houses are open to anyone, only practicing Mormons may enter a temple.

⁹In the case of a temple marriage, the church allows annulment of both the marriage and the sealing.

Even the natural children of parents who are not 'sealed' at the time of their birth must undergo the sealing ritual to join their 'eternal family' (Church of Jesus Christ of Latter Day Saints, 1992).¹⁰ However, children born into families where the parents are already 'sealed' are automatically bound to the family for eternity. Thus genetic heredity is not the crucial criterion for claiming Mormon heritage although, in some cases, it may be sufficient.

More tellingly, by allowing members to perform "saving ordinances" (Church of Jesus Christ of Latter Day Saints, 1993) for their ancestors posthumously, members can be 'sealed' with ancestors who did not have the opportunity to become members of the church during their lifetime.¹¹ As Parry (1990: 359) notes, this practice makes it possible for Mormons "to bring their lines of descent into the Mormon community" allowing them to claim Mormon ancestry even where it may not exist in fact although Parry (1990) notes that Mormons still place a value on 'true' Mormon ancestry, i.e. 'born' Mormons versus converts. For example, 'born' Mormons who have rejected the church will still often continue to refer to themselves as Mormon.¹²

Closely tied to the qualification of ancestral continuity is the recourse of an ethnic group to some homeland as Gordon (1964) (cited above) eloquently stated. O'Dea (1954) suggests that by establishing themselves in Utah, the "Mormon people" had found such a homeland. When the Alberta contingent subsequently migrated from Utah to Alberta, this feeling of a shared homeland was likely accentuated by the fact that groups of settlers often came from the same Utah community. For example, Nelson (1952) notes that the original settlers to Cardston were all from Cache Creek, Utah and those who came to Orton were

¹⁰This applies equally to children of convert and 'born' Mormon couples.

¹¹Although members are encouraged to seek permission from living relatives of ancestors born within the last 95 years, the feelings and proclivities of the ancestors themselves are not under consideration. For example in 'A Member's Guide to Temple and Family History Work' (Church of Jesus Christ of Latter Day Saints, 1993: 4), members are urged to "not try to determine their (ancestors') worthiness, whether they will accept the ordinances, or the feelings of other deceased persons affected by the ordinances."

¹²Although, they would probably classify themselves as 'Jack' Mormon (roughly, one who does not follow the Word of Wisdom rule).

originally all residents of Liberty, Utah.¹³ Thus, despite the fact that the Mormon church is a relatively new religion with its origins in North America, it still has both components of ancestral continuity; familial ancestral ties and claim to an ancestral homeland. Of course, as stated earlier, the views of non-Mormons on this question is also important. We have no clear evidence for an equivalent belief in Mormon ancestry in the non-Mormon community although the idea that someone can be "half-Mormon" suggests that it may exist.

What of other classic marks of ethnicity? We now discuss the question of shared fundamental cultural values.

An ethnic group shares fundamental cultural values, realized in overt unity in cultural forms

In Isajiw's (1974) survey, the notion of shared fundamental cultural values was stated as an indicator of ethnicity almost as often as ancestry. However, as Barth notes, the specific problem with using shared cultural practices is that "one cannot predict from first principles which features will be emphasized and made organizationally relevant by the actors" (Barth, 1969: 14). A group of people may share a distinctive cultural practice which has no relevance to their ethnic identity.

For example, Canadians (including French Canadians), in the last twenty years, have almost categorically adopted the practice of taking their shoes off before entering any personal residence. Despite the universality of this practice, taking one's shoes off at the door is not considered by either Canadians or others to be a marker of Canadian ethnicity as it may be for other ethnicities.¹⁴ Compare this to the use of the pragmatic marker *e/h*, which is widely viewed as a Canadianism both by Canadians and others even though not all Canadians employ it to the same degree (or even at all).¹⁵ As Barth states, "although ethnic categories take cultural differences into account, we can assume no simple one-to-one

¹³As stated earlier, this occurred quite often in the settlement of the Canadian West for both Mormon and non-Mormon ethnic groups (Bennett & Sherburne, 1992).

¹⁴For example, some oriental cultures.

¹⁵Furthermore, *eh* also correlates with other ethnic identities elsewhere (e.g. New Zealand (Meyerhoff, 1994)).

relationship between ethnic units and cultural similarities and differences. The features that are taken into account are not the sum of 'objective' differences, but only those which the actors themselves regard as significant" (Barth, 1969: 14). Thus, an ethnic group cannot be identified merely on the basis of objectively observed distinct cultural practices. These practices must be meaningful markers of distinction recognized by the group and others as such.

The designation of some social practice as an ethnic 'marker' can arise either externally or internally. For example, a cultural practice previously ethnically unmarked, can become marked by contact with some other group which finds it remarkable. In addition, cultural differences can be introduced or exaggerated within the group to promote their distinctive status. Some researchers (e.g. Baker, 1986; Mauss, 1990; Parry, 1990) have suggested that Mormon ethnicity has been both institutionally and otherwise promoted by the Mormon church through the introduction of distinctive cultural practices. Mauss (1990) implies this with the statement,

- (13) *"During the past century, there has been an obvious convergence between Mormons and their host societies in North America, so that Mormons are required to reach ever more deeply into their bag of cultural peculiarities to find traits that will help them mark their subcultural boundaries, and thus their very identity as a special people."* (Mauss, 1990: 348)

Mauss argues that apparent convergence between Mormons and others in North America militates their designation as an ethnic group. However, as we noted earlier, this 'objectivist' argument fails to take into account the possibility of change. Viewed subjectively, the suggestion that Mormons will introduce new "peculiarities" to mark their identity provides a strong argument for Mormons as an ethnic group since it directly implies the *contrastive* aspect of ethnicity which we earlier claimed to be the hallmark of an ethnic group. Furthermore, Mauss' assertion that the church has fostered this has some basis.

Baker (1986) reports that there are several indications that the Mormon church as an institution has actively attempted to maintain the distinctiveness of its members, at least in

the past. For example, in 1854, Brigham Young attempted to promote a distinct Mormon writing system, "the Deseret alphabet", and several books and papers were written in it. One of his wives, Eliza Snow, tried to introduce a distinct Mormon style of dress (May, 1980). Neither of these succeeded. Of course, the most notorious distinctive behaviour of the Mormons is polygamy but according to a number of sources (e.g. Card, 1990; den Otter, 1982; Lehr, 1988; White Jr., 1978) this was never practiced to any great degree in southern Alberta despite the fact that the initial motivation for migration was its preservation (Dawson, 1936; Lehr, 1988; Ursenbach & Jensen, 1976).¹⁶

Other social variations have survived. For example, Mormons, under the direction of the church and as a result of prophecies of famine in the Book of Mormon, are encouraged to prepare for emergencies by storing enough food and clothing to last for one year. While this practice is quite well-known in Lethbridge, it is largely invisible to the general public. In fact, other than a preference for basketball over hockey (Louder, 1990), southern Alberta Mormons show few other overt social distinctions from other members of the community with one notable exception. This is connected to the "Word of Wisdom" rule (Jarvis, 1990; May, 1980), which forbids Mormons from smoking tobacco or drinking coffee, tea or alcoholic beverages.¹⁷

Since 1920, the Word of Wisdom rule has played an important role as both an indicator of Mormon allegiance and as a mechanism for social distinction. Those who violate the Word of Wisdom rule may be socially ostracized by their Mormon peers and, institutionally, are prevented from receiving 'temple recommends' which effectively bar them from temple rituals including a temple marriage. This practice is a very strong Mormon cultural marker both within the group and in the non-Mormon community. Palmer (1985) reports that Alberta Lutherans also opposed drinking alcohol as well as dancing and

¹⁶The early Mormon settlers applied to the Canadian government for permission to bring their plural wives to Canada but their request was denied (Nelson, 1952). Polygamy apparently still exists in some Mormon subcultures but its practice is severely condemned by the main church organization and although at the beginning of Mormon settlement, a few Mormons publicly argued in favour of it, to my knowledge, it is not a feature of the southern Alberta community.

¹⁷More recently, this has been expanded to include all drinks containing caffeine including soft drinks.

card playing but these are not a marker of Lutherans in Lethbridge today. Someone who claims abstinence from alcohol is unlikely to be tagged Lutheran but runs a very real danger of being taken for a Mormon. As we shall see, the Word of Wisdom rule also affects social relationships between Mormons and out-group members. We now turn to a discussion of the role of social interaction as it relates to ethnicity.

An ethnic group makes up a field of communication and interaction

It is relatively uncontroversial that some kind of interaction between individuals is a necessary condition in ethnic group organization and maintenance. Shared cultural practices and, particularly, shared ancestry follow from some degree of contact. Mormons spend a great deal of time interacting with one another and the church provides numerous opportunities for them to do so. Social organizations exist for church members that begin at pre-school age and continue throughout their lives.¹⁸ Even one Lethbridge Mormon who professed disillusionment with organized religion praised the social opportunities the Mormon church provides to their members as in (14).

- (14) I went through the relief society and all that, Primary and all those kinda things and at that time I think it was good because there was lots of social things that they had at the church and I do think that the church is good for that and I'm a little sad that my kids didn't want to get involved in the church, only in that capacity. (Spkr 006, Cass 07: 18.30)

The Mormon church holds regular dances¹⁹ and parties for its teenage and young adult members and these are apparently successful in encouraging young people not to stray from the church's social umbrella as shown by the fact that over 70% of Canadian Mormons marry within their faith (May, 1980).²⁰ As a young Mormon informant told me in (15):

¹⁸Mormons begin attending Primary at the age of 4 or 5, continue on to Young Adults, the relief society for women and the priesthood organizations for men. As adults, they can also attend "the Institute" discussed further in Chapter Four.

¹⁹Mormon dances are open to all but are primarily attended by Mormons.

²⁰Jarvis (1990) notes that Mormons in western Canada are more likely to marry within their faith than those in eastern Canada and far more likely than other Protestant groups to do so. However, their rates are higher than other non-Protestant religious groups (e.g., Catholics and Jews have rates of intermarriage below 15%).

- (15) "It's nice to hang around with people that have the same morals, the same values, the same interests, stuff like that." (Spkr 018, Cass 20: 25.40)

In addition to fostering shared cultural norms, the Word of Wisdom rule, discussed in the previous section, also discourages Mormons from socializing outside the group in that it tends to prevent them from attending any social event that involves drinking coffee or alcohol either because they do not want to gain a reputation among their peers as a violator of the rule or because they are made to feel uncomfortable by non-Mormons in these situations. Few non-Mormon social events involving "communication and interaction" are devoid of *both* alcohol and some caffeinated beverage. The remarks of two of the Mormon informants in the sample in (16) indicate how the Word of Wisdom rule limits inter-group social relationships.

- (16) (a) "Sometimes, if you didn't have a lot in common, how you'd get together in the first place. ... You know, when people go out for coffee, you don't mind going to talk and drink but they think it's very odd that you don't drink coffee but you might want herb tea or juice or something. Why are we so hung up on what they're drinking?" (Spkr 012, Cass 14: 1.09. 50)
- (b) "There was some guys I hung out with that were pretty good but then they'd go and do stuff (involving smoking or drinking), I didn't know what to do and then I'd be alone." (Spkr 018, Cass 20: 10.35)

As a result, non-Mormons also usually associate only with other non-Mormons, particularly in adulthood. Of course, this is partly because there are fewer Mormons to associate with (as we discuss in Chapter Three) but it may also be because of the higher prestige among Mormons for socializing with other Mormons. The speaker in (17) was raised in a predominantly Mormon community outside Lethbridge and blamed the fact that he was "not too popular" on his non-Mormon status. This apparently had an affect on his social group.

- (17) "The Mormons that I knew, they were all Jack Mormons but there was a few Mormon people, not too many that you would really know that they would be Mormon but people I usually hung around with did what we always did every weekend, go out partying, all that stuff. Like, the only people I really knew that were Mormon'd

be just in class and that's where I knew 'em and that's where I left 'em." (Spkr 011, Cass 12: 1.31.29)

However, a special "field of communication and interaction" is by no means a sufficient requirement for development of an ethnicity. There are numerous examples of groups that can be defined by a common ancestry and where there is extensive intra-group interaction including institutional support but no clear evidence that ethnicity as a social force has any repercussions for the group as a whole in the sense that different social practices serve to distinguish members of the group from other members of the larger society.

An excellent example of this is found in discussions of "silent" or "invisible" ethnicity as in the case of Danish-Americans in San Francisco (Chrisman, 1981) and the Dutch in New Brunswick (van den Hoonaard, 1991). This type of ethnicity is largely unrecognized and culturally unexpressed even for the most devout members of the group and indubitably has no influence on the larger society.²¹ Conversely, where ethnicity clearly distinguishes social groups, contact does not necessarily alleviate this. As Barth (1969: 9) notes, in the case of true ethnicity, "boundaries persist despite a flow of personnel across them".

However, the Word of Wisdom rule combined with the active social life provided by the church conspires to keep Mormons and non-Mormons separate from one another except in a limited set of situations. Since most modern researchers agree that intra-group contact is less important for the formation of ethnicity than contact between groups, we now turn to a more detailed discussion of how ethnic boundaries between Mormons and non-Mormons were formed and are currently maintained in southern Alberta.

²¹van den Hoonaard reports that the Dutch in Canada show a small degree of language retention and predicts that use of Dutch will eventually be restricted to recent immigrants.

An ethnic group has a membership which identifies itself, and is identified by others, as constituting a category distinguishable from other categories of the same order

Our previous discussion has touched on a number of areas which may signal that Mormons and non-Mormons constitute discrete social categories in southern Alberta. The evolution of Mormons as a distinct group is probably best illustrated by a discussion of how the history of the Mormon church both in the United States and in Canada led to the construction of an ethnic boundary between Mormons and others.

Baker proposes that the most important factor in Mormon history leading to the emergence of Mormon ethnicity is migration which she claims led to a type of "siege mentality" or "psychology of persecution" (Baker, 1986: 10).²² Since Mormons encountered persecution in every place they went, she asserts that they "came to expect persecution and even to welcome it as a means of maintaining group loyalty and of helping to ensure survival as a distinct ethnicity" (Baker, 1986: 10). Persecution is not the only factor which Baker asserts led to the siege mentality. She notes that church doctrine fosters the idea that Mormons are a "peculiar people", a phrase taken from Deuteronomy 14:2 of the Bible and originally ascribed to the Jews but commonly used by Mormons to refer to themselves (Baker, 1986; Parry, 1990). This notion of uniqueness led to conflict with non-Mormon society which tended not to recognize their claim of a special status with God.

In fact, Mormons came to southern Alberta originally as refugees from what they perceived as religious persecution in the United States.²³ While neither situations such as were encountered in Ohio and Illinois involving physical violence nor economic sanction and threat of arrest as found in Utah, took place in Alberta, there was some opposition to their presence. Palmer (1990b) reports that during the first thirty years of the settlement, the "desirability" of Mormons was hotly debated, in the local, national and international²⁴

²²Baker takes this latter term from Dinkhalter (1954).

²³They were fleeing from arrest for plural marriage.

²⁴Even newspapers in New York were reporting on the migration of the Mormons to Alberta (Palmer, 1990b).

press and even went so far as to spark a debate in the Canadian parliament. Reports to their head offices from the mainline Christian missions to southern Alberta (e.g. the Presbyterians (Toombs, 1920)) warned of the Mormon threat. Although the local government as well as local business leaders (den Otter, 1982; 1990; Palmer, 1990b) welcomed their agricultural expertise,²⁵ even there, the welcome was reserved. Once the threat of polygamy faded, most of the vocal opposition declined with the exception of that from the mainline churches and, ironically, the Women's Christian Temperance Union (Palmer, 1990b) who kept up their attacks into the 1920s. Persecution is not the only factor which served to set Mormons apart from the larger society.

Baker notes that, in the early days of the church, Mormons were separated from their neighbours by "new doctrines and strange practices" (Baker, 1986: 12) and later, after the move to Utah, they were also isolated geographically. She states that "the physical separation allowed new cultural practices to develop relatively unimpeded, further widening the psychological separation" (Baker, 1986: 12). Alberta Mormons were isolated at first as well, settling in largely Mormon communities (Dawson, 1936). This was partly due to traditional Mormon settlement patterns (Nelson, 1952) and partly because of the 'wild west' attitudes which prevailed in the larger centres of southern Alberta at the time.

As noted earlier, Lethbridge, at the turn of the century, was a mining town and a large proportion of the population were single miners with no intention of settling in Alberta for the long term. Not surprisingly, Lethbridge was well known for its large number of saloons and houses of prostitution (den Otter, 1982; Gray, 1971; Johnston & den Otter, 1985).²⁶ There was little social motivation for Mormons to move into Lethbridge. Only when the Mormon church and the local government entered into a partnership to irrigate large sections of southern Alberta did some Mormon families begin to move to Lethbridge as liaisons for the project. Even so, Card (1990: 79-80) says that

²⁵Mormons were instrumental in establishing an irrigation system in southern Alberta which, in no small way, has made southern Alberta into the successful agricultural area it is today.

²⁶In fact, Lethbridge had a thriving red light district up until the early 1940s.

"(t)here was a quality of apartness to the Canadian (Mormon) settlements that kept them from full integration into the dominant anglophone Canadian culture".

From the beginning, Mormons and non-Mormons did not socialize as evidenced by the fact that the first Presbyterian wedding in Cardston included only three Mormon guests, although the church was "jammed to the doors" (Beecher, 1990: 219). This is particularly surprising given the bride was the local schoolteacher (and should have been well-known in the community) and that the majority (almost 100%) of Cardston's residents were (and still are) Mormon. Even after the initial furor died down and Mormons began migrating to Lethbridge, a certain amount of suspicion between Mormons and non-Mormons in southern Alberta remained. Tagg and Palmer (1968) note that early migrants to Lethbridge had trouble making friends with their neighbours. They report the recollection of Mrs. Izy G. Steele, an early Lethbridge Mormon, who stated:

- (18) "No sooner would I make a new friend ... than she would tell me her parents wouldn't let her play with Mormons." (Tagg & Palmer, 1968: 129)

This attitude still prevails in Lethbridge to some extent. One of my younger informants wanted to attend church with some of her Mormon friends but her parents would not allow it and their justification for forbidding it is based on rather a startling tale as she relates in (19).

- (19) "I don't know how true this is but she had some friends who were Mormon, left the church, came home one night and some of the Mormon members had gotten into their house and they had cleaned out their daughters' bedrooms. Bed, furniture, clothing because these girls had been- what do they do? baptized? ... Had been baptized Mormon. ... So, my mom told me to forget it. There's no way I was goin' back." (Spkr 024, Cass 27: 29.15)

This story is only one example of various "urban legends" which exist in Lethbridge regarding Mormons. The Mormons are not uncognizant of these stories as shown in (20) by the remarks of one of the Mormon informants.

- (20) "I think some of them (non-Mormons) are bothered by 'em (Mormons) and there's different stories that go around that aren't necessarily true that if you told me something about something I didn't know anything about I might take what you said as the truth

where it may not be, you know. I think sometimes they get some misconceptions." (Spkr 012, Cass 14: 1.11.52)

On a less fantastic note, undoubtedly many parents are simply afraid that by associating too closely with Mormons, their children will be converted into the church. As another Mormon speaker suggested,

- (21) "Everyone's worried about being converted to the Mormon church."
(Spkr 018, Cass 20: 14.30)

Baker claims that even though physical separation has ended, Mormons "retain and even foster their sense of psychological peculiarity" (Baker, 1986: 13). She notes that the use of unique first names for Mormon children (e.g. Orson, Zina, etc.) served initially as an identifying feature although she notes that this practice has become less common. In Lethbridge, some Mormons are recognizable in the community by their *last* names. For example, the American-born informant mentioned earlier has a locally recognized Mormon last name which led to some confusion as she describes in (22).

- (22) "And then when I got this job with [...] ²⁷, they wanted to find out if I was a Mormon that they wouldn't have hired me. ... So, they found out that I wasn't, in fact, a Mormon even though I had a Mormon name. ... The president of our board told me afterwards. He said, 'Your name threw me. I wasn't sure'." (Spkr 008, Cass 8: 21.55)

This anecdote is meant only as an illustration since speakers were not explicitly asked if they could identify particular names as Mormon. More interestingly, from the point of view of ethnic boundaries, it implies a certain amount of prejudice between Mormons and non-Mormons. This prejudice also surfaces in the belief of at least some Lethbridge residents that Mormons are responsible for inhibiting the economic growth of the city. As the non-Mormon speaker notes in (23), Mormons are sometimes blamed for scaring away new businesses to the city.

- (23) "You can be in a crowd of people and someone will say, 'well, you know why we didn't get that business in town'." (Spkr 020, Cass 24: 1.18.21)

²⁷To preserve anonymity, the name of the place where this speaker worked has been omitted.

At one time, the local gossip held that the reason Lethbridge did not have an outlet of 'The Bay' department store was indirectly related to the Mormons.²⁸

Furthermore, this prejudice can work both ways. The speaker in (22) reported that on another occasion, she *obtained* a job because the interviewer thought that she was Mormon. In fact, there is a common local belief that "Mormons stick together". This has led some to believe that Mormons will favor Mormon-run businesses over others. In fact, some long-time local businesses have the reputation of having captured the Mormon market (e.g. Christensen-Salmon Funeral Home (Scott, 1998)). These attitudes, though mostly anecdotal, can serve to illustrate how majority group perception in Lethbridge also may play a role in any ethnic boundary which may exist to distinguish the Mormons.

All this aside, the assertion that there is social distance between Mormons and non-Mormons in southern Alberta does have some empirical support from sociological research. Brinkerhoff and Grandin (1991), in their survey of 273 secondary school students in a small southern Alberta town, found that although there were differences depending on the students' religious background, all non-Mormon students, regardless of religion, ranked Mormons as having greater social distance than virtually all other mainstream religions as well as fundamentalist groups such as the Alliance church and the Salvation Army. Their overall results are shown in Table 1.

²⁸There was a story going around that The Bay decided where to put their stores based on Alberta Liquor Control Board sales figures and since there were so many Mormons in town, it was felt that Lethbridge must be coming up short.

Table 1: Social acceptance for various religious denominations²⁹ (abstracted from Appendix 2 (Brinkerhoff & Grandin, 1991: 185))

Religious Groups	Religious Distance Scores	
	Mean	N
Hare Krishna	3.76	217
Unification (Moonies)	3.72	217
Hindu	3.62	221
Jehovah Witness	3.53	223
Baha'i	3.44	212
Buddhist	3.42	218
Nazarene	2.93	217
Jews	2.85	223
Mormons	2.83	219
Presbyterian	2.59	219
Salvation Army	2.59	222
Lutheran	2.40	213
Christian Reformed	2.34	216
Full Gospel	2.24	214
Baptist	2.12	209
Alliance	2.10	221
Catholic	2.08	194
Anglican	2.03	206
United	1.99	176

Notice that Mormons and Jews show almost identical scores for social acceptance. Virtually all religions scoring higher than these can be directly associated with either specific ethnic groups such as East Indian or Japanese (e.g. Hindu and Buddhist) and/or involve what might be considered highly unusual cultural practices such as dress and hair styles (e.g. Hare Krishna). Brinkerhoff and Grandin suggest that the attitude towards Mormons may have been affected to some degree by anti-Mormon propaganda in the community, as evidenced by the fact that those students who reported being exposed to it showed a slight (non-significant) tendency to be less accepting of Mormons. They also attributed some anti-Mormon feeling to the tendency for Mormon students to keep to themselves. They characterized the Mormon students in their sample southern Alberta community as "somewhat cliquish" (Brinkerhoff & Grandin, 1991: 176). Students who counted Mormons among their acquaintances were more likely to be accepting of Mormons but even among these, most did not count their Mormon acquaintances as close friends.

²⁹ Higher scores indicate greater religious difference. N's do not total 273 since ratings of speakers' own denominations were not included and some subjects did not provide a response.

Brinkerhoff and Grandin also noted that there were some important differences with respect to individual questions on the questionnaire which the relatively median score for Mormon acceptance may obscure. For example, they noted that almost 10% of their respondents felt that Mormons should either only be allowed to visit Canada or should be excluded altogether, a rather high number for a very extreme response. Furthermore, while over 40% of the students said they would consider intermarriage with either a Catholic or a Fundamentalist, only 15% would consider marrying a Mormon.

There is other evidence that Mormons are a somewhat closed society. Baker describes terms of exclusion such as 'Jack-Mormon' or 'Jack' to refer to a member who no longer attends church or follows the Word of Wisdom rule and 'Gentile' to refer to non-members. While none of my informants used the term 'Gentile'³⁰, the word 'Jack' appeared several times spontaneously in the data, as the extract in (24) attests.

- (24) "I'm Mormon. Where's my beer?" (joking) Well, I'm Jack." (Spkr 006, Cass 6: 18.28)

As in the case of Mormon last names, a survey would be required to verify how widespread this term is but it would be surprising if it did not turn out to be universally recognized in Lethbridge. There are also a few non-sectarian lexical items, beyond the expected religious terms, which are largely restricted to Mormon usage. Many of my young informants (both Mormon and non-Mormon) reported exclusively Mormon use of some swear words, e.g. 'fetch'.³¹

Although ancestry and shared culture and communication may play a role as foci for group identity, ethnicities are essentially formed and their characteristics maintained as a result of group perception of conflict as a result of contact and contrast with other groups. In this sense, Mormons show all the classic signs of an ethnicity and, in particular, they

³⁰This term may be dying out throughout the Mormon culture realm (Baker, 1986).

³¹There may be others as well, e.g. 'gay', but 'fetch' was the most universally reported as distinct to Mormons.

clearly embody the "contrastive sense of peoplehood" which we earlier claimed to be the true diagnostic of an ethnic group.

All this aside, Mormons in Lethbridge are outwardly indistinguishable from other residents. They wear the same clothes. Other than restrictions of the Word of Wisdom rule, they eat the same food, e.g., there are no special edicts against meat or special days where only fish can be eaten. Aside from avoiding bars and enjoying basketball (characteristics not unique to the Mormons), they engage in the same recreational activities as everyone else. They work in the same environments and have the same range of occupations as everyone else. While it is probably true that a Mormon would avoid working in a bar, there is no restriction against it. Mormons celebrate the same holidays as other Christians and, for the most part, in Lethbridge, they hold a wide range of opinions on topics such as politics, etc. While Mormons are generally thought to be conservative, the church places no pressure on individual Mormons as to their political and social beliefs. They are free to exercise their own opinion and they do.

For reasons stated earlier, these similarities should make the study of southern Alberta Mormons particularly valuable for investigating the formation and maintenance of ethnic boundaries. Even the potentially divisive cultural form embodied in the Word of Wisdom rule is practically the only clear distinction and as noted earlier, its practices are not restricted to Mormons. These similarities allow a uniquely clear look at how ethnicity operates apart from these other social characteristics to foster linguistic differences. In particular, as Trudgill (1983: 54) notes, "we can suppose that ethnic group differentiation acts as a barrier to the communication of linguistic features in the same way as other social barriers".

We now turn to a more detailed discussion of theories regarding ethnic boundary formation and maintenance and formulate some predictions about linguistic behaviour in southern Alberta as it relates to ethnicity. Since our primary goal is to examine the relationship between sociolinguistic variation and ethnicity and how it may act as a social

barrier to the spread of linguistic variation, we focus on the study of ethnicity as a sociolinguistic boundary although there has been a great deal of research into other aspects of ethnic boundaries (Tajfel, 1978a).

Ethnicity as a sociolinguistic boundary

As Rickford (1985) points out "(d)espite the flood of research on Vernacular Black English (VBE) beginning in the 1960s, it is fair to say that American sociolinguistics has made less progress in understanding the role of ethnicity as a sociolinguistic boundary than it has in understanding other social variables like socioeconomic status and sex or gender" (Rickford, 1985: 99). Even where ethnic origin clearly correlates with a particular variant, we are often unable to determine the precise factor determining the variation (Wolfram, 1991a). Is it *purely* related to ethnicity as an organizing force or are there other explanations? For example, Rickford (1985) notes that some researchers have dismissed an ethnic explanation for variation among African-Americans, claiming that it merely reflects regional variation.

In addition, linguistic differences may also be attributed to fossilized *transfer* or a *substratum* effect from the language spoken by the speakers' parents or other ancestors as opposed to directly resulting from processes relating to ethnic group boundary formation or maintenance. Giles (1978) echoes this concern when he states that "the influence of the old language grammatically and phonologically is the most common cause of ethnic speech marking beyond the second generation" (Giles, 1978: 367) but then cautions against "regarding such intrusions *simply* as instances of interlingual *interferences*, particularly in the cases of second and third generations of immigrants, as they may often be adopted by them deliberately as ethnic speech markers to establish a distinctive linguistic identity" (Giles, 1979: 260). Furthermore, speakers may introduce entirely new forms unrelated to transfer.

Wolfram (1974) notes that second generation Puerto Ricans in New York city display types and degrees of variants that, although they could be attributed to interference,

show different patterns from those found among their parents. He proposes that ethnic groups follow the stages in Table 2 in the progress of assimilation.

Table 2: Phonological stages in the progress of assimilation (Wolfram, 1974)

<u>Stage</u>	<u>Pattern predicted</u>
Stage I	Categorical use of the interference variant
Stage II	Categorical use of the interference variant in some environments and variable use in others
Stage III	Variability in more linguistic environments and higher frequencies of the standard variant in variable environments from Stage II
Stage IV	Some environments show categorical use of the standard variant
Stage V	Interference variant no longer appears in any environment

Laferriere (1979) also confronted the transfer problem in her excellent study of the role of ethnicity in phonological variation in Boston. She found that ethnically Irish, Italian and Jewish Bostonians were showing different patterns of variation for short (a). Based on her results, she proposes a three stage model for the rise of ethnic patterns taking ancestral language patterns into account as well as possible socioeconomic or other social factors which may also play a role. These stages are shown in Table 3.

Table 3: Three stage model for the rise of ethnic sociolinguistic patterns (Laferriere, 1979: 611-612)

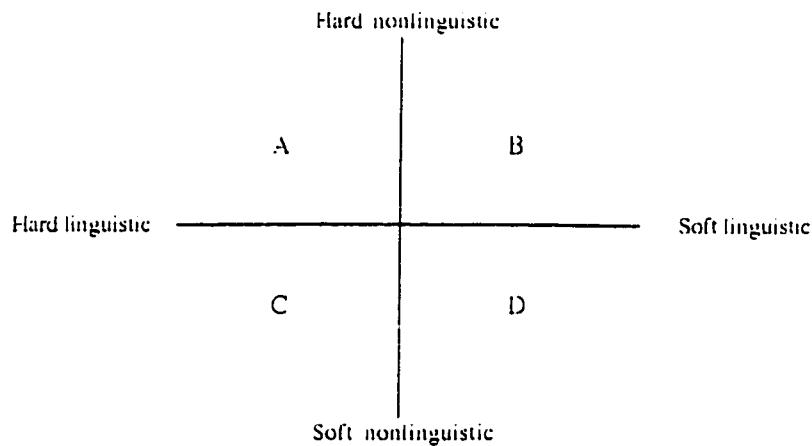
Stages	
I. ACQUISITION	–exposure to standard English variants of dialect variables for some group members –standard variant is assigned a positive value (PASSIVE variant) and dialectal variant is assigned a negative value (ACTIVE variant) –opposing pragmatic values result in sharp style differences
II TRANSMISSION	–variants are transmitted by speakers showing sharp style differences, with their pragmatic values, to some younger speakers. –younger speakers reanalyze the formerly PASSIVE variant as ACTIVE –the formerly ACTIVE variant is reanalyzed as PASSIVE and stigmatized
III SPREAD	–new variants with the reassigned values are adopted by all younger speakers –speakers who have not yet begun to participate in the change now regard the stigmatized variant as a mark of negative prestige

However, Laferriere notes that this model does not account for all situations involving ethnolinguistic variation. As Rickford (1985) notes, an appeal to linguistic origin

has no account for why ethnic variation persists or, for that matter why other potential transfer items do not. Laferriere (1979) notes that in some cases (as she predicts for her Irish and Italian informants), ethnic groups may not complete the cycle outlined in Table 3. She proposes that this is due to *cultural force*, (following Thernstrom (1973)) and defined as "the influence which an ethnic group may exert on the political, social, and occupational behaviour of its members" (Laferriere, 1979: 613). She suggests that ethnic groups may form subcultures within a larger culture and come to value their distinction from the majority society. These groups may adopt norms that are different from mainstream society for such cultural forms as occupation, language and education and these may affect the outcome of ethnic group convergence with mainstream society (Laferriere, 1979: 613). Cultural force is directly related to the formation of ethnic boundaries in that it serves to keep the group both homogenous within its boundaries and distinct beyond them. However, as we noted earlier, ethnicity is subject to change. Ethnic groups may either find their members accommodating to mainstream society despite cultural force or, alternatively, mainstream society may begin to adopt the norms that previously were only valued by the ethnic group. In these cases, boundaries must either fall or move. Thus, a central question for the study of language change beyond the erection of ethnic boundaries is their maintenance.

Giles (1979) proposes a model for classification of ethnic groups according to the hardness or softness of the ethnic boundary between them and the majority. A group of ethnic characteristics which would likely constitute a hard boundary are those which are perceived to be "(i) difficult to acquire and (ii) often easily and frequently used for ethnic categorization with the minimum of cognitive effort" (Giles, 1979: 275). The more of these characteristics a group has, the harder the boundary. He proposes the two dimensional model in Figure 2 to show how soft and hard boundary maintenance are connected with language change across ethnic groups.

Figure 2: Perceived linguistic and nonlinguistic boundary continua (Figure 2 from Giles (1979: 275))



Speakers with both hard linguistic and non-linguistic boundaries would fall into quadrant A. He suggests the Hutterites who have both a distinctive language (German) and distinctive cultural traditions and dress (as shown in Figure 3) are an example of this type of group.

Figure 3: Two Hutterite women and a child on the streets of Lethbridge in their distinctive dress



Mormons would fall into quadrant D since, as we discussed previously, their outward appearance and language (i.e., English is both the mother and ancestral tongue of most members) is the same as that of the majority group.

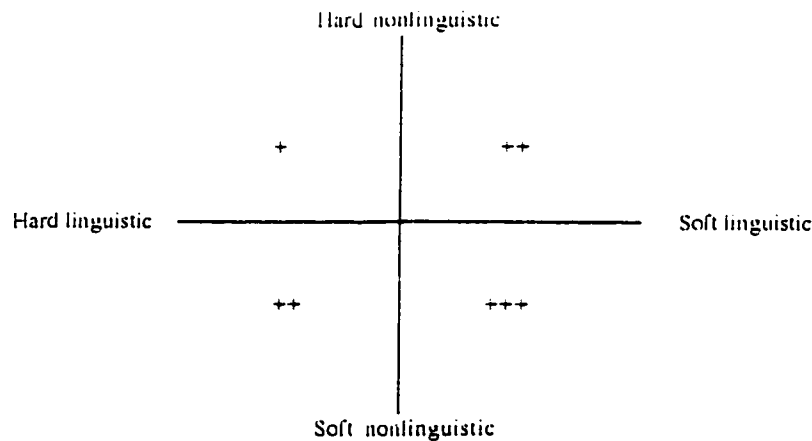
Giles asserts that the model in Figure 2 has four main advantages. (a) it allows for individual movement. (i.e., different members of the same group may be situated in different quadrants), (b) ethnic groups themselves may move from one quadrant to another (i.e., if other ethnic identity markers become soft, linguistic markers may be accentuated

thus hardening the linguistic boundary), (c) outgroup reactions are taken into account (i.e., if an outgroup perceives that an ingroup is encroaching on them, they can react and force the outgroup into another quadrant) and (d) the model illustrates the connection between linguistic boundaries and the process of accentuating ethnic categories.

In Giles' approach, ethnic boundaries may either *result* from social categorization or *lead* to it. As Giles states, "language can act as an independent as well as a dependent measure of interethnic relations" (Giles, 1979: 278). The degree of hardness of ethnic boundaries is discerned by both the in-group and the out-group and either or both groups may react when they perceive some instability. Giles (1979) predicts that where one marker of ethnic boundaries is reduced (softened), other markers will take their place. Some evidence exists to support this. Baar (1983) found that when communal life was de-emphasized in second generation Mennonites in Ontario, religious commitment became stronger.

Using an analysis of variance model, Giles argues that "the manipulation of the independent variables hardness vs. softness of linguistic boundary and hardness vs. softness of nonlinguistic boundary each has main effects on the dependent measure, use of ethnic speech markers" (Giles, 1979: 279). He schematizes this as in Figure 4.

Figure 4: Degree of ethnic marker accentuation to perceived hardness-softness of linguistic and nonlinguistic boundaries (+ indicates the degree of ethnic speech marker accentuation)(Figure 3 from Giles, 1979: 279).



His model predicts that those groups with the softest boundaries (both linguistic and otherwise) will be most likely to show the greatest linguistic differentiation. He states,

- (25) *"where both boundaries are perceived as soft, the individual has the choice of self-identifying with his ethnic ingroup or passing out of it to perhaps a greater extent than in any of the other quadrants. When the individual does commit himself to ethnic identification under these conditions, the 'failure' of the group in terms of the softness of its boundaries will mobilize the person to a greater sense of ingroup cohesion and collective action on behalf of the group than were the boundaries perceived to be more secure."* (Giles, 1979: 279-280)

Boundary theories of intergroup relations are dependent on "ethnolinguistic vitality" (Giles et al., 1977: 271). Status and demographic factors as well as institutional support all work to give a group a higher degree of ethnolinguistic vitality. Status is related to "the configuration of prestige variables an ethnic group holds in an intergroup context" (Giles et al., 1977: 271). This is intimately connected to the power of the group. As Giles states, "(t)he more a group has economic and political control over its destiny, consensual high esteem, pride in its past and a respected language of international repute, the more vitality it is said to possess as a collective entity" (Giles et al., 1977: 271). Demographic factors relate to the number of members in each group and how they are distributed geographically. He notes that, "(g)roups having high absolute numbers concentrating together in their own

ancestral homeland, a positive ingroup-outgroup proportion, a high birth rate, low emigration and incidence of mixed marriages with the outgroup, are more likely to have a high vitality than groups low in these regards" (Giles et al., 1977: 271). The final factor is institutional support defined as "the extent to which an ethnic group receives representation in the various institutions of the nation or territory" (Giles et al., 1977: 271). Giles states that, "(t)he vitality of an ethnic group should then be related to the degree it has representation, and its language variety is used, in various institutions of the government, school, church, mass media and culture" (Giles et al., 1977: 271).

Although we have little evidence for how power is currently distributed in the entire community between Mormons and non-Mormons, several speakers commented on a possible change in the dynamic occurring at Lethbridge's main high school, the Lethbridge Collegiate Institute (LCI). In the two years preceding the collection of the data, the students' council at LCI was predominantly Mormon. The young Mormons in the sample who had attended LCI claimed that this had resulted in several positive changes at the school. They stated that more people were coming out to school sponsored sporting and social events and there was generally more school spirit. In addition, school dances had previously been rather wild affairs. Under Mormon-dominant organization, school dances now had become more wholesome and the young Mormon speakers felt more comfortable now attending these functions. In fact, they said that in the past, they had avoided them.

Ties between LCI and high schools in the outlying predominantly Mormon communities had also been strengthened. Since the Mormons have dominated the students' council, LCI has hosted a "tri-high" dance which combined the students of LCI, Magrath and Raymond. Interestingly, this event does not include either the students of Winston Churchill High School on the north side of the city nor the students from Catholic Central across the street even though they are considerably closer geographically. Winston Churchill is generally considered to have a smaller proportion of Mormons in its population than LCI and Catholic Central has none.

There is some indication that the non-Mormon students do not share the enthusiasm of the Mormons for this state of affairs. One woman told me that her non-Mormon children rarely attend school dances because "only the nerds go to the school dances" (Spkr 006, Cass 6: 9.10). Some young non-Mormons felt that the Mormons at school had received privileges denied to them. For example, Mormons now can gain credits towards their high school degree by attending Seminary (the Mormon religious school)³² while students of other religions do not get credit for Sunday school. This is evidence of non-sectarian institutional support as is their suggestion that Mormons get special attention from Mormon teachers.

Of course, these opinions are purely anecdotal and merely indicate the possibility of non-Mormon insecurity with respect to the balance of power between these groups. They are not evidence of impropriety on the part of the teachers or the school system and furthermore, even do not necessarily indicate wide-spread resentment against Mormons in the community. At other points in the interviews, some of these same people also expressed admiration for Mormons. The important point is that these opinions are held by non-Mormons to some extent and they may indicate that the social dynamic between Mormons and non-Mormons at the school is shifting as Mormons occupy positions of greater power.

Giles (1979) makes a number of predictions about how ethnic markers and social dynamics between and within groups has implications for change. These are shown in (26).

- (26) (a) *"(T)he less aware Group B is of cognitive alternatives to its social and linguistic inferiority, and the lower its self-reported vitality, the more likely it will be that group members will adopt the language and ethnic speech markers of Group A and attenuate those associated with Group B" (p. 272).*
- (b) *"(T)he greater the awareness of cognitive alternatives among Group B as regards its inferiority, and the more vitality they self-report, the more likely they will be to retain their own language and create or accentuate ethnic speech markers in Group A's language" (p.273).*

³²I do not know exactly when this changed. It was not the case 20 years ago.

- (c) *"(T)he higher Group B's vitality, the more resources it has available for sanctioning (e.g. use of abuse, traitor labels, negative evaluations) or for rewarding (e.g. offers of help and positive evaluations) linguistic behaviour of ingroup members which conforms to speech marker accentuation in particularly public interethnic encounters" (p. 273).*
- (d) *"(T)he greater the awareness of cognitive alternatives amongst Group A as to its social and linguistic superiority, and the greater the perceived vitality of Group B, the more likely members of the former group will be to differentiate linguistically from the latter by means of adopting more derogatory lexical markers of the outgroup and by creating new ingroup markers at other linguistic levels." (p. 273)*
- (e) *"(T)he softer the perceived linguistic and nonlinguistic boundaries existing between ethnic groups, the more likely speech markers will be adopted in order to accentuate ethnic categorization" (p. 274).*

Given that Mormons show so many surface similarities to non-Mormons, it is apparent that they have many "cognitive alternatives" to any social or linguistic inferiority they may experience although we have seen no clear sign of any such insecurity among the Mormons. Their self-designation as a "people" promotes a sense of pride in their community which may indicate that no real sense of inferiority exists. Furthermore, the social organization exhibited by the Mormons within their church and, particularly for the young Mormons, outside the church, accompanied by institutional support points to a strong ethnic vitality. The use of somewhat derogatory terms such as Jack Mormon to distinguish "cultural traitors" (Giles, 1979: 269) bears this out. Thus, Giles' model predicts that the "soft" boundary between Mormons and non-Mormons should have linguistic implications in southern Alberta. This may result in change for either the Mormons or the non-Mormons or both.

Conclusion

We have argued that (although undoubtedly soft) a nonlinguistic ethnic boundary exists between Mormons and non-Mormons, particularly in southern Alberta. However, evidence for a linguistic boundary is sparse. Despite the claims of a number of researchers that Mormons constitute an ethnic group, very little sociolinguistic evidence exists that, universally, they have any linguistic distinctions beyond what is normally expected of any special interest group. Most of Baker's (1986) arguments for linguistic differentiation by

Mormons constituted lexical evidence primarily related to church organization and function. As Kaye (1991) noted, this is hardly evidence for distinct linguistic behaviour since most religions employ some unique terms. Furthermore, even her discussion of distinct pragmatic styles for Mormon discourse is dubious given that these are evident even in the case of other (not demonstrably ethnic) religions (Clyne & Bouma, 1994).

Other than this, only one study has suggested a linguistic distinction between Mormons and non-Mormons. Di Paolo (1993), using survey data relating to the rare propredicate *do* construction, found that Mormons in Utah were more likely to both use propredicate *do* and recognize it as a feature of their own speech than non-Mormons although it was recognized by both groups. Di Paolo hypothesized that this is evidence for a "soft" linguistic (Mormon) ethnic marker in Utah.

In southern Alberta, no studies of propredicate *do* have been carried out but there is some evidence of a soft linguistic marker in the fact, mentioned earlier, that locally, their speech is considered subtly different. Unlike propredicate *do*, the Mormon Drawl is characterized as an accentual or phonological difference. Since phonological variables appear with much greater frequency in conversational data than grammatical variables like the propredicate *do* construction, this allows us to investigate the existence of a linguistic boundary between Mormons and non-Mormons in southern Alberta using quantitative methodology on natural speech. By relating linguistic variation in the speech of southern Albertans to other factors of ethnicity such as social contact and ancestry, we can determine if ethnolinguistic boundaries are indeed evident between Mormons and non-Mormons in southern Alberta and, if so, their effects on the English spoken there.

Before proceeding to the analysis, in the next chapters, we describe the theoretical framework in which the study is couched and relate it specifically to the community under study.

CHAPTER 3: THE SPEECH COMMUNITY IN SOUTHERN ALBERTA

The variationist framework

As noted in Chapter One, the continuous non-discrete character of ethnicity likely results in variation in the employment of ethnolinguistic markers. As a result, we must employ a methodology for its research which allows us to account for this variation. Most frameworks for linguistic research avoid variability even though, as Sapir (1921: 147) observed, "(e)veryone knows that language is variable". The variationist approach to language is unique in that it takes as its starting point the tenet that language is inherently variable. By confronting variation and studying its properties (both linguistic and social), over thirty years of research has confirmed that, far from being a "vagarie of performance" (Chomsky & Halle, 1968: 3), linguistic variation shows complex, probabilistic patterns that form a sociolinguistic structure reflecting the sociolinguistic competence and, by extension, the social identity of speakers (Chambers, 1995; Faber, 1992; Labov, 1966/1982; Labov, 1972c; Sankoff, 1982; Wolfram, 1991a).

Since the patterns found in variable behaviour are at least partly a function of speakers' attitudes towards their own identity and that of others, the use of data culled from speaker intuitions is restricted in variationist study because the researcher can never be sure what speaker intuitions about variable patterns represent, i.e. grammatical or social information or even if these patterns constitute a true picture of the variation (see Labov, 1996b for a discussion). While introspective data such as that provided by studies of linguistic insecurity (e.g. Labov, 1994; Owens, 1985; Owens & Baker, 1984) as well as psycholinguistic studies which properly control for social attitudes, can provide valuable insights, the complex sociolinguistic structure of variation can only be ascertained by systematic analysis of corpora of natural conversational speech. Furthermore, the isolation of overall rates of occurrence, co-occurrences and a wide variety of conditioning environments in natural data requires a quantitative paradigm for linguistic analysis such as that proposed by Sankoff (1974) since the the rarity of some variant may merely reflect the

rarity of the structure conditioning it. Furthermore, the conditioning structures themselves may be variably employed by different members of the community.

A particular advantage of the quantitative paradigm for the sociolinguistic study of variation is its dedication to the study of speech communities; how language behaviour reveals the relationships between groups and, in turn, how these relationships shape language within groups. Its focus on social relationships and corpus data is ideal for isolating the variety of factors which may operate in any language variation situation. Thus, the first step in the study of sociolinguistic variation is identifying the speech community (Sankoff, 1974).

The speech community

A speech community is generally considered to be any group of people who share norms for linguistic behaviour (e.g. Gumperz, 1968; Kroch, 1978; Romaine, 1982; Sankoff & Labov, 1979; Weinreich et al., 1968). As Gumperz states, "(m)ost groups of any permanence, be they small bands bounded by face-to-face contact, modern nations divisible into smaller subregions, or even occupational associations or neighborhood gangs, may be treated as speech communities, provided they show linguistic peculiarities that warrant special study" (Gumperz, 1968: 114). Of particular interest is the way that linguistic patterns across social groups form an "orderly heterogeneity" (Kroch, 1978: 24). Even though subgroups of a speech community may vary in degree of use of particular variants, similar overall patterns of variability can indicate that members of a speech community still share both a linguistic system and social norms for evaluating particular variants. On the other hand, distinct behaviour can uncover both distinctions in linguistic systems (and origins) as well as how social barriers are constructed through language use. In theory, to describe a complete pattern of differentiation, the entire speech community must be studied. However, practically, this is virtually impossible. Therefore, we seek to analyze a subset (or sample) of the community which is arguably representative of the entire group.

Sampling methodology

Statistically, to obtain a representative sample of any given speech community, every member must have an equal chance of being selected, i.e., the sample must be random (Gravetter & Wallnau, 1988). However, random sampling in the strict statistical sense has proved to be problematic for sociolinguistic study. As Sankoff (1988a) points out, subgroups in speech communities are rarely evenly distributed and truly random sampling may overrepresent some groups and entirely omit others. Furthermore, all human beings have the capacity, even in very tightly controlled societies, to choose if they will participate or not. Thus, standard random sampling methodologies must be modified for sociolinguistic research.¹

As Sankoff (1988a) notes, while traditional sampling procedures should guide the selection of any sociolinguistic sample, ensuring that it be representative of the particular community under study is foremost. The focus is to capture how speakers differ along relevant dimensions (i.e. according to social categories or speech styles) and not how speakers exhibiting this behaviour are proportionally represented in the community. As long as we can be reasonably assured that the sample has been chosen in an unbiased fashion, we can be relatively confident that it is representative of the specific community under study (or, at least, we can be cognizant of any bias that may exist; intentional or otherwise). To this end, we must first identify and describe the community or communities in question in order to delineate the sample universe. Once this has been done, the description serves as a guide for determining the sampling technique to be used.

The southern Alberta speech community

This study focusses on the linguistic behaviour of the Mormons in southern Alberta and their relationship with the non-Mormon people among whom they live in the city of

¹The Survey of Vancouver English (de Wolf & Hasebe-Ludt, 1988; Gregg et al., 1981) clearly illustrates these difficulties. Using strictly random sampling methods, the initial sampling technique yielded 3700 possible informants. However, only 240 (7%) of these were eventually included in the study partly because most of those contacted were either not considered part of the sample universe (non-native speakers of English or non-Vancouverites), were excluded deliberately in the interest of stratification for sex, age group and socio-economic group or would not agree to participate.

Lethbridge. As a preliminary step, to establish which speakers in the community should or should not be included in the study, we need to find the social and geographical boundaries of the speech community or communities to which these people belong. For example, can any Lethbridge resident be included in the sample or must we limit it to those who have been born and/or raised there? Do we want to exclude or include any social or ethnic categories? To answer these questions, we first orient Lethbridge linguistically within its larger geographical and social context.

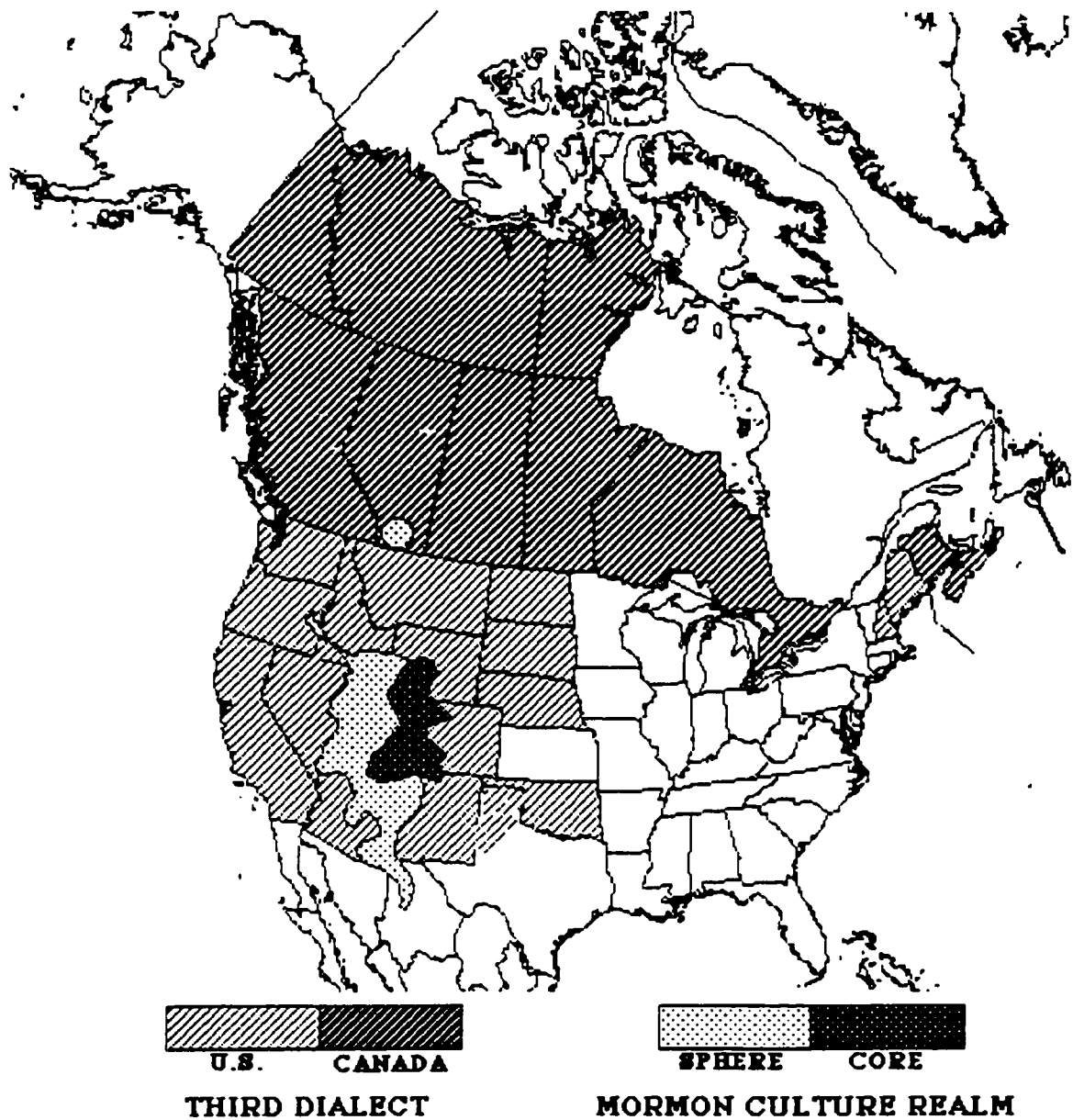
Characterization of the Lethbridge speech community

As shown in Figure 5, Lethbridge is an ideal location for this study because it is found in an enclave (or 'sphere') of the Mormon culture realm (Meinig, 1965), the core of which is centered around Utah. Geographically, Lethbridge residents may be assigned to one or all of at least three possible speech communities. In one sense, Lethbridge comes under the purview of the "third" dialect (Labov, 1991) speech community introduced in Chapter One and classified as such on the basis of a comparison of its vowel shift patterns (or lack of them) to other English-speaking communities. It is characterized by the two pivot conditions for the vowel system shown in (27).

- (27) 1. *The original low front /æ/ remains in place, at least in part. Raising and tensing are confined to the most favored, phonetically defined environments; most typically, /æ/ is raised before all nasal consonants, in checked and free syllables.*
2. *Short open o and long open o are merged in a single low back phoneme /ɒ/. (Labov, 1991: 30)*

Labov originally characterized this dialect's vowel system as relatively stable but more recently, Clarke et. al (1995) have noted that evidence of a vowel shift with common characteristics in Toronto and California (Hinton et al., 1987; Luthin, 1987) suggests that the third dialect vowel system may not be as stable as earlier believed (also see Labov, 1991). Other properties currently associated with the third dialect vowel system include the fronting of the back vowels (Labov, 1991).

Figure 5: Map of North America showing position of Lethbridge in relation to Third Dialect area, standard Canadian English area and Mormon culture realm.



Labov (1991) locates the third dialect in three major areas of North America. One is in eastern New England, mostly north of Boston. The second is located around Pittsburgh (not shown on map) and the third comprises most of the United States west of Wisconsin and almost all of English speaking Canada. Thus, as Figure 5 shows, Lethbridge is firmly situated in the third dialect region. Under that assumption, most any Canadian or western American-born English speaker can be included in the sample.

The inclusion of most of English Canada in this dialect area is supported by the fact that the homogeneity of Canadian English has been well-described and, in fact, is probably its most remarked-on characteristic (e.g. Avis, 1973; Chambers, 1991; de Wolf, 1992; Priestley, 1951; Wells, 1982). The study of fronting variation in the phonological variable, (aw), shows that change is proceeding in almost exactly the same way in Toronto, Vancouver and Victoria, a geographical range of over 3000 miles (e.g. Chambers & Hardwick, 1986; de Wolf, 1992; Hung et al., 1993) verifying this homogeneity and providing strong evidence for Chambers' (1991: 100) suggestion that "(a)t present, the best available evidence suggests that the tendency towards homogeneity remains a sociolinguistic force".

Thus, the possibility that Lethbridge residents can be included under the larger Canadian speech community is relatively uncontroversial. However, this is not the case for including them with a larger American speech community as the "third dialect" grouping implies. As Priestley (1951: 76) noted, although one Canadian generally cannot spot other Canadians by listening to their speech, "almost any American can detect a Canadian in a few minutes' talk; and a Canadian can recognize most Americans". In fact, Canadian English as a distinct dialect from general American English has been a much debated topic.

Pringle (1985) suggests that differences between Canadian and American English have been greatly exaggerated by those who wish to believe that, "at least in some respects Canadian English is more like British English, and is therefore better" (Pringle, 1985: 183-184). However, Canadian English clearly does differ from American English for at least one phonological feature. As noted in Chapter One, the central variants of (ay) and (aw) have long been considered defining features of Canadian English.

While it is true that raising of (ay) has also been observed in many parts of the United States (Allen, 1989; Dailey-O'Cain, 1997; Niedzielski, 1996; Vance, 1987), in most cases, it appears to be an innovation. As for the raising of (aw), with the exception of a few dialect areas such as Virginia (Frazer, 1994) and Martha's Vineyard (Labov, 1963) it

can be considered a truly Canadian feature. Although it also has been observed in some northerly parts of the United States (e.g. Dailey-O'Cain, 1997; Mann & Harris, 1989; Niedzielski, 1996), its rate of occurrence in Canada is far greater and more tightly constrained by linguistic conditioning environments than that reported for any of these northern U.S. varieties. Even though the tendency for fronting (aw) mentioned earlier and its interaction with the occurrence of the central variant may indicate convergence between Canadian English and American English towards a North American standard (Chambers, 1997), a distinction still undoubtedly exists as we will discuss more fully later on.

Thus, the possibility that Canadian English and American English show even a fine distinction means that our sample should be restricted to Canadians to ensure that any possible difference does not cloud the results. Even though the difference is slight, it may still serve as a marker of distinct Canadian identity. Clarke (1984) found phonological distinctions to be the most salient for dialect stereotyping in Newfoundland. Furthermore, since at least one description of the "Mormon Drawl" indicated that it *sounds* more American and others have linked it to (aw), we must consider that the distinction exists. However, even given Canadian English homogeneity, there is no guarantee that southern Alberta falls under its purview.

Despite the famed homogeneity of Canadian English, the possibility exists that southern Alberta may constitute a dialect area within Canada. Wilson-Smith (1997: 9) refers to Albertans as "the most American of Canadians with their suspicion of government and emphasis on individuality" and this may extend to their linguistic behavior. Don McGillivray in a 1992 column in the *Ottawa Citizen* (McGillivray, 1992) claimed that he could recognize an Albertan by the way s/he talks.

Chambers notes that it is very possible that Canadian English homogeneity may be restricted to urban centres but since most large-scale variationist studies in Canada have concentrated on these areas, evidence for rural diversity, especially in 'heartland' Canada (Chambers, 1973) is sparse. It has been suggested that although the standard variety

extends over vast areas of the country it may be studded with rural dialect pockets (Chambers, 1991; Trudgill, 1986) and in fact, Avis (1973) suggested that southern Alberta is just such a dialect area within Canada. Researchers into Canadian English have speculated that rural dialects may be as diverse as the differing ethnic populations which founded them and even within ethnic groups, regional distinctions may still be evident (Chambers, 1991). An examination of the available evidence for and against regional diversity in western Canada does not clarify this.

Most proponents of regional diversity in Canada's heartland have relied on evidence from lexical surveys such as the Survey of Canadian English (Scargill & Warkentyne, 1972); a study which is notoriously flawed (Schneider, 1984)². The Linguistic Atlas of the Upper Midwest (Allen, 1973; 1976), although better designed, provides too little information on Canada (and none on Alberta) to clarify the issue. The most recent large-scale survey of rural western Canada (Nylve, 1992) found only three distinctions between rural regions in Saskatchewan. In all three instances, the differences depended on age group and two involved only the younger speakers, indicating that any regional diversity is unlikely to be the result of ethnic distinctions between founder groups. In any case, ethnicity was not found to be an important factor for any of the variables studied. As Chambers (1991: 95) noted, despite the claims for Canadian ethnolinguistic rural diversity, any true linguistic implications "can only be guessed until they are studied".

Lack of evidence and differing metrics of evaluation have led to diverse claims about exactly where the standard Canadian dialect resides.³ Bailey (1991) observes that American lexical variants are less prevalent in the west. Conversely, Scargill (1955),

²As a postal survey, the authors had little control over who would complete the survey, creating doubt about its representativeness and due to the nature of the forced choice questions provided, the results may be distorted (e.g. speakers were not given the option of choosing the word 'couch' in lieu of 'chesterfield').

³Bailey (1991: 21) suggests that standard Canadian English should be divided up into the far West (B.C.), the Arctic North, northern Quebec, the prairies and southern Ontario. Wells (1982) recognizes three areas of difference: Newfoundland, eastern Canada (the Maritimes and Ontario) and western Canada but he bases the latter distinction on factors not related to accent (Wells, 1982). Avis (1973) reported regional variations in the Atlantic Provinces, the Ottawa Valley, the Red River Valley, on Vancouver Island and *southern Alberta* (my emphasis).

basing his comparison on pronunciation, notes that most Albertans in his survey *preferred* predominantly American pronunciations for variable items, particularly in the southwest corner of the province around Lethbridge.⁴ In any case, these assertions have limited relevance to the question of regional distinctions in North America since the designation of a variant as Canadian or not is itself controversial.

The central problem is that very rarely is there any clear link between the use of a particular term and any one national identity. Furthermore, this type of argument seems restricted to studies of Canadian English. Similar alternations in the United States such as that found between the terms *tap* and *faucet* in Utah (Lillie, 1998) have not prompted the suggestion that they are subject to some kind of Canadian influence although it is not beyond the realm of possibility (see Ursenbach & Jensen, 1976). Nylvek (1993) clearly illustrates this problem with her study of Americanization in Saskatchewan. While some lexical items showed an increased use of the so-called 'American' variant by young urban Saskatchewanites, others showed a reduction. In other words, in some cases, the American variant may have always been the local standard and both changes in use (either towards 'American' or 'Canadian' usage) are the result of movement towards a general Canadian norm. As Pringle (1985) notes, "the truth of the matter is that not all Americans say *tomedhdo*, and not all Brits say *tomahito*, and most Canadians do not think of whatever form they themselves use (and it might well be another) as anything other than Canadian. Nor is it anything other than Canadian" (Pringle, 1983: 231).

All this uncertainty leaves the question of whether or not southern Alberta English should be considered a distinct rural variety affected by contact with its large American-oriented ethnic community (e.g. the Mormons) unresolved. To do this, we need to examine the Lethbridge community for factors relevant to distinctions and compare the results to

⁴In fact, most discussions of 'change' in Canadian English make reference to American influence. For example, Bloomfield (1948/1973: 8) states "(i)n the past thirty-five years, it has been primarily the United States which, through motion pictures, magazines, books and personal contact, has kept Canadian English up to date." Also see Chambers (1981) and Clarke (1993) for possible evidence regarding the role of media contact.

both those found in studies of urban Canadian English and third dialect varieties of American English. Thus, in the face of this uncertainty, our sample universe is restricted to locally born and/or raised residents.

According to the quantitative paradigm (Sankoff, 1974), delineating the sample not only requires situating the community in its larger context but also requires that the speech community be examined according to a number of social categories to determine which factors are most relevant to the study in question. The social complexity of human beings makes it impossible and, likely, unnecessary to examine *all* possible categories. Of course, given the goals of the study, the distinction between Mormons and non-Mormons is paramount. As a result, our discussion of the social characteristics of the community will focus on those categories most relevant to both groups.

Social characteristics of Lethbridge from a Mormon perspective

Religious affiliation

Lethbridge, like other Canadian cities, has several different religious groups. Thus, any distinctions between Mormons and others may merely reflect some kind of general social segregation based on religion. In particular, Lethbridge has segregation of Protestants and Catholics in the schools. Thus, from a social network point of view, one might expect "religious" differences between Protestants and Catholics. Mormons attend Protestant schools although they also attend extra early-morning religious classes called 'Seminary' from about the age of 15 so their degree of difference on the basis of religious separation should be less than that found for Catholics. A comparison of these groups can resolve this question.

Of course, our thesis is that *ethnicity* is the dividing factor between Mormons and non-Mormons as elaborated in Chapter Two and the factor of ethnicity will not be discussed further here. However, other, more traditional, types of ethnic ancestry and the accompanying interference of substrate languages have been found to be important elsewhere and may also be in play in Lethbridge.

Ancestry and linguistic origins

Most current residents of Lethbridge are Canadian-born (83%) and over half of these were also born in Alberta (Statistics Canada, 1994). Of those who claim a single ethnic origin, the majority are descended from western Europeans although there is also a large ethnic Japanese and Chinese community as well as a relatively large aboriginal community (Johnston & den Otter, 1985; Palmer, 1990a; Statistics Canada, 1994).

In 1887, when they arrived, the original Mormon settlers differed from other immigrants in that while others had often come to western Canada either *via* the US or eastern Canada from some other old-world country with their families (some North American born) (Palmer, 1990a), the Mormon settlements were predominantly second or third generation Americans with roots in eastern North America (either the United States or Canada) (Ursenbach & Jensen, 1976; White Jr., 1978).⁵ Thus, their speech likely featured aspects of American English at that time.

For the most part, early Mormons were of British old-world ethnic origin although their number also included many Americans of Scandinavian descent (Government of Canada, 1902). Early Mormon "ancestries" thus echoed those of other southern Alberta settlers. Furthermore, as a result of their American origin, like most residents of Lethbridge, Mormons were (and still are) overwhelmingly native speakers of English (Government of Canada, 1902; Statistics Canada, 1993a). Although further immigration has changed the overall ethnic demographics of Lethbridge, the Mormon community is still dominated by these early ethnic categories as a result of limited movement across religious boundaries in southern Alberta. Toombs (1920) reported that, even in the earliest days, all Mormon growth in population could be attributed to either births within the community or

⁵Nelson (1952: 231) states that "(t)he migration was selective in that it attracted the men who were subject to arrest under the anti-polygamous laws of the United States. Under the system of administration of polygamy by the Mormon Church only reputable men of adequate means were "encouraged" to undertake the practice. It is highly probable that polygamy selected the better classes in the population. It selected, moreover, those who were definitely loyal to the tenets of the Church, which insured the future dominance of the colony by the authorities in Salt Lake City" This fact may account for the relatively high proportion of North American-born settlers in the expedition.

migration from other Mormon settlements or missions.⁶ Palmer (1990b) affirms that the Mormon missionaries in Canada were largely unsuccessful. Furthermore, the efforts of the Presbyterian missionaries to convince the Mormons of the error of their ways were also ineffectual (Toombs, 1920). Thus, in the interest of comparability, we wish our sample to be relatively consistent with these common traditional ethnic and linguistic origins, i.e. British and Scandinavian.

We want the sample to consist of people who share properties which make them most comparable within the community, i.e. those who best approximate the demographic characteristics of the Mormons just as the founding groups of the community did. This is best accomplished with some method which is biased towards contacting the descendents of the founding group or people who share their ethnic and linguistic characteristics.

Another important characteristic of Mormons is their strong ties to rural life (Dawson, 1936). The original group of Mormon settlers all congregated in primarily Mormon communities centered around agricultural enterprises. However, rural origins are not unusual in Lethbridge regardless of religious background.

Urban/rural

Because agriculture is the main industry of the Lethbridge area, many of those who now work or study in the city either commute from rural areas or outlying small towns or have migrated from those places. Jankunis (1972) notes that changes in farming methods leading to larger farms and lower farm populations as well as better transportation networks have led to the slowing or decline in growth of the populations of rural communities in southern Alberta just as Frazer (1983) reports for the 'cornbelt' of Illinois. As in Illinois, outmigration from smaller southern Alberta communities has resulted from limited opportunities for young people in these towns.

Between 1951 and 1966, the towns of Raymond, Magrath and Stirling (all predominantly Mormon communities) experienced a decline in population, largely due to

⁶In other words, despite the dominant American influence in the population, some settlers were recruited from places other than Utah.

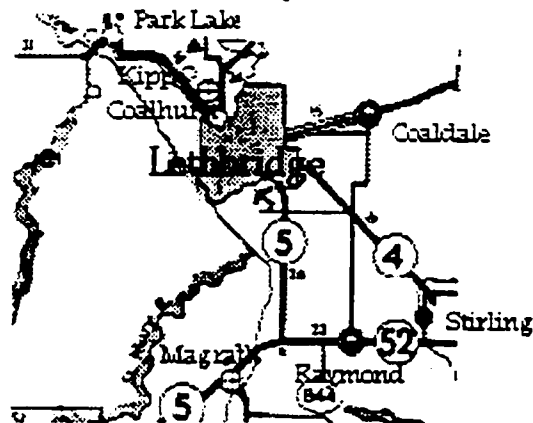
the closing of the local sugar factory. During that time, Lethbridge experienced a 60% growth in population. Although in the period following the second World War, Canada experienced a rise in immigration, some of this growth is undoubtedly due to urbanization. This is bolstered by evidence that the Mormon population of Lethbridge also increased at this time. Between 1951 and 1964, four new wards⁷ were created in Lethbridge indicating that the Mormon population almost tripled going from about 1,000 members in the late 1940s to between 2,500 and 3,000 members by 1968 (Tagg & Palmer, 1968). Even given higher Mormon birthrates, (in 1965, ward reorganization was partly prompted by the fact that 40% of the membership of the third ward was under the age of eight (Tagg & Palmer, 1968: 167)), undoubtedly some of this growth was due to urbanization.⁸ Currently, there are two Mormon stakes in Lethbridge indicating a population of between 6,000 and 8,000 (although this number also includes a few wards found in outlying communities).

In recent years, the proximity of many of these small communities to Lethbridge, as shown in the map in Figure 6, has resulted in a reversal of the urbanization trend in these cases towards one of suburbanization.

⁷A ward roughly corresponds to the notion of a church in other denominations but the Mormon church hierarchy regulates the size of these groupings. Generally, the church does not allow wards to grow much beyond 500 members. Mormon population figures are approximated from the number of wards.

⁸Even so, Louder (1990) reports that urbanization has proceeded somewhat slower for Mormons than the general Canadian population. Furthermore, many rural southern Alberta Mormons may have relocated to other areas besides Lethbridge. For example, Ursenbach and Jensen (1976) report between 1962 and 1976, most foreign-born immigrants to Utah were Canadian and over 90% of the immigration applications came through the U.S. consulate in Calgary showing that the bulk of these immigrants were likely from southern Alberta.

Figure 6: Map of Lethbridge and surrounding communities containing members of the sample.



Between 1966 and 1970, small communities in about a 25 mile radius of Lethbridge (e.g. Raymond, Stirling, Magrath, Coaldale and Coalhurst) experienced growth (Jankunis, 1972). Over the last twenty years, they have increasingly become suburban satellites of Lethbridge and billboards actively promoting new housing developments in these small towns can be seen around Lethbridge. Thus, we are justified in including residents of these communities as part of the sample. At the same time, the trend for urbanization in southern Alberta leads us to expect much of our sample (Mormon or otherwise) to have rural roots.

Other aspects of Mormon society and tradition have also contributed to their social characteristics. Most notably, as explained below, Mormons tend to be predominantly middle-class. However, social class is an important notion in sociolinguistic research so we now turn to a discussion of its importance in Lethbridge and southern Alberta.

Social class

Socioeconomic indicators have been invoked as valuable signals that linguistic change is in progress because they relate to social mobility. The theory rests on two basic findings; (1) linguistic variants with higher prestige tend to characterize the speech of the upper classes, and (2) speakers found in the status group directly below the highest class exhibit the greatest degree of linguistic insecurity. On the basis of linguistic variation patterns in New York city, Labov (1972b) postulates that a pattern of hypercorrection associated with the second highest socioeconomic class indicates variants with prestigious

or stigmatized values. Patterns within each group reflect perceived societal norms for the entire community (orderly heterogeneity). How subgroups pattern for mainstream norms may reflect their participation (or lack of it) in the society.

However, as Davis (1985) points out, socioeconomic indexes are inherently continuous rather than discrete and how cut-off points for different groups are assigned can determine the final results.⁹ Furthermore, just because a society can be grouped into classes on the basis of some objective socioeconomic criteria does not indicate that social class is necessarily a factor in determining the behaviour of individuals. The sociological study of Canadian voting patterns suggests that social class has less significance for social behaviour in general Canadian society (Lambert & Hunter, 1979) than in the large metropolitan communities studied in the United States¹⁰.

According to Chambers (1991), Canadian society is overwhelmingly middle-class which may account for the de-emphasis of class in social behavior. Of course, social categorization is inherently relative and Canadians do vary according to the factors traditionally used to calculate socioeconomic indexes, i.e. occupation, income and education (e.g. Labov, 1966/1982; Wolfram, 1969). Thus, it is possible to group Canadians into different categories based on socioeconomic criteria.¹¹ However, assuming Blishen and McRoberts' (1976) six category division, if all low income families¹² are working class (17%) and 20% of the population is upper or upper middle-class (as claimed by the National Anti-Poverty Organization (Ross et al., 1994)), we find that the majority of

⁹Davis suggest that rather than grouping speakers into artificial socioeconomic categories, effects of socioeconomic factors should be measured using correlation statistics.

¹⁰Grabb and Lambert (1982) found that a fairly large percentage (between 20 and 25 percent) of their Toronto sample either could not or would not establish criteria for social class. While most of their sample of Canadians were found to be capable of comprehending the concept of social class, this casts doubt on its salience in Canadian society.

¹¹The Survey of Vancouver English, for example, divided speakers into four socio-economic classes (de Wolf & Hasehe-Ludt, 1988) based partly on Blishen and McRoberts' (1976) six category division of occupational indexes for Canadians. Woods (1979) separated Ottawa into five social classes.

¹²The percentage of low income families is determined by Statistics Canada based on household income, family size, projected expenses (based on cost of living in the area where they are located), etc.

Canadians (over 60%) fall somewhere between this low and high scale, i.e. middle-class, validating Chambers' (1991) assertion.

Using this metric, in Lethbridge, the proportion of the population falling into the middle categories is even slightly higher than both the national and provincial averages (69%). Added to this, although both the mean and median income in Lethbridge is lower than that reported both provincially and nationally, the difference between them is smaller (the median income in Canada is approximately \$7,000.00 lower than the mean while in Lethbridge, the difference is about \$6,300.00). Furthermore, in Lethbridge, about 2/3 of private homes are owner-occupied, approximately the same as the national and provincial average and 66% of these are free-standing houses, slightly more than either provincially or nationally. All these indications point to the conclusion that Lethbridge, like many other Canadian communities, is overwhelmingly middle-class.¹³

Mormons are even more likely to be found in the middle-class than other Lethbridge residents due to one of the central ideologies of the Mormon church; communality. The church maintains a strict tithing system whereby each member must contribute at least 10% of their income to the church. This allows the operation of a church-operated welfare office which ensures that money is distributed to the less fortunate in the Mormon community. This system operates on top of Canada's existing social welfare structure so that Mormons have access to additional devices for economic levelling.

Mormon middle-class predominance is reflected in their educational levels. Alberta Mormons tend to be slightly higher educated than Albertans of other religions, with 54% with some post-secondary education and 19% with a university degree (Statistics Canada, 1993b). In fact, of those religions with more than 10,000 members, Mormons rank the highest in educational levels as shown in Table 4 by a comparison of Mormons with

¹³While it is true that the north side of the city is considered to be more "working class" than other parts, no one surveyed considered them to speak differently from anyone else and none of the speakers eventually sampled currently lived on the northside.

members of the United Church and the Roman Catholic church, the two largest denominations in Alberta.

Table 4: Comparison of educational levels across religious affiliation for Albertans (Statistics Canada, 1993b).¹⁴

	<u>United Church</u>	<u>Roman Catholic</u>	<u>Mormon</u>
University	17%	16%	19%
Some post-secondary	48%	48%	54%
High-School	33%	33%	25%
Less than grade nine	1%	3%	1%

Thus, attempts to reach any particular social class or even a strata of classes will not be pursued in this study although the emphasis on the Mormon community and those with whom they are in contact leads us to expect that, if the sampling schema is successful, most speakers will indeed fall into the middle-class. Furthermore, since some have suggested that social class effects are merely a result of social network maintenance, social network distinctions may also have more relevance to linguistic distinctions following religious lines.

Social Networks

Milroy (1980) approaches social group identity from the point of view of the individual who may use variability to express any number of aspects of her identity. Using *social network analysis* as a tool, she quantifies individual social relationships by examining ties between speakers according to relevant *clusters*: "kin, neighbourhood, occupation and voluntary association (friendship)" (Milroy, 1980: 52). She suggests that social networks operate as norm enforcement mechanisms and speakers with close ties to the network are more likely to use community vernacular.

In distinguishing Mormons and non-Mormons in Lethbridge, some of these clusters may be less relevant to this study than others. In the first place, since kin is an important part of a speaker's ancestry and most of the Mormons in southern Alberta are not converts, kinship and religious affiliation interact. Furthermore, there is some indication

¹⁴These numbers are calculated for persons between the ages of 25 and 44.

that the workplace may not be a principal source of social relationships.¹⁵ Neighbourhood also cannot be considered since in Lethbridge, neighbourhoods do not generally serve as strong foci for group activities.¹⁶

Speakers who have grown up in Lethbridge and the surrounding area generally make their first peer contacts and friendships through either church groups (both Mormons and non-Mormons) or at school. Of course, church group completely interacts with religious affiliation. School group membership in southern Alberta tends to be cliquish (see Chapter Two). For the most part, these cliques are either Mormon or non-Mormon predominant, i.e., religion plays a role in determining formation and interaction within groups. When examining the social relationships of the speakers, these factors must be taken into account.

On the basis of this discussion, we will deem our sampling technique successful if it yields speakers who are predominantly middle class, with a good representation of people with rural backgrounds and predominantly British or Scandinavian ancestry. Furthermore, although it may not be possible to disentangle social network and religion, an emphasis on reaching Mormons and non-Mormons in contact may allow some examination of the role of social contact. Before discussing the sampling technique, there are two other social factors to be considered which have relevance to any sociolinguistic study. These are sex and age.

Sex

One of the most widely reported social factors in linguistic variation is that of sex. Crosslinguistically and crossculturally, we find that the speech of men and women tends to differ. Labov (1990) notes two tendencies which have been frequently observed:

- (28) (1) *In stable sociolinguistic stratification, men use a higher frequency of nonstandard forms than women.*

¹⁵Most speakers in the study claimed that work associations had little or no relevance to their choice of social associates. Almost everyone claimed family relationships as primary.

¹⁶In this sense, social networks in Lethbridge are more loosely-knit than those studied in Northern Ireland (Milroy, 1980).

(II) *In the majority of linguistic changes, women use a higher frequency of the incoming forms than men (Labov, 1990: 204-205).*

In general, it has been observed that women are most often associated with greater use of variants which carry prestige which, in association with indications of social mobility and a correlation with differences across age groups, is a valuable indication of change. In fact, sex differentiation has often been found to be amplified in particular social groups within the community; usually those with the most linguistic insecurity (Labov, 1990). No one clear explanation for these tendencies has yet been established although a number of theories have been suggested.

One possibility is that, as proposed for other social distinctions, sex differences result from local network density. However, this is difficult to uphold since social groups virtually always include members of both sexes. Even so, Milroy (1980) has pointed out that men and women will often form distinct social networks within social groups. Eckert (1989) argues that linguistic differences related to sex are the result of power differentials in society associated with gender roles.¹⁷ Labov (1990) challenges this noting that the women who have shown the greatest differential are among the *most* powerful in the society. Furthermore, he notes that the patterning of men and women differ depending on whether or not change is occurring and the stage the change has reached. In early stages of change, sex differences operate independently while in later stages, they show a great deal of interaction with other social factors, e.g. social class. Thus, while power differences between gender roles are not ruled out, other aspects may also be important.¹⁸

One extremely compelling explanation is associated with the observation that women tend to lead in situations where change is in progress. This is attributed to their role as child care-givers. Small children in the early stages of acquisition would be more likely to hear advanced forms produced by women than by men (Labov, 1990; Roberts, 1997)

¹⁷In the analyses, we will continue to refer to sex effects since gender roles were not isolated.

¹⁸For example, Haeri (1996) notes that, for phonological variables alternating along the front/back dimension, iconicity may be involved with fronting associated with women's speech and backing with men's.

and thus the change is advanced *because it is transmitted to the younger generation*. Where men are in the lead, their limited contact with the next generation in their formative years limits the probability that their speech patterns will be passed on.

All these considerations have relevance to the comparative study of the Mormon and non-Mormon community in southern Alberta. If variation between sexes in the two communities shows similar patterns, it will be evidence that both groups show similar norms. In fact, there is some indication that gender roles may be somewhat more sharply drawn among Mormons than in the other groups.

As noted earlier, Mormons are generally more highly educated than other groups but they show a difference in educational level with respect to gender. While all other religions with over 10,000 members show roughly equal proportions of men and women with university educations, 62% of university-educated Mormons are male (although Mormon women are not *less* educated than any other group since they show a higher proportion of "some post-secondary education").

The notion that there are lower career expectations in Mormon society for women as opposed to men implied by the educational differences is reflected in some of the attitudes they expressed towards other male-dominated pursuits such as Mormon missionary work. The speaker in (29) is an older Mormon woman who notes the attitudes of her generation with respect to the choice between going on a mission and getting married and her opinion of the choices now available to the present generation.

- (29) "If you got older and weren't married, you'd probably maybe decide to go on a mission but now, I think that if they want to go on a mission, you'll darn well go." (Spkr 12, Cass 14: 1.07.40)

Despite her perception that this attitude has changed, the remarks of a younger Mormon woman in (30) indicate that marriage is still the preferred choice for some young Mormon women.

- (30) "So I thought, I'll stick around here for a little while and then I'll go to school for a year, or two years and then I'll go on a mission if I'm not married by then." (Spkr 015, Cass 16: 56.15)

In fact, the relatively high proportion of Mormon women who fall into the "some post-secondary" category for completed education may be related to the time frame of the missionary program. Since young Mormon men are called to their missions at nineteen and, if they wish to go on a mission, may not marry prior to this, on their return, the Mormon women in their age group, who have been prevented from going on a mission due to different age requirements, are approaching the middle of their university career. Mormon missionaries tend to marry quite soon after they return from their mission¹⁹ and it may be that, as in the case of at least one young woman interviewed, a new wife may decide to forego school and instead, take a job to support the family while her husband, who is expected to be the chief breadwinner, gets the higher education. However, these attitudes may be changing as the speaker in example (29) above suggested and if this is true, it may be reflected in differences across age groups.

Age

The variationist theory for interpreting age difference as language change is called the apparent time hypothesis; i.e., changes over time are reflected in the "apparent" time represented by the different age groups (Weinreich et al., 1968). Progression of change can be tracked by observing relatively little use of a particular variant in older speakers as compared to relatively more in younger speakers. In some cases, this hypothesis has been verified by a number of "real time" studies (see Chambers (1995) for discussion) where change is observed in the same community by returning after a number of years and re-examining the patterns of variation. However, it is important to note that age differences are just an indication that change *may* be occurring and may have other explanations, e.g. patterns of behaviour associated with particular times of life (Labov, 1994).

While age groupings may seem straightforward, differences related to age can be interpreted in a number of ways depending on the social situation and how the age groups are divided. As Eckert (1989) points out, in different communities, different groupings of

¹⁹No-one could tell me why this is.

age may correspond to different indicators of social significance. Linguistic differences associated with age can also indicate change as a result of specific historical events. For example, Keiser (1996) tracked age distinctions in the use of the dative in Pennsylvania German to historical changes in the school system. To identify and explain language change, researchers ideally wish to capture different behaviors across generations of speakers. In any case, age distinctions are valuable indicators of social conventions in any community.

Sample universe

On the basis of these considerations, the sample universe for this study was defined as native English speakers between the ages of 18 and 49 who live in or around the city of Lethbridge and have resided in the southern part of the province (south of Calgary) from at least the age of five. Since some of the variables under study have been reported only recently, it was felt that by limiting the sample to younger groups, there would be more opportunity to observe the *process* of any possible change. Of course, our focus is on reaching a representative sample of Mormons with the goal of comparing their linguistic behaviour to a corresponding group of non-Mormons, preferably with whom they maintain some social contact.

CHAPTER 4: METHODS OF ANALYSIS

Data collection

The social scene in Lethbridge

The sampling method chosen relies on the identification of some contact point where the speakers belonging to the sample universe discussed in Chapter Three might be found. There are a number of places and organizations where people in Lethbridge can meet. For example, people often congregate in restaurants, bars and night clubs. Country and western clubs are popular; Lethbridge has two. California-style salad and sandwich restaurants such as *Moxies* and *Treat's Eatery* are popular with the younger crowd as well as trendy coffee shops such as the one pictured in Figure 7. For older members of the community, there are a number of more traditional coffee shops in hotels or pancake houses like *Smitty's* or *Humpty's Egg Place* where local businessmen will often gather in the mornings to exchange news and views.

Figure 7: A popular downtown bookstore/coffee shop



Lethbridge also has several men's clubs such as the Rotary, Lions Club, Elks Club, etc. which cater to different interest and age groups. Women can meet each other at health

clubs, church groups, or organizations associated with their children, spouses or work. Volunteer organizations also provide a locus for interaction. The downtown area features a public square where there is an art gallery and nearby, a large public library and these attract middle class residents but usually only when there is some special event held such as the Children's Festival. East of town are the exhibition grounds where horse racing takes place and every summer there is a fair and rodeo which most everyone in the city attends.

Lethbridge residents, like most Canadians, are heavily involved in winter sports. Lethbridge hosts a Junior A Hockey team (the Lethbridge Hurricanes) and between periods at the games, people congregate and catch up on all the news. The Civic Centre, centrally located near the downtown core, contains a skating rink which is the home of the Lethbridge Figure Skating Club and features regular public skating sessions as well. The Civic Centre also has a running track and a large playing field where football, soccer and rugby games are played (both leagues and pick-up games). It is also the home of the Lethbridge Curling Club, a focus of many bonspiels and the parties associated with them. Nearby is a large indoor swimming pool and a senior centre where dances and other social events for seniors are held.

As for summer recreation, there are a number of man-made irrigation lakes in and around the city which provide social opportunities. The most centrally located is Henderson Lake, found on the southeast side of the city. Surrounding the lake is a popular park where people can go to fish and boat in the summer and skate in the winter. Nearby are tennis courts and the city's only outdoor swimming pool. At the time of the study, it was fashionable in Lethbridge for those wanting a little low-key exercise to walk around the lake and, at least in summer, it is rare to find no-one occupied in that pursuit. Golf is also very popular in Lethbridge. The two most prominent golf courses are the Country Club and the Henderson Lake Golf Club located near Henderson Lake.

Lethbridge also provides many educational opportunities to its inhabitants. There are three high schools in the city proper; Winston Churchill, on the north side, the

Lethbridge Collegiate Institute (LCI) on the south side and the Catholic school, Catholic Central, situated right across the street from LCI. LCI is the largest with over 1,000 students so, when combined with the students from Catholic Central, most Lethbridge high school students attend classes within a two block radius. LCI is also a technical school so students from other parts of the city or even the Catholic system will attend LCI if they have an interest in a technical skill such as woodworking, beauty culture, etc. On the outskirts of the city, there are high schools in Coaldale, Coalhurst, Raymond, Magrath and Stirling. The schools in the latter three towns tend to be predominantly Mormon. There are also two secondary schools; the Lethbridge Community College and the University of Lethbridge. The college caters to those interested in training for a specific job or as a preamble to university entrance offering courses such as business administration, hotel management, law enforcement, etc. while the University caters to more academic pursuits with courses in general arts and sciences as well as education and nursing.

This short description is meant to give a general view of the social life of Lethbridge. However, since the main goal of the thesis is to examine Mormons and non-Mormons in contact, it was felt that, since the Mormon population constitutes a minority in Lethbridge (only about 10% of the population), most of the social opportunities described above are too non-sectarian to offer a locus where we can be confident that a significant number of Mormons could be reached through any point of contact based on them. This is particularly the case for the bar, night club and coffee shop scene since, as noted previously, due to the Word of Wisdom rule, Mormons are unlikely to spend a great deal of time at these places. Furthermore, Mormons are not clustered in any particular neighbourhood in the city proper so, to ensure that the sample would be stratified for religion the sampling technique had to be specially designed to reach this population while at the same time contacting non-Mormons as well.

Fieldwork

In designing the sampling technique, the primary focus was to reach Mormons in the community but a secondary goal was that the sample closely approximate the traditional ethnic makeup of the founders of the Lethbridge community and, if possible, include descendants of this group. With these aims in mind, organizations which had direct ties to the Mormon church were highlighted. One organization, LDS Social Services, turned out to be too bureaucratic and Mormon-oriented to be of use. However, another Mormon organization; the Lethbridge Family History Centre, a local centre for tracing genealogy which is sponsored by the Mormon church but operated by volunteers from across the community, was deemed to be an ideal starting point for the study.

As part of their religious obligation to seek out their ancestors for the sealing ceremony (as discussed in Chapter Two) Mormons are urged to research their genealogy and the Lethbridge Family History Centre primarily exists for this purpose. However, the centre is open to anyone who is interested in their background, regardless of religion, and it was thought that workers at the centre would be acquainted with persons who shared this interest and therefore, would be more likely to have ancestral ties in the community. Thus, initial contacts were made by going to the centre and talking with some of the volunteers.

Specifically, the primary contacts were two women volunteers at the Lethbridge Family History Centre; one Mormon and one non-Mormon. The women were told that the study was an examination of the relationship between American and Canadian culture in southern Alberta.¹ Given the fact that Mormons have such close ties to the United States, it did not seem odd to these women that Mormons were a focus of the study. Despite the fact that contact through the Lethbridge Family History Centre was initiated in the hopes that at least some speakers would have ancestral ties to Lethbridge, the initial contacts were not led to believe that this was a necessary condition of inclusion. I only stated that I wanted to talk to people who had been born and raised in southern Alberta. Proceeding from these initial

¹ After they had recommended possible contacts, they were told that language was the focus for the study.

contacts, the speakers were self-selected using the "friend of a friend" technique which has been found to be very successful in other studies (e.g. Britain, 1997; Milroy, 1980).

Each initial contact provided a list of names of people who they felt would be helpful to the study. These lists allowed contact with nine persons. Of these, five were available for an interview. Two contacts were unavailable (due to time constraints) for interviews but recommended someone else. Another was forced to cancel the appointment at the last minute and it could not be rescheduled (due to time constraints - not reluctance of the speaker). Only one person was suspicious of the study and refused to participate in any way.² Other recommended participants could not be contacted.

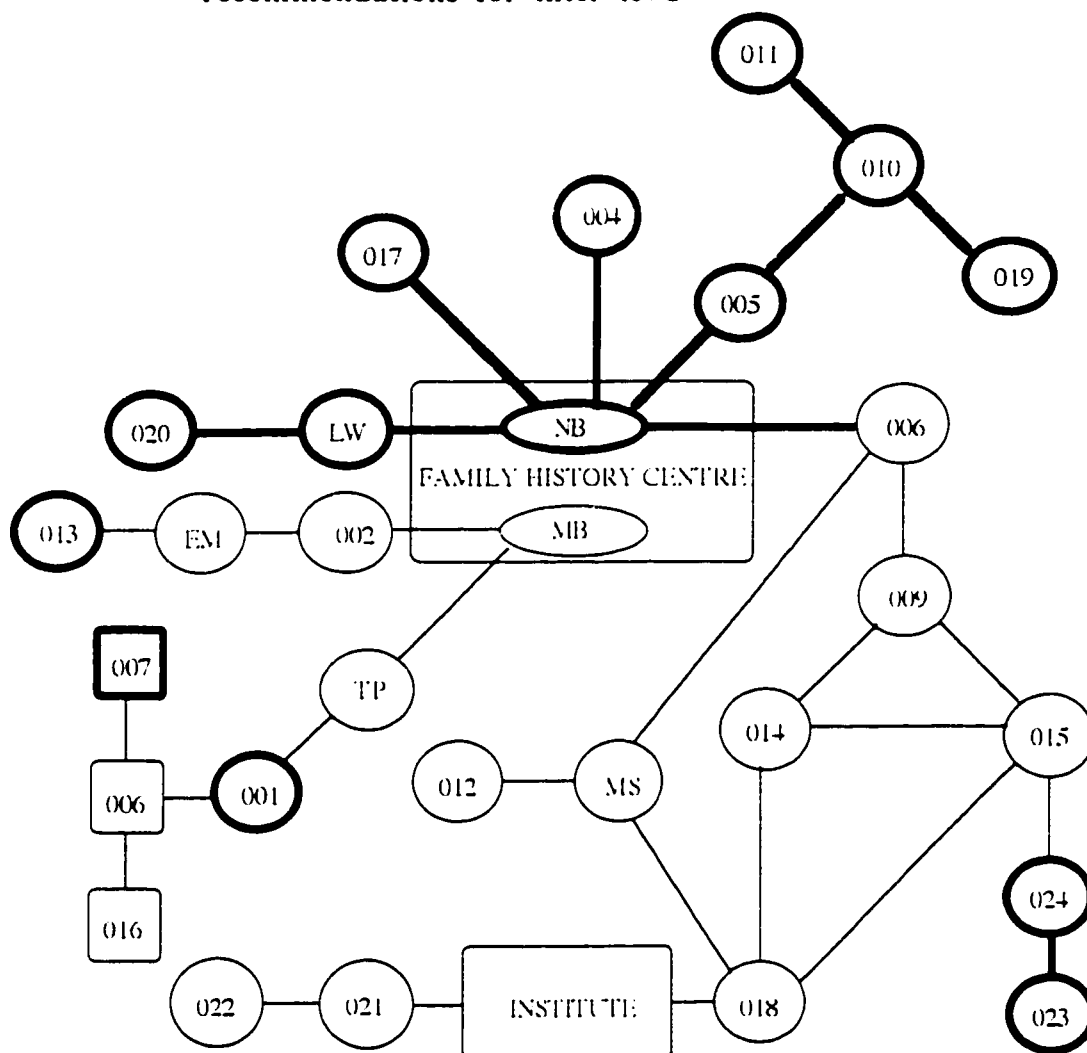
At the end of each of these initial interviews, each informant was asked if they could recommend someone else for the study, particularly people who fulfilled social qualifications not yet represented (e.g. age, sex, religion) but which were felt to be important for the study on the basis of the points raised earlier. Mormons were asked to recommend non-Mormons and vice-versa to increase the chance of reaching Mormons and non-Mormons in contact. As in the initial contact sequence, some recommendations did not work out due to time constraints or other problems (in a few cases, the contact turned out to have been raised elsewhere than southern Alberta) but, for the most part, where this occurred, the contact was able to recommend someone else. Again, only one contact completely refused to participate (and then, only after consultation with his wife).

Only two of the speakers in the sample were not selected in this way. One of the young Mormon informants contacted suggested that the "Institute" could be a good source of more young Mormon contacts for the sample. The "Institute" (Southern Alberta Institute of Religion) coordinates the Young Adult programs (both recreational and educational) for the Mormon church in Southern Alberta. In Lethbridge, its close proximity to the University makes it convenient for University students to attend classes at both institutions

²I later discovered that this speaker had a serious hearing problem so would have been disqualified anyway.

but everyone, regardless of age or religion, is welcome.³ It functions as a recreation centre (pool tables, television, etc.) as well as an educational centre.

Figure 8: Connections between speakers as determined by recommendations for interviews⁴



Classes such as "Church History" and "Book of Mormon" are held along with discussion groups and workshops (Southern Alberta Institute of Religion Council, 1995). Many young Mormons, both married and single, attend the Institute and, in fact, some classes are specifically directed towards married couples. Although most of the contacts for

³ Although, generally only Mormons are found there.

⁴ American-born informants are represented by a square. Mormons are represented in plain circles and non-Mormons in bold circles. Speakers who were interviewed and form part of the sample are identified with speaker numbers. Those who served as contacts only are identified by initials.

this study were not made directly through the Institute, all the young Mormon speakers in the sample were or had recently been associated with the Institute. The resulting sample consisted of 24 Lethbridge and area residents; 21 Canadian-born and 3 American-born contacted according to the connections shown in Figure 8.

Social characteristics of the sample

Ethnicity

Ideally, as stated earlier, to avoid possible confounding effects of other more traditional ethnic identities in Lethbridge, the sample would be restricted to speakers with an old-world ethnic background (e.g. British, Scandinavian, etc.) reflecting that of the early settlers of southern Alberta (Government of Canada, 1902) and the sampling method accomplished this. The majority of speakers in the sample, Mormon or otherwise have at least some British or Scandinavian ancestry. The strong influence of the two main groups of American settlers on southern Alberta is also reflected in the sample which includes descendants of American immigrants (those from Utah and elsewhere) as well as descendants of immigrants from eastern Canada and some European countries, in particular, Great Britain. This representation is likely to due to the intended bias of starting the selection process at the Family History Centre. Furthermore, both groups contain representatives with rural backgrounds.

Urban/rural

The geographical distribution of the Canadian-born speakers for hometown and current residence is shown in Table 5, along with the specific southern Alberta community with which they are connected. Out of seventeen speakers currently living in Lethbridge proper, five originally came from a smaller town. Six speakers in the sample came from one of Lethbridge's suburban satellites and three of these still live on the outskirts of town. One originally urban resident has moved to one of these communities. Of the thirteen speakers raised in the city, another four (including the speaker who had since moved back

to the country) came from families who had migrated into the city from farms or small towns in the area.

Table 5: Speakers by hometown and current place of residence ranging from furthest distance from Lethbridge to closest: Mormon dominant communities are in bold.⁵

<u>Community</u>	<u>Number of Speakers</u>	<u>Now urban</u>	<u>Now rural</u>
Cardston	1	1	
Vauxhall	1	1	
Magrath	2	2	
Raymond	1		1
Coaldale	1		1
Coalhurst	2	1	1
Lethbridge	13	12	1
Total	21	17	4

Thus, over half the Canadian-born sample has a clear connection to rural southern Alberta. As for social class, since most speakers over age 30 owned their own home, we can consider that the qualification that speakers be middle-class was also met. However, this will be discussed more fully in the next section. In any case we can consider that the sampling technique was successful in reaching the population for which it was designed.

Social factors isolated for study

Sex, age and religious affiliation

Due to the emphasis on sex, age and religious differences during the sampling technique, the Canadian-born speakers were stratified for age, sex and religious affiliation (i.e. Mormon or non-Mormon) as shown in Table 6.

Table 6: Stratification of Canadian-born speakers

Religion	<u>Mormon</u>		<u>Non-Mormon</u>	
Age/Sex	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
18-25	3	2	2	3
30-43	2	3	4	2

⁵Speakers were not necessarily born in their hometown but were raised there.

The data on which this study is based comes from the 21 native-born Canadians interviewed.⁶ Our study will focus on the social factors which mediate the use of English in both the Lethbridge community and within the subgroups defined by the Mormons and non-Mormons.

Sex and age

As noted above, the attempt to limit some possible confounding factors such as social class and more traditional ethnicities was successful and therefore, these will not be studied along with the urban/rural distinction since most Lethbridge residents have some rural ties. The emphasis on stratification of sex and age during the sampling procedure however allows that these can be studied. The distribution of sex is largely symmetrical across religious groups but the distribution of age groups is not sharply stratified. The two 'older' males in the Mormon group are both under 35 as is the case of the two 'older' females in the non-Mormon group.

However, this is not necessarily a problem since differences in age do not necessarily represent differences in generations which is implied by the apparent time hypothesis and the idea that phonological variation is passed from parent to child (Payne, 1976; Payne, 1980; Roberts, 1997). For example, the sample includes a brother and sister who fall into different age groups. Biologically, they belong to the same generation but chronologically, they are at very different points in their lives.

Furthermore, as Eckert (1989) pointed out, considerations such as association with age-related peer groups are, undoubtedly, also important. However, in dividing the sample, in order to invoke the apparent time hypothesis, age groups must remain as faithful as possible to chronological time. In addition, in order to test age as a social factor, it is advantageous for the speakers to be stratified with the number of speakers in each cell

⁶The American-born speakers consisted of one non-Mormon (1 woman), one Mormon convert (1 man) and one speaker who was raised as a Mormon but who has since converted to Catholicism (1 woman). Due to their small numbers, wide age range (30-56) and diverse geographical origins (Idaho, Oregon and Arizona), the only (somewhat fuzzy) category they may represent are American examples of the third dialect so their interviews do not feature in the analysis.

roughly equal. With the primary goal of stratifying the sample, it can be divided up into two roughly equal and otherwise (sex and religion) stratified age groups; 18-25 and 30-43.

All of the older speakers (30+) have been married for several years. Most of them either have children or are in the process of producing them and all of them owned their own home. Most of the speakers under 30 are either unmarried or had married within the last year. None of them have any immediate plans to start a family and only one couple had just recently purchased their own home (with extensive financial help from their parents). Most of the younger speakers either attend an institution of secondary education or have recently graduated or dropped out. Thus, on the basis of a subjective consideration of the speakers' position in life and not solely on the basis of age, the sample is still a good representation of age even though ideally, it would be more sharply-stratified.

Clearly, the two groups form two different mind sets with respect to their position in life and the strength of their connection with the community. With only one exception, all of the older speakers claimed satisfaction with their current life pattern and had no intention of ever leaving southern Alberta (although some speakers had lived elsewhere). The younger speakers in the sample were much more open to the idea of moving to some other area (although due to missionary work, some of these had also lived elsewhere). The relationship between age groups and acceptance of geographical mobility brings up the question discussed earlier of social mobility within the community. To what extent can we relate linguistic patterns to social aspirations or requirements of these speakers given the lack of social class stratification?

As we discussed earlier, the demographics of Mormons in particular and Canadians in general as reflected in the sample precludes a true study of social class. However, access to prestige values associated with social mobility can be accomplished with other methods. To this end, we analyzed the sample for "linguistic market" (Sankoff & Laberge, 1978).

Linguistic market

Traditional divisions of socioeconomic status can be more finely-tuned for the study of linguistic behaviour (Sankoff et al., 1989; Sankoff & Laberge, 1978). Even where speakers have similar rates of income and even the same occupation, the use of more prestigious forms of the language may be more important for some than others depending on the extent to which they require access to more standard varieties of language as a result of their occupation and other activities in the community. For example, two computer programmers could make the same salary but one might be required by her job to promote products at user-conferences or other sales meetings while the other would not. The speakers' jobs may also not be the most important aspect of their linguistic life. Speakers may be very active in their community taking part in activities which require public speaking or many appearances before government committees, corporate sponsors, etc.

To focus on the importance of standard or "legitimized" varieties of language in the speakers' lives rather than simply socioeconomic status, Sankoff and Laberge (1978), appealed to the notion of the 'linguistic market'. To operationalize it, they developed a survey technique whereby speakers are ranked according to subjective, rather than objective classifications of status but by recourse to relatively objective means, i.e., the researcher does not make the classification. In studies of Montreal French (Sankoff et al., 1989), linguistic market has been found to be not only a good predictor of linguistic behaviour but also closely tied to speakers' "symbolic orientation", i.e. individual preferences, social values, attitudes, etc.; some of the very attributes which social class is purported to reflect. Furthermore, in societies where social class is blurred, as we have argued is the case in Canada, the linguistic market provides an opportunity to identify prestige values for variants and can be employed even in a sample where the majority of the speakers are middle-class. Speakers ranking higher for linguistic market are more likely to use standard variants particularly in more formal styles.

Following Sankoff and Laberge's (1978) study, linguistic market scores for each speaker in the sample were determined by a survey sent to six Canadian sociolinguists (three professors and three graduate students) including two who had previously lived in Alberta (see Appendix I). The emphasis on nationality and Alberta residence was to try to ensure that the judgments would be made based on an intimate knowledge of Canadian society, and if possible, Albertan society in case it differs. The judges were provided with short biographies of the speakers describing their activities (both with respect to their employment and extra-curricular activities). None of the judges had any knowledge of the corpus itself other than that found in the speakers' biographies which, as much as possible, obscured the speakers' sex,⁷ age and religious background.

Judges were instructed to rank the speakers on purely subjective criteria based on their general knowledge of the Canadian marketplace and society and their reactions to the *entire* description provided. They were explicitly asked not to apply inferred objective criteria such as their knowledge about the education required for a particular job, the amount of contact with the public, etc. Specific information of this type about any particular speaker, in any case, was not revealed to the judges. Since the linguistic market ranking is not an objective notion, the number of groups into which the speakers could fall were not pre-set. Speakers were assigned to however many groups the judges felt were required and then each judge ranked the groups. The number of groups varied widely (between 3 and 8). In one case, the judge ranked all the speakers within groups as well as between groups. However, in the interest of simplifying (and regularizing) the process, only the between-group rankings were considered.

The rankings for each judge were then transformed into a numerical scale between zero and one. So, for example, if a judge had put the speakers into four groups, the speakers in the lowest ranked group would receive a score of zero, those in the next group

⁷Speakers were given pseudonyms for the linguistic market survey which were explicitly chosen because they could potentially be names of men or women, e.g. Kim, Corey, etc. Names were used rather than numbers to encourage the judges to think of each speaker as a person rather than a statistic.

would receive a score of .333, then .666 up to the highest ranked group which would receive a score of one. Scores for each speaker were then added and divided by six (the number of judges) to get an aggregate score.

Before assigning the final linguistic market ranks to each speaker, the overall rankings across pairs of judges were compared to determine the rate of agreement between judges. For each instance where speakers were clearly ranked (i.e. appeared in different groups), whether or not the judges had agreed or disagreed with respect to the ranking was noted. The total number of disagreements was then divided by the total number of agreements and the resulting score was noted. For the most part, the level of agreement between judges was high with agreement scores ranging between .03 and .10 for five of the six judges.⁸ One judge showed a relatively high level of disagreement (.11 to .20) with the other judges and so, the scores given by this judge were thrown out.⁹

On the basis of the scores, two well-defined cut-off points appeared with three speakers falling well below a score of .2 and three speakers falling well above a score of .8. The other fifteen speakers ranked on a continuum between about .2 and .7. On this basis, the speakers could be divided into involved, peripheral or uninvolved in the linguistic market (Sankoff & Laberge, 1978). However, given the size of the sample, this would have divided the speakers into too many groups to confidently determine if linguistic market was the relevant factor or some other social characteristic.

Thus, to ensure a stratified sample, speakers were divided into only two categories; high or low linguistic market. The cut-off point was set at a score of .45, which would divide the speakers into two roughly equal groups (10 Low, 11 High) and give the best stratification of the sample. One speaker appeared almost directly on the dividing line and

⁸This is roughly comparable to that found in the Montreal study where the agreement scores ranged between .016 and .093 (Sankoff & Laberge, 1978: 244).

⁹As it happened, adding in this judge's scores would not have affected the final coding of this factor since the ranking differences involved were embedded within the final two values which were adopted. The judge was not one of the ones from Alberta so this does not indicate some regional distinction.

along with all speakers above this was considered to be high linguistic market. All other speakers were coded as low.

Another consideration not explicitly garnered by the sampling technique, is the question of social networks. As noted in Chapter Two, this factor is very relevant to the question of ethnicity and, if at all possible, it needs to be considered.

Social network

Keeping the problems mentioned earlier in mind, an attempt was made to analyze speakers for this factor. Speakers were classed as to whether they self-reported as having Mormon or non-Mormon friends at school, and whether or not they still remained in contact with those persons with whom they had associated with in school. As noted earlier, kinship ties to one or the other group were generally the same as religious affiliation but the extent to which speakers had any kinship ties at all in the area (e.g. aunts, uncles, grandparents, etc.) could be evaluated and where the speakers came from mixed marriages, this indicated multiple network ties. Specifically, to evaluate the speakers, each was given scores for the conditions in (31) for each community (Mormon or non-Mormon) under study.

- (31) (a) Substantial ties of kinship in either the Mormon or non-Mormon community in Lethbridge (cousins, aunts or uncles). Speakers with extended families in the area were given two points. Those whose families lived mostly outside of the area were given no points. Those speakers who came from small families but whose entire family lived in the area were given one point. All speakers provided this information in some form so there were no missing values.
- (b) Voluntary relationships with Mormons and non-Mormons at school and at present. Those who reported a large network of friends at school and at present were given two points. Those who either only reported a large network of friends at school or only at present were given one point. Those who admitted few previous or present relationships with either group, i.e., they did not have many close friends, were given no points. Where information as to the religious affiliation of their friends was missing for any reason, it was extrapolated from their report of which high school they had attended. Speakers who attended Mormon dominant high schools were considered to have had mostly Mormon friends and vice versa. It was thus possible to give all speakers a score for their relationships.

Given the social separation between Mormons and non-Mormons, we began with the assumption that Mormons and non-Mormons represent two relatively distinct social networks. As a result, speakers were assigned separate scores representing closeness to Mormon networks or to non-Mormon local networks. Once the overall score for closeness to Mormon and non-Mormon networks was calculated for each speaker, it was divided by two (based on the fact that there were two criteria).

To determine the extent to which each speaker showed exclusively non-Mormon or Mormon local networks, the non-Mormon index score was subtracted from the Mormon index score for each speaker. Using this index, most of the speakers showing association with Mormon local networks were Mormon but not all. Most showing relative closeness to non-Mormons networks were non-Mormon but not all. Mormons who have relatively strong ties to the Mormon community will still rank as intermediate if their ties in the non-Mormon community are also strong. The same effect is found if speakers have weak ties to both communities. This is also true for non-Mormons.

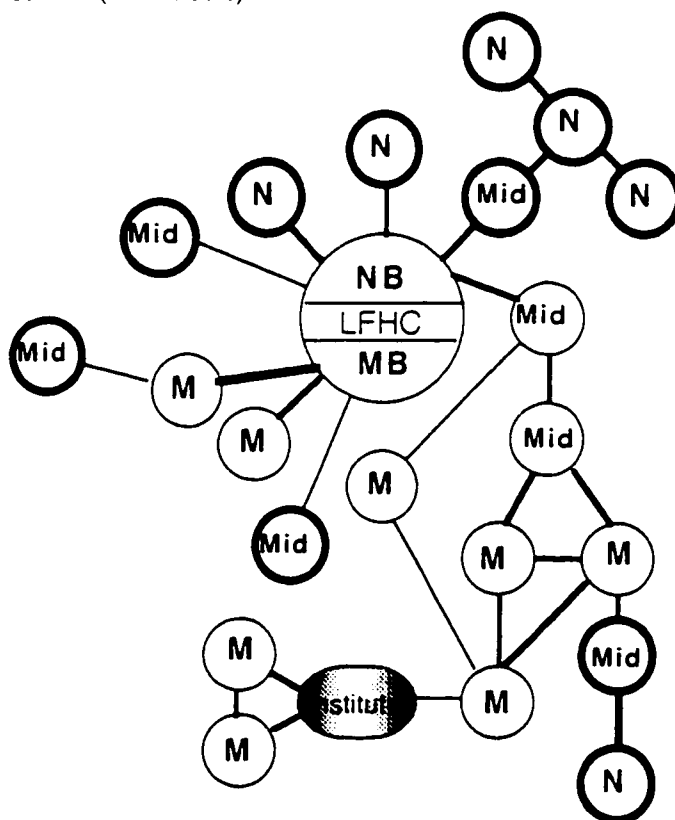
Although a few speakers reported that they participated in mixed networks in high school, as suspected by the cliquishness reported earlier in southern Alberta schools, these networks were always identifiable as either Mormon dominant or non-Mormon dominant. Furthermore, most speakers did not come from mixed families. Thus, few speakers could be said to truly straddle both communities. Only one non-Mormon and one Mormon participated in social groups in school that were clearly predominated by the opposite religious group. Thus, social network and religious affiliation in the sample highly interact. Table 7 shows the speaker distributions.

Table 7: Distribution of speakers according to religious affiliation and network affiliation

Religious affiliation and: Network affiliation	Mormon <u>N</u>	Non-Mormon <u>N</u>
Close	9	8
Mid	2	5

As expected, almost all Mormon speakers were close to Mormon networks although two could be considered somewhat median between the two. Five non-Mormon speakers also showed some degree of distance from local non-Mormon networks, either due to Mormon friendships, Mormons in their extended family or due to general distance from the community (i.e. few family ties in the area and small social groups). Thus, although the distributions are too skewed for a variable rule analysis, we can distinguish speakers by social connections when investigating indexes. Furthermore, marginal statistics using these classifications may also be revealing. Figure 9 shows the classification of each Canadian-born speaker according to the sampling connections.

Figure 9: Connections between Canadian-born speakers. Non-Mormons are in bold circles. Direct connections are shown with bold lines. Speakers' index coding for connection to local non-Mormon networks is shown by N (non-Mormon), Mid (mid), or M (Mormon).¹⁰



¹⁰LFHC is the Lethbridge Family History Centre.

Attitudes

An attempt was also made to rank speakers for their attitudes to Americans and other Canadians including other Albertans (Meechan, 1996) to see if these would correlate with the adoption of some American or North American standard. In particular, speakers were asked if they would ever move to eastern Canada or the United States. They were also asked if there was a difference between Americans and Canadians and if so, what was it? It was hypothesized that the use of more negative terms (such as "pushy") versus more positively associated terms (e.g. "assertive") could be used to evaluate this. However, the resulting indexes for the study were extremely gradient and a preliminary study of this in relation to the third dialect shift revealed no effect (Meechan, 1996). While this may show that the third dialect shift is merely not affected by this, it also may reflect a problem with the methodology.

Specifically, although Albertans often have strong attitudes about other parts of Canada and the United States, operationalizing this from conversational responses to the interview questions in some standard way turned out to be too subjective. Opinions on differences between Canadians and Americans were sometimes difficult to evaluate as reflecting strongly negative or positive attitudes. For example, one speaker felt that Americans ate differently from Canadians. Several speakers felt that Americans were better dressers although Canadians were better drivers. In a few cases, *both* positive and negative responses were given reflecting the ambiguous feelings which many Canadians have towards both their own country and the United States (also see Chambers, 1981). These can be illustrated by remarks made by one young speaker about a Canadian-made movie she had seen on TV in (32).

- (32) [010] The acting was terrible. We'd consider it terrible but it's Canadian acting.
 [MM] Oh yeah. You think Canadian acting is terrible?
 [010] Some of it. (laughs) Some of it, like- like, it has to be good because that actor is now on American TV ...(Spkr 010, Cass 12: 1.52.30)

In other words, when she watched the movie originally, she felt the acting was terrible but since the actor went on to a successful career on American TV, obviously the actor was *not* terrible.

None of the speakers felt that eastern Canadians were any different from them although many speakers said they would be reluctant to move to eastern Canada, particularly to Quebec or Toronto. Given the animosity expressed openly by many Albertans in the public press to the Quebec question, reluctance to move to Quebec is not surprising (see McKinnie & Dailey-O'Cain, 1998 regarding anglophone Canada attitudes to Quebec English). However, interpreting reluctance to move to eastern Canada as some kind of anti-Canadian orientation turned out to be difficult to entangle from a simple fear of living in a big city.

Even attitudes regarding more general characteristics of Americans and Canadians were not rewarding, largely because for the most part, the speakers shared the same attitudes. Furthermore, several speakers showed roughly equal antipathy to *both* eastern Canada and the United States. Their main loyalty appeared to be to Alberta. Most of the speakers, regardless of religion, had positive attitudes to Canada and few of them showed any great preference for the United States. This is important because it shows that despite their American ethnic origin, southern Alberta Mormons are Canadians and for the most part, they are very proud of it.

Thus, the principle problem was that the speakers basically were not all that different in their attitudes. A few speakers, those on the extremes of the attitude scale, could be confidently tagged as pro-Canadian or pro-American but wholesale division of the sample was too unreliable. A more stringent survey technique, using sociological methodology and forced choices might have been better for making this division in that it would have allowed more objective distinctions. Thus, this factor was abandoned for the present analysis. As for attitudes regarding Mormons, speakers were extremely reluctant to

go down this road. Other than the few isolated opinions presented earlier, general attitudes were not strongly expressed.

A disadvantage of the small size of the speaker sample is that it limits the number of social factors which may be studied. However, despite its limitations, the care taken to stratify the most relevant factors and to define others according to gradient means which allow stratification mediates this problem. These methods in conjunction with the care taken to obtain an unbiased sample should make it possible to do a thorough study of ethnicity in Lethbridge and allow us to draw some conclusions. As Labov points out, the important thing is that "the linguist must be fully aware of the nature of his data"(Labov, 1971: 103). Given the makeup of the sample, the data can be analyzed according to four basic social categories; sex, age, linguistic market and religion. As just mentioned, social network can also be considered although the classification described here will not generally form part of more detailed statistical analyses of each individual group due to the interaction problem. Conclusions will be drawn with the limitations of the sample in mind.

One advantage to a smaller sample is that more detailed analysis can be undertaken. The data was collected using standard sociolinguistic interview methodology (Labov, 1984) and the interviews were designed to elicit large quantities of speech from each individual. In larger speaker samples, time and resource constraints tend to limit this.

The interview

Natural conversations between each speaker and the author were recorded using a Sony DAT Walkman (TCD-D7) and an ATR35s Lavalier microphone in the summer of 1995. Interviews ranged between 1 1/2 and 2 1/2 hours and give a good representation of the speech of each individual although some interviews were conducted with couples reducing the amount of data collected per speaker. Since it is well-known that middle-class speech tends to be subject to more self-monitoring, in order to clearly isolate patterns, a large number of tokens will be required per speaker since we cannot necessarily count on

the regularity of the vernacular. Obtaining the vernacular is, of course, ideal since vernacular speech generally shows the most regular speech patterns.

The elicitation of the speakers' *vernacular*, defined as "that mode of speech that is acquired in pre-adolescent years" (Labov, 1984: 29), is a central concern for design and implementation of interviews in sociolinguistic research. The goal is to put the informant at ease since the vernacular is usually found when the speaker is paying the least attention to her speech. One of the prime problems with the interview approach to sociolinguistic research is the "observer's paradox" (Labov, 1984) whereby if speakers are aware that their speech is monitored (a natural consequence of tape-recording someone's speech), they become self-conscious and their speech register moves away from the vernacular. To minimize self-conscious speech, the strategies in (33) were employed:

- (33) (a) memorizing the interview schedule, making the interview more conversational in nature.
- (b) recording the subjects' consent on tape rather than by use of a formal consent form.¹¹
- (c) where possible, holding interviews in informal surroundings, preferably in the subjects' homes at a time of their choosing where possible.¹²

In at least some cases, these were successful. More than one speaker remarked that they had forgotten about the tape-recorder (generally while attempting to stand up and walk away while still attached to it). Interviews involving couples may also have contributed to more vernacular usage. Although the primary goal was to elicit vernacular speech, the clearest view of speaker attitudes with respect to community norms comes from a range of speech styles.

¹¹In accordance with standard sociolinguistic ethical principles (Labov, 1984), speakers were assured that the resulting tape-recordings would be kept in strict confidence and this has been done. All speakers discussed in this thesis are identified only by speaker number or pseudonyms. Furthermore, any transcriptions or partial transcriptions made from the tapes have been carefully vetted to ensure that no information that would lead to identification of the speaker is available.

¹²Some speakers were uncomfortable with this and, in that case, the interview was held at a place of their choosing. Four speakers (all male) were interviewed at their office and one speaker came to my home. These speakers were asked what neighbourhood they lived in to orient them geographically with the other speakers.

Style

Labov (1972a) outlines an interview technique for studying the way that social style influences linguistic behaviour. He notes that when stylistic factors combine with other factors to condition the form of language, they may appear to lead to random behaviour. However, he suggests that if these are properly studied and categorized, the underlying regularities can be exposed.

He describes two basic speech contexts. In one case, the formal interview itself defines the context, that of careful speech. To facilitate casual speech (or even, vernacular) within the interview structure, speech styles acquired early in life are encouraged. To do this, the subject is asked to talk about childhood rhymes and games. This is particularly useful in the elicitation of vernacular phonology. Speakers were thus asked to discourse generally on their upbringing and daily life in Canada (e.g. what kind of games they played, what kinds of hobbies they have now, etc.). Another interview question which notoriously encourages casual speech is the danger of death question shown in (34) since it is designed to provoke the speaker into producing a narrative since narratives tend to be more vernacular than other types of discourse (Labov, 1966/1982; 1971; 1984).

- (34) *Have you ever been in a situation where you were in serious danger of getting killed (where you said to yourself, "This is it")? What happened?*

The basic premise behind this question is that if the speaker admits to having a near death experience, he must then prove somehow to the interviewer that this is true with an impressive story. Prior to this study, I suspected that asking the danger of death question point blank without any lead-in in Lethbridge would lead to nothing more than astonished stares. To obviate this problem, as a lead-in to the danger-of-death question, I asked the question in (35).¹³

- (35) *I saw a TV show about a girl who dreamed her father was standing at the end of her bed and then later, she found out that he had died*

¹³This question was only unsuccessful in one interview and this was probably due to interviewer error; I introduced it too abruptly.

right at that moment. Have you ever heard about something like that or has anything like that ever happened to you? What happened?

This question turned out to be extremely successful. Anyone with a television in this day and age has heard a story like this (Sagan, 1997) and almost all the speakers responded in the affirmative to this question. In the first interview, I was unable to even ask the danger of death question because the question in (35) prompted a danger of death story.

To more fully contrast casual speech with more formal speech, formal speech can be explicitly elicited. The formal situation is considered to be optimized in a formal interview where the principal object is questions about language such as can be found in an interview of this sort. In particular, reading texts can be designed to provide many examples of the variables being studied in close proximity to facilitate their study.

To gain the fullest range of speech style possible and ensure a sharp distinction in style, speakers were asked to read three short texts and a word list designed to include a wide range of vowels in several environments. Their opinions on general topics like politics and religion were also encouraged during the latter part of the interview. Besides potentially providing a contrast of speech styles, these opinions give valuable information as to the speakers' attitudes towards their community and relationships between groups therein. Speakers were also asked general questions directly regarding their opinions of the speech behaviour of other members of their community, Americans and other Canadians.

This provided a clear contrast of stylistic contexts and style differentiation can be examined, i.e. reading versus conversational. Personal information requested from the speakers included age, religious affiliation and ancestry which formed the basis of their social classifications discussed earlier. (see Appendix II for the interview schedule). We now turn to the method used to analyze the data gathered.

Methods of analysis

The variable

In most studies, a sociolinguistic variable corresponds to a structural unit intuitively identified on the basis of semantic or other structural equivalences (e.g. a phoneme or a morpheme or a set of syntactic structures operating over some semantic or structural domain). Even natural classes such as front vowels or definite determiners may define a variable. However, as Wolfram (1991b) points out, the delineation of a variable is not required to directly correspond to any clear linguistic unit. Sets of variants may stretch across two structural categories (e.g. as is often found in the case of phonological merger) or may occupy some subset of a structural category.

The delineation of a variable is guided by the *principle of accountable reporting* (Labov, 1966/1982) which requires both that *all* variants must be analyzed as well as all *contexts* where any variant potentially could have occurred. Where the relationship between form and function is not clear, this can be a tricky procedure. Besides including all contexts where variability potentially could occur, we must also exclude all contexts where variability could never occur, i.e. categorical contexts, or contexts where the variation may be influenced by factors not relevant to the entire sample. This is known as "circumscribing the variable context" (also see Poplack (1990) for more detail).

Circumscribing the variable context

Establishing the variable context can be an arduous process. Both heuristic and systematic methodology can (and should) be used to facilitate the operation. So, for example, in an examination of copula variability, we can quickly establish both through intuition and quantitative verification that contracted forms never occur in phrase final position. Thus, while a final analysis of the overall variation of the copula will take this fact into account, the probabilistic analysis of the variation requires that this context be excluded so that it does not obscure any other results.

Other contexts may also require exclusion since the variation observed there may not be equivalent to that found in other contexts. To use the copula as an example again, quantitative analysis of the copula in contexts where the subject is 'it', 'that' or 'what' shows that the patterns of variation in these contexts are very different from those found with other subject types, even if the subject is a pronoun (Meechan, 1992a). Thus, where distinct contextual patterns may exist, it is up to the researcher to locate these and disambiguate the context in such a way that the linguistic and social patterns which are found there can emerge from the analysis.¹⁴

Sampling tokens

As in the case of the speaker sample, it is also important that the token sample be random. For this study, within the variable context, every token was taken from the reading portion of the interviews. This defined the formal style context. Then, more casual portions of the interview (i.e. not involving political opinion or discussions of language) were sampled starting at approximately 20 minutes into each interview¹⁵ until about seventy-five tokens of the variable in total were gathered.¹⁶ If the speaker did not utter 75 tokens between the 20 minute mark and the beginning of the more formal part of the interview, then the portion of the interview prior to the 20 minute mark was also sampled. Where couples were involved, sometimes more tokens were gathered than 75 from the more talkative member of the pair. In some cases, the less talkative member uttered too few tokens to make up 75 and in that case, the sample remained short.

Once the variable and its context were established and the tokens extracted, there are a number of ways that they were analyzed.

¹⁴Of course, these other contexts are still relevant to describing the variability but they must be dealt with separately.

¹⁵At the beginning of interviews speakers may be more nervous and self-monitoring so the arbitrary choice of twenty minutes was made to try to avoid this portion of the tape.

¹⁶For the low diphthongs, tokens were sampled according to following context. Seventy-five tokens preceding voiceless contexts were required along with an additional 50 from other contexts.

Analysis

Marginal statistics

Of course, the most straightforward type of analysis which we can do is to observe the proportion of each variant in each relevant context. In fact, this is probably the best way to determine rates and occurrences of variants by context. However, as noted earlier, since sociolinguistic variation is subject to so many possibly interconnected factors, more sophisticated statistical methodology serves as a valuable tool for determining (a) if distinctions are significant and (b) if cross-cutting factors are falsely inflating or obscuring variation. Thus, while the initial step for any quantitative study is an examination (and reporting) of the overall percentages of occurrence for each variant in relevant linguistic and social contexts, it behooves the analyst to assure that the percentages which result are a true picture of the variation. Variable rule analysis, which will be used in the bulk of this thesis is ideal for this purpose.

Variable rule analysis

Both extra-linguistic and purely internal aspects of linguistic environments act together in the choice of variants. Variable rule or multivariate analysis (e.g. Cedergren & Sankoff, 1974; Labov, 1969; Sankoff, 1988b; Sankoff & Labov, 1979) reveals significant regularities in the data across contexts allowing the analyst to find out in which configurations of factors in the linguistic environment the appearance of some variant is more probable. This type of statistical analysis is preferable to other types such as analysis of variance (ANOVA) or multiple regression particularly since data taken randomly from speech samples tends not to be evenly distributed (see Sankoff & Labov, 1979 for discussion). In this study, all variable rule analyses were done using Goldvarb 2.1 for the Macintosh (Rand & Sankoff, 1992).

In the variable rule analysis, the assumption is that the speaker has some binary choice in variants. Where more than one occur, we assume that multiple rules have taken place. However, this may not be appropriate to all situations. As noted in Chapter One,

variation may occur along a continuum (Berdan, 1978; Wolfram, 1991a). Imposing categories (possibly arbitrary) on different areas of the continuum, while valuable for discovering cross-cutting effects, may obscure the patterns where degree of variation as well as rate is involved. While individual speakers may show similar rates of deviation from some standard variant, the degree of deviation may differ between speakers or speaker groups. Thus, for example, an examination of overall proportions of front lax vowel lowering might reveal different results depending on the threshold defined for variant (i.e. partial versus full lowering) leading to the conclusion that either only one group participates in the variation or that there is no difference between groups at all.

One method of quantifying variation along a continuum is by assigning a value to points along the continuum.¹⁷ Each token uttered by the speaker is evaluated for this measure and then the mean value or index is then calculated. Those variables under study showing more gradient variation will also be analyzed from an indexing point of view.

Indexing

To calculate indexes, variants were ranged along a three-category continuum. Each token received a score depending on its value on the continuum. Following Chambers (1980), the most extreme category carried a score of 2, the mid category, a score of one and the least extreme, a score of zero (e.g. see Labov (1963) and Cook (1969) for an alternate approach). To arrive at the overall index score for each speaker, the sum of the values for all the tokens of each speaker was divided by the number of tokens s/he produced. This gave an average score for the range of values and their position along the continuum for each speaker. Index scores between speakers and the mean index scores of speaker groups were then compared. Of course, although the fact that speakers with greater amounts of variation along any dimension can be grouped with those showing mostly middle variants is somewhat troubling, indexing can also reflect tendencies among speakers who rarely produce the most extreme variants so finer distinctions may emerge. Thus,

¹⁷Of course, this also imposes categories but the absence of the binary limitation allows for more degrees of difference.

indexing in conjunction with a variable rule analysis allows both the range and distribution of variation to be examined.

Both the variable rule analyses and indexing analyses can also be verified by more mechanical means. As noted earlier, an acoustic analysis can reveal physical characteristics of a speech sample which allow insight into the variation.

Acoustic analysis

To accomplish the acoustic analyses, a sample of the vowels from a subset of the speaker sample were analyzed. Speakers in each religious group were chosen to try to get a broad view of any patterns that might be found. The sample was chosen on the basis of the results of the indexing and variable rule studies across styles. We now discuss the specific methodologies used for the acoustic study.

Sampling of speakers

The acoustic analyses that will be presented are just meant to be a graphic illustration of how the variation reported on here relates to the entire system. As a result, only eight speakers representing each combination of age, sex and religious group, were analyzed. In some cases, speakers were ruled out because the token sample should contain a variety of styles and two speakers did not complete the reading portion of the interview. From the remaining speakers, those chosen for analysis gave a wide representation of the range of variation (i.e. speakers who showed low rates of raising versus speakers with higher rates, etc.).

Sampling of tokens

At least six tokens from each speaker were sampled, roughly divided between the conversational portions of the interviews and the reading portions; text passages and word lists. All tokens occurred before stops (voiceless, voiced and nasal).¹⁸ Where possible, tokens of words which also appeared in the reading passage were chosen from the conversational portion of the interviews. If tokens of the same lexical type did not occur,

¹⁸Following LaCharité (1992), affricates are considered to be stops.

then one with a closely matching phonetic context was substituted. Where more than one word type was available, the one which was repeated most often across interviews was selected. Table 8 shows the words that were finally included in the analysis from both styles arranged in roughly corresponding phonetic contexts.

Table 8: Sample types for acoustic analysis

<u>Reading</u>	<u>Conversational</u>	<u>Reading</u>	<u>Conversational</u>
<u>/i:/</u>		<u>/u:/</u>	
seek	seek/speak/sneak	suit	shoot/scooter
heed	feet/neat/sheet/seat	soup	hoop/stupid/group
seep	keep/cheap	hoot	boot/hoot/food
<u>/ʊ/</u>		toque	toque/spook
pick	pick	hook	hooked/cooking/book/cook
			y
hick	sick/stick/kick	took	took
hid	kids/hit	foot	put/good/football
sip		<u>/ʌ/</u>	
<u>/eɪ/</u>		suck	touch(ed)/sucked
hate	hate/ate/states/dates	thud	shut/cut/shut/nuts/puddles
sake	take/cake	stuck	stuck/truck/duct
tape	tape		couple
<u>/ɛ/</u>		<u>/aʊ/</u>	
heck	text/heckle/cheque/second/heck/deck	out	out
step	kept	doubt	scouts
head	set/head/deb/dead	bowed	
<u>/ɔ:/¹⁹</u>		gouges	
hot	cot/spotted/pot/hot	bout	
stop	stop(ped)/top/shop	lout	loud
<u>/o:/o/</u>		couch	
thought	thought	sound	
	talk	town	
<u>/a:/</u>		<u>/aɪ/</u>	
hack/hag	back/tax/packs	right	fight
hat	chat/fat/sat/cat	pipe	type
bad	bad/dad	bike	psyched/bike
	happy	hike	
<u>/oʊ/</u>		hide	hide/side
hoax	spoke/joke(s)/jokester/coach	hiding	hiding
oats	boat/coats	time	
tote		mind	
soap	hope/soap		

The tokens were recorded directly from a DAT walkman (Model TCD-D7, Serial # 14524) to a Power Macintosh 7200 under System 7.5.3) using Signalyze (Keller, 1994).

¹⁹ a- and -o/ are considered to be merged in Canadian English. To check this, they were treated as two vowel classes.

Tokens were taken in 10 second samples. All samples were recorded at 11025 kHz since the object of interest in these data is F1 and F2 which reasonably should never rise above 3000 Hz. The Signalyze manual recommends that the sampling frequency be restricted to about twice the Hz of the highest frequency to be observed. All tokens were then subjected to a Butterworth Low Pass filter set to pass no frequencies higher than 4000 Hz to avoid aliasing (Denes & Pinson, 1993; Keller, 1994; Ladefoged, 1996).

The formant frequencies of the resulting filtered samples were then ascertained. The goal was to determine the F1 and F2 of the initial steady state of the vowel while ruling out coarticulation effects of adjacent consonants. This was established in two steps. First, a wide band spectrogram of the word in question was made. Based on observation of the spectrogram, the point where the vowel appeared to show the least influence from preceding or following elements (including glides) was examined more closely and by sampling each wave form in this section, the point in the vowel where adjacent segment influence could be absolutely ruled out was determined.²⁰ In many cases, the start point of the steady state was identical to that of the vowel (e.g. vowel initial words). The waveforms before and after the initial heuristic estimate of the steady state point of the vowel were sampled individually. By tracking the signal waveform by waveform around this point, and relating the findings to expected values reported in Borden and Harris (1984), I could be relatively confident that the sample included little influence from the preceding segment and did not erroneously capture a point during any potential transition slope of the vowel.

Signalyze allows wide (8ms/125 Hz), very wide (5ms/200 Hz) or extra wide (3.3ms/300 Hz) band spectra. The widest bandwidth which would still allow the determination of the first two formants was used for the spectral analysis. In a few cases, the formants could not be separated out. In these instances, following Keller's (1994)

²⁰Di Paolo (personal communication) has suggested that, in addition to eliminating initial and final consonant transitions, it would also have been fruitful to sample each vowel at three points (initial, mid and final) (Faber & Di Paolo, 1995) to better determine the overall trajectory of the vowel.

advice, the token was resampled to 10,000 Hz and an LPC analysis using order 14 was done. These were always heuristically verified for accuracy by comparison with the wide and narrow band analyses. LPC analysis was not done for the entire sample since an initial study revealed the results to sometimes be wildly inaccurate. To avoid anomalous signals, the sample was taken as an average over two or three waveforms if possible.²¹ This is preferable to a method incorporating some arbitrary duration because data was sampled from both conversation and reading passages and so vowels differed a great deal with respect to duration. Thus, it was felt that a standardized duration for each sample could not be supported.

To determine the formant frequencies, the cursor was placed at the highest amplitude in each identifiable formant peak in the resulting spectrum and the frequency range at that amplitude was recorded. The center point in the range was located and determined to be the formant frequency. Since these frequencies are, of course, always an estimate,²² this was just done to make the *methodology* precise and does not necessarily ensure that the *measurement* is exact.

Using Plotnik 2.1 (Labov, 1996a), the vowels so sampled were plotted on a vowel chart and then mean positions for each vowel in the vowel space were calculated. Plotnik also includes a t-test which was used to calculate whether vowel means were significantly different.

Predictions

Of course, once all the data has been properly slotted into place, the question will surface, what does it mean? This will be discussed more fully in the results section, of course but we can make some preliminary predictions about what kinds of patterns we will associate with potential groupings in the Lethbridge community.

²¹Some signals were too short to allow a sampling of more than one or two waveforms.

²²Because the observed formant frequency corresponds to *both* the filter function of the vocal tract and the properties of the glottal source, it does not necessarily exactly represent just the filter function because it is always possible that the glottal source does not contain a harmonic at the optimal point specified by the filter.

- (36) (a) If the Mormons constitute a distinct subcommunity within the larger Lethbridge community, then we should see distinct patterns of behaviour between Mormons and non-Mormons. If this is only due to social networks, network affiliations should turn out to be more predictive of the variation than religious association.
- (b) Even if there is a distinction of rate of use, if the Mormons do not constitute a distinct subcommunity, we should see parallel patterns of behaviour between Mormons and non-Mormons.
- (37) (a) If the Lethbridge community (either non-Mormons or Mormons) shows patterns of behaviour distinct from those found in the larger Canadian community, we will be justified in concluding that a distinct pocket of dialectal variation exists in southern Alberta.
- (b) If the Lethbridge community does not show distinct patterns of behaviour, i.e. patterns are consistent with standard Canadian norms, we can assume membership in the larger Canadian community and this is also true of both Mormons and non-Mormons.

Of course, the Lethbridge community may be similar to the larger community on one dimension and distinct on another as we noted with the confusion of use of American variants versus use of American pronunciation and in this event, we will try to disentangle the patterns to come to some conclusion about linguistic behaviour in Lethbridge. More importantly, these linguistic patterns may also reveal differentiation or integration of groups that can be related to the theories of ethnicity discussed in Chapter Two. In search of these patterns, we have chosen five phonological variables relevant to the question.

The variables

As discussed earlier, the variables to be studied are height alternation of the low diphthongs (ay) and (aw) as well as fronting of (aw) and the lowering of the front lax vowels (ɪ) and (ɛ). These have been chosen because previous research has shown that they can be associated with trends in standard Canadian English and in the special case of (ay) and (aw), serve to distinguish Canadian English from American English.

The variables were chosen following the guidelines in Labov (1963). They are frequent and thus a sufficient number for analysis can be obtained. In at least two cases, they show clear phonological structure and there are good reasons to believe that they will be differentially distributed in the community depending on the social allegiances of the

individuals. Furthermore, they are all beyond the conscious control of the speakers. Most speakers in the sample showed no knowledge of these as variable. One problem is that, due to the continuous nature of the variation, the saliency of these variables to the researcher is not as prominent as we might like. Distinguishing the central and low variants of the low diphthongs, given that as a native speaker of Canadian English, I have all the same perceptual difficulties with this as the speakers in the sample, was particularly difficult. Thus, special methodologies were employed to ensure consistency.

The problem is not in the perception of a difference but rather in the continuous nature of the difference. In many cases, researchers can use some preexisting perceptual category to distinguish variants. In fact, this was very useful in the coding of front lax vowel lowering because the lowering of the vowel caused it to be perceived as its lower counterpart (e.g. [ɪ] sounded like [ɛ]). In the case of (ay) and (aw), where no phonemic contrast exists in most environments this was trickier. To assure continuity in coding, therefore, I recorded examples of each variant to be distinguished into the computer as small playable sound files on the computer. For each variant, a male and female token was recorded. To obtain the tokens, I first did an acoustic analysis of a subset of the diphthongs found in the reading portion of the interviews. From these, I chose tokens which, in my opinion, were both perceptually representative of the variant and which showed acoustic characteristics expected for the variant. In other words, tokens were chosen from those examples which showed the best acoustic/perception match. The tokens chosen and their values for F1 and F2 are shown in Table 9.

Table 9: Templates for coding of diphthongs

Description	Variant	(ay)			Variant	(aw)		
		Sex	F1	F2		Sex	F1	F2
raised, fronted	[ɛy]	Male	none	none	[ɛw]	Male	618	1562
		Female	742	1943		Female	760	1787
raised, mid/back	[ʌy]	Male	646	1630	[ʌw]	Male	646	1320
		Female	666	1593		Female	709	1497
raised, back/round	N/A				[ɔw]	Male	560	1118
						Female	none	none
low, fronted	N/A				[æw]	Male	823	1777
						Female	833	2019
low, mid	[ay]	Male	792	1706	[aw]	Male	1050	1517
		Female	979	1550		Female	850	1686
low, back	[ay]	Male	878	1222	[aw]	Male	780	1302
		Female	825	1340		Female	936	1469

As the coding proceeded, whenever there was some doubt as to how the token should be coded, the sound file acted as a template to aid in making a decision. Thus, methodologically, every attempt has been made to assure a reliable result.

In the sections which follow, we examine the results of our analyses. We begin with an analysis of the third dialect shift as represented by variation in the front lax vowels.

CHAPTER 5: FRONT LAX VOWEL LOWERING

Introduction

The study of front lax vowel lowering in Canadian English is in its infancy, first noted in the literature by Clarke et al. (1995).¹ This variable is ideal for examining the possibility of differing group norms in Lethbridge because although it has been associated with the "third dialect", variation in the front lax vowels has been noted elsewhere with different conditioning. Comparison between patterns of variation reported in Utah, where it is apparently disappearing, can be compared to those found in Toronto where it has only recently been reported and is thought to be an incipient change. If Lethbridge speakers are participating in the third dialect vowel shift, this would be additional confirmation for the geographical range of the third dialect shift, especially given that Lethbridge is not in the United States and is not a major Canadian urban centre. It also goes toward the question of the homogeneity of Canadian English beyond major metropolitan areas. If it is increasing among non-Mormons and decreasing among Mormons, it may indicate differing sources for the community norms which guide it. Thus, analysis of patterns of variation for southern Alberta speakers may tell us the source of any variation we may find.

There are independent reasons to believe that front lax vowel lowering operates in Alberta. In the first place, Clarke et al. (1995) did have one northern Albertan in their sample who showed high degrees of lowering. Furthermore, although no variationist studies of a larger sample of Albertans have yet been undertaken, acoustic analyses of Alberta English are available.

Nearey and Assman (1986) showed that the front lax vowels in their sample of ten Albertans (five male and five female) showed significantly different values for F1 and F2 between the initial and final point of the front lax vowels. In both cases, there was a tendency for F1 values to increase (consistent with lowering) and for F2 values to decrease

¹Also see Hoffman (1998) which appeared after this study had all been completed so results are not summarized.

(consistent with backing). Their results also showed a non-significant centralization tendency with [æ]. However, their results show no sign of fronting of the back vowels, nor the fronting and/or lowering of [ʌ], i.e. other characteristics of the third dialect. In any case, their findings indicate that, at least with respect to front lax vowel lowering, the third dialect shift may well operate in Lethbridge. The excerpt from the data in (38) bears this out.

- (38) I was really *ill* [ɪ] and I *kep'* [kep] *thinking* [θʌŋkɪŋ], you know, I know I'm gonna die, like I'm just so *sick* [sek] and- and the nurses were on strike and so I couldn't go to the hospital, so my mom k--*set* [set] up this cot in the *living* [lɪvɪŋ] room and it was always dark because I could- like I was really light *sensitive* [sænsətəv].
(Spkr 001, Cass 01: 0.30.30)

However, the fact that lowered front lax vowels occur in these data does not show that Lethbridge speakers are involved in any large-scale shift nor even that front lax vowel lowering in Lethbridge represents the same process as that observed in Toronto.

As Clarke et. al. (1995) pointed out, the precise linguistic and social factors involved must first be ascertained and then compared across communities. For example, is front lax vowel lowering limited to any particular phonological environments? What social conditions, if any, promote its use? Are both front lax vowels varying according to the same conditions? More importantly, do the conditioning environments for front lax vowel lowering in southern Alberta give some indication as to the source of the community norms they represent?

For example, are there similarities between the environments where lowered vowels are found in southern Alberta and the merger of front lax vowels before nasals² in some parts of the United States (e.g. Brown, 1991; Lillie, 1998)? Lillie (1998) found that the tendency for this merger in Utah was diminishing. What about front lax vowel lowering in general? Lillie (1998) found that some of her Utah speakers, particularly older rural speakers, produced front lax vowels with a central off-glide which she associated with the "Utah Drawl". However, she notes that this is rare in Salt Lake City and concludes that it is

²Commonly referred to as the *pmlpen* merger.

not a predominant aspect of modern urban Utah speech. As for other aspects of the Utah vowel system, Di Paolo and Faber (1990) have found considerable lowering of high tense vowels before [l] in Utah leading to apparent merger between both front and back tense and lax vowels although an accompanying voice quality distinction is serving to keep the vowels distinct at present.

By comparing patterns of variation in Lethbridge to these Utah studies, we can attempt to determine if they show that Utahns and Albertans share any linguistic features and if so, are they related to Mormon ethnicity? Comparison to other studies in Canada (e.g. Avis, 1979; Clarke et al., 1995; Esling & Warkentyne, 1993; Kinloch, 1983) may show contrast that can also help determine likely sources of community norms. Of course, since both Utah and Toronto are geographically situated in the third dialect area, it is always possible that patterns of variation observed in Lethbridge may show variation that is similar to that found in both these areas.

Another important question is how dynamic this shift is. Currently, the evidence that the vowel system is shifting or even that lax vowel lowering represents change is preliminary. Do speakers vary according to speech style? Can we see a difference in speakers according to age, either in terms of rate, prestige or other community norms? Virtually all of the southern Alberta speakers sampled claimed no knowledge of front lax vowel lowering whatsoever (and most of them were specifically asked about it). One speaker recognized it as a point of distinction between Canadian and American speech but was not sure which dialect it characterized (Meechan, 1996).³ Naturally, since so few of the speakers in the southern Alberta sample recognized front lax vowel lowering (as a feature of their own or anyone else's speech), it is hardly surprising that none of them expressed any opinions regarding it (pejorative or otherwise).

³Interestingly, this speaker's main contact linguistically with the United States was made on family trips to Michigan. Niedzielski (1996) found that front lax vowel lowering was considered a Canadianism by her Michigan informants so perhaps this speaker's attention was drawn to it there.

More importantly, given the main thesis of this dissertation, we want to determine if front lax vowel lowering is varying along social lines that can be attributed to speaker loyalties stemming from Mormon ethnic membership. The fact that these variables have only been recently reported and are, for the most part, completely unrecognized in the community would lead us to believe that it is extremely unlikely that they function as *markers* of any specific identity.

In an attempt to answer the questions posed above, over 5,000 tokens of (ɪ) and (ɛ) were extracted from the data and coded for relative height. All tokens were coded as either not lowered, partially lowered or fully lowered. Tokens found to be ambiguous were so noted. For the variable rule analysis, all those tokens classified as partially lowered, fully lowered or ambiguous between the two were considered to be lowered variants. Tokens coded as not lowered or ambiguous between that and partially lowered were counted as not lowered. Before we continue to the analysis of the data, we first discuss the variable context under study.

The variable context

As discussed earlier, before proceeding with any variationist analysis, it is necessary to circumscribe the variable context. Not all front lax vowels in the data can be considered in the study of the variables under question. Clarke et al.(1995), in limiting their data to word lists, included only vowels in stressed content words. As Labov (1994: 195) notes, “the most highly stressed vowels tend to move farther in the direction of the change in progress” making content words a fertile area of study. However, when data includes both conversational and reading contexts, we find that front lax vowels are not restricted to content words.

While running speech allows analysis of more linguistic factors than word lists (e.g. relative stress, intonation, vowel harmony, etc.), it also presents the problem of whether or not functional items (e.g. the pronoun *it*, determiner or pronominal *this*, prepositions such as *into*, and auxiliaries like *get*, *did*, *is*, *etc.*) should be considered.

Words in this class are highly variable as to stress and, as a result, they may also variably undergo complete or partial vowel reduction. When this occurs, we are unable to determine if the vowel should be classed as lowered or not and so these contexts constitute a neutralization context. As a result, functional items which were deemed to have the possibility of undergoing reduction were excluded from the analysis. While some generalizations may be lost by excluding these items, the resulting reduction in ambiguity allows us to be more confident in the results and furthermore, their exclusion makes the data set more comparable to the Toronto study (Clarke et al., 1995).

Despite the emphasis on excluding these neutral items, a few content items also very occasionally featured reduced vowels. Tokens containing the morphemes *every* and *any* as in *everything*, *everyone*, *anyone*, etc. particularly presented a problem. Vowel quality in these tokens was sometimes difficult to determine since even though they almost always carry some stress, in many environments it was very weak (e.g. if a speaker emphasized *thing* in *everything*, the front lax vowel in *every* was reduced in stress). Furthermore, because they all share roughly the same phonological environment and there are so many of them, there was a danger that they could erroneously skew the results. Since “practical considerations of reliability also have to guide the codification of variants” (Wolfram, 1993a: 209), these tokens were also excluded along with a few other isolated cases of reduction in content words. Tokens of *every*, *any* and *thing* found standing alone as in example (39) were included since this problem was not present to any great degree in these cases.

(39) I've predicted *every* single one of 'em. (Spkr 010, Cass 12: 1.00.40)

Canadian English also features a small set of words that are variable in that they may be pronounced with a tense vowel but usually have a lax vowel (e.g. *really* i.e. [rɪli] vs. [riyli], *again* i.e. [əgen] vs. [əgeyn], *been* i.e. [bɪn] vs. [biyn], etc.(Bailey, 1982)) and the tense versions did occasionally appear in these data (although rarely) so these were also not considered. This variation was generally limited to these few lexical items, giving no

indication that Alberta English has some counterpart of the merger between tense and lax vowels found in Utah (Di Paolo, 1988; Di Paolo & Faber, 1990).

The variable context is thus restricted to all syllables containing the variables (ʊ) or (ɛ) which are not generally subject to phonological reduction. Furthermore, since /ʊ/ and /iy/ are merged before [r] and virtually no examples of lowered (ɛ) were found before [r], this context was also excluded. Additional exclusions included tokens found in proper names (e.g. *Lethbridge*, *Edmonton*, etc.)⁴ and acronyms (e.g. *LCI* 'Lethbridge Collegiate Institute', *U of L* 'University of Lethbridge, etc.) since these may behave idiosyncratically.

In all, a total of 1,966 tokens of (ʊ) and 1,908 tokens of (ɛ) were retained for the final analysis. The range of variation is shown in Table 10.

Table 10: Variants of front lax vowels

	(ʊ)	N	%	(ɛ)	N	%
Not lowered	[ʊ]	1577	80%	[ɛ]	1691	88%
Partially lowered	[ʊə]	254	13%	[ɛə]	147	8%
Low	[ɛ]	135	7%	[æ]	70	4%
TOTAL		1966			1908	

In the interest of accuracy, all tokens were checked at least twice and then were coded for a variety of social and linguistic factors.

Analysis

As discussed in Chapter Four, there are a number of methods of analysis we can pursue in the study of these variables. For (ʊ) and (ɛ), we will examine the sample from three main points of view. First, we can isolate the linguistic and social factors that condition front lax vowel lowering and record the rate of occurrences of the lowered variants in each context with marginal statistics. Since there may be a number of different factors operating simultaneously on front lax vowel lowering, we will accompany this with a variable rule analysis of each variable to ascertain what, if any factors are relevant.

Of course, a variable such as front lax vowel lowering may vary both with respect to quantity and quality. Clarke et. al. (1995) deemed a vowel to be lowered if there was any

⁴In fact, Lethbridge is often referred to jokingly as [ləˈθɹɪdʒ] and Edmonton as [ædˌmɒntɪk]. Note the lowered vowels.

perceptible degree of lowering and for the purposes of the variable rule analysis, this definition was also used. The assumption is that all lax vowels are available for lowering and this either has phonetic variation in its output as to degree of lowering or first occurs to all vowels and then a second rule reapplies to lowered items. Either assumption is covered by this division. However, it may be the case that some speakers lower more than others in a qualitative way. To determine this, we will examine degree of lowering as shown by an index score which will be associated with a reduced set of social categories.

Finally, we will examine an acoustic analysis of the vowel systems of the subset of the speakers outlined in Chapter Four to see if there is any relationship between what was observed in Toronto and what may be occurring in southern Alberta. We first look at the distribution of lowered versus non-lowered variants according to the linguistic categories under study, discussing each factor along the way. Variation according to the social categories discussed in Chapter Four will also be examined. We then examine these with a variable rule analysis of the data.

Marginal statistics

There are a number of factors, both social and linguistic, which may be in play in front lax vowel lowering. As just noted, the social factors to be considered were outlined in earlier chapters since they will form the basis of a comparison of the social forces acting on all the different variables under study in this dissertation. The linguistic factors that may be important are somewhat different in each case so we will first discuss the distribution of variants according to possible linguistic influences on front lax vowel lowering.

Linguistic factors

Essentially, lower vowel quality is achieved by modifying the shape of the vocal tract to raise the frequency of the first formant. This can be accomplished in more than one way. Borden and Harris (1984) (citing Fant (1967)) note that the crucial element is the distance between the point of maximum constriction and the glottis. While movement of the tongue naturally can affect this, it can also be affected by lip rounding, jaw movements and

raising or lowering of the larynx (Lieberman & Blumstein, 1988; Lindblom & Sundberg, 1971; Summers, 1987; Trigo, 1991). Due to coarticulation, the voice quality or articulatory properties of adjacent consonants may also have some effect on lowering. Either the preceding or following contexts can be important. We first discuss the preceding environment.

Preceding environment
Manner of articulation

Manner of articulation, and, in particular the presence or absence of a preceding stop may be important. Lowering effects on following vowels have been connected to voicing of preceding obstruent stops because voiceless stops are accompanied by raising of the larynx while with voiced stops, the larynx is lowered. A raised larynx, by reducing the length of the vocal tract, can lead to a higher fundamental frequency and also a higher frequency for the first formant, resulting in “somewhat lower vowel quality” (Hombert et al., 1979: 52). Loss of voicing distinctions in preceding stops has been linked to the emergence of vowel height distinctions in a number of languages (e.g. Dinka (Denning, 1989) or Khmer (Meechan, 1992b)) and may operate synchronically as a trigger for vowel harmony in others (e.g. Madurese (Cohn, 1993; Trigo, 1991)). According to Labov (1981: 277), both F1 and F2 are lower after initial obstruent-liquid clusters particularly when the obstruent is voiced. These acoustic features have been associated with both raising and backing of vowels. Therefore, there is some reason to believe that the voicing of preceding stops (including those with a liquid intervening) may be relevant. Our prediction is that a preceding voiced stop should inhibit lowering and a voiceless stop will promote it.

Table 11 shows the percentage of lowering for (ʌ) and (ɛ) according to preceding voicing of stops as opposed to other preceding articulations. Stop plus liquid clusters are included in the stop categories.

Table 11: Percentage of lowering according to preceding voicing

	(ʌ)		(ɛ)	
	N	%	N	%
<u>Preceding voicing</u>				
Voiceless stop (+liquid)	290	23%	438	16%
Voiced stop (+ liquid)	339	20%	217	13%
Other ⁵	1337	19%	1253	9%

The marginals show that, as predicted, a preceding voiceless stop is associated with more lowering with a consistent pattern across variables although the effect is slight.

Point of articulation

Point of articulation of the preceding segment, with its association with tongue position, may also exert an effect. Coarticulation effects of a preceding consonant may promote or inhibit front lax vowel lowering by affecting the relative position of tongue constriction in the vowel. Since this is connected to vowel height, if the preceding consonant has a relatively forward articulation, it may inhibit lowering in the following vowel articulation by encouraging a relatively front articulation of the vowel. Table 12 shows the effects of preceding point of articulation.

Table 12: Percentage of lowering according to preceding point of articulation

	(ʌ)		(ɛ)	
	N	%	N	%
<u>Preceding point of articulation</u>				
Labial	426	26%	395	11%
Palatal	8	25%	20	25%
Velar	123	20%	101	9%
Glottal	96	20%	139	9%
Alveolar/Interdental	1144	18%	1001	12%
Word initial	94	17%	180	11%
Labiodental	75	16%	72	10%

Across variables, there is no clear pattern with the possible exception that a preceding palatal appears with a high rate of lowering for both variables. However, this may easily be some kind of statistical anomaly given that in both cases, this was the rarest context. In any case, the differences between points of articulation are not great and may have other explanations. We return to this after a discussion of the following segment.

⁵Includes fricatives (voiced and voiceless), nasal stops and liquids not found in clusters.

Following environment

A more fruitful area of inquiry may lie in properties of the following segment. Hombert et al. (1979) note that the same effects noted for preceding voicing may also have implications for vowel height in connection with a following consonant, i.e., a following voiceless segment should have a lowering effect. Summers (1987) found that final consonant voicing did show significant effects on F1 values with low vowels preceding final voiceless consonants showing higher F1 (i.e. lower overall height) than those before voiced consonants. Furthermore, hypothesized point of articulation effects described above may also apply postvocally. Following segment is also important in that this was the only context previously reported in Canadian English to show an effect (Clarke et al., 1995; Hoffman, 1998).

Clarke et al. (1995) found that effects of the following segment, although sometimes significant, were not consistent across variables in Toronto English. Point of articulation was not significant for either variable. Following manner of articulation was only significant to the probability of (ʌ) lowering. Thus, across variables, no clear patterns emerged. Only the factor of following voicing had a consistent effect with lowering more frequent before voiceless consonants, as predicted by Summers (1987) study, although again, this was only selected as *significant* in the case of (ɛ). Table 13 shows their results.

Table 13: Factors contributing to the probability of lowering of (ʌ) and (ɛ) in Toronto (Taken from Tables 2a-c, p. 215 (Clarke et al., 1995)): Factor weights in brackets were not selected as significant by the stepwise regression program.

	(ʌ) N = 352	(ɛ) N = 368
<u>Following manner of articulation</u>		
Fricative	[.48]	.62
Nasal	[.38]	.51
Stop	[.54]	.46
Alfricate	[.55]	.31
[l]	[.55]	.28
<u>Following point of articulation</u>		
Bilabial	[.62]	[.38]
Labiodental	[.56]	[.63]
Interdental	[.39]	[.59]
Alveolar	[.40]	[.49]
Palatal	[.57]	[.44]
Velar	[.51]	[.48]
<u>Following voicing</u>		
Voiceless	[.54]	.61
Voiced	[.47]	.36

Although no linguistic factors emerged as significant for (ʌ), for (ɛ), following manner of articulation and following voicing were significant. A following fricative was the most likely environment for lowering (ɛ), while a following [l] was the least likely.

An examination of the Alberta data shows some parallels with Toronto. Perhaps the strongest effect found in Toronto for the *entire* vowel shift was that of voicing. Table 14 shows the percentage of lowering as a function of voicing of the following segment in the southern Alberta data.

Table 14: Percentage of lowering according to following voicing

	(ʌ)		(ɛ)	
	N	%	N	%
<u>Following Voice</u>				
Voiceless	611	25%	565	11%
Voiced	1355	17%	1343	11%

As in Toronto, a following voiceless segment promotes lowering. However, in contrast to the Toronto results, the variable showing this effect is (ʌ). There is no apparent difference in following voicing for (ɛ).

Table 15 shows the distribution of variants in southern Alberta according to following manner of articulation.

Table 15: Percentage of lowering according to following manner of articulation

	(ʊ)		(ɛ)	
	N	%	N	%
<u>Following Manner</u>				
Stop	715	24%	546	8%
Nasal	577	19%	619	12%
Fricative	464	16%	502	12%
[l]	162	15%	202	17%
Affricate	48	13%	39	10%

Since (ʊ) showed no significant effects for following manner of articulation in Toronto and they did not report marginal statistics, we can only compare the data to the results for (ɛ). Following fricatives and nasals were a favorable environment for the lowering of (ɛ) in Toronto and there is a relatively high proportion of lowering in this environment for (ʊ) in Alberta. As for (ɛ), the hierarchy between stops and fricatives echoes that found in Toronto but the effect of [l] is completely counter to the Toronto study with (ɛ) before [l] showing the highest percentage of lowering in Alberta whereas it was one of the least likely environments in Toronto.

Manner and voice of articulation are not the only properties of following segments which may play a role. The percentage of lowering according to following point of articulation is shown in Table 16.

Table 16: Percentage of lowering according to following point of articulation

	(ʊ)		(ɛ)	
	N	%	N	%
<u>Following point of articulation</u>				
Bilabial	66	36%	145	5%
Palatal	113	25%	103	14%
Velar	682	21%	156	10%
Alveolar/Interdental	895	18%	1343	12%
Labiodental	210	16%	161	11%

The pattern associated with preceding and following point of articulation for each vowel is relatively consistent, particularly for (ʊ). A comparison with Table 12 shown

earlier shows that exactly the same hierarchy holds whether the consonant appears before or after the vowel. In the case of (ε), the pattern is less striking but we still see some similarities. For example, both before and after (ε), palatals are associated with more lowered variants.⁶ Alveolar/Interdental articulations still rank in second place. For the most part, there seems to be little difference in influence on (ε) between the other points of articulation although a following bilabial appears to inhibit lowering, a result which would also be consistent with the effect of an extended vocal tract discussed above in connection with larynx lowering. The effect of a following bilabial on (ι), however contradicts this since both preceding and following bilabials show the highest percentage of lowering.

The final linguistic factor investigated was phrase position. Vowels found in phrase final position are more likely to be accentuated and lengthened (Beckman & Edwards, 1990). Table 17 shows the results for phrase position.

Table 17: Percentage of lowering according to phrase position

	(ι)		(ε)	
	N	%	N	%
<u>Phrase Position</u>				
Final	139	45%	231	22%
Internal	1730	18%	1580	10%

This factor shows a consistent pattern across variables. Front lax vowels found in phrase final position are much more likely to be lowered.

Variable rule analysis

Interaction between linguistic factors

The marginals presented in the preceding tables (with the exception of preceding and following point of articulation) can be verified statistically by variable rule analysis. However, before doing so, the configuration of the data has to be modified. One of the problems with factors relating to the nature of the preceding and following segment is that there is considerable interaction between them. For example, there is no one point of articulation where a full range of manner of articulation can be observed. Furthermore, the

⁶Hoffman (1998) also found this effect.

sonorant nasals and liquids do not vary along the voicing dimension. In order to avoid this problem, for this study, the factors of manner and voice were collapsed by expanding the manner group to distinguish between voiced and voiceless obstruents, i.e. stops, fricative and affricates.

However, this still leaves considerable interaction between manner/voice of articulation and point of articulation and it is always possible that some of the results discussed earlier are confounded with effects of voicing or manner of articulation. For example, bilabials are always stops (nasal or otherwise). There is only one sure way to investigate this without losing any of the oppositions under study and this would be to collapse all three; voice, manner and point of articulation into one factor group. However, the group would be so detailed that the resulting cells would be very small, opening up the way for further interaction with other factors.⁷

There would also be a danger that either oppositions which are not significant would be brought out or oppositions that are, would not since so many different hypotheses would be involved with one factor group.⁸ Given that the primary goal of this study is not to exhaust all possible phonetic or phonological influences on front lax vowel lowering but to isolate some consistent phonological structure in order to relate it to the social forces which may be operating in the community, point of articulation was not considered for the variable rule analysis since manner and voice of articulation have already been shown elsewhere (Clarke et al., 1995; Hoffman, 1998) to exert an effect on lowering.⁹

An additional factor, style, was added to the analysis to ensure that there is no accidental confounding effect because the reading style contains a fixed set of lexical items

⁷Greg Guy (personal communication) noted that by considering sonorants as unspecified for voicing, some of the interaction problem might be avoided. Any future investigation of this will incorporate this suggestion.

⁸For example, in order to disentangle the following point of articulation from the factor of following manner/voice, it would be necessary to combine the sonorants into one category since [l] is only found at one place of articulation.

⁹Recall that only point of articulation was never found to be significant in the Toronto study. Hoffman (1998) also found that point of articulation was erratic. Her results for voicing were also inconsistent

and phonological environments. The results in Table 18 show that the strongest factors exerting an effect on front lax vowel lowering are following manner of articulation and phrase position as shown by the wider range of variation they exhibit.

Table 18: Linguistic factors contributing to the probability of front lax vowel lowering in southern Alberta English

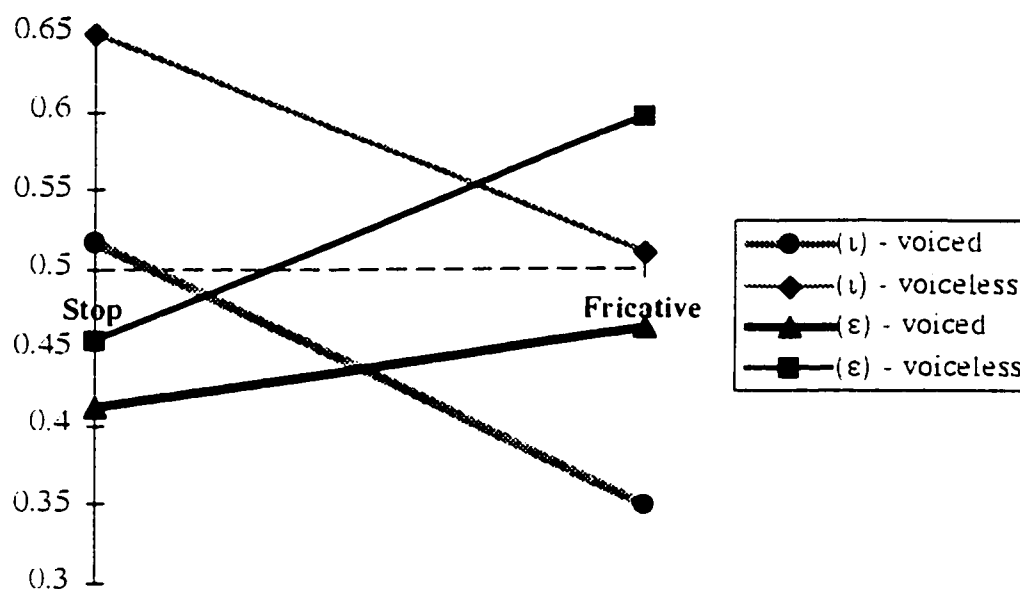
	(ʌ)			(ɛ)		
	Input: .182			Input: .088		
	N = 1966			N = 1908		
	P	N	%	P	N	%
<u>Following manner/voice</u>						
Voiceless stop	.648	325	30%	.450	281	8%
Voiced stop	.518	390	19%	.407	265	8%
Voiceless fricative	.507	286	20%	.595	284	14%
Nasal	.477	577	19%	.488	619	12%
Lateral	.434	162	15%	.642	202	17%
Voiced fricative	.351	226	11%	.459	281	8%
Range	297			235		
<u>Phrase position</u>						
Final	.778	45%	139	.715	231	22%
Internal	.475	18%	1730	.466	1580	10%
Range	284			249		
<u>Style</u>						
Conversation	[]	1220	21%	.612	1220	15%
Reading	[]	746	18%	.309	688	5%
Range	N/A			303		
NOT SELECTED						
Preceding voice		X			X	
Style		X				
Age		X			X	

We first note that the preceding voicing was not selected as significant. Thus, although this factor may be important for laxing (and hence, lowering) of tense vowels (Matthew Gordon, personal communication), it does not appear to be relevant for lax vowels. All other phonological factors were selected as significant.

At first glance, the conditioning effect of manner of articulation on (ʌ) and (ɛ) seem very different but closer examination shows similarities. Figure 2 shows the relationship between voicing and manner of articulation with respect to the probability of lowering across variables. For both variables, lowered vowels consistently precede voiceless obstruents more often than voiced. Both variables show an opposition between stops and

fricatives but across variables the effect of fricatives and stops is reversed. A lowered (ϵ) more often precedes a fricative than a stop regardless of voicing while low (ι) is more likely before a stop than a fricative. Comparison of the results for the two variables shows that a central variant (i.e. low (ι) or non-low (ϵ)) tends to occur with a following stop. The results are consistent with those found in Toronto for both variables in this regard.

Figure 10: Comparison of relationship between probability of lowering according to following voicing and following manner of articulation for (ι) and (ϵ) before obstruents



The differing effect of stops and fricatives may be related to duration. Vowels in phrase final position for both variables show more lowering indicating that longer duration promotes lowering. According to Summers (1987), vowels before fricatives are longer than those before stops. Nearey and Assman (1986) found a difference between [ι] and [ϵ] in vowel recognition studies in that presence of a formant transition is important for correctly identifying [ι] but not necessarily as important for [ϵ]. Specifically, in the case of [ι], if the vowel is short (as before stops), the transition slope may be steeper making it more salient and hence, more likely to be perceived as low than in longer vowels. For [ϵ], there should be no distinction with respect to transition slope but longer vowels may be more likely to show a transition at all, i.e., there would be more time allowed for the vowel

to lower. Thus, differing durational effects on the presence or absence of the transition slope for each variable as opposed to the presence or absence of lowering in general may be playing a role and could explain why these vowels differ in conditioning.

Whatever the explanation, the most important point is that these variables do differ in conditioning and thus must be analyzed separately. In particular, Table 18 shows a clear and consistent style effect but this is only significant for (ε). We will discuss the style result more fully below in connection with community factors.

Community factors

As discussed in Chapters Two and Three, there is some doubt as to whether or not the data represents one speech community and some subcommunity or even two distinct communities given the possibility that Mormon ethnicity may be reflected in linguistic variation. Thus, we first examine religious affiliation to see if it plays a role in the social conditioning of front lax vowel lowering. The possible contribution of sex and age to the sociolinguistic structure of these variables will also be considered.

The marginal statistics for religious affiliation are shown in Table 19. As we can see, religious affiliation appears to be important with non-Mormons showing higher rates of lowering than Mormons.

Table 19: Percentage of lowering according to religious affiliation

	(ʌ)		(ε)	
	N	%	N	%
<u>Religious affiliation</u>				
Non-Mormon	1049	22%	978	13%
Mormon	917	17%	930	10%

However, the apparent distinction on the basis of religion may be an epiphenomenon of the fact that the two groups do not tend to associate. Table 20 shows the percentage of lowering according to network affiliations. For (ʌ), speakers with little association with majority group networks show a reduced amount of low (ʌ). This is consistent with the hypothesis that reduced use of the majority group variant is due to lack of contact between speakers.

Table 20: Percentage of lowering according to network affiliation

	^(ι)		^(ε)	
	N	%	N	%
<u>Network affiliation</u>				
Non-Mormon	560	22%	554	11%
Non-Mormon MID	489	22%	424	16%
Mormon MID	160	26%	156	6%
Mormon	757	16%	774	10%

Following Granovetter (1973), Milroy suggests that speakers with weak ties have more freedom to adopt innovations from outside the group. She proposes that group members with more contacts from outside the group may be more open to influences that can lead to new behaviours. The high rate of ^(ι) lowering by Mormons with greater out-group contact is consistent with Milroy's hypothesis regarding innovators in a community. There is no evidence of the contrastive group behaviour expected in situations of ethnic distinction. In that case, we could expect to show decreased use of lowering by Mormons in contact as opposed to those not in contact and perhaps an accompanying increase in the non-Mormon speakers with Mormon contacts. With ^(ε), this is indeed the pattern observed but the fact that, if the speakers in contact are disregarded, there is actually little difference across groups for ^(ε) suggests that an ethnicity explanation may not be relevant here and other characteristics of these speakers may better account for the apparent ethnic distinction.

What of other social factors? The style effect in Table 18 is consistent with the hypothesis that lowered ^(ε) carries some stigma since it is found less frequently in careful style. Thus, an examination of linguistic market may be revealing. Marginal and variable rule statistics are shown in Table 21 for an examination of sex, age, religious affiliation, linguistic market and style.

Table 21: The contribution of sex, age, religious affiliation, linguistic market and style to the probability of front lax vowel lowering in southern Alberta English

	(ɪ) Input: .182 N = 1966			(ɛ) Input: .088 N = 1908		
		N	%		N	%
<u>Sex</u>						
Female	.568	973	24%	.624	913	16%
Male	.433	993	16%	.385	995	8%
Range		135			239	
<u>Age</u>						
18-25	[]	980	21%	[]	978	13%
30-43	[]	986	19%	[]	930	10%
Range		N/A			N/A	
<u>Linguistic market</u>						
High	.547	1057	22%	.538	993	12%
Low	.446	909	17%	.458	915	10%
Range		101			80	
<u>Religious affiliation</u>						
Non-Mormon	.528	1049	22%	.545	978	13%
Mormon	.468	917	17%	.453	930	10%
Range		60			92	
<u>Style</u>						
Conversation	[]	1220	21%	.613	1220	15%
Reading	[]	746	18%	.306	688	5%
Range		N/A			307	
NOT SELECTED						
Preceding voice		X			X	
Style		X				
Age		X			X	

As Table 21 shows, the effect of sex is consistent with that found in Toronto, with women more likely to lower than men for both variables. Clarke et al's (1995) hypothesis that this is a change in Canadian English is suggested by the fact that more lowering is found among the younger speakers, as revealed by the marginals, but the difference is not significant. This does not necessarily indicate that no change is occurring. It may be that change in this case is proceeding very slowly and the fact that the sample was not sharply stratified for age precludes its selection as a significant factor.

There are also some differences in the social values that each of these variables carry. While (ʌ) shows no evidence of social stigma and, in fact, may carry a positive value for prestige as shown by its association with high linguistic market score, (ɛ) shows a strong stylistic effect with speakers avoiding the lowered variant in more formal styles. However, the linguistic market score indicates that it too is favored by speakers with high linguistic market. Thus, the factors relating to prestige are conflicting for this variable. We will examine these questions below when investigating the qualitative *and* quantitative properties of lowering as revealed by the indexing and acoustic analyses.

The variable rule analysis also showed a significant difference between Mormons and non-Mormons with the latter more likely to show front lax vowel lowering. However, note that religious affiliation shows the smallest range of probabilities of all other factors. As we saw in Table 20, this effect is more probably the result of limited social contact, at least for (ʌ). In other words, although Mormons are less likely to lower, there is no clear indication that ethnicity per se is the relevant factor. Religious affiliation merely correlates with social contact. For (ɛ), it is interesting to note that although the difference between religious groups seems proportionately small, the range of probabilities for the factor of religious affiliation is larger than that found for (ʌ). Although the fact that Mormon speakers with the most contact with non-Mormon networks showed a reduced degree of lowering and non-Mormon speakers with increased contact showed increased lowering is consistent with ethnic meaning for this variable, as noted earlier, the apparent lack of difference between speakers showing less contact indicates that such a conclusion is highly speculative.

To investigate this further, we now examine variable rule analyses for each community separately. Table 22 shows the result of four separate variable rule analyses which reveal the constraints on front lax vowel lowering for each community and each variable.

Table 22: Factors contributing to the probability of front lax vowel lowering according to religious group

	Non-mormons						Mormons					
	(ɪ)			(ɛ)			(ɪ)			(ɛ)		
	Input: .201 N = 1049	N	%	Input: .098 N = 978	N	%	Input: .160 N = 917	N	%	Input: .061 N = 930	N	%
<u>Following manner/voice</u>												
Voiceless stop	.655	177	33%	.476	148	10%	.646	148	26%	[]	133	6%
Voiced stop	.570	210	25%	.360	140	9%	.440	180	13%	[]	125	8%
Vceless fricative	.522	150	23%	.655	143	20%	.497	136	17%	[]	141	8%
Nasal	.478	321	20%	.431	315	11%	.480	256	17%	[]	304	13%
Lateral	.324	83	12%	.721	88	23%	.540	79	19%	[]	114	12%
Voiced fricative	.290	108	9%	.511	144	12%	.425	118	12%	[]	113	6%
Range	365			361			221			N/A		
<u>Phrase position</u>												
Final	.762	84	45%	.695	121	21%	.801	55	45%	.754	110	23%
Internal	.473	913	20%	.469	805	12%	.477	817	15%	.460	775	8%
Range	289			226			324			294		
		N	%		N	%		N	%		N	%
<u>Style</u>												
Conversation	[]	672	24%	.572	632	16%	[]	548	18%	.704	588	14%
Reading	[]	377	19%	.371	346	8%	[]	369	17%	.183	342	2%
Range	N/A			201			N/A			521		
<u>Sex</u>												
Female	.570	511	25%	.685	457	19%	.576	462	21%	.575	456	12%
Male	.434	538	19%	.336	521	7%	.422	455	13%	.428	474	8%
Range	136			349			154			147		
<u>Linguistic mkt</u>												
High	.557	604	25%	.588	564	15%	[]	453	19%	[]	429	9%
Low	.423	445	18%	.382	414	10%	[]	464	16%	[]	501	10%
Range	134			206			N/A			N/A		
<u>Age</u>												
18-25	[]	564	20%	[]	459	14%	[]	495	18%	[]	519	11%
30-43	[]	485	24%	[]	519	12%	[]	422	17%	[]	411	8%
NOT SELECTED:												
Flwg mnr/vce										X		
Style	X						X					
Age	X			X			X			X		
Linguistic mkt							X			X		

Table 22 shows remarkable similarities between the two groups. Phrase position shows equivalent conditioning effects across variables and groups. However, the two groups of speakers do show some differences in the influence of the following manner of

articulation. With non-Mormons, the following manner of articulation is significant for both variables while with Mormons it is significant only for (ʌ).

Figure 11: Comparison of probability of lowering for (ʌ) across following manner/voice contexts between Non-Mormons and Mormons

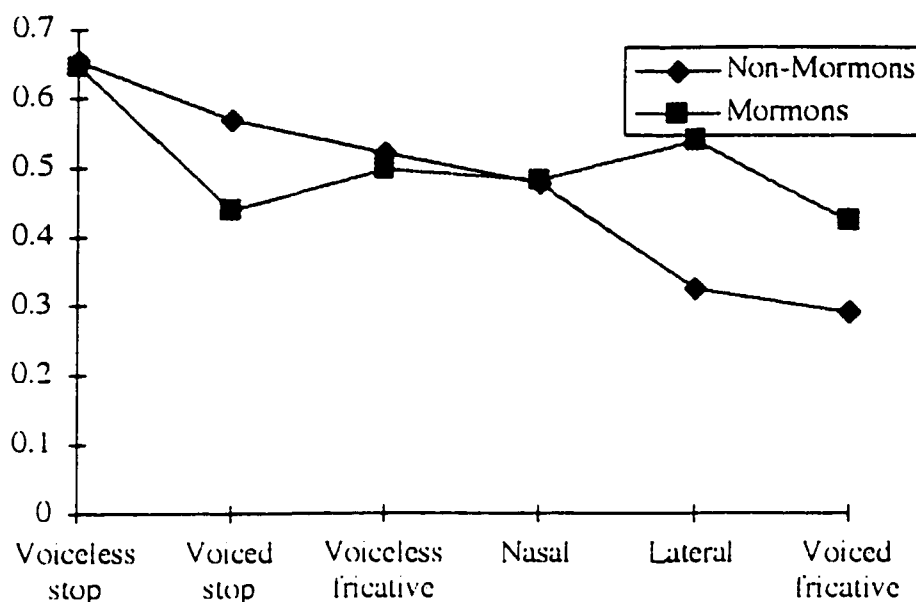


Figure 11 shows that the pattern of conditioning for (ʌ) is roughly equivalent although the effect of a voicing distinction in stops is not as strong for Mormons as it is for non-Mormons. Perhaps the sharpest distinction is in the case of a following lateral which has a much stronger lowering effect for Mormons than non-Mormons. Since the near-merger in Utah is related to lowering of *tense* vowels towards lax, this cannot be directly connected to Utah norms although, as we shall see in the acoustic analysis, it may be related. Furthermore, there is no distinction between variables across speaker groups before nasals. Clearly the lowering of front lax vowels in southern Alberta shows no patterns that can be connected to processes known to be operating in Utah such as the variable merger of front lax vowels before nasals (Labov et al., 1998) for either set of speakers.

As verified by the fact that the variable rule analysis did not select the following manner of articulation as significant to the probability of (ɛ) lowering for Mormons while

clear patterns exist and *are* significant for non-Mormons, the two groups of speakers are distinct linguistically with respect to this variable but the distinction is slight and even though not selected as significant, Mormons, like non-Mormons, show most lowering of (ɛ) before voiceless stops and least before voiced fricatives. There does appear to be some distinction between groups with respect to laterals where this is a favoring context for both variables in the Mormon community as compared to the non-Mormon group where only (ɛ) is lowered more in this environment. If this represents a distinction between groups, it may be echoed in the social patterns of these variables within each community.

First note that there are several important differences in which social categories are associated with front lax vowel lowering depending on the community and the variable. Lowering is favored by non-Mormon women with high linguistic market scores. Mormon women are also more likely to lower than men but no other social categories were significant. Only among the non-Mormons is lowered (ɛ) associated with a high linguistic market score indicating conflicting prestige values. Among the Mormons, it uncontroversially carries some stigma as noted by the fact that there is a significant style effect and no conflicting effect of linguistic market.

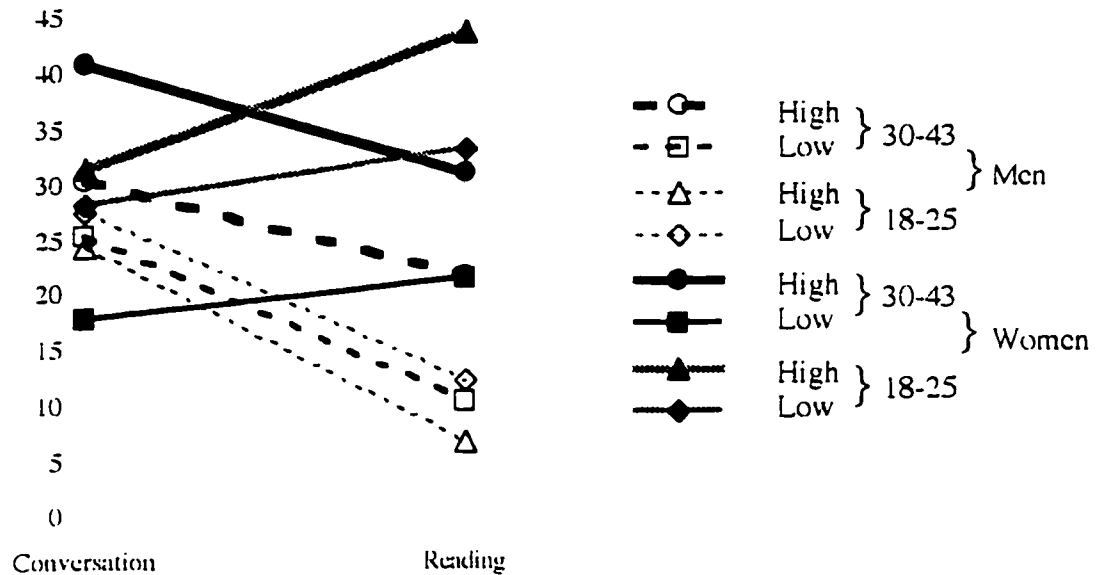
The question of how the prestige values of these variables should be interpreted may be connected to the question of differences (or lack of them) across age groups. Given that differences in age groups may be more clearly shown by an gradient examination of these variables, we now turn to the indexing analysis.

Index scores

Using the index calculation described in Chapter Four, an indexing analysis of the data can determine if speakers differ across age groups for degree of lowering even if not for rate. In addition, we can examine individual patterns within groups. To compute the index score, the lowest variant (as shown in Table 10 earlier) of each variable was given a score of 2, the middle variant a score of 1 and the non-lowered variant was scored as zero to make the calculation (discussed in Chapter Four).

Figure 12 shows the index scores for all speakers according to age, sex and linguistic market across speaker styles for (ɹ).

Figure 12: Comparison of index scores for lowering of (ɹ) by sex, age and linguistic market across linguistic styles.



A comparison of the index scores shows clearly that the distinction between men and women is upheld even when degree, rather than overall rate, of lowering is considered. However, again there is no clear-cut overall age distinction based on either quality or quantity of lowering. Those speakers showing the highest degree of lowering include older women while those with the lowest scores are the younger men. Examination of how the *patterns* of variation differ across age groups and sexes, on the other hand, is quite revealing, especially when linguistic market is taken into account.

Notice that among the older speakers, there is a strong effect of sex and linguistic market. Women show greater degrees of lowering than men. Within these groups, speakers with the greatest degree of lowering had high linguistic market scores. There also appears to be a style effect but it is not consistent across all these groups. While both groups of older men¹⁰ and the older women with high linguistic market scores show a

¹⁰In fact, using a paired t-test, the style difference is found to be significant for all the men at $p < .05$.

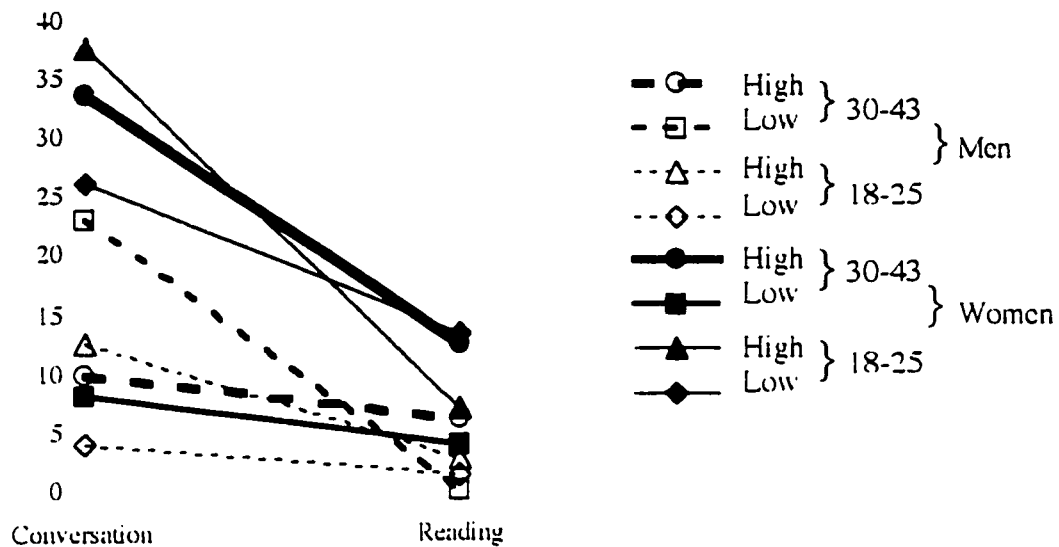
sharp reduction in lowering in more careful style, older women with low linguistic market do not. In fact, they show a slight increase in careful style.

These results are very interesting especially when compared to the patterns of the younger speakers. The younger men show no difference for linguistic market and they echo the style patterns of the older men. The young women, however, still show a distinction between high and low linguistic market with a greater degree of lowering among speakers with high linguistic market. Furthermore, the style patterns of women overall show a shift in prestige across age groups. Young women, and in particular, those with high linguistic market show an increase in lowering in careful styles. Therefore, the reason style was not selected as significant may well be the distinctive behavior of the women in the sample. The results reveal that differences across speakers and age groups are related to different values of prestige for (ɹ) lowering rather than overall rate of lowering.

This pattern of variation can be explained if we hypothesize that lowering of (ɹ) originated as a casual feature of the speech of upwardly mobile women, as suggested by Clarke et al. (1995). This has led to its reanalysis as a prestige variant, at least among women, as shown by the fact that young speakers clearly now interpret the lowered variant as somewhat prestigious. However, evidence for change here is extremely preliminary. Young women with a lower linguistic market show much higher scores for lowering than their older counterparts but no corresponding age difference in rate of lowering is found among speakers with high linguistic market; only a difference in style usage. Although the prestige value of the lowered variant may be changing, its overall rate across age groups shows no difference. Furthermore, all of the distinctions seen here apply only to the women. Men show little difference of age or linguistic market. Thus, while this situation may be ripe for change, no indication that a shift in front lax vowels represents a change in progress is yet evident although as Milroy (1980) states, "the formation of a recognizable set of linguistic norms is itself an aspect of change".

Notice that the same patterns are not evident in the case of (ϵ) as shown in Figure 13. All speakers in the sample showed a tendency for less lowering in more formal styles although again, older women with low linguistic market scores show a difference in the style distinction (i.e. not as sharp) from all other women in the sample.

Figure 13: Comparison of index scores for lowering of (ϵ) by sex, age and linguistic market across linguistic styles.



Equivalent patterns do not appear among the men for either variable. For the most part, the men show less lowering and less difference across styles overall than the women and no consistent patterns that can be clearly attributed to age or linguistic market are evident across variables although the male speakers showing the sharpest degree of style shift are also those with low linguistic market. No reanalysis of the prestige of this variant is evident.

Figure 14 shows the comparison of index scores for lowering of (ι) according to network affiliation and linguistic market across styles. We see that those speakers showing the closest association to majority group networks across styles particularly with high linguistic market score are the most likely to lower. The only group showing a marked style shift is speakers with a close association to non-Mormon local networks and low linguistic market.

Figure 14: Comparison of index scores for lowering of (ɪ) by network affiliation and linguistic market across styles.

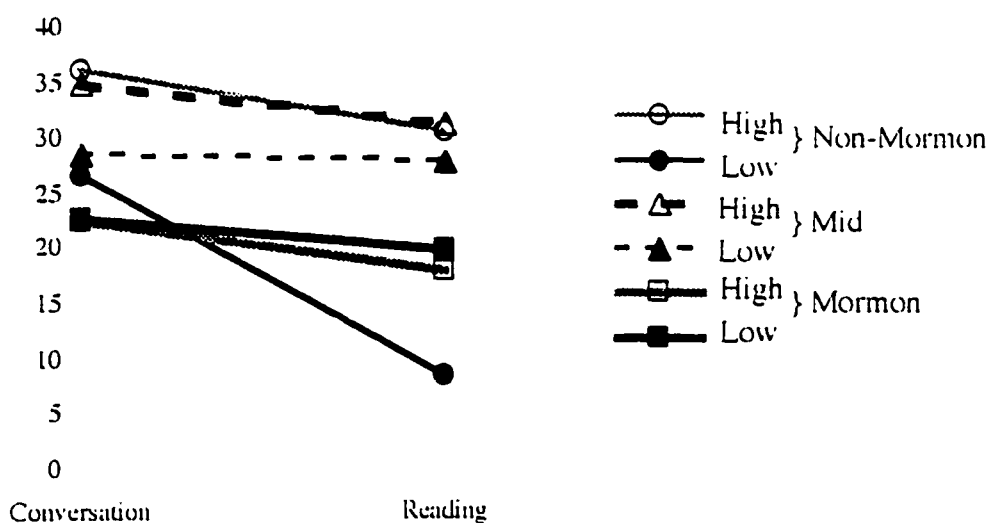
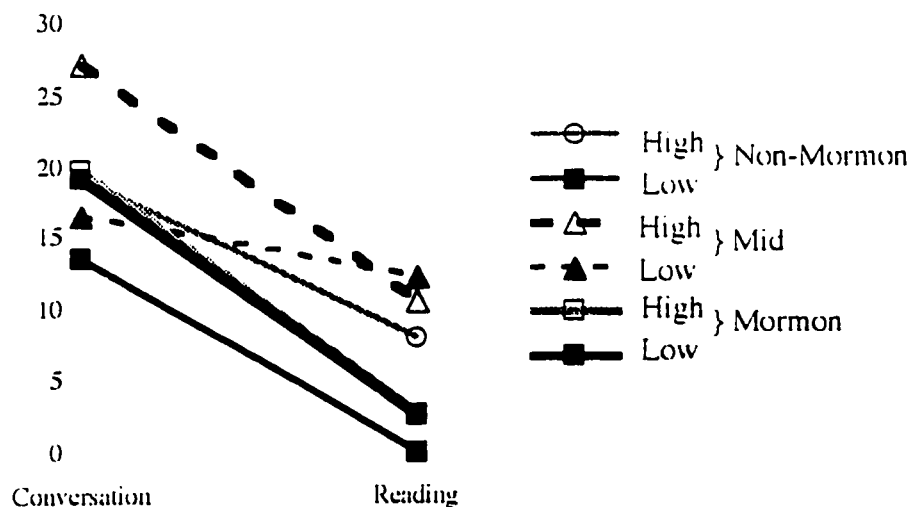


Figure 15 shows the results for (ɛ) by network affiliation and linguistic market across styles.

Figure 15: Comparison of index scores for lowering of (ɛ) by network affiliation and linguistic market across styles.



Again, we see that the speakers with the most contact across groups show high rates of lowering. All groups show the same style tendency with lower index scores in reading style. Linguistic market differences are not as evident. From this, we can conclude that although religious affiliation shows a distinction in the community, this is better

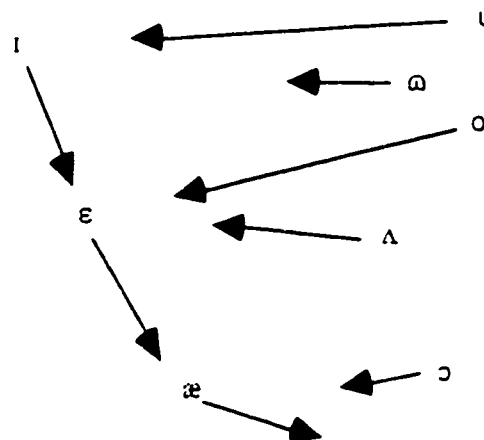
attributed to the social distance associated with membership in the Mormon church which has limited the spread of lowering in that segment of the community. The fact that speakers with the most intergroup contact are most likely to lower (ʌ) can be attributed to their increased susceptibility to outside influence. Although the Mormon community is lagging behind the majority group, the results show no evidence that these variables are functioning as contrastive cultural elements for these two groups. Thus, we conclude that any distinction in the community found for front lax vowel lowering is best attributed to network ties and we can consider these results to be indicative of general community norms.

Thus, although the index analysis has not given clear evidence of change, the patterns of variation suggest that it may be incipient (at least for (ʌ)). Before concluding, we use an acoustic analysis to examine the extent to which the vowel systems of these speakers show other third dialect characteristics such as back vowel fronting, retraction of (æ) as well as the fabled low back vowel merger.

Acoustic analysis

As noted earlier, only a subset of the speakers were chosen for analysis, generally because they had some particular social or linguistic characteristic that led to their choice and not as a result of an unbiased sample. Therefore, these analyses can only serve as illustrations of how these speakers can be oriented in the North American dialect situation and not direct evidence for change. General characteristics of this third dialect shift as noted in California are shown in Figure 16.

Figure 16: California system (abstracted from Luthin, 1987: 314)

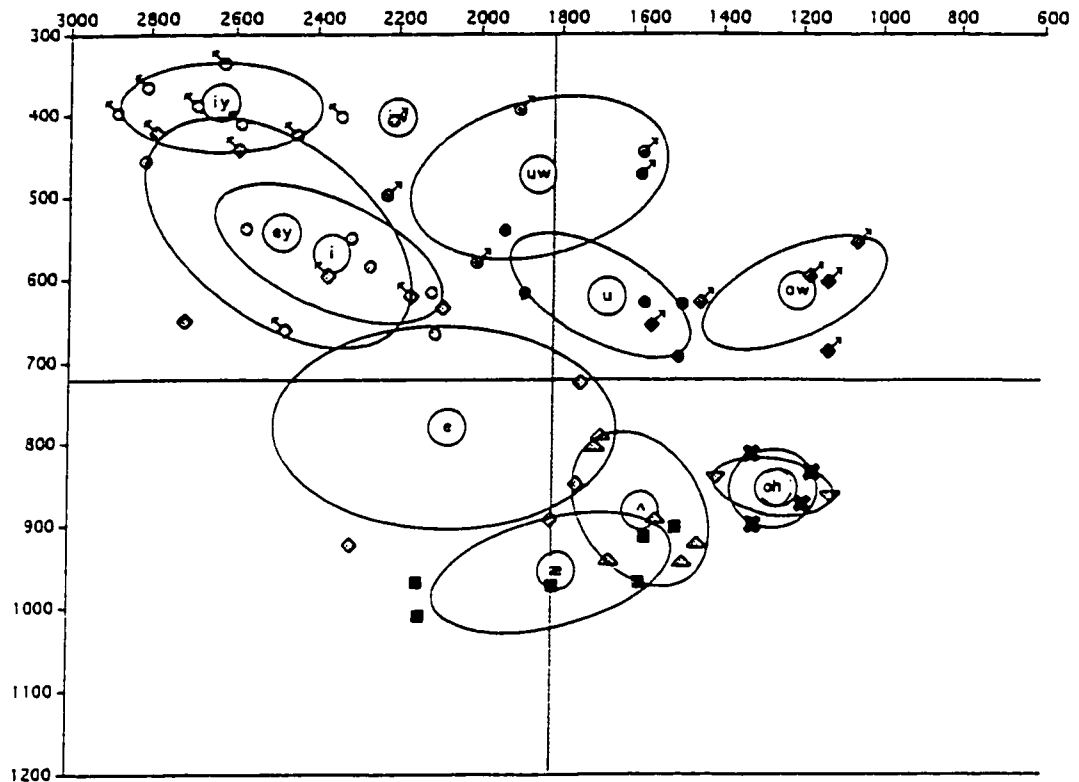


In the charts found in the remainder of this chapter, vowel classes are labelled with IPA phonetic symbols with the exception of the following: *i* = /*ʊ*/, *e* = /*ɛ*/, *u* = /*ɔ̃*/, *oh* = /*ɑ*/ (as in 'cot', 'stop', etc.), and *ah* = /*ɑ*/ (as in 'thought'). The vertical and horizontal lines represent overall means for F1 and F2 respectively for each speaker. Ellipses around vowel classes are positioned to reflect means and ranges of values for F1 and F2 for each class.

The vowel system of the speaker who exhibited the greatest amount of front lax vowel lowering (an older non-Mormon woman) is shown in Figure 17. Notice that her mean formant values for /*ʊ*/ are below those of /*ey*/. Tokens of /*ɛ*/ range from somewhat high (an F1 value of below 700 Hz) to sharply lowered (F1 value above 900 Hz). Perhaps the most interesting aspect of this speaker's system is that there is some retraction of /*æ*/ which ranges from F2 values of above 2200 Hz to a relatively back value of below 1600 Hz. Luthin (citing Lerner (1986)) notes that (*æ*) retraction in California occurs to a greater degree with women than men. This sex distribution was also found in Toronto (Clarke et al., 1995). In addition, Esling and Warkentyne (1993) found a clear relationship with sex and age in Vancouver with more retraction among women with younger speakers overall showing more retraction than older. Furthermore, they found a distinction between middle-class and working class speakers. Those in the middle-class are clearly leading. As Labov

(1991) noted, these other studies also found that following nasals inhibit this but contrary to his assertion that (æ) is otherwise stable, retraction of (æ) in other environments is obviously a clear characteristic of the third dialect shift.

Figure 17: Vowel system before stops of Margaret Morgan (age 32)

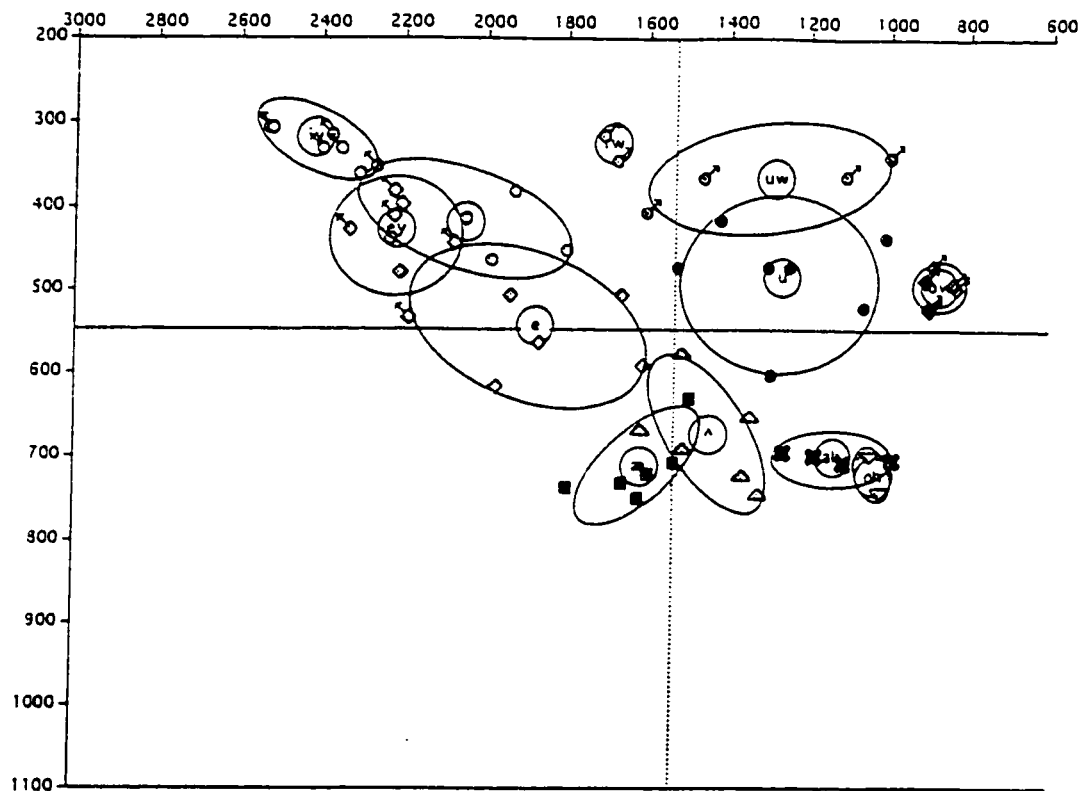


This speaker also shows other characteristics found in third dialect areas. Lowering of / Λ / is also evident and she shows some overlap between / æ / and / Λ /. There is also a considerable amount of fronting of all three back vowels; /uw/, /ow/ and / ω /. Of course, since she is a Canadian, she also features the merger of the low back vowels with no distinction made between these word classes. Although there is some variation along the front/back dimension for the combined class, as we shall see, there is no indication this is moving forward as was found in California.

We can compare this speaker's vowel system to that of an older non-Mormon man (shown in Figure 18). This speaker shows much less fronting of the back vowels. In fact, /ow/ shows none at all. Like the speaker shown in Figure 17, there is only one low back

vowel. Retraction of /æ/ is not as pronounced but again there is some overlap between /æ/ and /ʌ/, partly due to the fronting of /ʌ/. The range of height variation for /u/ and /ε/ is not as pronounced and indeed, the mean formant value for /u/ is slightly above that of /ey/. This reflects the sex distinction found elsewhere and earlier in the variable rule analysis.

Figure 18: Vowel system before stops of Steven Stryker (age 43)



Comparison of the speaker in Figure 18 to a younger non-Mormon man in Figure 19 shows that there is some slight age difference with more retraction of /æ/ and much more fronting of /ɥw/. The other back vowels are roughly the same for both speakers. This speaker also shows /u/ below /ɛ/ like the women and /ε/ is lower and farther back.

Figure 19: Vowel system before stops of Mike Mackenzie (age 21)

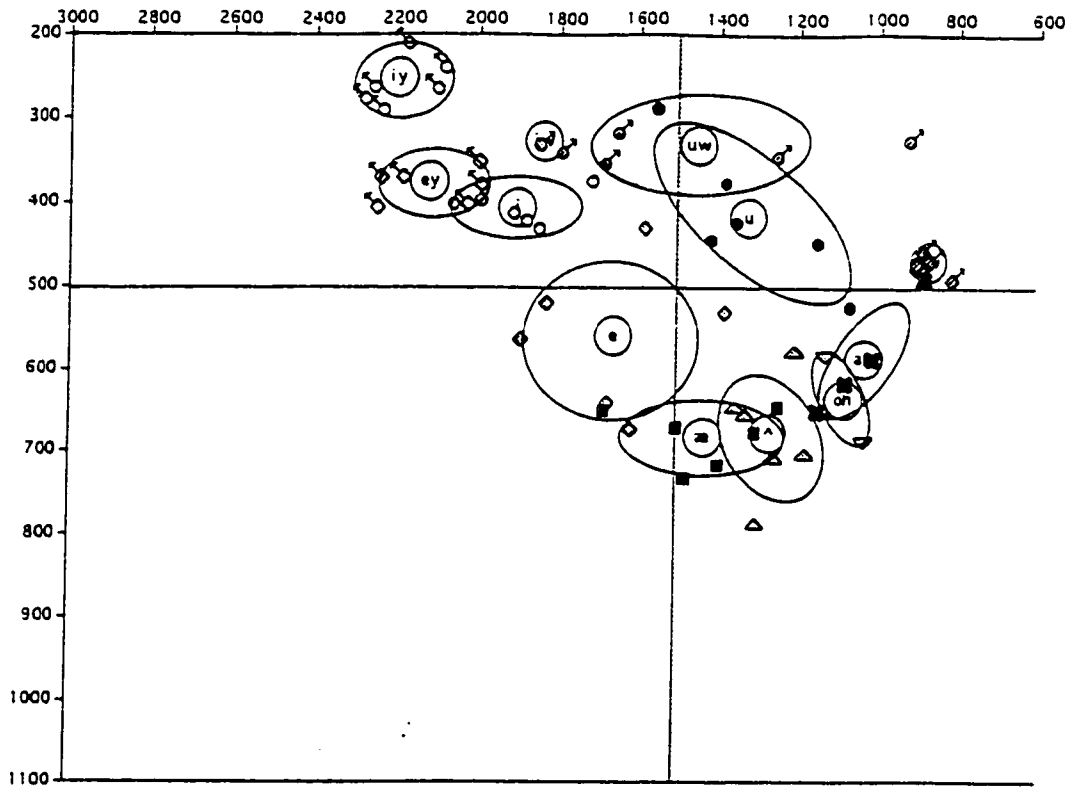
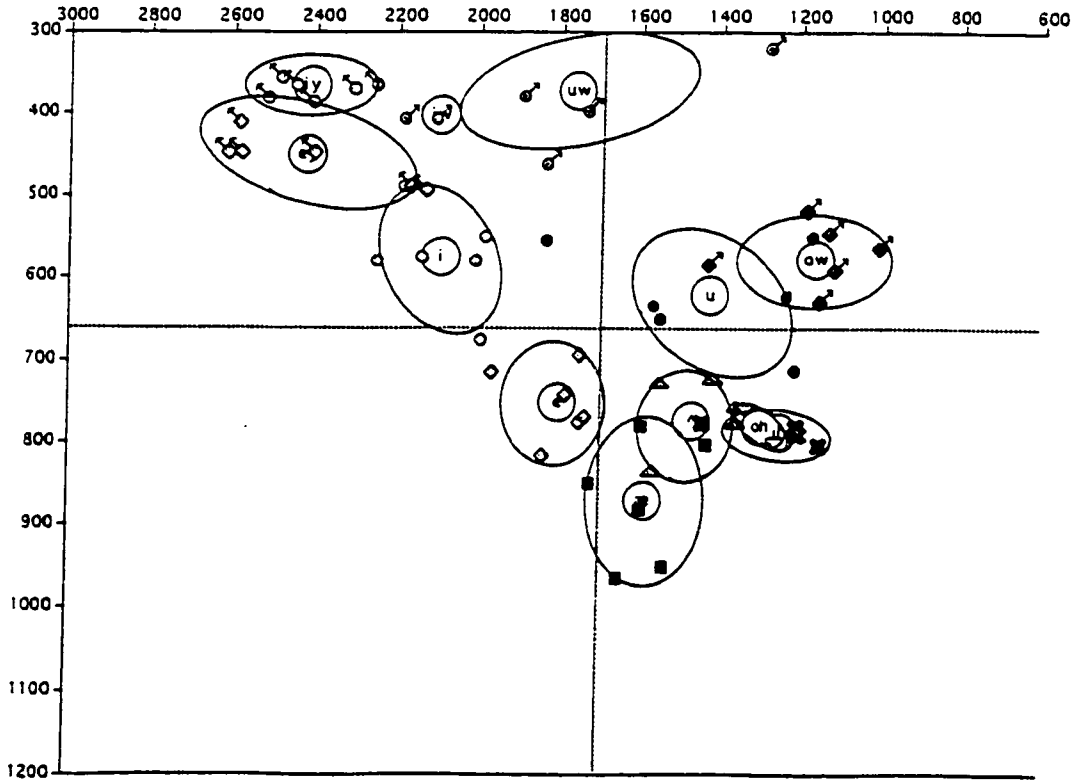


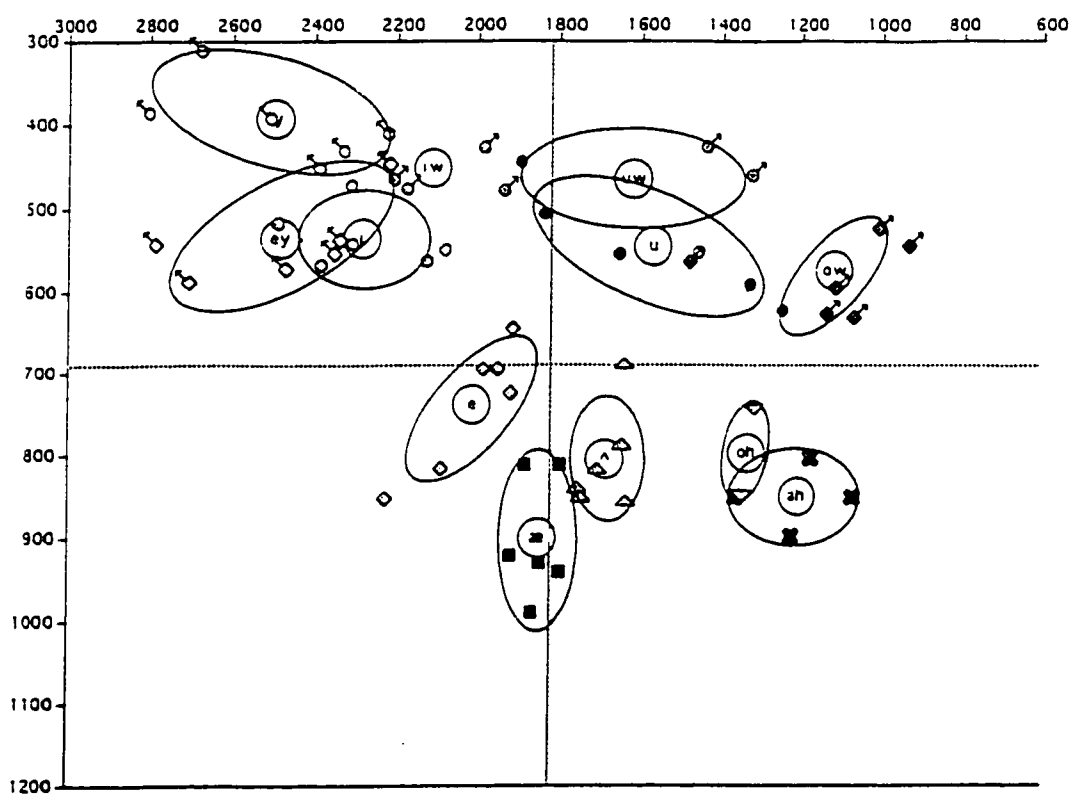
Figure 20: Vowel system before stops of Julie Johnson (age 18)



The analysis of a young non-Mormon woman in Figure 20 also shows signs of the patterns observed in the other speakers. Notice that, like the other non-Mormon woman, this speaker shows some fronting of all the back vowels. In addition, the mean formant values for /u/ are considerably lower than those for /ey/. This speaker also shows the most retraction of /æ/ with all but one token showing F2 values lower than the mean F2 formant value for her vowel system. What about the Mormons?

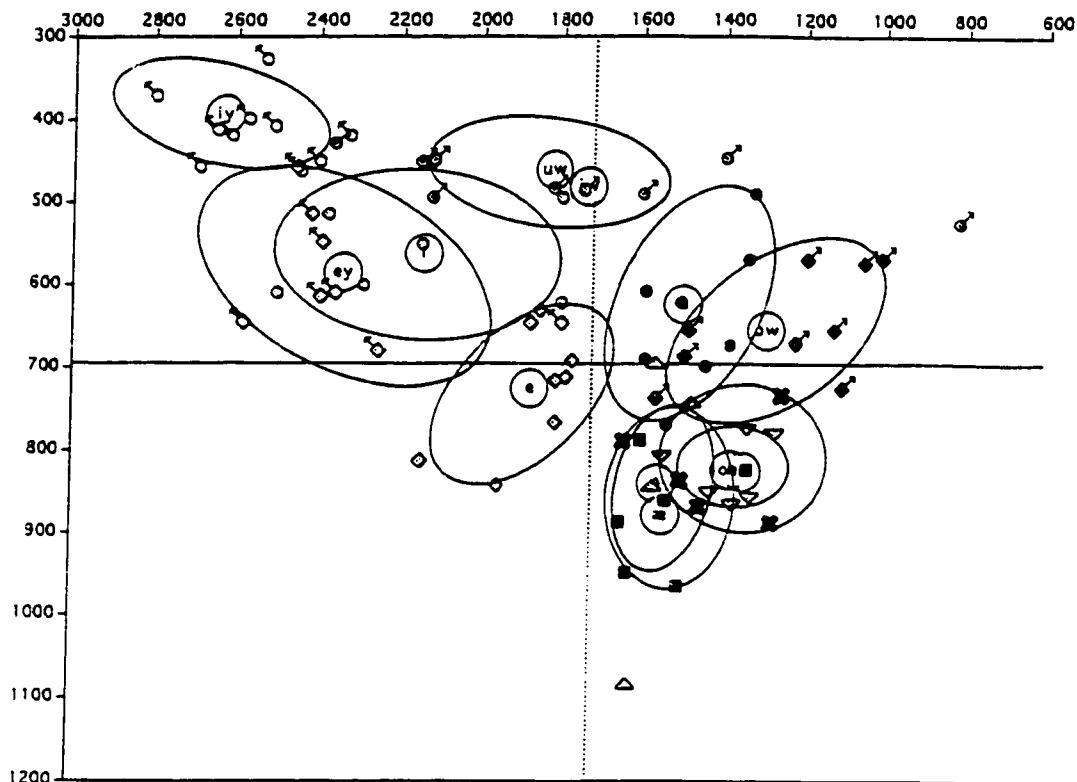
Figures 21 and 22 show the vowel systems of older and younger Mormon women.

Figure 21: Vowel system before stops of Jane Jackson (age 42)



For the most part, the patterns are about the same as observed for the non-Mormons although the younger speaker shows more fronting of the low back vowel than observed in the systems of any of the other speakers. Combined with retraction of /æ/ and lowering of /ʌ/, there is quite a bit of overlap between the vowels in this part of her system.

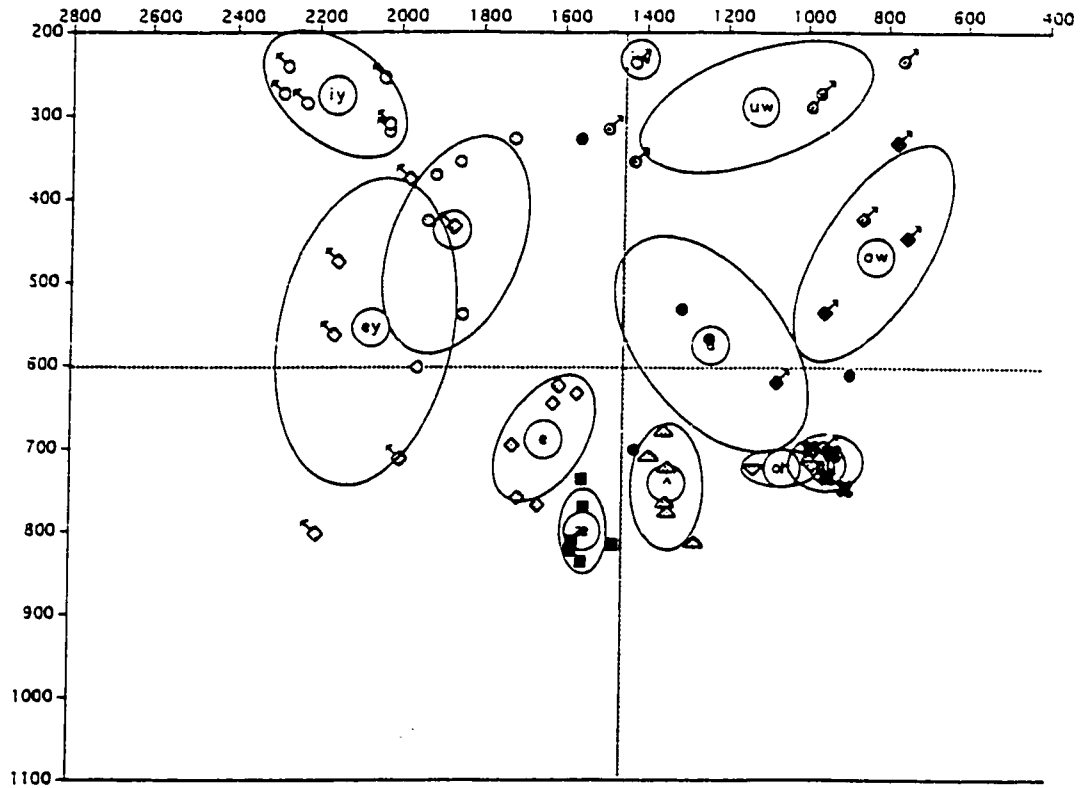
Figure 22: Vowel system before stops of Colleen Cox (age 18)



Finally, we can also examine the vowel systems of older and younger Mormon men in Figures 23 and 24. These speakers, like the other men, do not show as much retraction of /æ/. Both speakers show some lowering of the front lax vowels and fronting of /uw/. Unlike the systems of the other two men, there is quite a lot of variation in /ow/ but this is not so much fronting as it is lowering. The older speaker also shows this same type of variation in the front vowel /ey/. This type of variation has been reported in Utah, particularly before [l]. However, this result may merely fall out from the sampling methodology and indicate that these speakers are just incorporating more diphthongization in these vowels.¹¹

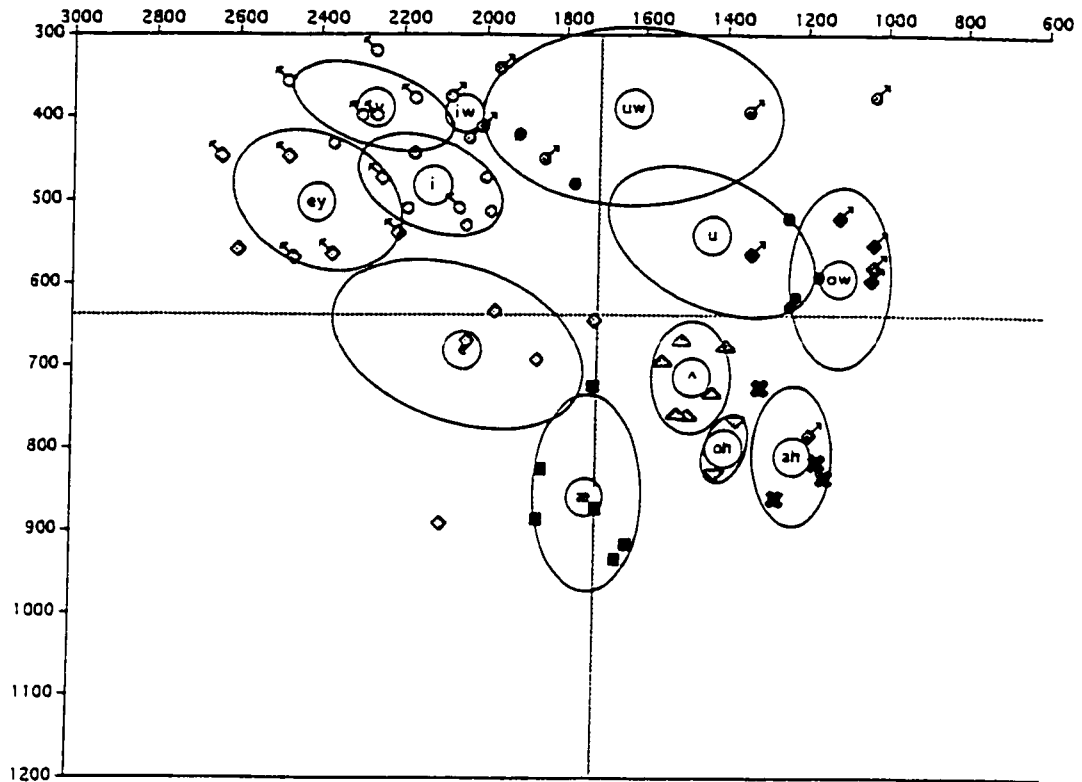
¹¹ Marianna Di Paolo (personal communication) notes that a pattern similar to this occurred in older Utah speakers in the generation preceding that showing tense vowel laxing.

Figure 23: Vowel system before stops of Robert Brewer (age 30)



The fact that a following [l] was selected as significant for lowering of front lax vowels may be related to this. These speakers may have a slight tendency to lower the tense vowels as well and increased lowering of the front lax vowels before [l] may indicate some kind of reaction to movement of the tense vowels. However, since these charts only deal with the context before stops, the possibility that this reflects the adoption of some Utah norm is highly speculative and remains an area for future research. Recall that the Mormons also showed a greater degree of front lax vowel lowering before laterals than the non-Mormons which may indicate a reaction to lowering of the tense vowels for some speakers.

Figure 24: Vowel system before stops of Edward Evans (age 18)



In sum, the acoustic analysis of these speakers reveals evidence of third dialect patterns in their vowel systems and supports Clarke et al's (1995) suggestion that Canadian English is undergoing a shift.

Conclusion

Front lax vowel lowering shows social conditioning indicating sex and prestige differences in the community and these are clearly interconnected. The variable rule analysis showed common linguistic and social conditioning in the community for both variables but no conclusive evidence of change although younger speakers do lower more. Indexing analysis indicated that the prestige value of (ɪ) is shifting which, taken together with the other results, may mean that change is incipient.

In the case of both variables, the lower variants are chiefly associated with close ties to local mainstream community networks and women are in the lead. In general, women with closer ties to the majority community show greater evidence of the shift. The

association with religious affiliation is thus, better attributed to differing relationships with respect to local network ties and not directly related to ethnicity since no clear contrast across groups occurs. Although age was not selected as significant, the trend shown in the marginal statistic is for younger speakers to lower more and considering the apparent shift in prestige among these speakers may signal incipient change.

Matched with the acoustic analyses, we conclude that although the shift may not be as pronounced as in California, all these speakers are participating members of the third dialect speech community and its features represent Lethbridge sociolinguistic norms. On this basis, we have sound evidence that all Lethbridge speakers can be oriented firmly within the third dialect speech community. We now turn to a discussion of the low diphthongs to see if there are additional indications that this is the case.

CHAPTER 6: THE LOW DIPHTHONGS — BACKGROUND AND METHOD

Introduction

Since an alternation between central and low variants of the low diphthongs in Canadian English was first noted by linguists in the early part of this century (Bloomfield, 1933; Joos, 1942), its origins (e.g. Chambers, 1989; Gregg, 1973; Thomas, 1991), conditioning (e.g. Chambers, 1973; Dailey-O'Cain, 1997; Joos, 1942; Vance, 1987), formal representation (e.g. Chambers, 1973; 1989; Jensen, 1993; Nespor & Vogel, 1986; Paradis, 1980; Picard, 1977) and status with respect to change (e.g. Chambers, 1981; 1984; Chambers & Hardwick, 1986; Davison, 1987; de Wolf, 1992; Hung, 1987; Kinloch & Ismail, 1993; Murdoch, 1983; Woods, 1993) have all been extensively discussed. In recent years, there has also been a considerable amount of interest regarding new variation along the front/back dimension of the diphthong (aw) (Chambers & Hardwick, 1986; Davison, 1987; Easson, 1997; Hung, 1987; Hung et al., 1993).

A central issue in the study of these diphthongs in Canadian English is the stability of the rule determining the height alternation. Several researchers, noting that younger Canadian women seem to be using an increasing number of low variants before voiceless consonants have suggested that Canadian English may be losing this distinctive feature (e.g. Chambers, 1981; Woods, 1993). However, despite the fact that studies in Vancouver, Victoria, and Toronto show that the fronting of (aw) shows clear age distinctions, evidence for loss of the height distinction has been less conclusive.

As noted earlier, Ursenbach and Jensen (1976) cite central (aw) as an identifying feature of Canadians in Utah but they note that southern Alberta Mormons are able to pass relatively unnoticed there. In contrast to the case of front lax vowel lowering, we hypothesize that a Mormon distinction in the patterns of variation of these diphthongs serves as a *marker* of Mormon ethnicity in southern Alberta. Even so, central and low variants of (ay) and (aw) are found in the speech of non-Mormons as well, as illustrated by the quote from a young Catholic southern Albertan in (40).

- (40) ... and then figure *out* [ʌw], wonder what that was eh. Look *outside* [əw] and there was a arrow, stuck in the *house*. [aw] Did I tell you about [ʌw] this? Yeah, there was an arrow stuck in the *house* [aw] and I just freaked *out* [ʌw]. (Spkr 023, Cass 26: 1.04.10)

- Truly, as Bailey (1982: 155) notes, "these 'Canadian diphthongs' present a particular challenge to linguistic and social analysis". Their study is further complicated by the fact that there is disagreement about practically every aspect of this variation both from the historical point of view and with respect to its phonological representation.

Phonological representation

How do the variable rule or rules involving (ay) and (aw) operate? A few early researchers suggested that the central and low instantiations actually represent two different phonemes (Harris, 1951; Lehn, 1975). As evidence, they noted that the two variants contrast before flaps derived from voiceless consonants. This view is almost universally ignored.¹ The more accepted theory is that they are phonologically conditioned variants of the same phoneme.

Even so, the controversy surrounding the distribution of their variants before flaps has prompted perhaps the most discussion on the conditions on (ay) and (aw). Joos (1942) first noted that the height variation of these diphthongs before flaps has implications for the question of rule ordering (also see Chambers, 1973; Picard, 1977). Since the central variant occurs before voiceless segments, if it appears before a (voiced) flap, the rule conditioning it must be ordered before flapping. If the central variant does not appear before a flap, the rule must be ordered after. Joos (1942) noted that where both central and low variants are found in the same speech community before a flap, as he suggested was the case in Canada, there is a paradox.

Joos' (1942) solution to this was to claim that the speech community in Canada was not homogeneous in this regard. Differences between speakers in the distribution of central variants before flaps were cited as evidence for two different sub-dialects of Canadian

¹ Although it is still not dead (Vance, 1987).

English. Those with central variants before flaps were speakers of Dialect A while those with low variants were speakers of Dialect B. However, his only real justification for this claim was that otherwise we had to contend with the rule ordering paradox, a clearly circular solution. In fact, no study (sociolinguistic or otherwise) of variation before flaps has ever provided evidence to back up the claim that distinctive behaviour in this context shows dialectal difference. Furthermore, even his assertion that Canadian English speakers differ in variant choice before flaps has been challenged.

Chambers (1973) asserted that (ay) and (aw) in Canadian English are always central before flaps showing no evidence for two Canadian dialects that differed in rule ordering. He suggested that if there had been dialectal differences along this line in 1942, they no longer existed in Canada by 1973 and all speakers now show only patterns of Dialect A. Kaye (1990) argues that there were never two dialects.² Perhaps less controversial than its ordering but still relevant to the issue is the nature of the rule involved.

There has been some disagreement over the underlying form of (ay) and (aw), i.e., is this a raising rule or a lowering rule? Gregg (1973) proposes that [ʌy] and [ʌw] are the underlying forms and the alternation between low and central variants is a rule of diphthong *lowering* as in (41) (Gregg, 1973: 142).

$$(41) \quad \text{Canadian lowering} \\ \Delta y \rightarrow ay / \text{ — } \left\{ \begin{array}{c} \# \\ [+voice] \end{array} \right\}$$

In the case of the diphthongs /ʌy/ and /ʌw/, the phonetic result is the surface forms [ay] and [aw] respectively. He claims that the similarities between the conditioning environments for (ay) and (aw) and the Scottish Vowel Lengthening Rule (Aitken, 1981; Anderson, 1993; Carr, 1992) shown in (42)³ which lengthens vowels before voiced fricatives and [r] and in word final position show that height variation in Canadian English

²Also see Manaster-Ramer (1994) who suggests that Joos had isolated a lexical peculiarity of the word 'typewriter'.

³This is an adaptation of Gregg's rule. He argues that it does not include [l] as it is non-continuant (Chomsky & Halle, 1968; Gregg, 1973).

is probably a relic of this rule since in Scottish English, some diphthongs also surface with lower vowel quality when lengthened.

(42) **Scottish vowel lengthening**

$$V \rightarrow V: / \text{ ______ } \left\{ \begin{array}{c} \# \\ [+continuant] \\ [+voice] \end{array} \right\}$$

An alternative to this proposal is that central (ay) and (aw) are a raising rule in Canadian English. This is the position argued by Chambers (1973; 1989), who suggests that the low form is underlying and undergoes a rule such as the one shown in (43).

(43) **Canadian raising**

$$\begin{array}{c} \text{V} \\ [+tense] \end{array} \rightarrow [\text{low}] / \text{ ______ } \begin{array}{c} \sigma \\ \swarrow \quad \searrow \\ \begin{array}{c} [-cons] \\ [-syll] \end{array} \quad \begin{array}{c} C \\ [-voice] \end{array} \end{array} \quad (\text{Chambers, 1981: 20}).$$

Origins of (ay) and (aw) in Canadian English

A Scottish origin for the height variation among low diphthongs in Canada is certainly possible. Many early immigrants to Canada were Scottish (Avis, 1973; Government of Canada, 1902). Furthermore, Trudgill (1986) notes that similar patterns of variation occur in colonial varieties of English around the world which may well be the result of influence from some common variety like Scottish. This proposal is also consistent with Mufwene's (1996) *Founder Principle* which states that substrate features of the language spoken by the majority or founder group in a community can be imported directly into the new leveled variety. If features of leveled dialects can be directly traced to linguistic properties of the English spoken by a Scottish dominant group, it may also explain why (ay) and (aw) differ both qualitatively and quantitatively even within Canada where Scottish immigrants may have had less influence. In regions such as Newfoundland (Chambers, 1986) and the Ottawa Valley (Pringle & Padolsky, 1983), where Irish immigrants predominated, central (ay) is found in contexts other than before voiceless segments.

However, Trudgill (1986) argues against this explanation. While the phonetic result of Scottish vowel lengthening is very similar for (ay), the difference in conditioning contexts make direct transfer of this rule unlikely. Furthermore, he points out that (aw) lengthening in Scotland shows no differences in vowel quality (i.e., it does not lower) casting doubt on the explanation that reanalysis of the variation by early speakers of Canadian English led to a height alternation for (aw) since there was no height alternation to begin with.

Chambers (1989) proposed that Canadian raising began as an innovation in Canadian speech somewhere in the early part of this century but using linguistic atlas data, Thomas (1991) shows that the alternation in height was a robust feature of Canadian English as far back as 1880 although variation was certainly present. Ahrend (1934) provides a short transcription of Canadian English featuring 10 tokens each of (ay) and (aw) before voiceless consonants and all of them show the central variant showing that at that point, it was virtually categorical in this context at least in formal styles.⁴

Thomas (1991) agrees that the height alternation in Canadian English is more likely an innovation rather than a relic as shown by the fact that central (ay) is also now appearing in several varieties of American English. In a survey of 500 university students in Ohio, Thomas (1991) found categorical central (ay) before voiceless consonants. Vance (1987) has noted a high degree of central (ay) among three Rochester, New York speakers (although it appears to occur there in more environments than in Canadian English).

Raising of both (ay) and (aw) has surfaced as a sound change in progress in northern Michigan (Dailey-O'Cain, 1997; Niedzielski, 1995; 1996) and has also been reported in the Pacific Northwest (Foster & Hoffman, 1966; Mann & Harris, 1989). This parallel development may indicate that there is a natural phonetic process involved. Thomas (1991) suggests that central (ay) (and possibly also central (aw)) results from a natural tendency for the offglides to raise before voiceless consonants. He states, "(g)iven that

⁴It is interesting to note that the transcription *does* feature some variation before [n]. Out of four tokens of the word 'line', three are transcribed as raised.

higher offglides make the onsets sound higher, it seems a small jump to an articulation in which the onset actually is higher" (Thomas, 1991: 161). However, this conclusion is not assured given that the American innovation is taking place in close proximity to the Canadian border. An explanation related to dialect contact is also very possible.⁵

Britain (1997) shows that dialect contact in the English Fens has led to the recent formation of a conditioning environment for (ay) that is very similar to that found in Canada. Adopting Trudgill's (1986) notions of dialect focusing and reallocation in the process of dialect leveling, Britain argues that the best explanation for the emergence of a new conditioning environment for (ay) in the English Fens is what he calls the "Contact, Focusing, and Reallocation Hypothesis" (Britain, 1997: 34). Basically, when speakers of different dialects come into contact, where there is variation across dialects (not necessarily within), speakers will reallocate the variants which originally showed only social distinction to different linguistic environments in a focussed homogeneous dialect. In other words, the dialect distinction is lost in favor of a phonological distinction. In Canada, presumably, a variety of English featuring central diphthongs came into contact with other varieties which featured low diphthongs and reallocation led to the resulting leveled dialect with a grammatical rule assigning each variant to a distinct phonological context. Since Scottish English showed a height alternation for (ay), it may be a candidate as one of the contact dialects. If this is the source, we must assume that the height alternation for (aw) arose by analogy since, as Trudgill noted, it did not vary.

Current status of (ay) and (aw)

Undoubtedly, there are still many questions regarding the history of variation in Canadian low diphthongs. More recently, it has become increasingly apparent that their future also is in doubt. Despite the fact that historical studies claim categorical behaviour, synchronic studies have confirmed that height variation is variable in modern urban English across Canada (de Wolf, 1992; 1993; Woods, 1979). In the case of (aw), it has also been

⁵In fact, Mann and Harris (1989) do attribute the rise of the central variants in their Pacific Northwest sample to contact with Canadian English.

found to co-vary with fronting and also sometimes with backing and rounding (Chambers, 1981; 1984; 1987; Chambers & Hardwick, 1986; Davison, 1987; Easson, 1997; Hung, 1987; Hung et al., 1993; Kinloch & Ismail, 1993; Warden, 1979).

The fronting of (aw), although not perhaps phonetically the same in all the locales where it has been reported, shows a considerably wider geographical range than the height alternation, encompassing both the Northern Cities and the third dialect region in the United States as well. In some respects, this variable may be linked to the emergence of a truly North American standard. Studies show that front (aw) occurs in the geographical range of at least two of the three major dialect areas which Labov (1991) identified. In the east and midwest, it has been reported in Pennsylvania (Labov, 1994), Ohio (Thomas, 1989 [1993]), Kansas City (study cited in Frazer, 1983), Michigan (Dailey-O'Cain, 1997; Eckert, 1991), Illinois (Frazer, 1983) as well as Virginia (Frazer, 1994). In the west, it has been found in California (DeCamp, 1971; Luthin, 1987) and the Pacific Northwest (Foster & Hoffman, 1966) and most notably for this study, in Utah (Cook, 1969).

In Canada, all but one study of major urban centres from coast to coast (Chambers & Hardwick, 1986; Davison, 1987; Hung, 1987; Kinloch & Ismail, 1993) have found it to show evidence of change in progress. In Toronto, the apparent time studies showing change have been confirmed by an analysis in real time (Easson, 1997). In both Toronto and Vancouver, the process shows remarkable similarities. Both cities show a distinction according to age and sex with younger women showing the greatest degree of fronting. Furthermore, in both cases, the change appears to be from below with no clear stylistic differences evidenced. Phonological conditioning across cities is also similar with fronting more prevalent in contexts where, traditionally, only the low variant is found; i.e. before voiced consonants and in open syllables.

The situation in Victoria is virtually identical to that found in Toronto and Vancouver except the evidence for an age distinction is less clear.⁶ The effect of a

⁶Although the male speakers show the same age patterns as the other cities, the female patterns are somewhat anomalous. Davison (1987) notes that the two older women in his study show sharply different

following voiced segment was not as strong in Victoria as in Toronto and Vancouver, particularly in the youngest speakers and no clear explanation could be determined for this. Davison speculated that differences between Victoria and Vancouver were due to the presence of a unique variant in Vancouver (Chambers & Hardwick, 1986); back, central, rounded (aw). Fronting as a change in Vancouver is impeded by this competing variant although this does not explain the difference between Toronto and Victoria.

Kinloch and Ismail (1993) did not explicitly study front (aw) in New Brunswick, but before voiced consonants and in word final position, they did distinguish fronted variants. A comparison of teenagers to older non-university educated speakers showed that there was a clear distinction on the basis of both age and sex. As noted earlier, they found that the most important factor distinguishing speakers was that of education. University-educated adults showed a much greater percentage of the fronted variants than the less educated speakers including the teenagers suggesting that front (aw) is the more standard variant.

The only city in Canada where fronting has been studied which shows distinct patterns is in Montreal (Hung, 1987). In that study, there is no clear evidence of either a sex or age distinction. Hung suggests that front (aw) is a case of stable variation in that community. However, change is still indicated for (aw) in Montreal. Hung notes that only among those speakers who show a tendency to front, is there evidence that low (aw) is increasing. She proposes that fronting is a precursor to the loss of the height distinction.

Luthin (1987) asserts that front (aw) is merely one aspect of the third dialect shift of back vowels towards the front which, as we saw in Chapter Five, is prevalent in Lethbridge. Thus, it is not surprising that we should find it in southern Alberta. Example (44) shows that, indeed, the range of variation in southern Alberta resembles that found elsewhere.

patterns for fronting which he attributes to the tendency for one of the women to nasalize vowels in rapid speech. If this speaker is not included in the study, the patterns are consistent with other studies.

- (44) There's a whole new *crowd* [aw] *out* [ɔw] there *now* [æaw]. (Spkr 010, Cass 12: 28.06)

Chambers and Hardwick (1986), noting that the degree of (aw) fronting is dependent on the height of the diphthong, hypothesized that this could, in future, lead to the loss of central (ay) and (aw) and this is supported by the Montreal results. However, as noted earlier, all other evidence that has been produced for the loss of the height distinction in the Canadian low diphthongs remains speculative. de Wolf (1992) does report that young Ottawa women show significantly lower numbers of central variants than other speakers but a difference across sexes was not evident. Furthermore, Woods (1993) notes that the age effect is better characterized as a "generational" effect; with first generation Canadians showing a decreased proportion of central variants in comparison with those of longer standing. However, he does not elaborate on why this generational effect should occur and only in Ottawa.⁷ The possibility exists that there was some other unexplored social category involved (e.g. ethnicity).

Görlach (1991) asserts that central variants are more consistently prevalent in heartland Canada than in the East although quantitative evidence was not produced. Lehn (1975) noted variable pronunciation of /ay/ before /l/ in Saskatchewan English but Nylvek (1992) found no social distinctions for (ay) and (aw) at all in Saskatchewan with central variants occurring over 90% of the time for all categories. As for Alberta, Avis (1979) characterized the diphthong /aw/ as variably central or low and fronted before voiceless consonants although /ay/ apparently is generally central. This was not substantiated quantitatively.

The question of how variation in the low diphthongs is related to other varieties of North American English is relevant to the discussion of (ay) and (aw) in southern Alberta given that they may provide clues to distinct linguistic and social behaviour across and within the community. To examine this, we can compare the conditioning environments

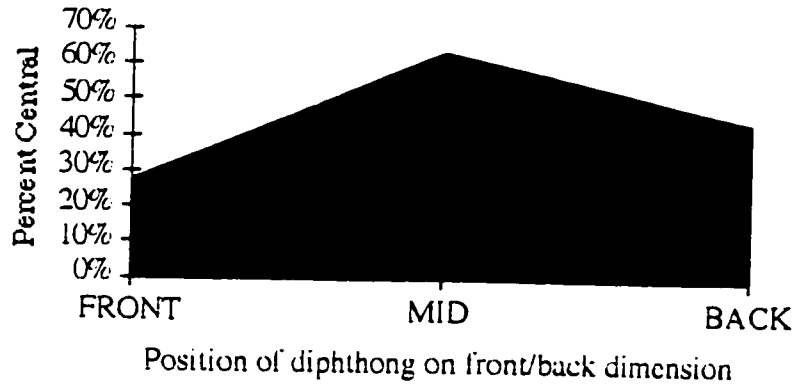
⁷Woods (1993; 1979) also reports a significantly lower proportion of raised (aw) than all other studies of metropolitan Canada. de Wolf (1992) found location to be the most significant difference in the combined study of Ottawa and Vancouver.

found in southern Alberta with those observed elsewhere in the third dialect area and, in particular, Canada. As we found in Chapter Five, southern Alberta English speakers show evidence of conforming to general Canadian norms for the third dialect shift. Can we find evidence for this in the study of (ay) and (aw) in southern Alberta?

To examine the sociolinguistic structure of (ay) and (aw), almost 6,000 tokens were extracted from the data. In the case of (aw), tokens were coded as either central, ambiguous or low as well as fronted, mid or back using the template technique described in Chapter Four. Tokens judged to be intermediate between front and mid or mid and back were counted as front or back respectively, according to the extreme of the front/back dimension they most closely approximated. While it might be more prudent to exclude these, since the variation is gradient, any point on the continuum chosen to distinguish between forms is necessarily arbitrary anyway and preliminary analysis showed these tokens to pattern more like the extremes of the dimension than the tokens in the middle group indicating that they constitute an intermediate point on the dimension. Before we continue, we first discuss the relationship between the two dimensions of (aw) as it relates to the analysis. A precise understanding is required before we can determine how they should be studied.

The analysis of (aw) is complicated because both dimensions are simultaneously involved and they interact. Although central variants occur along the entire front/back scale, as Figure 25 shows, speakers differ as to the degree that they show alternation along this dimension. The more fronted the diphthong, the more low variants we find.

Figure 25: Percentage of central (aw) along the front/back dimension



This in and of itself is not a problem. The main concern is that the front/back dimension may be affected by different factors, i.e., they are different variables, especially given that other studies have shown clear evidence of distinct social conditioning for fronting and raising (Chambers & Hardwick, 1986; Hung et al., 1993). Thus, social factors acting on fronting may erroneously emerge as important for the probability that the central variant will occur. In other words, the social and linguistic factors may not be independent in the study of this variable.

As noted earlier, variable rule analysis also assumes that where there are two processes affecting the same variable, two rules must be involved. The question is, as in the case of the discussion on flapping, which rule precedes? For example, there could be a rule which variably raises (aw) followed by a fronting rule with non-raising a factor favoring fronting. On the other hand, fronting could be the initial rule and bleed raising.⁸ Hung's (1987) findings in Montreal that fronting was a necessary condition for the sociolinguistic structure of height variation are consistent with the latter scenario. However, the reverse possibility may also be true; failure to raise precedes fronting. Of course, it is always possible that some speakers show one order and others the reverse. To attempt to reduce the interaction, the fronting value for (aw) was included as a factor in the study of the height variation and the height value was included as a factor in the study of the

⁸Both these considerations are also relevant if the rule is actually one of lowering.

front/back variation. Although this involves conflicting assumptions for rule ordering, it will allow us to mitigate the interaction problem of the two possible orders.⁹

Method of analysis

As in the study of front lax vowel lowering, the focus will be on the marginal distributions of the variants and a variable rule analysis to determine their significance. However, we also have recourse to other methods in the study of this variation.

The method of coding yielded three degrees of fronting for (aw) since, for the most part, the salience of (aw) fronting is much more gradient. Situations such as this are ideal for the use of indexing methodologies because indexing may capture the degree of fronting and this may be more relevant than a dichotomy between front and non-front. Thus, we will examine front (aw) on this basis as well. For the index score calculation, the most fronted tokens receive a score of 2, the mid tokens a score of 1 and backed tokens receive a score of zero. Calculation of the index is done on the basis of the method described in Chapter Four. Finally, we will examine the acoustic properties of the diphthongs to see how these pattern.

Although several previous studies of (ay) and (aw) in Canada have used indexes to distinguish height, in most cases, they only distinguish two levels (although see Woods (1993) and Eckert (1996) for discussion of more levels). This is essentially the same as reporting overall percentages because only presence or absence of a variant is in question (i.e., the variation is not represented as gradient) so we will only study central (ay) and (aw) by examining the proportional distribution of the variants using marginal statistics.

Before discussing the precise characteristics of the token sample for (ay) and (aw), we first note that not all tokens could be included in the variable context for each analysis.

⁹In a previous study of the height alternation (Meechan, 1998a), the fronted contexts were excluded. However, I later determined that this obscured important aspects of the variation. This points up the difficulty and importance of properly circumscribing the variable context.

The variable context

A number of contexts of (ay) and (aw) were universally excluded from all analyses. In these data, the contexts before [r] and [l] were problematic. First, the transition between the diphthong and final [r] often includes an epenthetic schwa as shown in the examples in (45). The degree to which this occurs is variable. In some cases, it is barely perceptible and in others, it constitutes the insertion of an entire syllable.

- (45) (a) So we have to *hire*[hayr] somebody. (Spkr 011, Cass 19, 45.12)
 (b) I don't care. Just, *hire* [hayər] me. (Spkr 021, Cass 25: 45.20)
 (c) ...and go for about an *hour* [awr] or two and then go home. (Spkr 010, Cass 12: 27.25)
 (d) ...sit in the car and talk for like an *hour* [æwər], whatever. (Spkr 001, Cass 1: 13.15)

This also occasionally occurred before [l]. Given the epenthesis variation, it was unclear to what extent these tokens would reveal a clear conditioning result and even if it did, what it might mean.

Furthermore, these contexts are generally quite rare for both (ay) and (aw) with the exception of a few frequent items. Almost all the tokens of (aw) before [r] were the word *hour* and a preliminary examination of a subset of the data (Meechan, 1998a) garnered no tokens of (aw) before [l]. The great majority of the tokens of (ay) before [l] were the word *while*. Central variants, in any case, were quite rare before both [l] and [r] so, more tokens were not extracted from this context and those already extracted were excluded from the analysis.

Occasionally, speakers also (albeit rarely) produced monophthongs instead of diphthongs and although these also showed height variation, they were excluded since they showed very little variation along the front/back dimension. Tokens which may show idiosyncratic patterns were limited to two or three tokens as in the case of discourse *like* (see Dailey-O'Cain, 1997 for discussion) or were excluded altogether as in the case of proper names like *United States*¹⁰ and *Mike Mountainhorse*. As in the case of front lax

¹⁰Murdoch (1983) found an increased use of the unraised variant in the word *united*.

vowels, functional items such as *my*, *myself*, *by*, *etc.* which frequently contained a reduced vowel, a context discussed in Chapter Five as one of neutralization, were also not studied.

Finally those tokens which were ambiguous as to height were so noted and excluded from the analysis of height variation. They were, however, included in the fronting analysis since even where height was ambiguous, fronting was not. The resulting sample and variants isolated is shown in Table 23.

Table 23: Variants of the low diphthongs and the proportions in which they occurred

	(ay)		(aw)					
		N	%	Front	Mid	Back	N	%
Central	[ɛy]/[ʌy]	1540	59%	[ɛw]	[ʌw]	[ɔw]	1057	33%
Ambiguous		67	3%	33	14	0	47	1%
Low	[æy]/[ay]/[ɔy]	996	38%	[æw]	[aw]	[ɔw]	2077	65%
TOTAL		2603		588	2038	555	3181	
				18%	64%	17%		

Probably due to the use of the templates discussed in Chapter Four, the number of ambiguous tokens is quite low (less than 1%). However, it should be noted that the coding of these variables was still impressionistic and although the variants are labeled with phonetic symbols, this does not necessarily indicate that an acoustic analysis of the onsets of these diphthongs would necessarily support all of the coding decisions. As Thomas (1991) pointed out, the perception of a diphthong as "low" may be either partly or completely related to the acoustic characteristics of the off-glide. As a methodological caveat, we should note that most ambiguous tokens were found in contexts not traditionally associated with central variants. As we shall see, given the final makeup of the variable context for the study of the height variation, these problems are probably not important.

Before continuing, it is also necessary to note that the fronting dimension is not divided in exactly the same way as that found in the other Canadian studies discussed above. In low contexts, the divisions are approximately the same. However, in raised

contexts, the southern Alberta speakers rarely, if ever, showed the extreme degree of fronting found in Toronto.¹¹ Furthermore, several speakers exhibited the central back rounded variant found in Vancouver. In fact, the backing distinction actually is probably better characterized as rounding (although there are degrees to which this is true). In this sense, we can already state that these speakers show some distinction from most other studies of Canadian English.

In the interest of comparison across variables, each token was then coded for the same set of linguistic and social factors.

Factors

We first discuss the two linguistic factors chosen for study.¹²

Linguistic factors

Following segment

This factor is extremely important in that it is the only one which has been shown in study after study to consistently affect the height of (ay) and (aw). As discussed above, a central issue is the status of following flapped consonants. How do they condition diphthong height? Is it phonetically related to voicing? Are low variants found there more often than central variants?

Probably due to the added complication of the interaction between front and central (aw), voicing has been found in previous studies to be an important factor for front (aw). Thus, this context could provide some insights into the nature of the rule. Since previous studies (Chambers, 1980; Davison, 1987) found no real difference between a following voiced obstruent or a diphthong in an open syllable and preliminary examinations of this data showed this also to be true here, these contexts were collapsed. This category also includes all 18 tokens of (ay) and 3 tokens of (aw) in the entire corpus before vowels since

¹¹I am basing this on casual observation of a number of younger Torontonians in my acquaintance. Fronting of the central variant in Toronto is quite salient while that noted here was much more subtle. Acoustic results presented later will illustrate this.

¹²Other factors may also play a role. These two factors were chosen in the interest of simplifying the analysis. Preliminary research found them to be consistently important across variables allowing for easier comparison and also to show the strongest effects. See Meechan (1998a).

they showed similar patterns. Thus, a comparison of the diphthongs in the context of a following voiced obstruent or syllable final position with the patterning of flaps should still be revealing. In addition, we will examine a possible distinction of voiceless fricatives¹³ since this is a distinguishing context between the rules of raising and lowering discussed earlier. If low variants are found more often before fricatives, it may indicate some underlying influence of Scottish English.

Cook (1969), in the two speakers on which he reported for phonological conditioning, found more fronting before nasals. Chambers (1984) and Davison (1987) also suggested that nasalization might be a factor. Thus, we will also examine the effect of a following nasal.

The effect of voicing on both fronting and height variation may be explicitly related to whether these constitute phonetic realizations of lengthening and shortening. However, determining which of these is more likely is probably better explored with an examination of stress.

Stress on the diphthong

The voicing effects just described may relate both to the duration of the vowel and the conditioning effect of the following environment. Vowels tend to be shorter before voiceless consonants (e.g. Summers, 1987). Joos (1942) suggested that raising of (ay) and (aw) is a consequence of this. As Chambers reiterates (Chambers, 1973: 88), "(r)aising arises as a reflex of the Shortening rule".¹⁴ The raising of (ay) and (aw), in that sense, can be seen as a kind of vowel reduction process.

Summers (1987) shows that the relative duration of the vowel is determined by *both* voicing and stress, particularly if the following consonant is voiced. However, he notes that vowels before voiceless consonants show the most differences in *F1 structure* (e.g. overall shape of formant transitions) when they are stressed. Summers also noted that

¹³Ideally, we could also separate voiced stops and fricatives but, there are relatively few voiced fricatives and, in any case, a preliminary analysis (not shown here) found that the context before voiced fricatives showed equivalent patterns to other voiced obstruents.

¹⁴Also see Jensen (1993).

vowel *durations* were affected more by stress when followed by voiced segments. A similar difference in effect was shown between stops and fricatives. Vowels before fricatives are longer when stressed.

Style

The relative duration of vowels also differs across styles since reading style which includes tokens from word lists, would naturally tend to include tokens with longer duration than in faster, running speech. Thus, we can compare reading style to that found in the conversational portions of the interviews against these indications of duration to examine if there is a difference. Style can also be an important indication of the prestige value of a variant as discussed in Chapter Four.

Community factors

These were discussed in detail in Chapter Four. As with front lax vowel lowering, we study age, sex, network affiliation and religious affiliation as well as the factor of linguistic market. In the next two chapters, we examine the results of the analyses.

CHAPTER 7: (aw) FRONTING

For the variable rule analysis, tokens counted as fronted were those that were so indicated in Table 23 in Chapter Six. Non-fronted tokens include mid and back variants. We now discuss the marginal statistics across the community for the linguistic and social factors outlined in Chapter Six for the distribution of front (aw).

Marginal statistics

Linguistic factors

Height

Table 24 shows the percentage of front (aw) according to the height of the diphthong.

Table 24: Percentage of front (aw) according to diphthong height

	N	%
<u>Height</u>		
Low	2077	22%
Central	1057	11%

As noted earlier, there is a strong effect. If the diphthong is low, it is more likely to be front.

Following segment

Table 25 shows the percentage of front (aw) according to the following segment. As other studies have found, front (aw) occurs a high percentage of the time before nasals. However, this is not really that different from the situation found before the category including other voiced obstruents and syllable final position.

Table 25: Percentage of front (aw) according to following segment

	N	%
<u>Following segment</u>		
Nasal	748	22%
Voiceless fricative	345	22%
Voiced obstruent or syllable- final	599	21%
Flap	228	15%
Voiceless stop	1261	15%

Furthermore, as predicted by the interaction between the height variation and fronting, there is a difference between the contexts before voiceless stops, flapped or otherwise, and all others. Consistent with the hypothesis that this is a duration effect, voiceless fricatives show a pattern more similar to the voiced contexts. What of stress effects which are also associated with duration differences? Does front (aw) also occur in other contexts associated with longer vowels.

Stress on the diphthong

If front (aw) is a phonetic consequence of vowel lengthening, then we should also expect to find more fronting in more highly stressed contexts. Table 26 shows that this is, indeed, the case. Furthermore, the amount of fronting shows a gradient effect with the most fronting in heavily stressed syllables and the least in lightly stressed syllables with intermediate stress showing an intermediate degree of fronting. As predicted by the hypothesis that fronting is one phonetic result of lengthening, the sharpest distinction lies between heavy stress and all other degrees.

Table 26: Percentage of front (aw) according to stress on the diphthong

	N	%
<u>Stress on the diphthong</u>		
Heavy	412	32%
Average	1804	19%
Light	964	13%

Of course, as is discussed in Chapter Five, stress and duration may also be associated with more careful styles. In careful styles, speakers may tend to speak more slowly involving more pauses and thus, include more instances of heavier stress and less of lighter stress.

Style

Table 27 shows that although the style distinction does not appear to be strong, more fronting does occur in reading style. This also may show that front (aw) carries some prestige in this community.

Table 27: Percentage of front (aw) according to style

	N	%
<u>Style</u>		
Reading passage	496	22%
Conversation	2685	18%

An examination of the community factors involved may elucidate this.

Community factors

Sex

Table 28 shows the percentage of front (aw) according to sex. Women show a much greater tendency for front (aw) than men. This is consistent with previous studies of this variable as well as the notion that front (aw) carries prestige, since, as noted in Chapter Three, women notoriously tend to use more high prestige or standard variants than men.

Table 28: Percentage of front (aw) according to sex of the speaker

	(aw) N	%
<u>Sex</u>		
Female	1557	24%
Male	1624	14%

Predominant use of a variant by women can also signal change. An examination of the age distinction will show if there is any distinction over time.

Age

Table 29 shows that younger speakers show a greater tendency to front than the older group.

Table 29: Percentage of front (aw) according to age of the speaker

	(aw) N	%
<u>Age</u>		
18-25	1348	22%
30-45	1833	16%

The patterns for sex and age taken together are consistent with the hypothesis that a change is in progress, as has been found in many other Canadian studies. However, since there may be a distinction between religious groups, before reaching this conclusion, we first examine the possibility that front (aw) shows differences across subgroups of the community.

Table 30 shows the percentage of front (aw) according to religious affiliation.

Table 30: Percentage of front (aw) according to religious affiliation.

	(aw)	
	N	%
<u>Religious affiliation</u>		
Non-Mormon	1759	15%
Mormon	1422	23%

As we can see, there is a difference between groups but it is the opposite of that found for front lax vowel lowering. In the case of front (aw), it is the Mormons who are in the lead. Of course, since fronting is increased when the diphthong is low and, as we shall see, Mormons also show more low variants of (aw), this may merely reflect this distinction.

On the other hand, it may also indicate the influence of Utah norms on the Mormon community. Cook (1969) concluded that (aw) fronting in Utah represented the emergence of an urban Salt Lake City variety.¹ Salt Lake City informants showed the highest degree of fronting and this was particularly true among young college educated speakers. Although he did not explicitly study possible effects of religious affiliation, the two rural communities he studied did differ with respect to their degree of religious homogeneity.

In the predominantly Mormon community (Minersville), the speakers showed social conditioning similar to that found in Salt Lake City, even though the community was geographically isolated. In the less isolated and more religiously heterogeneous community (Millford), (aw) fronting was more prevalent among young non-college speakers. He suggested that this was a case of hypercorrection and showed the prestige value of this

¹Although no recent studies have verified Cook's (1969) conclusion that fronting is still increasing in Utah (Marianna Di Paolo, personal communication).

variant in Milford. Interestingly, this pattern of hypercorrection was not found in Minersville or Salt Lake City. However, since Milford was also less isolated, Cook attributes this to the equally possible explanation that it represents a more general spread of the urban variety to the country which had not yet permeated into general Minersville society, i.e., only speakers who had left the community were exposed to it.

To what extent can this be directly related to Mormon ethnicity? What of the effects of contact between groups? In Table 31, we see the percentage of front (aw) according to network affiliation.

Table 31: Percentage of front (aw) according to network affiliation.

<u>Network affiliation</u>	(aw)	
	N	%
Non-Mormon	958	9%
Non-Mormon MID	801	22%
Mormon MID	477	24%
Mormon	945	22%

As in the case of low (ɪ), it is those speakers who have the most contact with both networks who show the greatest degree of fronting.

A variable rule analysis of these factors will determine the statistical significance of these effects. Of course, due to the interaction between religious affiliation and network affiliation, only religious affiliation will be tested statistically since network affiliation is not stratified for other factors.

Variable rule analyses

Community factors

Table 32 shows both the marginal and variable rule results for the effects of social factors on the probability of front (aw) for all speakers in the sample combined. This run also includes relevant linguistic factors which we will examine in a moment. As the table shows, the marginal results presented earlier are verified. All social factors examined statistically turn out to be significant. In particular, the results for sex and age indicate that there is good reason to believe that the community is showing change.

Table 32: The contribution of sex, age, linguistic market and religious affiliation to the probability of front (aw) in southern Alberta English

Input: .166

N = 3181

	P	N	%
<u>Sex</u>			
Female	.575	1557	24%
Male	.428	1624	14%
Range	.147		
<u>Age</u>			
18-25	.559	1348	22%
30-45	.456	1833	16%
Range	.103		
<u>Linguistic market</u>			
High	.543	1646	20%
Low	.453	1535	16%
Range	.090		
<u>Religious Affiliation</u>			
Mormon	.545	1422	23%
Non-Mormon	.464	1759	15%
Range	.081		
NOT SELECTED			
Following segment		X	

Although religious affiliation also shows a significant effect on front (aw) and, as just noted, the Mormons are clearly in the lead for this variable as opposed to the situation found with front lax vowel lowering, it shows the smallest range of probabilities of all other social factors. Given the fact that, as was shown in Table 31, not only Mormons but also those speakers who have the most contact with them show high proportions of fronting, this effect is probably an epiphenomenon of social contact as suggested for (ɪ) lowering. In other words, although Mormons are more likely to front, fronting is not a *mark* of ethnicity, Mormon or otherwise and shows no indication of becoming one. There is no evidence of boundary formation or maintenance.

Linguistic factors

Table 33 shows marginal statistics and results of the variable rule analysis for the linguistic factors discussed previously for all speakers in the sample combined.

Table 33: Linguistic factors contributing to the probability of front (aw) in southern Alberta.

Input: .166

N = 3181

	P	N	%
<u>Diphthong height</u>			
Low	.545	2077	22%
High	.412	1057	11%
Range	.133		
<u>Stress</u>			
Heavy	.659	412	32%
Average	.513	1804	19%
Light	.406	964	13%
Range	.253		
<u>Style</u>			
Reading	.552	496	22%
Conversation	.490	2685	18%
Range	.062		
NOT SELECTED			
Following segment		X	
Style		X	

We first note that the height of the diphthong is a significant factor and in all probability, the apparent following segment effect found in the marginals is an epiphenomenon of this since the following segment factor was not selected as significant. Front (aw) is not another phonetic realization of some general vowel lengthening rule conditioning both height and fronting. Even so, stress effects are selected as significant indicating that duration of the vowel may still play a role. Style is also significant with front (aw) more likely in reading passages indicating that it carries some prestige.

A broader examination of the relevant factors across religious groups may provide more insight into the variation since there was a distinction.

Analysis across religious groups

Table 34 shows the factors contributing to the probability of front (aw) distinguishing religious groups. In the interest of ease of comparison, all factors are shown together.

Table 34: Factors contributing to the probability of front (aw) across religious groups.

	Non-Mormons			Mormons		
	Input: .114 N = 1759			Input: .207 N = 1422		
	P	N	%	P	N	%
<u>Diphthong height</u>						
Low	[]	919	18%	.534	1158	25%
Central	[]	815	11%	.342	242	13%
Range	N/A			.192		
<u>Following segment</u>						
Nasal	.660	395	22%	.496	353	23%
Voiced stop/syllable final	.542	319	21%	.432	280	21%
Voiceless fricative	.457	203	15%	.624	142	32%
Voiceless stop	.422	736	10%	.504	525	20%
Flap	.388	106	8%	.504	122	20%
Range	.272			.192		
<u>Stress</u>						
Heavy	.664	212	29%	.648	200	35%
Average	.520	1010	15%	.504	794	23%
Light	.396	536	10%	.422	428	16%
Range	.268			.226		
<u>Style</u>						
Reading	.582	247	19%	[]	249	25%
Conversation	.486	1512	15%	[]	1173	22%
Range	.96			N/A		
<u>Sex</u>						
Female	.711	803	26%	.468	754	21%
Male	.319	956	6%	.537	668	24%
Range	.392			.69		
<u>Age</u>						
18-25	[]	768	18%	.548	580	28%
30-43	[]	991	13%	.467	842	19%
Range	N/A			.81		
<u>Linguistic market</u>						
High	[]	982	14%	.602	664	30%
Low	[]	777	16%	.410	758	16%
Range	N/A			.192		
NOT SELECTED						
Style				X		
Age				X		
Linguistic Market				X		

Comparison across speaker groups reveals a great number of differences. In the first place, the following segment exerts a different effect across groups even when the

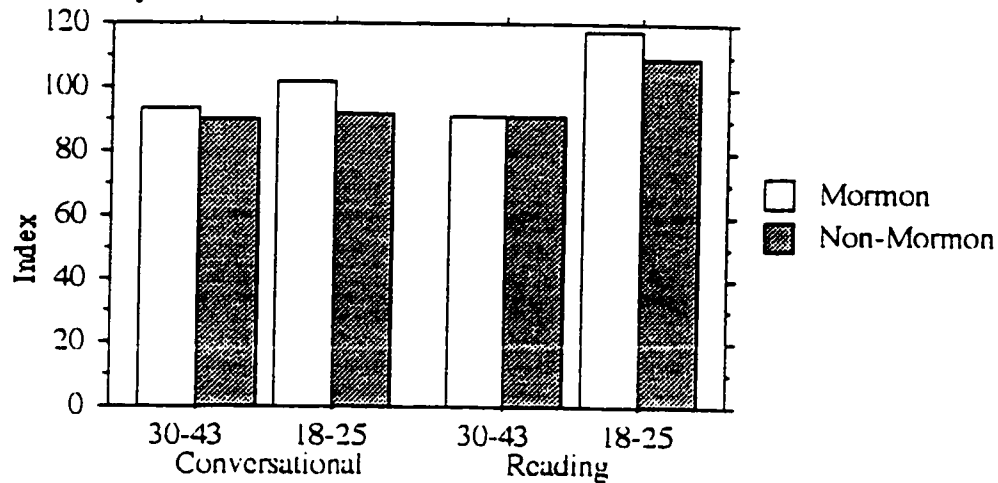
height of the diphthong is taken into account. In fact, the height of the diphthong is not significant for the non-Mormons; only for the Mormons. Non-Mormons favor fronting before nasals and other voiced segments while Mormons favor fronting before voiceless segments, particularly fricatives. For both groups, stress on the diphthong exerts approximately the same effect. Style is significant only for non-Mormons with reading style favoring although Mormons also show a slightly higher proportion of fronting in reading style as well. The biggest differences are in the social factors. Non-Mormons show only a sex effect with women favoring fronting far more than men. This may also be related to an increased rate of the back rounded central variant in the speech of the men (Meechan, 1998b). For the Mormons, there is both a sex and age effect with young Mormon men favoring fronting. Linguistic market is also only important for the Mormons with speakers with a high linguistic market favoring fronting. Thus, front (aw) does appear to carry prestige in the Mormon community particularly for the young men.

To examine the situation further, we now examine the patterning of these same speakers according to the (aw) fronting index. Perhaps distinguishing *overall* degrees of fronting may reveal differences within groups as we found for front lax vowel lowering. In particular, we will examine the network affiliation factor to see if this is related to the spread of front (aw) in the same way as it was for front lax vowel lowering.

Indexing analysis

Figure 26 shows a comparison of the indexes by age and style across religious groups.

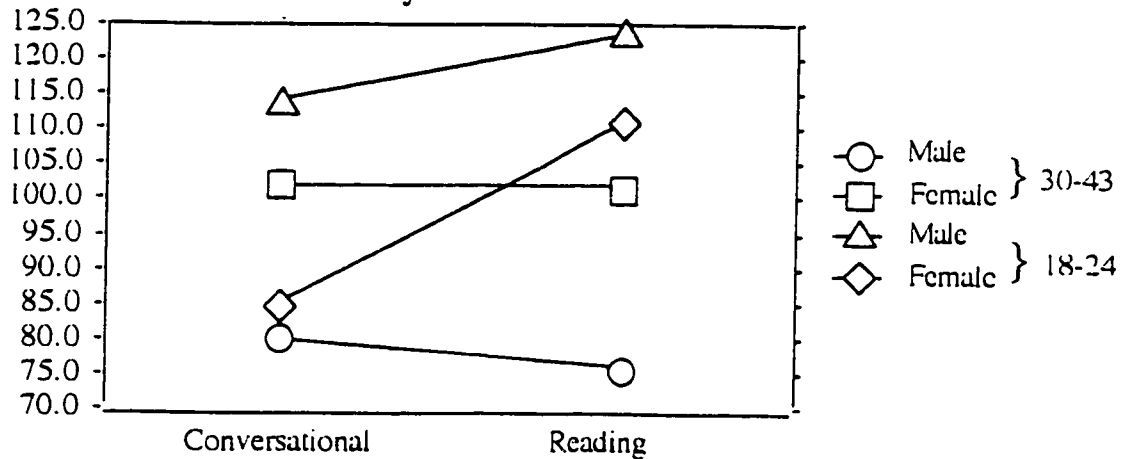
Figure 26: Comparison of (aw) fronting indexes for age and religion by style



We first note that although Mormons show higher fronting indexes, for the most part, than non-Mormons, the distinction is slight, particularly among the older speakers. We see that older Mormons show slightly more fronting in conversational styles but there is no style difference among older non-Mormons. Among younger speakers of both groups, there is an increase in fronting and a greater style difference with more fronting in reading style.

Figure 27 shows the (aw) fronting index according to style for the Mormons in the sample, separating them by age and sex. We find that the men and women show different patterns. Among the men, the young speakers clearly front more than the older speakers. Furthermore, there is a difference in the patterns for style for the men with older men fronting slightly less in formal styles and younger men fronting more. Among the older speakers, there is a clear sex difference with women fronting more than men and no clear style distinction. In fact, in both cases, there is slightly less fronting in formal styles.

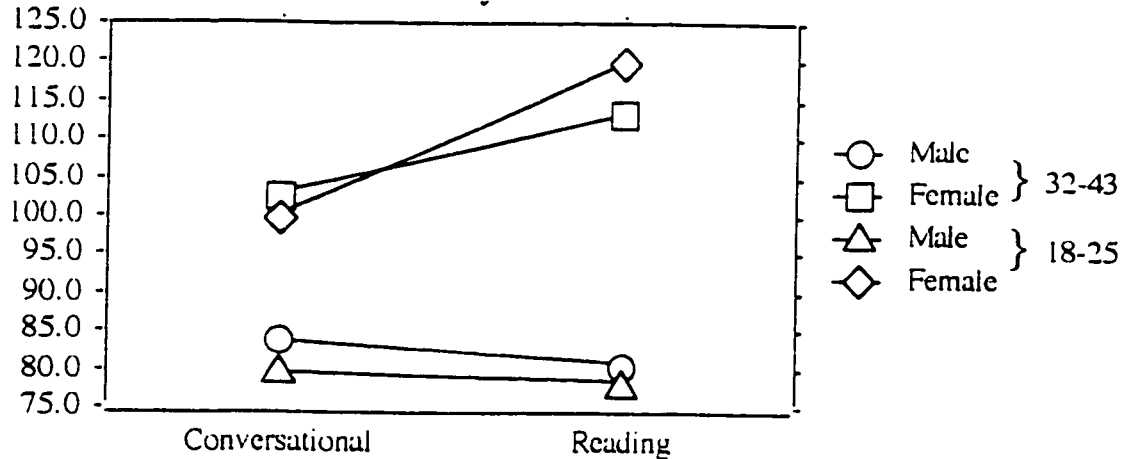
Figure 27: Comparison of (aw) fronting index for age and sex by style: Mormons only



The pattern shown among the young women, however, makes it difficult to conclude that fronting is increasing in the Mormon community. It is true that they show a style distinction consistent with the hypothesis that fronting is increasing in prestige for these speakers with low index values for fronting in conversational style and sharply increased values for formal styles. This pattern is reminiscent of the style shift patterns found for (t) which suggested incipient change. However, the fact that the young women show no more fronting overall than the older women is counter to a suggestion that fronting is increasing unless we assume that in this case, the change is being led by the men who also show the style distinction found among the women, albeit to a lesser degree. Another possibility is that there is some interference here from the mainstream community norms.

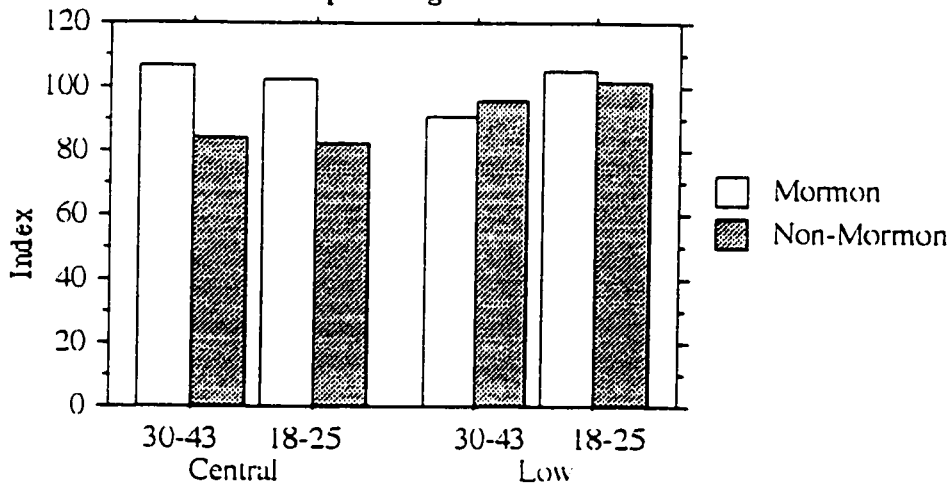
Figure 28 shows the index values for the non-Mormons. Fronting among the non-Mormons only shows a difference according to sex. Women front more than men. Furthermore, fronting carries some prestige among the women since it occurs more often in formal styles and the shift is slightly sharper for the younger women. This style distinction is totally absent among the men. This variation appears to be currently stable for the non-Mormon speakers.

Figure 28: Comparison of (aw) fronting index for age and sex by style: Non-Mormons only



One question is whether or not this distinction between groups is related to an underlying height distinction. The fronting of (aw) according to the height value for the diphthong is shown in Figure 29.

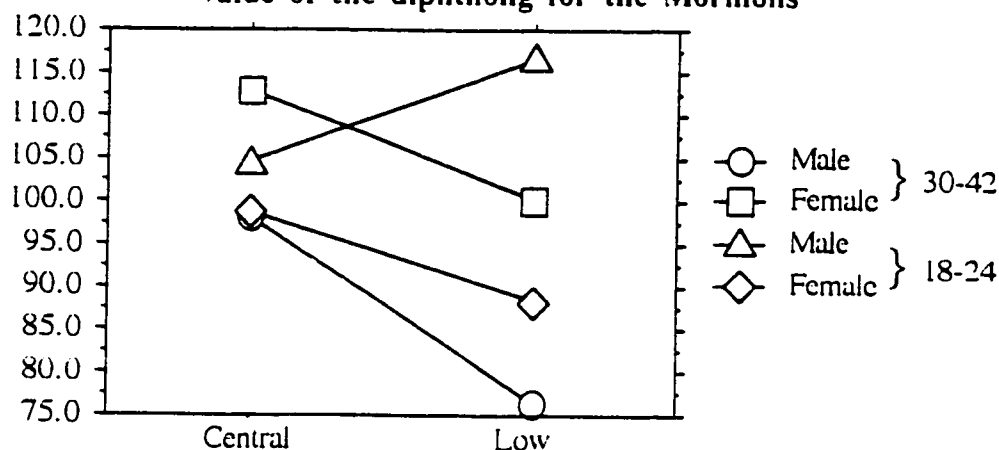
Figure 29: Comparison of (aw) fronting index for age and sex by height value of the diphthong



Here we see that Mormons show much more fronting for central variants although there is a decrease in this pattern in the younger speakers of both groups. Both Mormons and non-Mormons show slight increases across age in low contexts.

Figure 30 shows the index value for fronting according to diphthong height for the Mormons with sex and age distinguished.

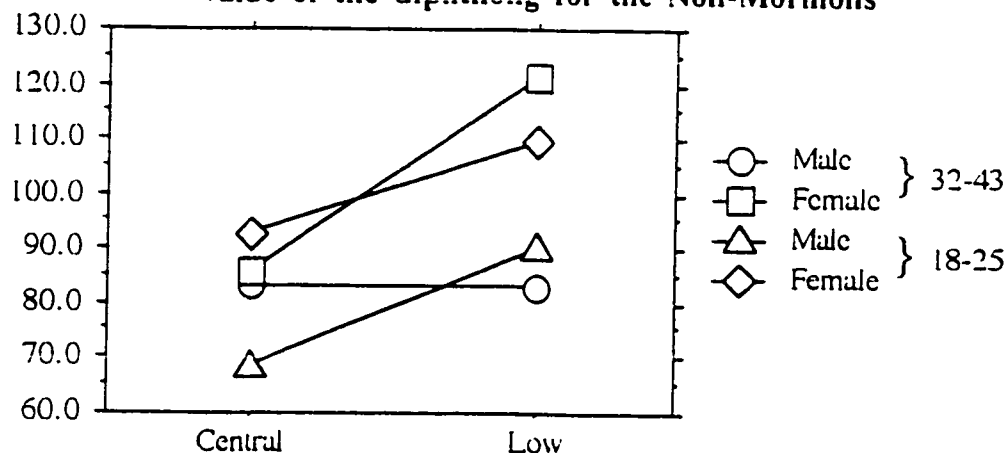
Figure 30: Comparison of (aw) fronting index for age and sex by height value of the diphthong for the Mormons



Most speakers in the Mormon sample have higher fronting index values when the diphthong is central as opposed to low. This is not necessarily because these speakers are producing the extreme front central variant found in Toronto but rather, because in low contexts, they also tend to produce a strongly backed variant. In other words, their range of variation is greater in low contexts. Again, while the older speakers show a clear sex distinction with women fronting more than men, the younger speakers show a reverse trend. The young women are fronting less in central contexts and more in low contexts while the contexts favoring fronting for the young men are reversed.

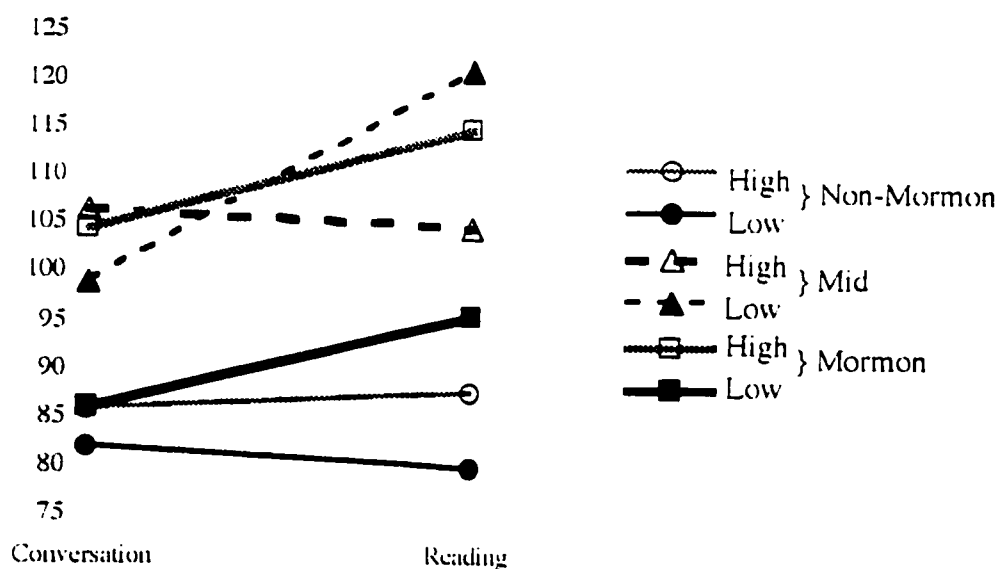
Figure 31 shows the fronting patterns of the non-Mormons according to the height of the diphthong. A comparison of these patterns with those found among young Mormon men show that despite the difference in rate, the young Mormon men are more closely approximating general community linguistic norms for fronting. Across the non-Mormon community and particularly in the case of the younger speakers, we see that fronting is increased when the diphthong is low. This may reflect the strong influence of the following segment conditioning factor for front (aw) among the non-Mormons since contexts favoring central (aw) disfavor front (aw). The fact that the young Mormon men show a pattern similar to that of the non-Mormons probably reflects the loss of the low backed variant among those speakers, or as we shall see, increased use of central (aw).

Figure 31: Comparison of (aw) fronting index for age and sex by height value of the diphthong for the Non-Mormons



A more revealing view is provided by an examination of (aw) fronting across styles according to social distance and linguistic market as shown in Figure 32.

Figure 32: Comparison of (aw) fronting index for linguistic market and social network affiliation by style



Here we see a clear affiliation with lower fronting indexes and close association with non-Mormon local networks. Furthermore, almost no distinction occurs across styles for these speakers. All speakers designated as showing a medium degree of distance from local networks show the highest degree of fronting although it is the speakers with low linguistic market scores which show the sharpest style shift. Interestingly, those speakers

closest to Mormon networks are split as to fronting. As found in the variable rule analysis, it is those with high linguistic market scores who front the most. The fact that the most fronting occurred among speakers whose association to both networks is somewhat ambiguous suggests that where fronting as a norm has dual reinforcement, it is more strongly favoured. This result lends support to the hypothesis that fronting is influenced by two *distinct* community norms.

Fronters as a social category

Hung (1987) claimed that "fronters" constituted a distinct group in Montreal and provided an analysis of height variation which excluded the non-fronters. As noted earlier, she discovered that within the group of speakers in Montreal who front, there was evidence for distinct linguistic behaviour among fronters along the height dimension for (aw) in that when considered alone, they showed a loss of the height distinction. However, there are methodological problems with analyzing a group of speakers as if they represented some social category without other evidence of social distinction merely because they show a particular linguistic tendency. It is tantamount to using the objectivist approach to ethnicity criticized in Chapter Two since it uses a purely objective criterion to identify the group. Furthermore, social variation found within such a group is uninterpretable since we have no justification for considering the group to be representative of any particular community. However, a closer examination of the southern Alberta group of "fronters" on the basis of *non-linguistic* characteristics may still be revealing. Table 35 shows speakers showing more than 15% extreme front variants, i.e. "fronters", as opposed to all other speakers.

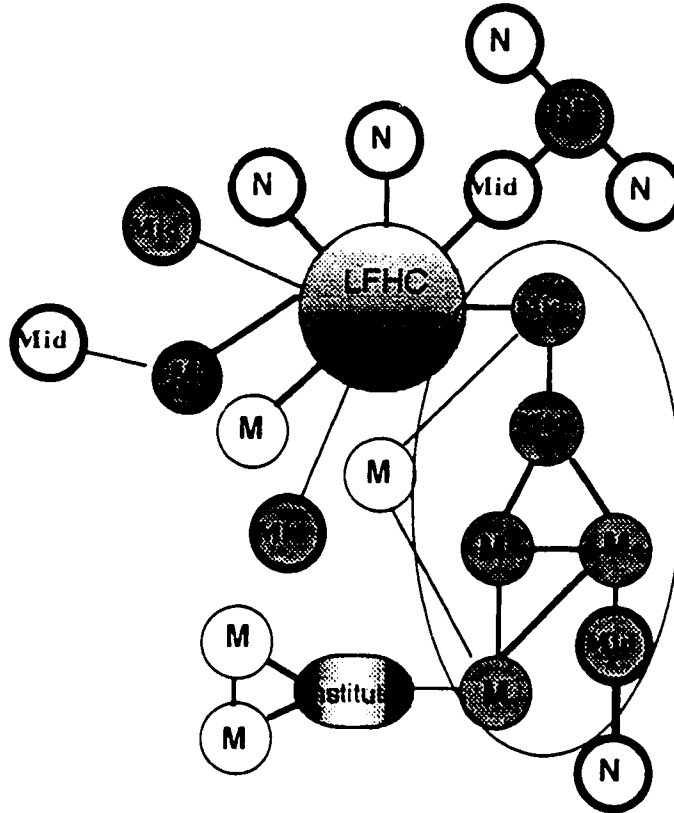
Table 35: Speaker characteristics of fronters and non-fronters grouped according to speakers with extreme fronting scores above 15%

Fronters				Non-fronters			
Spkr	Religion	Age	Sex	Spkr	Religion	Age	Sex
15	Mormon	18	Female	21	Mormon	19	Female
18	Mormon	18	Male	22	Mormon	24	Male
14	Mormon	22	Male	3	Mormon	31	Male
2	Mormon	30	Male	12	Mormon	42	Female
9	Mormon	42	Female	13	Non-Mormon	18	Female
6	Mormon	42	Female	23	Non-Mormon	21	Male
24	Non-Mormon	20	Female	11	Non-Mormon	25	Male
10	Non-Mormon	23	Female	19	Non-Mormon	37	Male
1	Non-Mormon	32	Female	17	Non-Mormon	38	Male
20	Non-Mormon	34	Female	5	Non-Mormon	42	Male
				4	Non-Mormon	43	Male

Not surprisingly, as Table 35 shows, the majority of the "fronters" are also Mormon (6/10). However, the "fronters" still constitute only slightly more than half of the whole Mormon sample. Why are these six Mormon speakers showing different patterns from the others? They are equally divided between men and women. They are also relatively (given the small size of the group) stratified for age. Compare this to the set of Non-Mormon fronters included in this group who are all women.

Furthermore, all of the Mormon speakers who were classified as "mid" for the network affiliation score, largely because they also had strong associations with the non-Mormon community are found among the "fronters". Three of the four non-Mormons were also classified as mid. Examination of the the initial connections between speakers in the sampling schema, as implied by the connection with network affiliation shows a startling relationship between the majority of these "fronters". Figure 33 illustrates this.

Figure 33: Connections between Canadian-born speakers. Fronters are indicated with shaded circles. Non-mormons are in bold circles. Direct connections are shown with bold lines. Speakers' index coding for connection to local non-Mormon networks is shown by N (non-Mormon), Mid (mid) or M (Mormon) inside the circle. The Network is enclosed in an ellipse.



Six of the ten "fronters" in the sample are closely related in the sampling schema, including one of the non-Mormons. These speakers belong to a clear network of "communication and interaction" in a more concrete sense than that represented by the network affiliation factor.

Of the other four speakers, one is Mormon and lives in the same neighbourhood as most of the Mormons in the network. Since this speaker was not found through the same set of connections as the others, we have no way of knowing if he also belongs to this network since he was not asked. It is very possible that he may attend the same ward as some of these other speakers and he may know them.² As for the three non-Mormon

²Although, wards are not necessarily based on neighbourhood association, it is a factor in their organization.

women, there is no reason to believe that they have close ties to this particular network. However, it is interesting to note that one of these speakers, due to the fact that her mother is a convert from the Mormon church, received the highest ranking of all of the non-Mormons for closeness to local Mormon networks largely due to her relationship with her Mother's side of the family. Her intermediate status as to social distance was due to the fact that, since she attended the completely segregated Catholic schools, the only Mormon non-family contacts she now reports are work acquaintances. Another of these speakers has an American mother originally from the Pacific Northwest. As for the remaining non-Mormon speaker, her participation in this group remains an enigma. She may merely represent the higher end of the non-Mormon continuum for fronting.

Thus, fronting is clearly associated strongly with Mormons and may, in fact, have originated in that part of the community given that it was found as an emergent feature of Salt Lake City English as far back as 1969 (Cook, 1969). However, it shows no clear evidence of operating as a marker of Mormon ethnicity given that it is found in both communities and at least among older speakers shows the same social conditioning, i.e. sex. Furthermore, despite the fact that there is a preponderance of Mormons among the fronters, one relationship between fronting and network associations for front (aw) in both communities is the same.

All but three of the "fronters" have strong inter-religious relationships. In other words, women who show the most inter-group contact in the community, regardless of religion, front the most. Those who are found in less integrated groups show less fronting regardless of religion. The fact that the Mormons showed more fronting overall may indicate that fronting began in different segments of the community at slightly different times as a result of different community norms. The fact that it is now concentrated among speakers with the most inter-religious contact may relate to Milroy's (1980) assertion that weak network ties are more important for transmitting innovations than strong ties. The innovators in Lethbridge for front (aw) are those with most contact across groups. Thus, if

the entire community is considered, front (aw) shows evidence of increasing in Lethbridge but the exact structure of the heterogeneity is not completely clear. Particularly among the young men, there appears to be a distinction across religious groups and so ethnicity may still also be a factor. We will return to this in Chapter Nine.

Conclusion

Front (aw) at a community level also shows social conditioning with young women in the lead. The fact that similar patterns have been reported widely in Canada and the United States and even verified with real time studies, supports the conclusion that this may also be a change in progress in the Lethbridge community. However, this change is mediated by complementary values from two different social groups in the community centered around the Mormons and the non-Mormons. Each group shows different linguistic norms for this variable. Non-Mormon women are more likely to front (aw) than non-Mormon men. Other than that, there are few signs of social conditioning. In the Mormon community, we see no significant sex difference but age and linguistic market scores indicate that young Mormon men who require most access to standard community varieties tend to front (aw) more. The fact that speakers with higher linguistic market consistently show more front (aw) across groups argues that fronting has some prestige across the community.

The fact that fronting is more prevalent among the Mormons and, in particular, the older Mormons may indicate that it arose first in this segment of the community as a result of influence from Utah. However, the divergent patterns of variation among the younger Mormon speakers is consistent with the hypothesis that the communities are realigning with respect to this variable. The fact that younger Mormon women show less fronting than older is probably an adjustment to the general rate of fronting found across the community. This is supported by the patterns of the young men who still show high degrees of fronting but show phonological conditioning more consistent with their peers in the non-Mormon community.

The reconfiguration of this variable according to more general norms is also verified by the fact that the most extreme fronting is most closely associated with speakers who have strong cross-community ties, i.e. those with the most norm reinforcement possibilities for this variable. No indication exists for either group to show that speakers are differentiating between groups under the direct influence of ethnicity. Even so, there are slight but persistent differences in the phonological conditioning of this variant across groups which may be related to the interaction between front and central (aw). Before we come to a conclusion as to how this relates to Mormon ethnicity, we first need to examine central (ay) and (aw).

CHAPTER 8: CENTRAL (AY) AND (AW)

Variable context

Before discussing results of the study of height variation, there are additional considerations regarding the variable context. Table 36 shows the percentage of central variants found in each following segment context for each variable. An examination of the percentage of raising across variables shows a clear rate difference between (ay) and (aw) even taking into account the fact, due to the way the tokens were sampled (see Chapter Four), (aw) includes more traditionally non-raising contexts. As expected, there is also a clear conditioning effect of following voicing.

Table 36: Percentage of raising according to manner of articulation of the following segment: all contexts considered

Following segment	(ay)		(aw)	
	N	%	N	%
Voiced Obstruent	223	6%	543	3%
Word final	234	7%	372	9%
Nasal	147	10%	300	9%
Nasal + voiceless	49	39%	120	8%
Flap (from voiceless stop) ¹	167	74%	219	32%
Voiceless obstruent	1716	79%	1580	57%
TOTAL	2536	61%	3134	34%

As Table 36 shows, the pattern of conditioning is generally mirrored across variables, with some exceptions. Central variants of both variables occur most often before voiceless stops and the flaps derived from them (although there is a sharper reduction in raising before flaps for (aw)). This may be because many of these flaps were also word final as in example (46a), although some of the flaps following (ay) are also in word-final position as in (46b).

- (46) (a) And they do this *without* even thinkin'. (Spkr 003, Cass 3: 17.15)
 (b) It'd be ripped *right* off our bodies. (Spkr 019, Cass 22: 19.12)

Central (ay) is also more frequent before nasal + voiceless clusters than central (aw). In both cases, the environment before voiced consonants is where central variants are least found. This is the classic pattern for these variables in Canadian English.

¹ Flaps derived from voiced stops are included with other voiced obstruents.

Given the reduced number of central variants in other contexts and following the example of most previous studies, the variable context was restricted to the traditional contexts before voiceless consonants and the flaps derived from them. Furthermore, by limiting the context to that used elsewhere, the results will be more useful for comparative purposes.²

Marginal statistics

Linguistic factors

Fronting

Since fronting may interact with the height variation, we first examine the fronting value of the diphthong with respect to (aw). Table 37 confirms that the fronting value of the token has an effect even when only (aw) before voiceless consonants is considered.

Table 37: Percentage of central (aw) according to fronting

	(aw)	
	N	%
<u>Fronting</u>		
Non-fronted	1512	59%
Fronted	287	29%

Central (aw) is far more frequent when the diphthong is not fronted. This reconfirms the assertion that these two dimensions are interconnected. We examine this further with the factor of following segment.

Following segment

In Table 38, we first note that the highest proportion of central variants occurs before voiceless stops for both (ay) and (aw), consistent with the results of Table 37.

Table 38: Percentage of central variants according to following segment³

	(ay)		(aw)	
	N	%	N	%
<u>Following segment</u>				
Stop	1361	82%	1240	63%
Flap	167	74%	219	32%
Fricative	353	67%	340	34%

²Although Chambers and Hardwick (1986) included voiced contexts in their study.

³As noted earlier, affricates are included with stops.

As predicted by the theory that flapping involves some degree of voicing and so blocks raising, fewer central variants appear in this environment. The context before fricatives shows a low proportion of the central variant in both cases, a result which has not been previously observed in Canadian English. Recall that fricatives appeared to be important for front (aw) as well but the variable rule analysis showed that their effect was roughly similar to that for stops, at least for non-Mormons.

Of course if there is a change in progress, the more favorable lowering environment phonetically is naturally where we find it to be most advanced and the parallel lowering effects found for [ɹ] may indicate that the position before fricatives is such a context. Furthermore, as noted earlier, Summers (1987) showed that stress has an effect on vowel duration and it is increased before fricatives. What of the effect of stress?

Stress on the diphthong

The results in Table 39 show that more central variants occur where there is lighter stress on the diphthong.

Table 39: Percentage of central variants according to stress on the diphthong

	(ay)		(aw)	
	N	%	N	%
<u>Stress on the diphthong</u>				
Light	505	86%	613	61%
Average	1126	77%	1012	52%
Heavy	250	70%	173	38%

Given that reduced stress tends to shorten vowels (Beckman & Edwards, 1990; Summers, 1987), these results are consistent with the hypothesis that the central variant is the result of a shortening rule although the degree of distinction is gradient. Of course, a central question, as noted earlier, is the stability of this variation. Is there any indication that Canadians and, in particular, southern Albertans are losing these distinctive Canadian diphthongs? If change is involved, it should be verified by an examination of the effect of the social factors most often associated with change; sex and age.

Community factors

Sex

Table 40 shows the percentage of central variants according to sex. In the case of (ay), the sex of the speaker shows no influence whatsoever. For (aw), men show a higher percentage of the central variant and this pattern may be associated with change towards the loss of the central variant.

Table 40: Percentage of central variants according to sex of the speaker

<u>Sex</u>	(ay)		(aw)	
	N	%	N	%
Female	956	78%	865	45%
Male	925	79%	934	62%

Age

In Table 41, we see that younger speakers show a slight tendency for increased use of the central variant of (ay) as opposed to than the older group. While the tendency is reversed for (aw), the differences are not great. There is no evidence that southern Albertans are losing the central variant.

Table 41: Percentage of central variants according to age of the speaker

<u>Age</u>	(ay)		(aw)	
	N	%	N	%
18-25	827	81%	755	53%
30-45	1054	76%	1044	55%

As before, the factor of religious affiliation must be examined, particularly since we have a strong reason to believe that these variables have ethnic significance in this community. Table 42 shows the distribution of variants according to religious affiliation.

Table 42: Percentage of central variants according to religious affiliation

<u>Religious affiliation</u>	(ay)		(aw)	
	N	%	N	%
Non-Mormon	1047	87%	1029	73%
Mormon	834	68%	770	28%

Here, we see sharp differences between religious groups with non-Mormons exhibiting central variants far more often than Mormons particularly for (aw). As before, we now examine these same speakers for network affiliation. Table 43 shows the results.

Table 43: Percentage of central variants according to network affiliation

	(ay)		(aw)	
	N	%	N	%
<u>Network affiliation</u>				
Non-Mormon	564	89%	574	78%
MID- Non-Mormon	483	85%	455	67%
MID- Mormon	290	55%	264	19%
Mormon	544	74%	506	33%

As Table 43 shows, unlike in the case of the previous variables studied, the religious distinction is maintained even when network affiliation is taken into account. In fact, Mormons with more contact with the majority group have fewer central variants in their speech than those with less contact for *both* variables. We now examine these results with a variable rule analysis to determine if the distinctions shown are significant.

Variable rule analyses

Community factors

Table 44 shows marginal and variable rule results for social factor effects on (ay) and (aw). Although the results are not examined here in detail, linguistic factors were also considered in this run.

Unlike in the case of front lax vowel lowering, we see no consistent social effects on (ay) and (aw) across the community with one important exception. The only social factor shown to have a significant effect for *both* variables is that of religious affiliation and, by far, in both cases, the ranges of probabilities show it to be the most important factor. Furthermore, these ranges far exceed those noted for the variables discussed previously.

Table 44: The contribution of social factors and style to the probability of the central variant⁴

	(ay) Input: .810 N = 1881			(aw) Input: .548 N = 1799		
	P	N	%	P	N	%
<u>Sex</u>						
Female	[]	956	78%	.417	865	45%
Male	[]	925	79%	.577	934	62%
Range	N/A			160		
<u>Age</u>						
18-25	[]	827	81%	[]	755	53%
30-45	[]	1054	76%	[]	1044	55%
Range	N/A			N/A		
<u>Linguistic market</u>						
High	[]	982	79%	.585	903	61%
Low	[]	899	78%	.414	896	47%
Range	N/A			171		
<u>Religious Affiliation</u>						
Non-Mormon	.627	1047	87%	.707	1029	73%
Mormon	.343	834	68%	.235	770	28%
Range	284			472		
<u>Style</u>						
Conversational	.516	1047	87%	[]	1029	73%
Reading	.389	834	68%	[]	770	28%
Range	127			N/A		
NOT SELECTED						
Sex		X				
Age		X			X	
Linguistic market		X				
Style					X	
SELECTED BUT NOT SHOWN:						
Fronting		N/A			✓	
Following segment		✓			✓	
Stress		✓			✓	

An examination of each group of speakers separately for the relevant social and linguistic factors shows that, in these cases, two distinct community norms are in play. We first turn to the analysis of (aw) separating speakers by religious affiliation.

⁴This run also included following segment and relative stress as well as height of the diphthong for (aw). However, given the differences across groups, we will only discuss the linguistic factors in relation to each individual group.

Central (aw)Linguistic factors

Table 45 shows marginal statistics and a variable rule analysis for the effect of the linguistic factors discussed above for each group on the presence of central (aw). We first see that, unlike the case of front (aw), the effect of the fronting value of the diphthong is significant and consistent across groups.

Table 45: Linguistic factors contributing to the probability of central (aw) across speaker groups.

	Non-Mormons			Mormons		
	Input: .783			Input: .249		
	N = 1029			N = 770		
	N	%		N	%	
<u>Following segment</u>						
Stop	.646	728	84%	.563	512	33%
Flap	.223	102	52%	.268	117	15%
Fricative	.174	199	44%	.477	141	19%
Range	472			295		
<u>Fronting</u>						
Non-fronted	.521	918	76%	.566	594	32%
Fronted	.336	111	52%	.289	176	14%
Range	185			277		
<u>Stress</u>						
Light	[]	351	76%	.656	262	41%
Average	[]	586	74%	.424	426	22%
Heavy	[]	91	55%	.384	82	18%
Range	N/A			272		
<u>Style</u>						
Conversation	[]	878	74%	[]	615	28%
Reading	[]	151	71%	[]	155	26%
Range	N/A			N/A		
NOT SELECTED						
Stress		X				
Style		X			X	
Age		X			X	

However, the other linguistic conditioning factors between Mormons and non-Mormons for central (aw) are systematically different. While stress plays no role in the conditioning of central (aw) for non-Mormons, it is significant for Mormons. As predicted, lighter stress leads to more central (aw) and heavier stress to less.

Despite the fact that the following segment factor is significant for both groups, there are several crucial differences in the nature of the effect. For the non-Mormons, a following stop favors central (aw) with a following flap and following fricative both disfavoring raising. In the case of the Mormons, stops also favor central (aw) but the fricative effect, while still present, is much less evident. There is also no evidence that speakers are patterning according to some social division along the lines of Joos' (1942) Dialects A and B. Both of these groups of speakers show a strong disfavoring effect of a following flap indicating the predominance of Dialect B speakers in both groups. It appears that Chambers (1973) was premature in announcing the demise of Dialect B, at least for (aw).⁵ In fact, the results suggest a contrast between Dialect B and a whole new dialect which places a further restriction on central (aw) to the position before voiceless stops. The two groups show evidence of having two similar but distinct rules governing this variation on this basis. Furthermore, it is the non-Mormons who show more evidence of speaking this other "dialect".

In the case of the Mormons, they exhibit the variation but without the strong fricative distinction. Taken together with the finding that only in the case of the Mormons is central (aw) also conditioned by stress reduction, we can tentatively suggest that the two groups have distinct rules for this variation. The Mormon results are most consistent with a rule of shortening, not lengthening as shown by the fact that only lighter stress favors central (aw). The division for non-Mormons, although not significant, is clearly between heavy stress and all other weights.⁶

In any case, the important point is that these two groups pattern differently with respect to the linguistic conditioning on central (aw). Given that these speakers show different linguistic norms, it is highly possible that they are also showing different social

⁵Although, since most contexts before flaps were also in word final position, this may reflect some other consideration not relevant to the initial proposals for the dialect distinction.

⁶In fact, if the two groups are more closely investigated, we find that for Mormons, the *only* significant difference is between light stress and all others and for non-Mormons, there *is* a significant difference between heavy stress and all others.

norms with respect to this variation although as Table 45 showed, style was not selected as significant for any of the variables giving no indication that either group considers central (aw) to have some prestige value. This may be verified by an examination of the social factors.

Community factors

Table 46 shows marginal statistics and the results of the variable rule analysis regarding the social factors under study.

Table 46: Social factors contributing to the probability of central (aw) across speaker groups.

	Non-Mormons			Mormons		
	Input: .783			Input: .249		
	N = 1029			N = 770		
<u>Sex</u>						
Female	.449	457	66%	.404	408	21%
Male	.541	572	79%	.608	362	36%
Range	92			204		
<u>Age</u>						
18-25		445	69%		310	30%
30-43		584	77%		460	27%
Range	N/A			N/A		
<u>Linguistic market</u>						
High	.642	545	83%	.562	358	28%
Low	.341	484	63%	.446	412	28%
Range	301			116		
NOT SELECTED						
Stress	X					
Style	X			X		
Age	X			X		

Both groups show the previously observed effect of sex with men more likely to use central (aw) than women. Linguistic market is also important for both groups of speakers with high linguistic market favoring central (aw) in both cases. Although the linguistic market scores indicate an association between central (aw) and the more standardized use of the language in the community, the other factors are more consistent with the hypothesis that central (aw) is decreasing, at least for non-Mormons. However,

the fact that age is not significant precludes this conclusion. This variation shows every indication of being stable although socially conditioned.

As noted earlier, the study of (aw) is complicated considerably by the fact that it actually constitutes two variables. The comparison of front (aw) and central (aw) have shown that even though both these variables show associations with Mormon religious affiliation, their significance with respect to ethnicity differs. In Chapter Nine, we will return to this question in more detail during the overall discussion of the influence of ethnicity in Lethbridge.

Before that, we can first examine central (ay) which, since it features no interacting variation, may provide a clearer view. In particular, we can test if the differing grammatical conditions across groups found for central (aw) are also evident for central (ay).

Central (ay)

Linguistic factors

Table 47 shows marginal statistics and a variable rule analysis for the linguistic factors relevant to central (ay) discussed above for each group of speakers. Again, the conditioning factors between Mormons and non-Mormons are different. As in the case of (aw), while stress plays no role for non-Mormons, Mormons again show significant effects for this factor. As in the case of (aw), lighter stress leads to more central (ay) and heavier stress to less. This suggests that the phonological rules conditioning (ay) and (aw) are similar for each of these two groups of speakers since the differences are parallel and reinforces the suggestion that each group has a different rule or set of rules.

However, unlike the case of (aw), Mormons and non-Mormons show similar patterns of conditioning for the following segment. In both cases, not only is it selected for both groups but the conditioning hierarchy is the same indicating little possibility of dialectal difference on this basis although we return to this in Chapter Nine with an examination of intra and inter-speaker variation.

Table 47: Linguistic factors contributing to the probability of central (ay) across speaker groups.

Non-Mormons				Mormons			
Input: .886				Input: .689			
N = 1047				N = 834			
	N		%		N		%
<u>Following segment</u>							
Stop	.550	764	90%	.538	597	72%	
Flap	.429	90	83%	.492	77	64%	
Fricative	.340	193	78%	.366	160	54%	
Range	210			172			
<u>Stress</u>							
Light	[]	315	90%	.579	190	79%	
Average	[]	603	87%	.492	523	66%	
Heavy	[]	129	83%	.365	121	56%	
Range	N/A			214			
<u>Style</u>							
Conversational	[]	932	88%	.517	720	69%	
Reading	[]	115	79%	.394	114	59%	
Range	N/A			123			
NOT SELECTED							
Stress		X					
Style		X					
Sex		X					

In any case, the different effects of stress still indicate that the Mormons have additional grammatical conditions on this variable. This result also does not repudiate the Scottish Vowel Lengthening Rule origin hypothesis for the general origin of height variation in Canadian English since, as in the case of central (aw), the fricative effect is found yet again except now it is present in both groups of speakers.

Given that these speakers show different linguistic norms, distinct social norms may also be evident, particularly since, as Table 47 showed, both groups use more central (ay) in conversational contexts although this was only selected as significant for the Mormons. This may indicate some measure of prestige for the low variant, at least for the Mormons although central variants were also less frequent in reading styles among non-Mormons.

Community factors

Table 48 shows marginal statistics and the results of the variable rule analysis of central (ay) regarding the social factors under study.

Table 48: Social factors contributing to the probability of central (ay) across speaker groups.

Non-Mormons				Mormons		
Input: .886				Input: .689		
N = 1047				N = 834		
Sex	P	N	%	P	N	%
Female	[]	482	86%	.559	474	70%
Male	[]	565	88%	.422	360	64%
Range	N/A			.137		
Age						
18-25	.571	475	89%	.566	352	70%
30-43	.441	572	85%	.452	482	66%
Range	.130			.114		
Linguistic market						
High	.589	560	91%	.422	422	64%
Low	.398	487	84%	.579	412	72%
Range	.191			.157		
NOT SELECTED						
Stress		X				
Style		X				
Sex		X				

Here again, we see differences between groups. The Mormons show a distinction between men and women which is not evident for the non-Mormons. Women are more likely to produce central (ay) than men. Note that this is completely counter to both the trend seen in the marginal statistics for the non-Mormons and with the results from the study of central (aw).

The age difference, on the other hand, is consistent across groups. Younger speakers of both groups are more likely to have central (ay); clearly not an indication that any of these speakers are losing this distinction and possibly an indication that Mormons, although showing a lower rate of central (ay), are approximating the general community norms. Linguistic market is also important for both variables and both groups of speakers although, the direction of influence for (ay) among the Mormons is not what is expected if

Figure 34 shows the distribution of (aw) before stops (including nasals) for the older non-Mormon man.⁷ We see that (aw) has very little variation along the front/back dimension for this speaker. Mean F1 values for the two contexts are distinct showing the traditional distinction between contexts. The only token out of place is for the word *couch*. It may be that the sibilant quality of the following affricate places this token in the same context as following voiceless fricatives as noted in the case of front lax vowel lowering. Analysis of two tokens of *house* for this speaker (not shown) showed one with an F1 value of about 800 Hz and the other with a value around 700 Hz. This speaker is exhibiting the pattern revealed by the indexing and variable rule analysis to be associated with non-Mormon men.

Figure 35: (aw) before stops (incl. nasals) of Margaret Morgan (age 32)

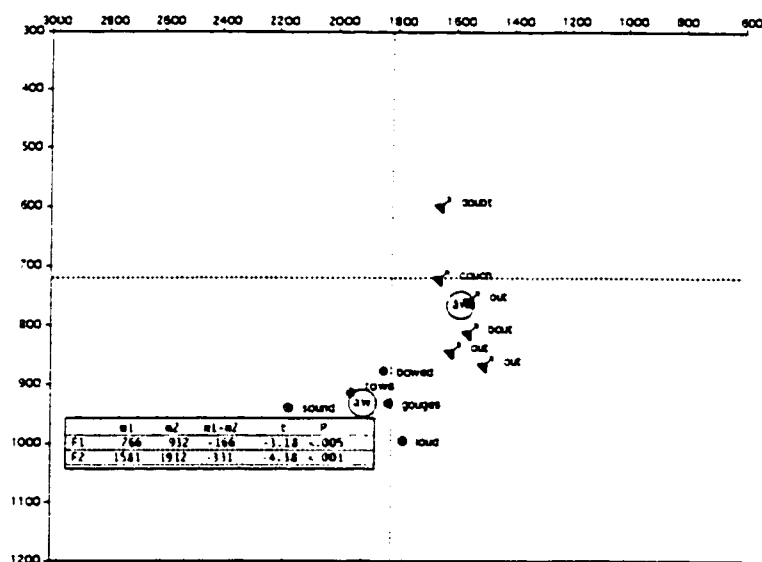


Figure 35 shows the distribution of (aw) before stops (including nasals) for the older non-Mormon woman. Although this speaker is maintaining the distinction between contexts, there is also considerable fronting in the voiced context. For both this speaker and the older man shown in Figure 34, the F1 mean for the voiceless context is slightly higher

⁷ âw indicates the context before voiceless segments and aw to the elsewhere context.

than that of their vowel system in general. Both these speakers are maintaining a distinction in contexts but the appearance of fronting in the low context may have some effect on the nature of the distinction in the future.

Figure 36 shows the distribution of (aw) before stops (including nasals) for the younger non-Mormon man. This speaker is also maintaining the height distinction and, in fact, both his F1 means are below those found for the older man. Furthermore, there is no overlap in contexts. He also shows more evidence for fronting of the low diphthong with one token before a nasal showing an F2 value above the overall mean for his vowel system.

Figure 36: (aw) before stops (incl. nasals) of Michael Mackenzie (age 21)

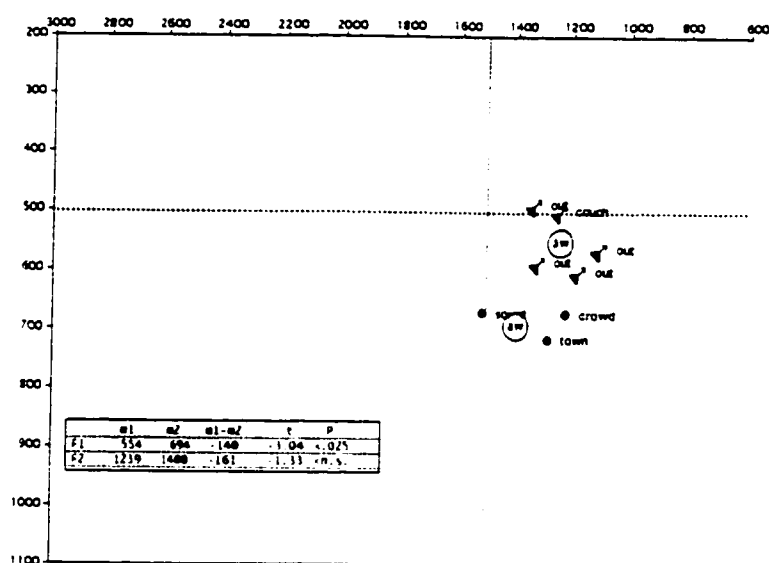


Figure 37 shows the distribution of (aw) before stops (including nasals) for the younger non-Mormon woman. As in the case of the older woman, this speaker also shows some degree of fronting. However, the most striking aspect of this system is the fact that the distinction in height is much less clear. F1 means for both contexts are above 700 Hz and they are not significantly different.

Figure 37: (aw) before stops (incl. nasals) of Julie Johnson (age 18)

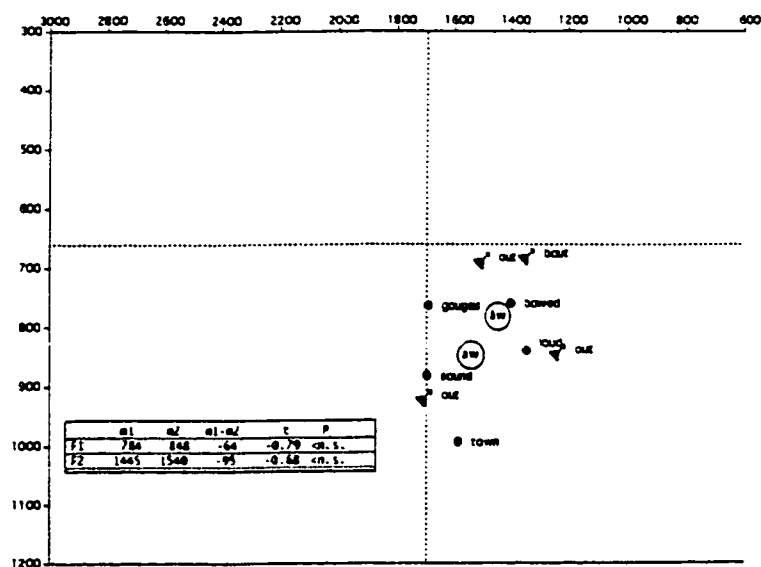


Figure 38: (aw) before stops (incl. nasals) of Jane Jackson (age 42)

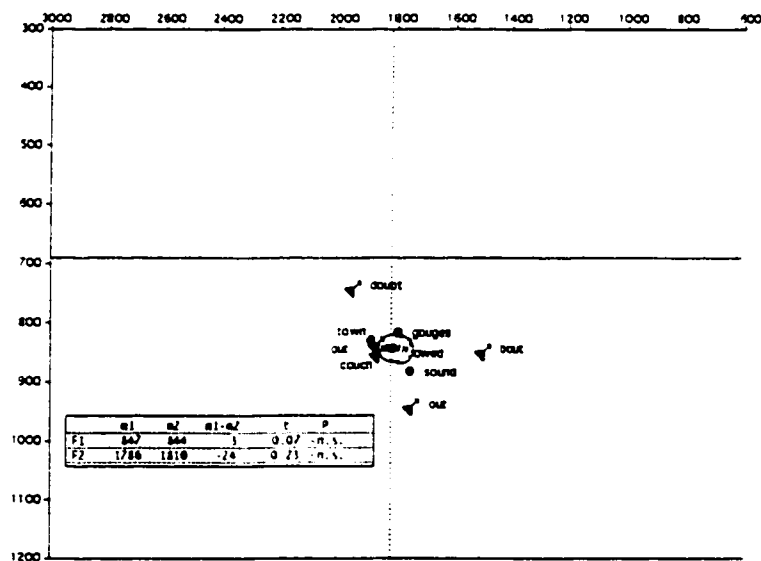
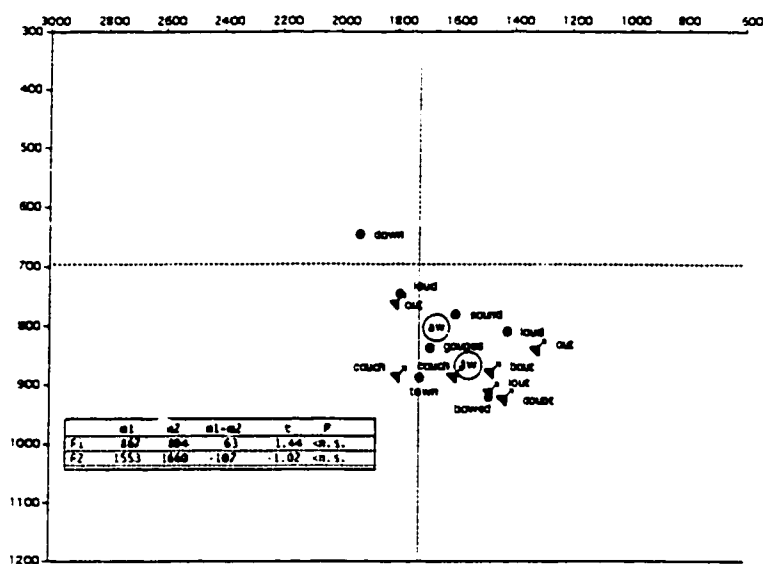


Figure 38 shows the distribution of (aw) before stops (including nasals) for the older Mormon woman. Unlike her non-Mormon counterpart, this speaker shows no difference between contexts for either fronting or height. Furthermore, the mean values for

F2 show her diphthongs to be considerably fronter in relation to her entire system than those found among the non-Mormons.

Figure 39: (aw) before stops (incl. nasals) of Colleen Cox (age 18)



Compare this to Figure 39 which shows (aw) for the younger Mormon woman. The diphthongs in her system also show fronting and raising. Furthermore, not only are the means for each context not significantly different, the mean F1 value for the voiceless context is actually higher than that of the voiced context.

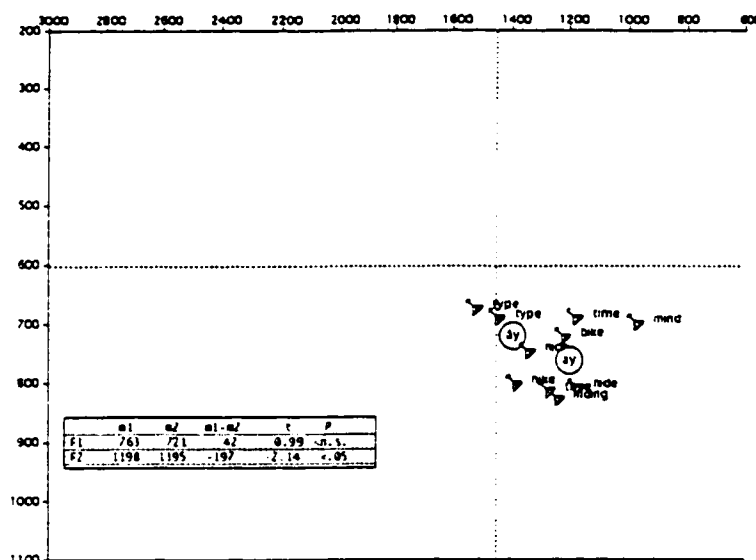
The plots of (aw) for the Mormon men are shown in Figures 40 and 41.

distinction between contexts for F1. Both show roughly the same amount of fronting but only the younger speaker shows a significant distinction.

Thus, we see that the trends noted above for (aw) are reflected in the acoustic study. The Mormon men are showing patterns much closer to those found for the non-Mormon speakers. Furthermore, the women in both groups show the greatest evidence of change. What about (ay)?

Figures 42 and 43 show (ay) before stops (including nasals) for the two Mormon men.⁸

Figure 42: (ay) before stops (incl. nasals) of Robert Brewer (age 30)



The diphthongs of the younger man show a more diffuse pattern than that of the older. The younger speaker is showing a wider amount of variation but this does not map directly onto the voicing distinction expected for this variable in Canadian English.

⁸ ây indicates the context before voiceless segments and ay to the elsewhere context.

The same difference in diffusion is found for the women with the younger speaker showing more as in the case of the men. Furthermore, the younger Mormon woman is showing a significant difference between F1 means for each context.

Figure 45: (ay) before stops (incl. nasals) of Colleen Cox (age 18)

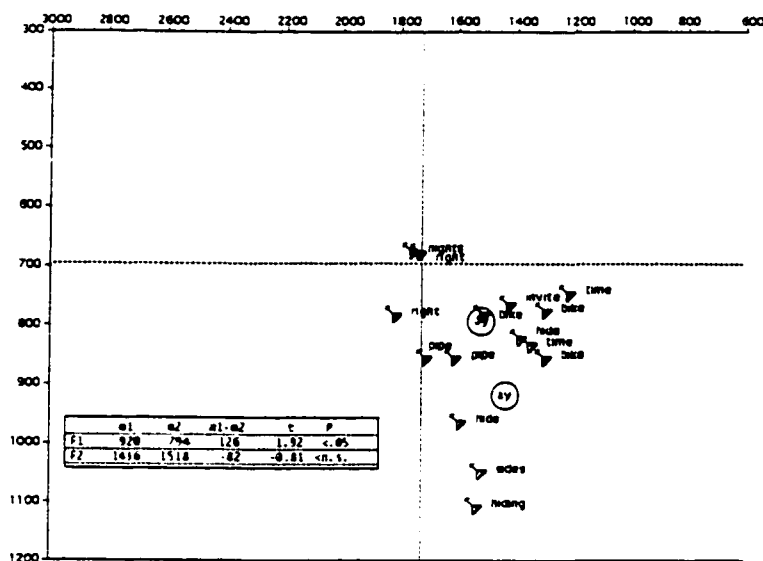
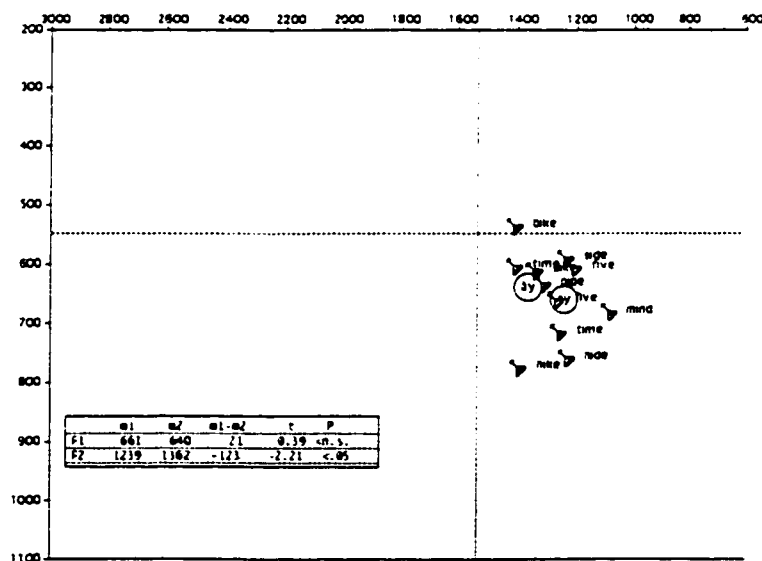


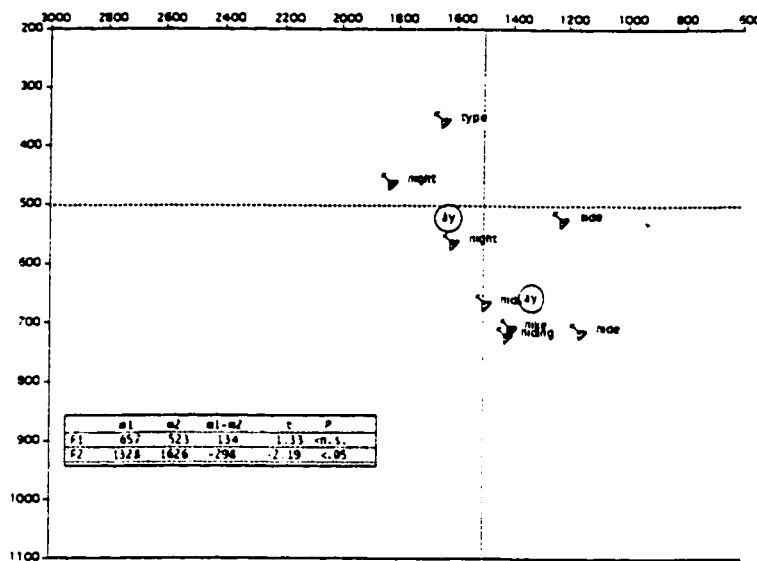
Figure 46: (ay) before stops (incl. nasals) of Steven Stryker (age 43)



While the distinction is not completely discrete, the younger woman shows clearer evidence of the Canadian distinction than any of the other Mormon speakers for this variable.

However, the vowel charts for the non-Mormons do not make the source of this apparent integration clear. Figures 46 and 47 compare (ay) before stops (including nasals) for the non-Mormon men.

Figure 47: (ay) before stops (incl. nasals) of Michael Mackenzie (age 21)



Neither of these speakers show significant differences for F1 across contexts. In both cases, the main difference is in F2 with (ay) in voiceless contexts showing more fronting.

Figure 48: (ay) before stops (incl. nasals) of Margaret Morgan (age 32)

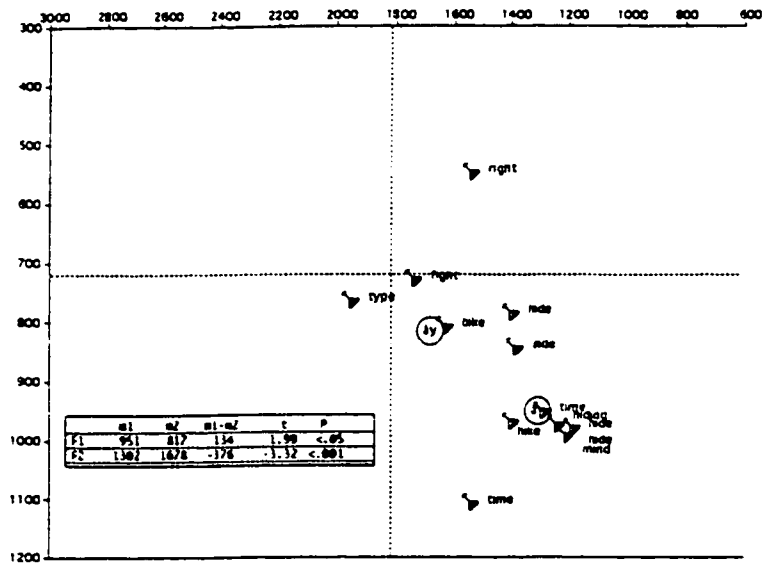
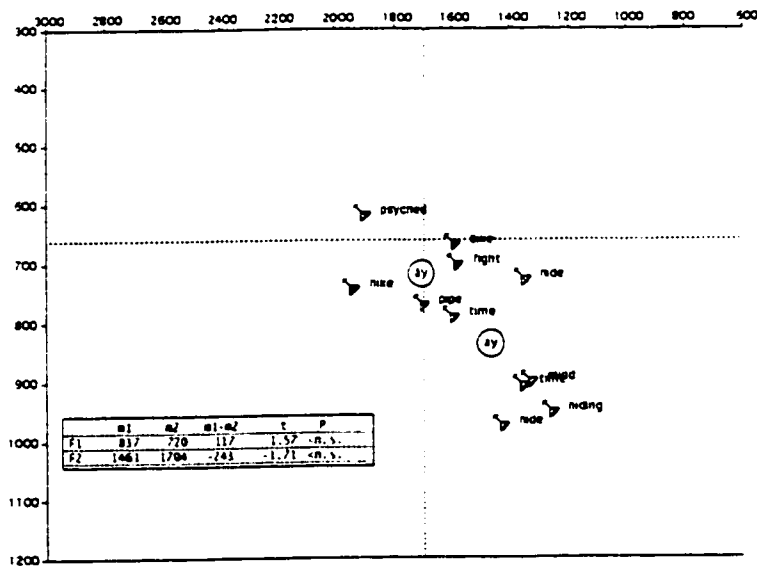


Figure 49: (ay) before stops (incl. nasals) of Julie Johnson (age 18)



Figures 48 and 49 compare (ay) before stops (including nasals) for the non-Mormon women. Note that the older non-Mormon woman shows differences in F1 and F2 means with most of the tokens in voiceless consonants showing fronting and raising. In the

case of the younger woman, all of the tokens in voiceless contexts are fronted and raised in comparison to the tokens in voiced contexts but the means for F1 and F2 are not significantly different, largely because she also raises and fronts several of the tokens in *voiced contexts*.

Conclusion

Central (ay) and (aw) are the markers of a Canadian identity par excellence. In Lethbridge, our analyses show that while there is variation in the community, for the most part, it is stable and there is no evidence for its loss as has been suggested in other areas.

Central (aw)

Central (aw) is consistently found more often in male discourse although, probably due to the interaction with front (aw), it also shows evidence of competing values with two foci for norms. We find that Mormons are considerably more likely to have a low variant than non-Mormons. Despite differences in linguistic conditioning, the social factors governing central (aw) across groups are extremely similar. In particular, in both groups, men with high linguistic market scores are the most likely to show central (aw). In this respect, only a different rate of central (aw) divides the two groups.

Central (ay)

Central (ay), at the community level, also shows distinctions between the Mormons and the non-Mormons both in rate and conditioning. In particular, and this was the only social factor consistently selected across the community, young speakers are using central (ay) more often than older speakers. Unlike the case of (aw), central (ay) has distinct patterns with respect to the social factors. While (aw) appears to be stable, we find that young women in the Mormon community are showing a higher degree of central (ay) which indicates convergence with the main community. Interestingly, this is not connected with the linguistic market in the same way as we found for (aw). In the case of (ay), it is the Mormon speakers with lower linguistic market who are more likely to show central (ay). Furthermore, for the Mormons, there is a style distinction with more casual style

showing more central variants. Both of these results are consistent with change from below. Perhaps the most interesting results are in the case of the non-Mormons. Non-Mormon women show no particular tendency to produce central (ay) more than non-Mormon men but across genders, young non-Mormons with high linguistic market are more likely to do so. When the two groups are analyzed separately, we see consistent differences in phonological conditioning for both variables. This suggests that these speakers are both socially and grammatically different for these variables.

The study of the low diphthongs in southern Alberta English has revealed that they are subject to a complicated set of linguistic and social factors. In particular, we find that Mormons and non-Mormons consistently differ with respect to height alternation of both (ay) and (aw). Although both groups show similar social conditioning for central (aw), the study of central (ay) revealed distinctions. In the next chapter, we provide an overall discussion of these and previous results and relate them to theories of ethnicity.

CHAPTER 9: DISCUSSION AND CONCLUSION

Introduction

In the previous chapters we have analyzed and discussed five variables in southern Alberta English. Perhaps the most interesting finding to come out of their study is the fact that although all these variables show an effect of religious affiliation, different social configurations in the community make up the sociolinguistic structure of each variable. Furthermore, only in some cases, is distinct social conditioning accompanied by distinct linguistic conditioning. Thus, although grammatical and social differences between speaker groups do exist for some variables, others show community heterogeneity, i.e., religious affiliation only has an influence on rate of occurrence.

In this chapter, we discuss these findings and relate them to the linguistic expression of Mormon ethnicity in this community. As Giles (1979) notes (citing the findings of Segalowitz and Gatlinton (1977)), not all phonological features that differ between ethnic groups may have the same level of importance or even any ethnic significance. We will argue that these different conditions fall out from the fact that while some of the variation in southern Alberta English relates to more traditional factors of social group relations such as sex, age or social contact, two of the variables; central (ay) and (aw), clearly serve as markers of ethnicity in the community. We begin the discussion with a brief summary of the results.

Summary of Results

Table 49 compares social factors selected as significant across all variables under study. Although not evaluated by variable rule analysis, network affiliation is also presented. Examination of these factors as to what they indicate about social prestige and language change in the Lethbridge community as a whole in comparison with each sub-community under study, can illustrate the distinction between variation which is merely correlated with membership in an ethnic group and directly the result of limited social

contact versus true *markers* of ethnic identity between groups. As noted in Chapter Two, the important consideration is evidence of contrast between groups.

Indications of language change

We first note that all the variables that have been reported as innovations in Canadian English, i.e. (ʌ), (ɛ) and front (aw), show a sex influence with women showing more of the newer variant than the men. In the case of the more longstanding central (ay) and (aw), only (aw) shows a sex distinction with the low variant more prevalent among women. While women are considered to be more progressive than men in situations where change is in progress and these results would be thus consistent with change, we find that only one variable of all those studied shows evidence of a significant age distinction. This is the case of front (aw) where younger speakers are more likely to front than older.

Table 49: Comparison of relevant social factors significantly favoring designated variants across variables.

FACTORS	<u>low</u> (ʌ)		<u>low</u> (ɛ)		<u>front</u> (aw)		<u>central</u> (aw)		<u>central</u> (ay)	
SEX	Women		Women		Women		Men			
AGE					Young					
LX MKT	High		High		High		High			
STYLE			Conversation		Reading				Conversation	
RELIGION	Non-Mormon		Non-Mormon		Mormon		Non-Mormon		Non-Mormon	
	N-M	Mor.	N-M	Mor.	N-M	Mor.	N-M	Mor.	N-M	Mor.
SEX	✓	✓	✓	✓	✓	✓*	✓	✓		✓
AGE						✓			✓	✓
LX MKT	✓		✓			✓	✓	✓	High	Low
STYLE			✓	✓	✓					✓
CONTACT‡	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No

* Effect was reversed from overall community results.

‡ 'yes' indicates speakers with higher inter-group contact and 'no', speakers with less inter-group contact.

When speakers are divided by religion, we find that not all community level findings are reproduced within the two sub-communities under study. While the sex effect remains the same for front lax vowel lowering and central (aw), we find that for front (aw), Mormon men are more likely to front than the women as opposed to the situation found in

the general community. Furthermore, we see that for central (ay), although no sex difference was found in the general community, in the Mormon community, women are more likely to show central (ay) than men. Interestingly, this is the opposite of the general effect found for central (aw). In fact, of all five variables studied, when speakers are grouped by religious affiliation, only central (ay) maintains clear evidence of a shift in usage and only among Mormons.

Indications of prestige

As discussed in Chapters Three and Four, prestige values for different variables can be inferred from style or linguistic market distinctions. All variables except central (ay) show community level effects of linguistic market. For all variables except central (aw), high linguistic market favors the innovative form. In the case of (ɪ), this may be an indication that change is incipient, especially given the fact that although style was not selected as significant, the indexing analysis revealed that a shift in prestige is occurring in the community with the innovative form now favored in more formal styles for younger speakers, particularly those with high linguistic market. In the case of (ɛ), style is selected as significant but the lowered variant is more prevalent in less formal styles consistent with the idea that lowered (ɛ) is less prestigious. However, the fact that speakers with high linguistic market also favor the lowered variant makes the prestige value of this variable unclear.

Front (aw) at the community level shows a clear association with standard English usage. Speakers with high linguistic market, particularly in reading style are more likely to front. However, when speakers are separated by religious affiliation, we find that the style effect only holds for non-Mormons and the linguistic market effect only for Mormons. This, along with the fact that sex and age indications within sub-groups were also not reproduced indicates that caution must be exercised before a clear conclusion can be reached about the meaning of these patterns. We return to this later.

Like the variables already discussed, central (aw) is also associated with standard usage in that it is again most prevalent among speakers with high linguistic market. This, along with the fact that men are more likely to use central (aw) and there is no concomitant age distinction is consistent with the conclusion that this variable is stable in the community. As for central (ay), the only indication of prestige is style, with increased central (ay) occurring in conversational contexts. Linguistic market was not selected as significant on the general community level but when the two groups are separated, we find that, as in the case of central (aw), high linguistic market favours the central variant for the non-Mormon group. In addition, the style effect disappears making prestige values for both central (ay) and (aw) equivalent among non-Mormons. The central variants are clearly a feature of standard southern Alberta English but are not strongly associated with any particular style. In the Mormon community, on the other hand, we find that both conversational style and low linguistic market are selected as significant and favour central (ay). Taken together with the indicators of change, this is consistent with the hypothesis that among Mormons, central (ay) is increasing and constitutes change from below speakers' conscious awareness.

Religious affiliation and social contact

All five variables show a conditioning effect of religious affiliation but this is not unequivocally attributable to an effect of ethnicity in all cases. Although Mormons are less likely to show front lax vowel lowering than non-Mormons and more likely to show front (aw), an examination of network affiliation indicates that these effects are better attributed to differing relationships with respect to local network ties since no clear contrast across groups occurs. This is shown by the fact that speakers with ties to both group networks also show the highest rates of the incoming variant where a clear effect of religious affiliation is shown.

In the case of front lax vowel lowering, the religious affiliation effect is clearly the result of the relative social isolation of Mormons from the mainstream community and not

directly due to any ethnic meaning connected to front lax vowel lowering. In the case of front (aw), while the Mormon community may have acquired the variation first, realignment in the community militates against the conclusion that it is a focus for ethnic contrast. In fact, social contact enhances the effect. Even though there are slight but persistent differences in the phonological conditioning of front (aw) across groups, these are probably related to the interaction between front and central (aw). This becomes more clear when the patterns for (aw) fronting are compared to those found with central (ay) and (aw).

For central (ay) and (aw), the variation shows a more direct relationship with religious affiliation and cannot merely be attributed to lack of social contact. In fact, unlike most of the other variables studied, social contact inhibits the central variants and this is true for both central (ay) and (aw). Furthermore, as Table 50 shows, this is not due to some special overall distinction between religions in southern Alberta. Despite the fact that Lethbridge, like other Canadian cities, has segregation of Protestants and Catholics in the schools, the line of demarcation is clearly between the Mormons and the non-Mormons.¹

Table 50: Percentage of central variants across contexts before voiceless consonants

Religion	(ay)		(aw)	
	N	%	N	%
Catholic	578	88%	564	71%
Protestant	469	86%	465	76%
Mormon	834	68%	770	28%
TOTAL	1881	78%	1799	54%

On the basis of the results of the variable rule analysis of front lax vowel lowering and front (aw), matched with the acoustic analyses, we conclude that all these speakers, in some capacity, are members of a single speech community and are participating in the third dialect shift. Although this shift echoes that found in the United States, it does not necessarily indicate direct American influence. Speaker attitudes to general Canadian society as opposed to American society discussed in Chapter Four are decidedly pro-

¹ Although several of the Catholic speakers had attended Protestant schools.

Canadian for the most part. While the Mormons may have additional allegiances as a result of their association with a predominantly American organization, neither group are exhibiting a clear preference for American linguistic norms.² All these speakers, Mormon or otherwise, are exhibiting Canadian patterns like those of their counterparts in Toronto and Vancouver.

Why has the Mormon community failed to completely integrate linguistically with the larger southern Alberta population with respect to the older Canadian English variables? The fact that they produce any central variants at all indicates at least a partial adoption of Canadian norms and there is some evidence of convergence with (ay) but the two communities are still quite far apart. Compare this to the more recent variation found in the front lax vowels where assimilation across the community is more advanced and regular. The inevitable conclusion is that the two communities remain distinct for central (ay) and (aw) because they are subject to an additional social force in Lethbridge. They are operating as ethnic markers. Only with these variables do we see clear evidence of *contrast* between groups.

We now concentrate the discussion on the results for central (ay) and (aw) relating their sociolinguistic structure to three major aspects of ethnicity as a social force; social contact, substrate effects and boundary maintenance to attempt to discern how these markers are maintained in the community.

Confounding factors for ethnicity

Contact

As noted in Chapter Two, social contact is considered to be an extremely important factor in the formation and maintenance of social boundaries. It has been invoked as the underlying factor promoting distinctions in regional, social class and even gender influences as revealed by variation correlated with sex. Some researchers have considered it to be the primary factor in the explanation for distinctions following ethnic lines (e.g.

²A previous study (Meechan, 1996) found that speakers with the most dialect contact with speakers of American English were *less* likely to have lowered front lax vowels.

Rickford, 1985). Examination of the "fronter" network as to central (ay) and (aw) can provide insights into how contact affects their distribution because it includes speakers of both religions and involves differing degrees of contact and ethnic loyalty.

While we cannot analyze the network speakers alone for social categories, primarily for the reasons noted earlier, we can examine individual speaker effects and see if they provide any coherent explanation for variation in this small group. This can be valuable because unlike the factor of network affiliation examined throughout this study where social network ties were inferred from speakers' *reported* relationships, this group of speakers provides a concrete example of a particular social network. Table 51 shows the contribution of each speaker in the "fronter" network to the probability of central (aw) and (ay). These runs include the linguistic factors discussed earlier so we can be relatively certain that they do not mask any unknown lexical preferences³ which might skew the data according to the linguistic factors relevant to these variables.

Table 51: Contribution of individual speakers to the probability of central (ay) and (aw) in the "fronter" network

Speaker	(aw)			(ay)		
	Input: .182			Input: .684		
	N = 482			N = 524		
Older Mormon woman (06)	.675	95	32%	.758	98	85%
Young Mormon man (14)	.643	34	32%	.537	43	70%
Young non-Mormon woman (24)	.619	80	29%	.674	95	78%
Young Mormon man (18)	.613	110	27%	.385	107	58%
Young Mormon woman (15)	.432	88	17%	.585	83	75%
Older Mormon woman (2)	.112	75	3%	.156	98	31%

We first note that a comparison of the input probabilities for these runs and those done for the general Mormon population in Chapter Eight shows that they have about the same probability for central (ay) and a somewhat lower probability for central (aw) (.182 vs. .249). This reduction for central (aw) is expected given the purported interaction between front and central (aw) since these speakers do show a high degree of fronting.

³Although not dealt with here, I did examine the possibility that central (ay) and (aw) were conditioned by lexical differences. Although some lexical items are more likely to show the central variant than others, the pattern which emerges clearly follows the lines of the phonetic distinction, i.e., words ending in voiceless stops more often have the central variant than those ending in fricatives.

Even so, the distinction is not great, verifying that ethnicity is still important, i.e., if contact was the only consideration, we would expect the difference to be greater.

Although Table 51 shows that the speakers do not pattern in exactly the same way across variables, there are a few clear consistencies. In both instances, the two older Mormon women show the highest *and* lowest probabilities for the central variant of both variables. It is interesting to note that although these speakers are friends and regularly interact socially, the speaker with the highest probability for central (ay) and (aw) calls herself a Jack Mormon while the other is a dedicated member of the church. In addition, the young non-Mormon woman favors both central (ay) and (aw) while her friend, the young Mormon woman favors the low variants. As Barth states, "categorical ethnic distinctions do not depend on an absence of mobility, contact and information, but do entail social processes of exclusion and incorporation whereby discrete categories are maintained *despite* changing participation and membership in the course of individual life histories" (Barth, 1969: 9-10).

The fact that these speakers show common behaviour is undoubtedly a result of social contact but it is still also unmistakably affected by the relative strength of each of their dual loyalties to different speech communities. However, before reaching this conclusion, we can investigate another explanation. Both of the women showing more low variants of (ay) and (aw) are also distinguished by the fact that they are descended from the original Mormon settlers from Utah. Thus, this may also reflect some substrate effect. Giles (1979) notes that the origin of phonological differentiation between two ethnic groups speaking the same language can frequently be "attributed to intrusions from their substratum varieties or mother tongues" (p. 260).

Substrate effects

As noted in Chapter Two, Wolfram (1974) and Laferriere (1979) discussed several stages of substrate interference in the assimilation of an ethnic group to the majority which we can evaluate on the basis of the results of this investigation. However, before we can

address the existence of possible substrate effects, we first must explore the question of what we might expect these effects to be given the patterns observed synchronically, i.e. what features did the the founders of these communities have in their speech? Is this a raising rule or a lowering rule?

The origin and representation of central (ay) and (aw)

The acquisition of central (ay) and (aw) by southern Alberta Mormons relates directly to the controversy over the origin and representation of the rule in general Canadian English discussed in Chapter Six. If the rule was present in 1880 in eastern Canada before the wave of immigration to the west began, early Canadian-born immigrants to southern Alberta most likely carried it with them. Given that the overwhelming majority of early Mormon immigrants were native-born Americans and the fact that central (ay) and (aw) has not been reported in the literature on Utah English either as an innovation or a relic, it is a safe assumption that, unlike the immigrants from Ontario, the early Mormons did not have this rule.⁴ What can the patterns of variation in southern Alberta tell us about the underlying representation of this rule in southern Alberta specifically and Canadian English in general? A consistent distinction between stops and fricatives with respect to the following segment factor found among non-Mormons may imply influence from the Scottish vowel lengthening rule in the origin of the height alternation. On the other hand, given the contact situation in southern Alberta, it is also possible that this distinction is unique to this area especially since it has not been reported elsewhere in Canada.⁵ In other words, were the early Mormons exposed to a categorical rule or do their patterns of variation merely represent an earlier phase of southern Alberta English?

Differences in the phonological conditioning between these two variables (central (ay) and (aw)) across groups reveal that Mormons and non-Mormons in southern Alberta

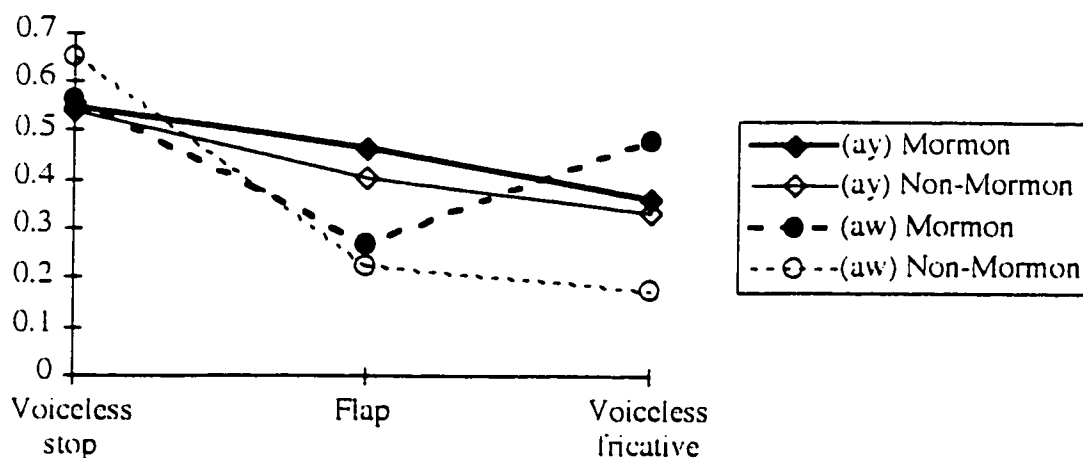
⁴Although many of the earliest Mormon converts originated in Ontario, their descendents would have been American-born and assimilated into the general Utah population by the time of the Alberta expedition. To my knowledge, none of the original settlers were Canadian-born.

⁵Of course, since, to my knowledge, this has not been *investigated* elsewhere in Canada, this point is subject to future research.

show different grammatical influences. For example, stress is only important for these variables for the Mormons, showing that despite the fact that raising has been attributed to shortening, only the Mormons show evidence of this with respect to stress with lightly stressed syllables favoring the central variants in both cases and all others disfavoring. This argues against the hypothesis that the rule underlying the variation in modern Canadian English is a reduction rule related to shortening. Both groups show the disfavoring effect of fricatives although the hierarchy across variables differs. Is the fricative effect the result of some reorganization of the rule due to contact either during the formation of Canadian English or as a result of contact between Mormons and non-Mormons?

A summary of the results of the variable rule analyses for the factor of following segment across groups and variables is shown graphically in Figure 50.

Figure 50: Following segment probabilities for central (ay) and (aw) according to religious group: results summarized from Chapter Seven



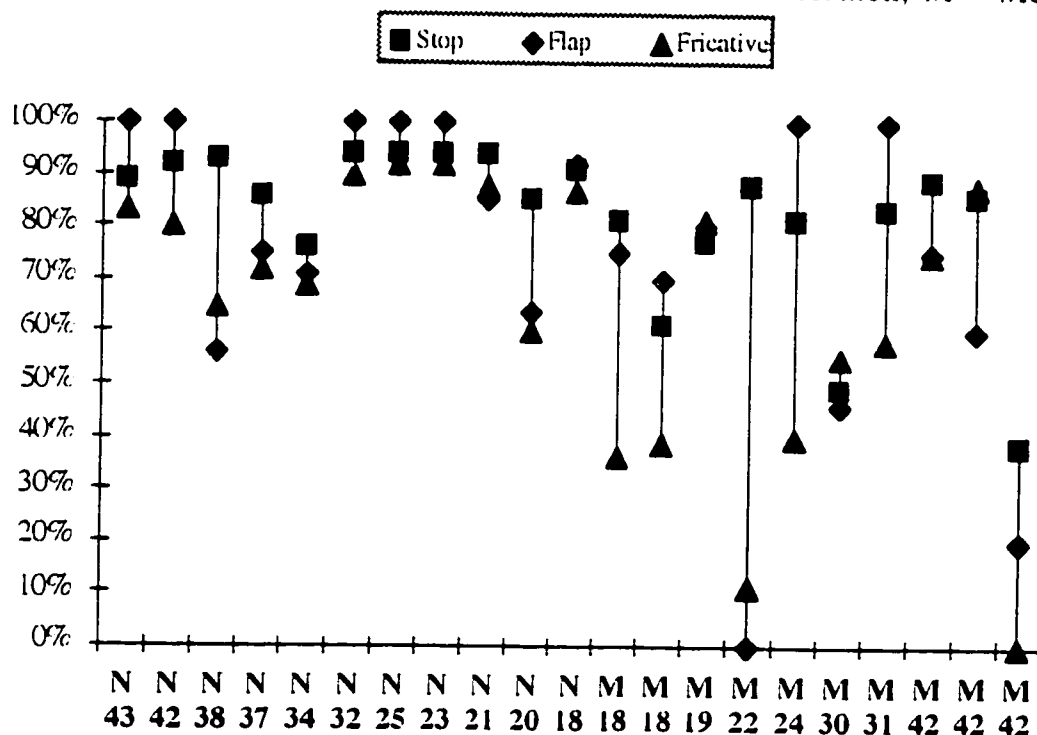
The patterns for (ay) are remarkably similar across groups of speakers. Assuming an ordering relationship between the flapping and height alternation rules, this is consistent with the Dialect A ordering of rules since although central (ay) occurs less often before flaps, the difference is slight.⁶ The patterns of (aw) are more consistent with Dialect B but the fricative effect found for both variables suggests a further distinction. Of course, these

⁶In fact, statistically, the difference between following flaps and stops is not significant.

distinctions may also be unrelated to any particular social dialect and merely may reflect differences between individual speakers.

An examination of the percentage of central (ay) across speakers and contexts as shown in Figure 51 reveals both that it is variable in both contexts for most speakers and that although there is intra- and inter-speaker variation in both groups, the Mormons show considerably more of this than non-Mormons. Most non-Mormons either show increased and sometimes categorical central variants before flaps. The reduced proportion of central variants before flaps is primarily due to three speakers. One of these is the non-Mormon member of the "fronter" network mentioned earlier. The other two speakers are both older men. Thus, the non-Mormons show a pattern consistent with Chambers' (1973) assertion that most Canadians have the Dialect A order.

Figure 51: Percentage of central (ay) across following segment contexts for individual speakers by age and religion: younger speakers are in the center of the chart: N = Non-Mormon, M = Mormon.

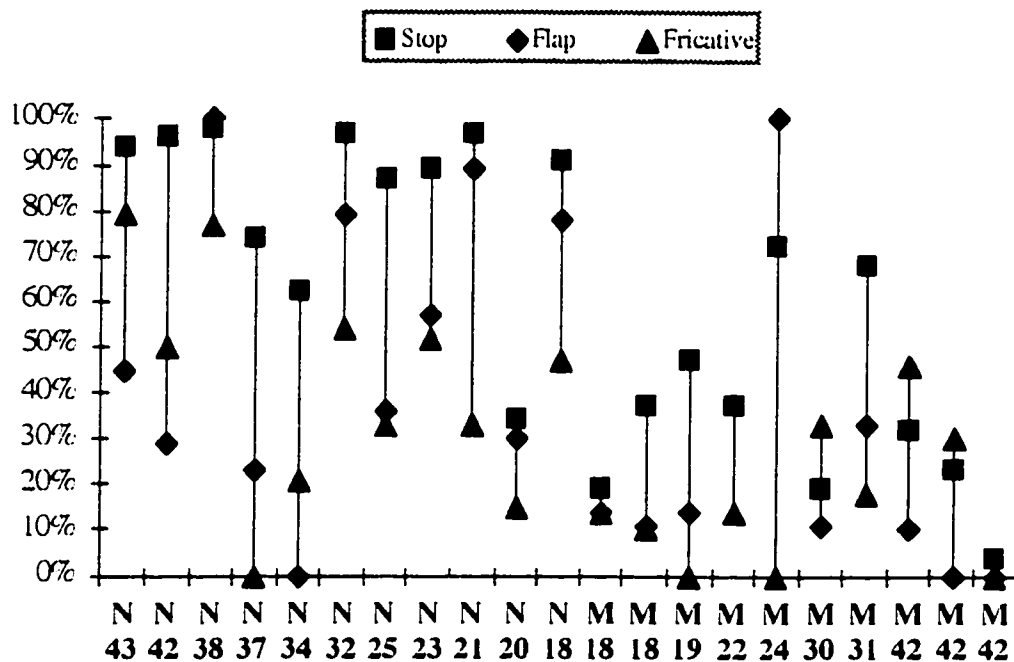


Fricatives are shown to be the least favorable environment for a preceding central (ay) for both groups suggesting some degree of homogeneity although the effect is more

pronounced among older non-Mormons and all the Mormons. We examine this further with a look at interspeaker variation across contexts for (aw).

Unlike (ay), both groups of speakers show a great deal of interspeaker variation for (aw) as shown in Figure 52. However, the results for (aw) show differences across groups and the locus of difference is the effect of a following fricative. In this case, as was shown in the variable rule analysis, it is clearly part of the phonological representation of (aw) for the non-Mormons but its overall effect among the Mormons is less clear. Some speakers show increased central (aw) before fricatives and others show a reduced proportion. Those showing increased central (aw) before fricatives are all older speakers.

Figure 52: Percentage of central (aw) across following segment contexts for individual speakers by age and religion: younger speakers are in the center of the chart: N = Non-Mormon, M = Mormon.



As noted earlier, Wolfram (1974) suggests that ethnic groups will show variation between standard and ethnic variants in some phonological contexts before others. These can be conditioned either by factors relevant to the variety originally spoken by the minority group or echo patterns of the dominant group. As the standard variant increases in frequency in the minority variety, it will spread into other contexts but the degree of use

across contexts will mirror the initial patterning, i.e., more standard variants will be found in the first context where they appeared.

For (ay), Figure 51 shows that, for Mormons, the central variant is most often found before voiceless stops. The fricative effect is much stronger for most of these speakers. In addition, although some speakers show an increased proportion of central (ay) before flaps, others (particularly older women) show a lower amount. Given the voicing distinction considered to be the hallmark of this variable, this may indicate that the central variants first appeared before voiceless stops in the Mormon community. However, given that we have little indication as to what kinds of distinctions these speakers may have started with, this is speculative. Furthermore, the fact that it is also the older speakers in the non-Mormon sample who show distinctive behaviour (again, the exception is the non-Mormon member of the "fronters"), the Mormons could be exhibiting acquisition patterns based on the English spoken by earlier generations of non-Mormons. This would indicate that this is, indeed, a raising rule but that its original conditioning environment either had similarities to the Scottish vowel lengthening rule or reflects some universal property related to phonetic conditions propitious to vowel lengthening.

For (aw), we find that all the non-Mormons show evidence of both the fricative and flapping effect, confirming the variable rule analysis, although the relation between the following fricative and the following flap context varies widely. The only constant is the strong favoring effect of a following voiceless stop. For the Mormons, the following stop context is only consistently higher in the younger speakers. Three of the older speakers show more central variants before fricatives. This may represent some substrate difference in the progress of the group acquisition of this variable (i.e. voiceless segments versus voiced). In that case, it would appear that the fricative effect emanates from the non-Mormon community. This is consistent with the results for (ay) although the non-Mormon group appears to be losing this distinction for (aw) as well, suggesting that the direction of

the change is towards the central variant and supporting the suggestion that this is a raising rule.

Predictions of assimilation theories as they relate to Mormons

Table 52 evaluates the patterns of central (ay) and (aw) as to Wolfram's predictions.

Table 52: Assessment of Mormon assimilation of (ay) and (aw) according to Wolfram's model (Wolfram, 1974)

<u>Stage</u>	<u>Pattern predicted</u>	<u>Results of Lethbridge study</u>	
		<u>Central (ay)</u>	<u>Central (aw)</u>
Stage I	Categorical use of the interference variant	No	No
Stage II	Categorical use of the interference variant in some environments and variable use in others	No	For some speakers
Stage III	Variability in more linguistic environments higher frequencies of the standard variant in variable environments from Stage II	Yes	Yes
Stage IV	Some environments show categorical use of the standard variant	For some speakers	For some speakers
Stage V	Interference variant no longer appears in any environment	No	No

The results indicate that the Mormons show an intermediate stage of assimilation although the fact that these variables are not categorical for either group mitigates this conclusion. However, the intermediate stage hypothesis is verified by assessing the data against Laferriere's (1979) predictions regarding stages of assimilation with respect to style shown in Table 53.

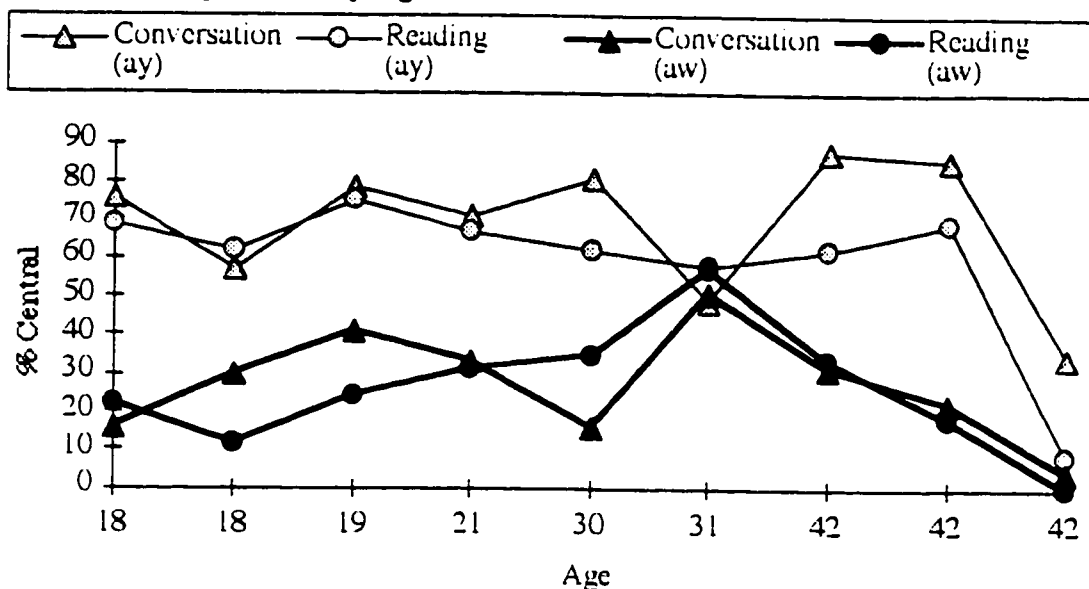
Table 53: Assessment of Mormon assimilation of (ay) and (aw) according to Laferriere's model

<u>Stage</u>	<u>Pattern predicted</u>	<u>Results of Lethbridge study</u>	
		<u>Central (ay)</u>	<u>Central (aw)</u>
Stage I	Style differences for some speakers	Yes	Yes
Stage II	Stigmatization of ethnic variant Age difference across speakers - only some speakers show variation	No	Maybe
Stage III	Negative prestige of ethnic variant All younger speakers now show variation	Yes	Maybe

As Table 53 and Figure 53 show, with respect to style, the Mormon situation is most relevant to a later stage but the assimilation of (ay) appears to be more advanced than

that of (aw). This is consistent with the results of the study of following segment effects just discussed.

Figure 53: Style difference in central (ay) and (aw) across Mormon speakers by age



Assimilation versus convergence

Wolfram (1974) distinguishes between assimilation and convergence in ethnic group integration. In assimilation, speakers in contact show variable patterns which are more similar to the target group dialect than to those found among speakers not in contact. In convergence, contact group speakers will show a greater degree of standard variants but the patterns of variation across the community will be roughly the same for both speakers who are in contact with the outgroup and those who are not. While the Mormons show patterns consistent with increased adoption of mainstream norms, as shown by the parallel social conditioning of (aw) and the increased use of central (ay) across the board, the distinct linguistic conditioning and, in particular, the differing importance of stress, is more consistent with a pattern of convergence rather than assimilation although this may be more true for (aw) than (ay). Most importantly, it is the speakers with the most majority group contact who show the lowest rates of central (ay) and (aw). In other words, despite

increased use of the standard variants, the ethnic distinction is maintained, particularly with (aw).

Taken together, these results indicate that although the process is slow, Mormons are showing evidence of convergence with the mainstream community. However, although the pattern of variation appears to show adoption of a fricative effect from the non-Mormon community, the results are not conclusive since our information on the precise state of the variation in preceding generations of the non-Mormon community and even other Canadian English communities on this question is too meagre. This is clearly an area for further research.

The possible effect of the substrate variety spoken by the Mormons can also be investigated in another way.

Ancestry

As noted earlier, if substrate effects can linger, it is possible that the direct descendents of early Mormon immigrants could have retained the low variant to a greater degree than other Mormons, especially given the possible importance of the caregiver in passing along variation as suggested by studies of dialect acquisition (Payne, 1976; 1980; Roberts, 1997) and the early isolation of the original Mormon settlers. Table 54 shows marginal statistics of the Mormon speakers according to whether or not they reported an American ancestor.

Table 54: Percentage of central variants according to American ethnic origin: Mormons only

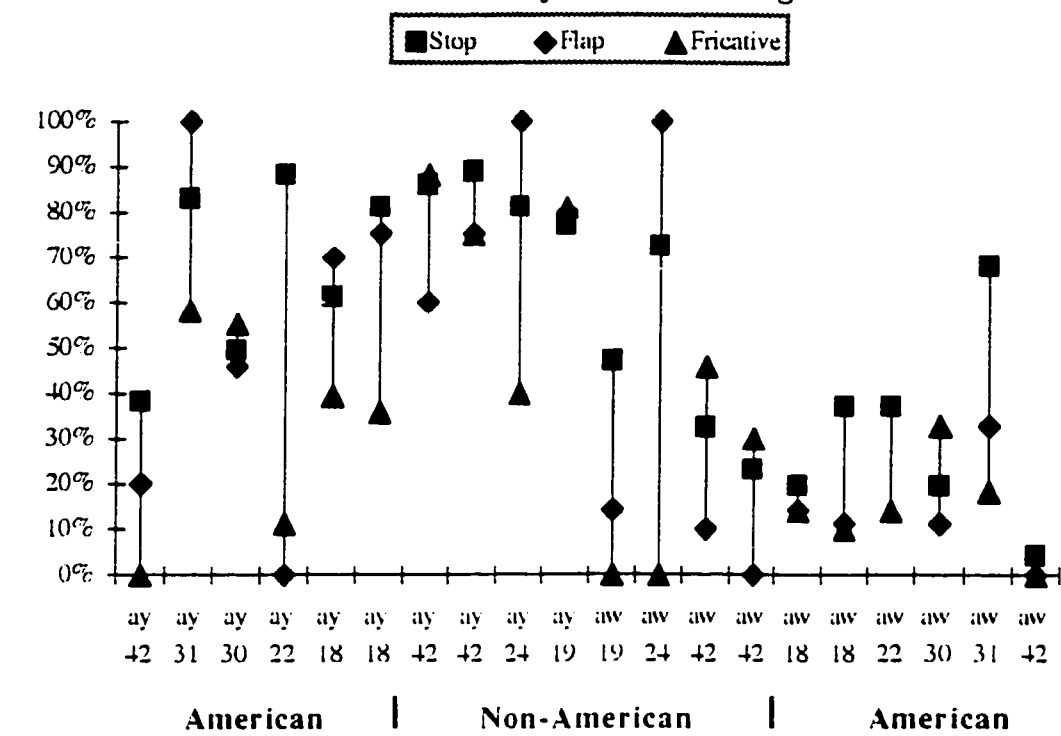
	(ay)		(aw)	
	N	%	N	%
<u>Ethnic origin</u>				
American	510	58%	501	26%
Other	324	82%	269	32%

As predicted by a substrate effect, the direct descendents of American immigrants show a lower degree of central (ay) and (aw).⁷ However, an examination of interspeaker

⁷In a previous analysis, where linguistic market was not taken into account, this factor was found to be significant for both variables only among Mormons (Meechan, 1998a).

variation across ethnic origin and variables does not reflect these results as seen in Figure 54. No clear patterns emerge although Mormons with American ancestry tend to show greater distinction across phonological contexts for (ay) and less for (aw).

Figure 54: Percentage of central (ay) and (aw) across following segment contexts for individual Mormon speakers by ancestry: those with American ancestry are at the fringes of the chart



An examination of ancestry and its relationship to linguistic market is more revealing. One problem with investigating ancestry further is the fact that it happens to be highly interactive with both the linguistic market score and sex. Table 55 shows the interaction between Mormon speakers for ethnic origin and linguistic market.

Table 55: Cross-tabulation of Mormon speakers for linguistic market and ethnic origin.

Linguistic market	Ethnic origin	
	American	Other
High	1	3
Low	5	1

Most of the Mormon speakers in the sample with low linguistic market also have American ethnic origin. Assuming that the results for linguistic market shown earlier are

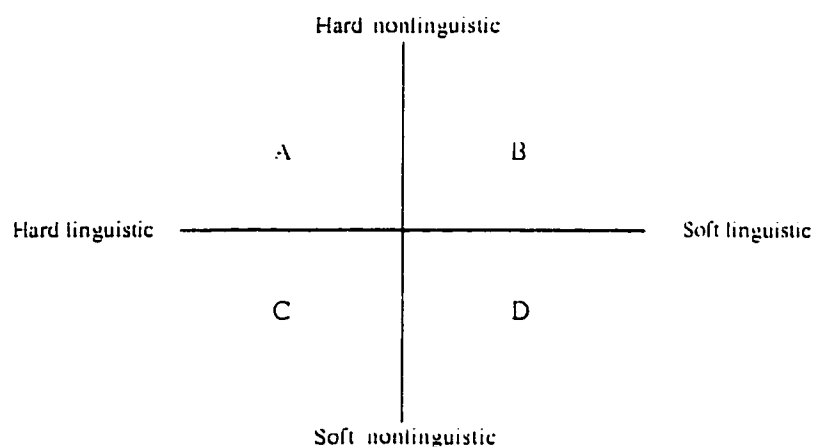
actually indications of substrate effects, the fact that high linguistic market showed more central variants would account for the results for (aw) in that speakers with low linguistic market showed less central (aw). However, this does not account for the fact that linguistic market was also important in the non-Mormon community and that the effects were the same across groups. Furthermore, the variable rule analysis showed that, unlike in the main community, it was speakers with *low* linguistic market in the Mormon community who showed the *greatest* amount of central (ay). The differing linguistic market score effect across variables argues against a substrate explanation across the board for central (ay) and (aw). Thus, historical substrate effects alone cannot explain the patterns of linguistic and social variation observed synchronically. In other words, while substrate effects may account for the source of the variation, they are not important for its continuation.

A discussion of these variables and their relative association with ethnicity as shown by a study of the question of boundary maintenance gives a more revealing explanation for the patterns we have observed and verifies our conclusion that central (ay) and (aw) show the contrastive properties described in Chapter Two as indicative of the presence of an effect of ethnicity.

Boundary maintenance

According to Giles (1979), boundary hardness is a desired state for an ethnic group because it "enables them to differentiate on valued dimensions between own and outgroup more clearly, thereby achieving a positive social identity (Tajfel, 1978a) and allows for the easier establishment of ingroup norms (Banton, 1978) " (Giles, 1979: 276-277). Using the two dimensional model in Figure 55 (repeated from Chapter Two) as a reference, we can show how boundary maintenance accounts for patterns of central (ay) and (aw) across groups in Lethbridge and its relation to change.

Figure 55: Perceived linguistic and nonlinguistic boundary continua
Figure 2 from Giles (1979: 275).



As noted earlier, the model predicts that where non-linguistic boundaries soften, linguistic boundaries harden and this is particularly true when both linguistic and non-linguistic boundaries are soft as we argued earlier to be the case in this situation. Examination of patterns of variation for the Mormons shows no evidence that the linguistic boundary between the Mormons and the non-Mormons is hardening. In fact, as just noted, in the case of front lax vowel lowering (at least (ɪ)) and (aw) fronting, we see evidence of assimilation and, at least for central (ay), there is evidence of convergence. The patterns for the non-Mormons, however, indicate that the boundary is still being maintained, probably by means of what Giles (1979) refers to as "linguistic pursuit".

He suggests that "linguistic pursuit" arises when the minority group moves into quadrant D of the model and proposes that,

- (47) *"(T)he outgroup may feel its boundaries are becoming permeable. They may respond to such perceived boundary threats by creating linguistic differentiations, thereby forcing members of the ingroup into quadrant C. Thus, the perception of ethnic boundaries is in terms of social comparison so that both in- and outgroup perceive the stability of the hardness not only of their own, but also of the outgroup's, and react accordingly" (Giles, 1979: 277).*

Giles notes that "members of dominant and subordinate ethnic groups carry around with them cognitive representations of their own and of each other's perceived vitalities"

and that "it is precisely these *perceptions* rather than any objectively calculated sociological or demographic forces which mediate and determine whether individuals (and hence groups) concede use of their language, and whether ethnic speech markers are adopted." (Giles, 1979: 272). Where a majority population perceives a minority as a threat to their power, linguistic pursuit can occur.

Horowitz (1975: 121) identifies two main factors responsible for setting group boundaries; "contact with ethnic strangers perceived as possessing varying degrees of likeness and difference" and "the size and importance of the political unit within which groups find themselves". Actual numbers and importance of the groups in inter-group relations are not important; only how they are perceived. One indication that a majority group perceives that a minority group has strong ethnolinguistic vitality is when members of the majority group tend to overemphasize the power and size of the minority.

In Lethbridge, at least some majority-group members believe that there are more Mormons than there really are. For example, one older non-Mormon speaker claimed that the ratio of Mormons to non-Mormons when he attended LCI in the 70s was 50/50. Given that only 10% of Lethbridge's population is Mormon and even when the Catholics, who have their own school system, are factored out, the highest percentage that the Mormons could have reached would be about 25% and this is a generous estimate. This speaker is obviously overestimating the proportion of Mormons in the community.

Furthermore, as discussed in Chapter Two, there is some reason to believe that the social dynamic is shifting towards more perceived power for the Mormon group, at least among younger members of the community, as revealed by the concerns over increasing predominance of Mormons both socially and institutionally at the city's main high school. These attitudes point to a perception of strong Mormon ethnolinguistic vitality and, in addition, some insecurity for non-Mormons.

Table 56 relates the predictions made by Giles' (1979) model with respect to how ethnic markers and social dynamics between and within groups can account for patterns of behaviour in southern Alberta.

Table 56: Predictions and results based on boundary theory

	<u>Mormons</u>	<u>Non-Mormons</u>
Characteristics	Many cognitive alternatives for assimilation Evidence of high vitality	Fewer cognitive alternatives for distinction Perception that Mormons have high vitality
Prediction	Likely to retain their own speech characteristics Linguistic resources will be available for sanctioning or rewarding linguistic behavior of ingroup members Likely to differentiate linguistically from by adopting more derogatory lexical markers of the outgroup and creating new ingroup markers at other linguistic levels	Likely to create or accentuate ethnic speech markers
Results	Convergence with non-Mormons for non-salient marker (ay) and retention of characteristics for salient marker (aw)	Divergence from the Mormons for both markers

Despite indications of convergence with (ay), the ethnic boundary is still being maintained by both groups as shown by the results for contact (Table 43 from Chapter Eight) where we can see that Mormons with more inter-group contact show lower rates of the central variants for both variables. Apparent evidence for assimilation on the part of the non-Mormons, i.e., those with greater contact show more low variants, can be entirely attributed to the young non-Mormon member of the "fronter" network. If she is excluded (results not shown), then non-Mormons, regardless of contact show about the same rate of the central variant for both variables. A similar effect is not found for either front (aw) or (ɛ).⁸ Thus, contact is reinforcing, rather than weakening, ethnic boundary distinctions.

⁸Although the patterns of variation for (ɛ) with respect to contact are similar to those found for central (ay) and (aw), the lack of contrast between the non-contact speakers mitigates a conclusion that (ɛ) is operating as an ethnic marker across the community.

Furthermore, when we examine the non-Mormon community for (ay) and (aw), we find that young non-Mormons, regardless of sex, are most likely to produce the central variants, particularly if they have high linguistic market scores. This result holds even if the young non-Mormon woman actively involved in the "fronter" network is excluded as Table 57 shows. In fact, in that case, we now find that for *both* variables, age is selected as significant. Young non-Mormons show more central variants than their elders and despite the fact that young men still show more central (aw) (not shown), sex is now not selected. The sex difference can apparently be attributed almost completely to the speaker involved in the "fronter" network who showed the lowest rates of central (ay) and (aw) of all the non-Mormons. This is probably due to her close social connections with the Mormon community. In fact, she noted that several of her non-Mormon friends and relatives had commented on her 'accent' and she herself attributed it to this association.

Table 57: Contribution of social factors to the probability of central (ay) and (aw) in the non-Mormon community (Network speaker excluded)

	(ay) Input: .901 N = 952	(aw) Input: .820 N = 949
<u>Age</u>		
18-25	.621	.575
30-43	.418	.453
Range	203	122
<u>Linguistic market</u>		
High	.571	.625
Low	.400	.334
Range	171	291
<u>Style</u>		
Conversational	.516	[]
Reading	.369	[]
Range	147	N/A
NOT SELECTED		
Sex	X	X
Style		X

These patterns are not consistent with what has been observed elsewhere in Canada. In Vancouver, de Wolf (1992) notes that younger speakers of higher social class

show a higher percentage of the *low* variant of (aw) although class was not found to be significant. The same pattern for age found in Vancouver was also observed in Ottawa (Woods, 1979). Although in Ottawa, the higher class speakers did show a higher percentage of central (aw) than lower class, when sex and age were factored in, the difference was again found not to be significant. Thus, there is no indication that low (aw) carries lower prestige in the general Canadian English speech community. In fact, Kinloch and Ismail (1993) found that university educated speakers in Fredericton were far less likely to show central (aw) than non-university educated speakers indicating that low (aw) may even carry higher prestige in that community.

Hung et al. (1993) note that for Victoria and Toronto, the evidence for change is conflicting although they confirm that younger speakers in Vancouver show less central (aw), especially the young girls. In Lethbridge, younger speakers across the community are bucking this trend. However, the evidence is not completely consistent with general change since sex differences are not evident. Given Giles' model, how can these patterns be interpreted? Specifically, what do they indicate about the maintenance of an ethnic boundary in Lethbridge between Mormons and non-Mormons?

Crucially, ethnic identity allows groups to "locate themselves psychologically in relation to one or more social systems, and in which they perceive others as locating them in relation to those systems" (Isajiw, 1990). Non-Mormons perceive that Mormons are occupying a more powerful position in Lethbridge society and are increasing their use of central variants to harden the boundary. In this way, linguistic pursuit has implications for the stability of central (ay) and (aw), both within and across religious groups in the Lethbridge speech community. However, caution must be exercised before concluding that this is precipitating change.

Ongoing social dynamics between Mormons and non-Mormons may be unstable over time, particularly in the high school environment where most conflicts were reported by speakers in the sample and where the clearest evidence for recent increase in Mormon

social influence, i.e. predominance on the students' council, was found. Even though Eckert (1991) has argued that social categories adopted in preadolescent and adolescent years can have social implications for linguistic change, the social categories she identifies, i.e. "jocks" and "burnouts", have a clear relationship with socioeconomic goals and are fairly universal across communities (e.g. Habick, 1991).

An unstable social dynamic between Mormons and non-Mormons in secondary school does not necessarily equate to relationships between groups in adulthood. Groups of students come and go very rapidly. Over the history of LCI, there may have been many times where Mormon students dominated the students' council. Since no attempt was made to track the religious makeup of the LCI student council over the years, it may be that the increased use of the central variants by the speakers here merely indicates a passing phase between young Mormons and non-Mormons in Lethbridge. At present, Mormons do not dominate local politics although several years ago, a Mormon did run for mayor (he was defeated).

Whatever the state of affairs with respect to change, it is interesting to note that in a situation where the majority group may well have the perception that both the non-linguistic and linguistic boundaries between them and the minority are threatened, we find hardening of the linguistic boundary on the part of the majority group consistent with the idea of linguistic pursuit. Even if this trend does not continue, it does not negate its relevance to Giles' model. Furthermore, it provides strong evidence for the effect of contrastive group membership, i.e. ethnicity, on central (ay) and (aw) in this community.

One question that arises is whether the data can give an indication as to whether the two variables; central (ay) and (aw), operate in the same way for the marking of ethnic identity. In particular, is the reduced rate of use of the central variants among Mormons linked to a rejection of *Canadian* identity or rather, is the increased use of low variants a marker of *Mormon* identity or are both these possibilities in play?

Distinctions between markers of ethnicity

Although speakers are not generally aware of either of these two variables in Lethbridge, the variable (aw) is more salient than (ay). It is (aw) that gets the most outside notice and is clearly associated with Canadian identity. Most of the Mormon men have spent some time in the United States when they went for their missionary training and several of them told me that Americans had commented on their pronunciation of (aw).⁹ However, (aw) appears to be in stable variation in the Mormon community with only the Mormon *men* adopting the majority group variant. For the men, Mormon identity appears to be covertly expressed with an increased use of front (aw); a variable which shows little sign of operating as a marker of ethnic identity for other members of the community.

Why are the Mormon men showing these patterns for the more salient (aw)? One explanation relates to economics. We can assume that originally Mormon settlers had both somewhat harder linguistic (no central variants) and non-linguistic boundaries (segregated communities). Then, due to their involvement in the irrigation business, they had greater interaction with non-Mormons as a result of moving into Lethbridge and central (ay) and (aw) were encountered. The fact that central (aw) is connected with high linguistic market for both groups suggests an economic tie. In order to compromise between their conflicting ethnic identities, Mormon men are adapting use of both central and front (aw) in relevant phonological contexts.

If the Mormons were converging with the mainstream Canadian community at the *expense* of their Mormon identity, we would expect that convergence would be more likely for (aw), the more salient marker. However, only the *less* identifiably Canadian marker shows this pattern. It is the Mormon men, as the traditional breadwinners and having more to lose by exclusion from mainstream economic society who are more likely than the women to adopt the more salient marker of local majority group community identity. However, they are also more likely to retain other, less salient, indicators of minority group

⁹In fact, like most other Canadians in situations of this type, they were teased about it.

membership. In other words, (aw) carries multiple social meanings in this community. For (ay), Canadian identity is not as salient, particularly among their Utah counterparts so the Mormon community as a whole is involved in convergence to the Canadian norm. In other words, they have more freedom to express their Canadian identity. Since (ay) has a more covert association with Canadian identity and thus less interference with Mormon community norms which may emanate from Utah, there are fewer ingroup restrictions on moving into quadrant D. This may explain why many younger speakers did not appear to know about the Mormon drawl. It has become less distinctive.

Interestingly, although both variables operate below the conscious awareness of most residents of Lethbridge, the non-Mormon community is still sensitive to this movement and responding to it by "raising the bar" forcing the Mormons to remain in quadrant C. If the present situation continues, it may have implications for the stability of these variables in southern Alberta English. What do these results say about Mormon ethnicity as an ongoing entity in southern Alberta and, by extension, North American culture?

Mormons as an emergent or disappearing ethnic group

Mauss (1990: 335) found so many parallels between Mormons and Jews that he suggested that the Mormons might be called "the Jews of the Rockies". Despite this, he rejected the idea that Mormon ethnicity is equivalent to Jewish ethnicity on the grounds that even though there are some similarities between the Jewish and Mormon situations, there are far more differences between them both historically and presently. He suggests that while "nineteenth-century Mormons [may have been] an 'emergent' ethnic group, with a subculture increasingly divergent from the American mainstream, such trends have been reversed during the twentieth-century assimilation of Mormons in North America" (Mauss, 1990: 336-337).

Parry (1990: 353) notes that "Mormons do not think of themselves as ethnics; nor do their neighbors label them as such". However, he argues that Mormons should be

considered as ethnics from the point of view of ethnic boundary theory in that Mormons are different from non-Mormons in southern Alberta in meaningful ways and because they "seem to occupy a clearly defined space" (Parry, 1990: 361). Parry's analyses indicate an effort both internally and externally to maintain a barrier between non-Mormons and Mormons in southern Alberta, a condition which we earlier maintained to be the most diagnostic of the existence of an ethnic group. The linguistic results produced here would support his assertion but the fact that Mormons show convergence toward the mainstream norms is also consistent with Mauss' claim that Mormon self-identification as a distinct ethnic group may be fading in modern society.

Future research

The results presented here constitute a confirmation of Giles' (1979) model for ethnic boundary maintenance. However, there are still a number of ways this could be further researched. In the first place, as noted in Chapter Four, although the sample was carefully selected, some of the social analyses have pushed the data to its limits and a larger sample would give the conclusions more credence. For example, since sex and age within groups sometimes yields cells containing only two speakers, the addition of linguistic market to the analysis, although it was carefully defined to maximize stratification, still leaves some cells represented by less than two speakers, e.g., there are no older Mormon men with high linguistic market. In fact, it was for this reason that social network was not studied using the variable rule analysis. Since it involved dividing the speakers into at least three groups, the resulting cells revealed even more interaction than found with linguistic market. This does not negate the results since our *comparison* between groups clearly shows how these speaker divisions reveal distinct patterns across variables consistent with the boundary maintenance hypothesis. Thus, social network results, although they must be viewed cautiously, can still be considered to provide a compelling explanation for the patterns of variation found in Lethbridge. In particular, the contrast between variables confirms this. All this aside, although age was stratified, a greater range of ages would

possibly have clarified the question of what underlying forms should be hypothesized for each group and whether or not change was occurring.

A fuller investigation of style could also be revealing. Giles (1979) suggests that the degree to which ethnic markers appear may be affected by the conversational context in which the speaker finds herself. Speakers may use ethnic markers either more or less in the presence of an outgroup member depending on the nature of the relationship between groups in the community. Examining Mormon speakers according to whether or not they were interviewed in the presence of another Mormon could possibly have provided corroborating evidence of boundary theory.¹⁰

As Giles (1979) notes, there may also be differences depending on the power dynamics or ethnolinguistic vitality of contact groups. This has direct relevance to the use of linguistic markers among southern Alberta Mormons as opposed to their apparent absence in Utah. In Utah, the overwhelming majority of the population is Mormon. Furthermore, the Mormon church actively strives to make the state 100% Mormon as evidenced by the fact that missionaries are stationed in Utah as well.¹¹ As noted earlier, in Alberta, recruitment into the church has been less than successful. This points up the fact that, in Lethbridge, both Mormons and non-Mormons harbour a greater fear that members of either group will cross the boundary and this may have resulted in a greater degree of boundary maintenance than found in Utah.¹² There are also many other small southern Alberta communities where social dynamics between these groups may vary. For example, could there be a difference between the situation in Lethbridge and that in Raymond where

¹⁰As it happened, all the speakers interviewed as couples were young so this could not be incorporated into the full analysis here.

¹¹One of my informants, in fact, was stationed in Utah as a Mormon missionary. He informed me that there had been quite a bit of immigration from California requiring ongoing efforts for spreading the word. In fact, with the growing popularity of Utah as a winter recreation site and the upcoming Olympics, boundary maintenance for Mormons may become more important in Utah in the future.

¹²Jarvis (1990) notes that a larger proportion of eastern Canadian Mormons are converts.

the Mormon majority may be shrinking due to suburbanization? This could also be compared to Cardston where the Mormon majority is more secure.¹³

More work is also required in disentangling the height/front interaction with (aw).¹⁴ How should the patterning of these competing variants be interpreted? We have suggested that they are subject to some realignment of the variation due to initially different values in different groups in the community but outside of an examination of fronting according to indexes, we have not fully examined the range of variation. In particular, the loss of a low backed variant and emergence of a central backed variant have not been dealt with. Thus, the conclusions must be viewed as tentative.

What about the status of southern Alberta English as a distinct dialect in Canada? With respect to front lax vowel lowering, we find no evidence of any distinction either within the Lethbridge community as a function of religious affiliation or generally. Furthermore, the patterns are also consistent with membership in the third dialect speech community. Only in the case of central (ay) and (aw) do we find clear evidence that there is a distinct dialect pocket operating in southern Alberta. In particular, there is a Mormon subdialect characterized by low (ay) and (aw). As for whether or not Lethbridge as a community is different from the general Canadian community, since no other study has shown clear evidence of loss of the central variants and this study is no exception, we can tentatively state that, in general, southern Alberta English is no different from that found elsewhere in Canada. These findings are summarized in Table 58.

¹³There may even be communities where the population is balanced and has been for a long period of time (e.g. Taber).

¹⁴While unambiguously disentangling this interaction may not be completely possible, there is room for further exploration. Berdan (1978) has argued that sociolinguistic structure of multidimensional variables may be more clearly shown using statistical procedures such as multidimensional scaling or principal component analysis and perhaps this is the direction in which the research for (aw) should proceed.

Table 58: Hypotheses regarding the southern Alberta speech community

<u>Null Hypothesis</u>	<u>Variable</u>	<u>Result</u>	<u>Comments</u>
Mormons are not distinct from the larger Lethbridge community	(ɪ) (ε)	Not disproved	Mormons and non-Mormons show no distinction not also related to network affiliation
	Front (aw)	Uncertain:	Mormon distinction shows sensitivity to Utah norms but evidence of ethnic meaning is conflicting
	Central (ay) (aw)	Disproved:	Mormons and non-Mormons show a distinction with evidence of contrast between religious groups
Lethbridge is not distinct from the Canadian community	(ɪ) (ε)	Not disproved:	Lethbridge shows patterns found elsewhere in Canada
	Front (aw)	Uncertain	Lethbridge patterns are not completely consistent with elsewhere
	Central (ay) (aw)	Not disproved:	Lethbridge shows no evidence of loss of central variants
Lethbridge is not distinct from the third dialect	(ɪ) (ε)	Not disproved:	Lethbridge shows patterns found elsewhere in third dialect area
	Front (aw)	Uncertain:	Lethbridge patterns are not completely consistent with elsewhere

Since the Lethbridge community does not show distinct patterns of behaviour, i.e., patterns are consistent with standard Canadian norms, we can assume membership in the larger Canadian community. The Mormon community does show evidence of having retained, at least in part, some of the linguistic properties of their American heritage however, they also take part in more general Canadian processes such as front lax vowel lowering. Furthermore, their patterns of variation for the central variants show clear evidence of convergence even though the distinction in rate of use and evidence of linguistic pursuit show these to be ethnic markers in this community.

Conclusion

The classification of the speakers in this sample as Mormon only indicates that they grew up as members of a community which revolved around the social organization of their church. These results in no way indicate that they are inextricably bound to it either

psychologically or physically as is suggested by claims that the Mormon church constitutes some kind of "cult" (e.g. Martin, 1965).¹⁵ This study finds no evidence for this to be the case. Rather, the results presented here are more consistent with the proposal that their unique circumstances have led to the formation of a Mormon ethnic identity. Careful examination of the patterns of variation both within and across groups have shown the effect of Mormon ethnicity on southern Alberta English.

Most importantly, despite the fact that religious affiliation shows distinctions for all variables, the analysis clearly shows that not all are necessarily conditioned by ethnicity as a distinct factor. Use of a multi-faceted approach in investigating the variation along with the added method of comparing sociolinguistic structure according to the same social configuration across variables has provided a clear picture of the linguistic situation and the importance of ethnicity in this community and verifying the adage that "data tortured long enough will almost always confess" (Economist, 1998: 79). Despite the difficulties involved in disentangling ethnicity from other factors, it clearly plays a role in this community.

As Le Page and Tabouret-Keller (1985: 247) note, "(n)either 'race' nor 'ethnic group' nor 'language' turns out to be a clearly-definable external object. Rather, each is a concept we form as individuals, and the extent to which, and the manner in which, we project our concepts on to those around us and establish networks of shared suppositions determines the nature of the groups in our society and their mode of operation". The distinction between the Mormon Drawl and the English of other southern Albertans is subtle but the evidence provided here shows that it marks Mormon ethnicity in this community. As the speaker in example (48) notes,

- (48) [021] *They could tell we were from southern Alberta. ... [MM]*
 How could they tell? [021] ... *I guess we have Mormon*
language. (Spkr 021, Cass 25: 1.13.28)

¹⁵Also see Bainbridge and Stark (1982) for a brief note on these claims.

APPENDIX I

LINGUISTIC MARKET INSTRUCTIONS

THANK YOU IN ADVANCE FOR YOUR CO-OPERATION. PLEASE FOLLOW THE GUIDELINES BELOW IN COMPLETING THIS TASK.

You have been provided with short employment biographies of twenty-four residents of Lethbridge, Alberta (see attached description of area).

Each individual is to be assigned to a ranked group solely according to your own judgement as to the relative importance of legitimized (prescriptive) language in the socio-economic life of the speaker using the information about their employment history. Their present employment is probably most relevant to the task but I have also provided past employment where it was available just in case. In addition, I have added information about their extra-employment activities in case this will help you in your task. If it is not helpful, ignore it. The important information is their present employment.

NOTE: Since the idea of linguistic market ranking is not an objective notion, the number of groups is not pre-set. Assign the speakers to however many groups you feel apply. So, for example, if you feel that legitimized language is equally important to all speakers, then all speakers will be in the same group. If you feel that each speaker differs significantly from each of the other speakers, then speakers will fall into 24 separate groups. It is entirely up to you. Once the speakers have been placed into groups, the groups should be ranked. I have provided a sheet for recording groups and their rankings.

This is clearly a subjective task. In making your judgement, be guided both by your general knowledge of the Canadian marketplace and your reaction to the entire description provided for each speaker. Do not try to apply objective or a priori criteria such as the education required for a particular job, the amount of contact with the public, etc. Only your personal impressions are important.

A number of other judges have also been asked to complete this task. The final linguistic market score for each speaker will be compiled as an index of the combined scores from each judge. Please give your honest *opinion* as a result of your observations in your capacity as a member of Canadian (and if applicable, western Canadian) society and as a sociolinguist.

APPENDIX II**INTERVIEW SCHEDULE**

Module 0: Demography

1. May I have your name?
2. What year were you born? I guess you were born in Lethbridge? *If no then..*
Where were you born?
3. How many years have you lived in Lethbridge? ...in this neighbourhood?... in
this house? Besides Lethbridge (*and place of birth if different*) where else have
you lived? How long did you live there?
4. Were your parents born in the same place that you were? *If not....* Where were
they born and raised? Were your grandparents born there too? When did your
family originally come to Canada and where did they come from? How did they
end up here? Where does your wife/husband come from?
5. How much school did you get a chance to finish? Did you go to school near your
home or did you go away to school? *If from Lethbridge...* What school did you
go to?
6. Do you go to church very often? Which one? *If not ...* Did you go to Sunday
School when you were a kid? Which one?
7. What's your line of work? Are you still working at that now? How long have you
been doing it? Have you ever worked at any other jobs? *If yes...* What was your
first job? What line of work is your (wife/husband) in? How about your father,
what did he do?
8. Have you ever spoken any other language than English? What language? When
was that and with whom? Did your parents speak any other language than
English? What and to whom? Grandparents?
9. Have you had a chance to travel much? Where have you been? Have you ever
visited the East? Where? How about the States? Where? Did you like it? Better
than Canada? Can you tell me any of your travel experiences? Do you visit the
States often? Regularly? Where? *If Mormon...* Have you ever been on a mission?
If yes ... Where did you go?

Module 1.0: Games

1. If you think back to when you were a kid, say nine or ten years old, can you remember any of the games you used to play with your friends after school? What games did you play? Do you remember who used to play with the most? What games did he/she like to play?
2. Did you ever play any games where everybody had to hide and you had to go out and find them? What were those called? What rules did you have? What happened after you got found? Were you out or could you try to race back to some safe spot? Could you free people that had already been found? How did you do that? Was there anything you had to say? ... like Olly Olly alsten free or something like that?
3. Did you ever play a game where one person was IT and had to try and tag another person? What rules were there for that? What happened after you got tagged?
4. How did you decide who was IT? Did you have any special rhymes for that? (ceny meeny miny mo...etc)
5. Did you ever play a game where one person stood on a hill and everyone tried to push him/her off? What was that called? Were there any other rules? What did you call the person on the hill?
6. Were there any games that you played only in the winter?... in the summer? (e.g. a kind of tag where you stamped out a track in the snow and ran around it - Fox and Goose) Were there any games that you only played after dark?
7. Did you play any hiding or tag type games where people played as teams? (e.g. Red Rover, Run Sheep Run) What was that called? How did you play?
8. Did you and your friends ever play with marbles? What kinds of games were there? Were marbles just for boys or could girls play too? What kind of special marbles (catseye, steelies etc.) were there? Did you ever trade them? Were there other things you'd trade like that?

Module 1.1: Boys' Games

1. Did you and your friends ever play any games with a knife? (e.g. splits) What was that called? What were the rules?
2. I guess you must have played hockey sometime? *If yes* ... Where did you play? What position did you play? Were you any good? Why? Do you still go to watch games? *If not* ... Why not? Why do you think hockey is so popular in Canada? Have you ever played broomball? My brother really likes that but I've never understood the rules. How do you play?
3. Do you remember playing table hockey? When you played, did you ever try to "announce the game" the way the CBC announcers did? Did you try to imitate someone special? What did he sound like? Do you remember what kinds of things you would say?
4. What about street hockey? I think everybody had their own rules for that. What kinds of rules did you have? What did you use for a puck? How many men to a side? How did you decide if a team was "off-side" or "icing"? What did you do if a car came along? How did you warn the other guys on the team? Was there ever a time when anybody got hit or almost got hit by a car? What happened?
5. Are there any other games you played in the street? What were they like?
6. Have you ever played league basketball? Where did you play? What were the rules?
7. What other sports did you play? Were there any special rules that you used that are different from the way they play today? How did you choose up teams?
8. Did you ever go to summer camp? (e.g. Camp Inuspi) What games did you play there?

Module 1.2: Girls' Games

1. Did you ever used to jump rope? What skipping games did you have? There's a way to play where you use two skipping ropes at the same time (e.g. double dutch) or you can tie a rope to your foot and jump over it while you swing it around.
2. Lots of skipping games had little rhymes that went with them. (example: Tinker, tailor.....*when you stumbled, the occupation was taken note of and that was supposed to be the occupation of your future husband*, Cinderella, dressed in yella, went upstairs to meet her fella....) Do you remember any?
3. Were there any rhymes you can remember for bouncing a ball?
4. Did you play any clapping games? (pat-a-cake, etc)
5. Have you ever played basketball? Where did you play? What were the rules?
7. Did you play jacks? What were the rules?

Module 1.3: Fights (for males)

1. Do kids fight alot around here? What do fights start about?
2. How was it when you were young/a kid? Did they fight a lot in your neighbourhood? What did it mean to "fight dirty"? Do you think this has changed? In what ways?
3. Could somebody say that he'd had enough? What would he say?
4. Did you ever get into a fight with somebody bigger than you? If yes, How did it start?
5. What was the best (the worst) fight you remember?
6. What was the most important fight you were ever in?
7. Have you ever seen girls fight? Did you ever get into a fight with a girl?

Module 2: Family

1. **I guess there were alot of kids in your family?** How many brothers and sisters do you have? Where do you fit in... are you the youngest or the oldest? Did you live with just your parents or were there other relatives living with you? What was that like?
2. **Were your parents stricter than your friends' parents?** How so (or how not)? Can you give me an example? (e.g. curfews, dating, make-up, etc.)
3. **What kinds of rules were there around your house when you were a kid?** Were there any rules at the dinner table? (e.g. Could you leave the table before everyone else was finished?) Did you have to clean your plate? Did you have to eat all the vegetables? Was there something you hated to eat? Did dinner table rules apply to everyone or just to the kids? Was there any especially important meal during the day or week, when everyone had to be there? What about bedtime? Did you have any special chores?
4. **Could you talk to your parents about everything, like personal problems, love, friends or sex?** Who did you talk about these things with?
5. **What were your parents like (e.g. modern, old-fashioned)?** What kinds of things did they like to do? Did both of them work? Did you spend alot of time with your parents? What kinds of things did you do together?
6. **Did your parents have any special ambitions for you?** What did they want you to be when you grew up? How far did they want you to go in school? Did the same thing apply to all the children in the family? What kind of person do you think they expected you to marry?
7. **Was there anything special that you used to do as a family?** *If Mormon...* Did you have family home evening? What kinds of things would you do?

Module 3: School

1. When you were in school, what was your favorite subject? Why? What subject did you hate the most? Why was that? Did anything in particular happen that made you like one or hate one the most?
2. Do you remember your teacher from first grade? What was he/she like? Who was your favorite teacher? Why? Who was your least favorite teacher? What was the worst thing he/she ever did? Did you ever get the strap?
3. When I was in school, some of the kids used to like to play practical jokes on each other or on the teachers? Did you or your friends ever do that? What did you do?
4. Did you ever get blamed for something you didn't do? What happened?
5. There always seems to be different groups of kids in school, like the smart kids, or the partiers, or the jocks? Were you a loner or did you have a special group you used to hang around with? Were these mostly kids you met at school or at church? What kinds of things did you and your group used to do?
6. Were there any mormons/non-mormons in your group? Do you still see any of your friends from school? Are there any you particularly don't see? Why? *For Mormons...* Was there any difference in your social group after you started going to seminary? Do you think that had anything to do with seminary or was it something else? Why or why not?
7. What activities did you take part in at school? Did you ever belong to the booster club or were you ever a cheerleader? Do you remember any cheers you used to shout at the basketball or football games? What were they?

Module 4: Marriage

1. When you were dating, where would boys usually go to meet girls? Was that the way you met your wife/husband? *Or, if not married...* Was that the way couples usually met?
2. Did you know right away that he/she was the right one? How did you know?
3. How did you/he propose? Do you remember just what you/he said?
4. Did your parents approve of your marriage? Did his/hers? Did you have your own place right away after you got married or did you live with your/her parents? How was that?
5. A lot of couples these days live together before they get married. Did you and your wife ever think of doing that? What would you do if one of your children decided to do that?
6. Some churches require couples today to have marriage classes. What do you think of those? Did you go to one? What was it like? (E.g. do you think they make a difference in the success of a marriage? Why or why not?)
7. People seem to get divorced quite a lot these days. Why do you think that is? Was it better years ago? Why?
8. What if a girl gets pregnant and she's not married. Whose fault do you think it is? Should the father have to marry her? Should she have an abortion? Should she put the child up for adoption?
9. What would you do if your son/daughter decided to marry a person of a different religion, race, colour...?
10. Before you got married, did you have any fantasies about what your wedding would be like? What were they? Did they work out? What went wrong? *If Mormon...* Did you hope to be married in the Temple? Were you worried that it wouldn't be allowed? What did you do to make sure it would happen?

Module 5: Dreams and Superstitions

1. I saw a TV show about a girl who dreamed her father was standing at the end of her bed and then later, she found out that he had died right at that moment. Do you know anybody who ever had a dream like that? Do you think dreams ever come true? Did you ever hear about something like that?
2. Did you ever have a dream that really scared you? What happened?
3. Did you ever wake up and find yourself on the floor or in another room?
4. Do you usually remember your dreams, e.g. what was your last dream about? Do you dream in color? *For bilinguals...* What language do you dream in? Can you tell me the last dream that you remember having?
5. Can you wake up if you don't like a dream or can you keep on dreaming if you are enjoying it? Did you ever have a dream like that, where you just didn't want to wake up? What was it about?
6. Do dreams mean anything? Did you ever have a dream that you thought meant something?
7. My grandmother used to say that if you spilled salt, you had to throw it over your left shoulder really quickly to avoid bad luck. Have you ever heard of any other beliefs like that? I also know some guys that play in the NHL who insist on wearing the same underwear or socks whenever they have a game because they believe they're lucky. Do you have any lucky charms? What 's lucky or unlucky for you? Do you think people believe in those kinds of things more than they used to or less? How do you know?
8. Do you ever have trouble getting to sleep? What do you do? Do you ever have trouble waking up?

Module 6: Danger of Death

1. In most families, there's someone who gets a feeling that something is going to happen, and it does happen. Is there anybody like that in your family? Do you remember anything like that that came true?
2. Do you think there are things science can't understand, e.g. ufo's and things like that? Do you think people your parents' age believed in stuff like that more than we do (e.g. ghosts, gremlins, poltergeists)?
3. **Have you ever been in a situation where you were in serious danger of getting killed (where you said to yourself, "This is it")? What happened?**
4. Some people might say, in a situation like that, that whatever happens is fate and that they had no control over it. What do you think?

Module 7: Morality

1. When you were a kid, did your family go to church regularly? What church did you go to? (If not answered in first section)
2. How important is it to go to church every Sunday? Why?
3. Do you think that people who go to church are different or better than people who don't?
4. A lot of people say there's a different sense of 'morality' in the world today. What do you think about that? What does religion have to do with 'morality'?
5. Do you think young people are less moral today than they were in your day? Why? Do you think young people have become more religious or less these days? What makes you think so?
6. *If Mormon...* Have you had a chance to go on a mission? *If yes ...* Where did you go? Was that your first choice? Did you ever run into anybody who was really hostile? What happened? *If no ...* Why not? If you could go, where do you think you'd like to go? Why?
7. Has there ever been a time when you thought you were in the presence of evil, like the devil himself was right there? What happened? Have you ever heard of anyone having that happen to them? What happened?
8. Have you ever felt as if you were in the presence of pure good? Like an angel or something like that appeared to you? What happened?

Module 8: Occupation

1. When you were a kid, what did you want to be when you grew up? What made you decide you wanted to do the job you're doing now? What kind of company are you working for now? Did you ever wish you had done something else? If you could have changed anything, what would you or wouldn't you have done?
2. What do you think makes a person successful? What do you think makes a job personally satisfying?
3. What are the people like that you work with? Are they friendly? Would they help you out if you were ever in trouble?
4. Where you work, do you all hang around with each other? *If yes...* What kinds of things do you do? Do you like to hang around with people you work with? *If not ...* Who do you hang around with?
5. What kind of training did you get to do the job you do now? Do you think it's more important for someone doing your job to have a lot of experience or a lot of education? Why?
6. What's an ordinary day at work like? (Do you work by yourself or can you chat with your office mates while you are working?) What kinds of things do you talk about with the people you work with, e.g. during breaks? Do you ever meet the people you work with socially?
7. Did you ever think of changing your job? (Why didn't you?)
8. Would you say your job is exciting? What makes it exciting, boring etc.?
9. Every once in a while, it seems like one of those days comes along where everything goes wrong. (You're late, your car won't start, the boss gets mad at you) Can you ever remember a day like that? What's the worst day at work you ever had?

Module 9: Holidays

1. Christmas is a special time of year to a lot of families. Which holiday do you think of as the most important around your house? How do you celebrate it? **Who all is there at Christmas at your house?** Is this the same as when you were a kid? What was it like then?
2. Do you ever remember a holiday that was particularly special to you? What happened?
3. There are always a lot of family traditions associated with holidays. Did your family have any special traditions that might be different from how other people celebrate? Were there any holidays you did not celebrate? Why?
4. Are there any special foods that you always have on holidays in your family? What do you eat for example for Thanksgiving/Christmas? Did you ever have Christmas pudding? Was there money in it? Was that a good idea?
5. A lot of people today complain that holidays like Christmas and even Mother's Day are becoming too commercial. What do you think about that? Would you say that's true?
6. Do you remember your last vacation? Where did you go? Do you try to spend your vacation the way you did when you were a kid? What's changed?

(=> Summer holidays)

Module 9.1: Summer Holidays (optional)

1. When you went for summer holidays when you were a kid, where did you use to go? What was it like there?
2. Did you ever go camping? Did you ever have campfires? What kinds of things did you do around the campfire? Did you ever sing any special songs?
3. Did you ever go to summer camp? What was the name of your camp? (Camp Inuspi) What kinds of rules did they have there? Did you ever have any rhymes that you would say around the dinner table, for example, if someone put their elbows on the table or something like that?
4. Did you ever hear any good ghost stories when you were a kid? Can you remember one? How does it go?
5. Did you ever meet up with any wild animals while you were out in the woods? What happened? Did you ever hear about that happening to anyone? What happened?
6. What other kinds of things did you do on your holidays? Do you still do those things today? Is there anything that you do on your holidays nowadays that you didn't do then? Is there something that you used to do that you wish your children could do? (E.g. drink the water in a creek, eat snow...)

Module 10: Neighbourhood

1. Was this neighbourhood your first choice when you were looking for a place to live? Where would you say your neighbourhood ends?
2. Do you like living in this neighbourhood? Why? If you didn't live in this neighbourhood, what other part of Lethbridge would you like to live in? Why?
3. What part of Lethbridge would you particularly not like to live in? Why?
4. Before you moved to this house, did you know anyone else who lived around here?
5. Are you particularly friendly with any of your neighbours? Do you know all your neighbours or only those who live close to you? Who was the first person you met in the neighbourhood? How did that happen? When you get together with your neighbours, what kinds of things do you do? Block parties? Barbecues?
7. Do you think it's important to have good neighbours (for example, in case of sickness..)
8. Can you count on your neighbours (for example to watch the children in case of sickness, etc.) Did that ever happen? Were you ever really sick and had to call on them?
9. What makes for a good neighbour? ...a bad neighbour?

=> Home

Module 11: Home

1. Why did you decide to live in a house of your own, and not, for example, an apartment?
2. How did you pick out your house? How did you find it? Did you look at a lot of other houses? Was there another house that you almost picked before this one? Is there anything about your house you'd like to change? Why?
3. How are the chores divided up at your house? Who does the cooking and cleaning? What kinds of chores do the kids have to do? Who does the outdoor chores? How much of your time do you spend working around the house? Do you like to garden? Who does most of the work?
4. These days everyone is worried about ecology. How do you feel about recycling? Do you ever worry about ecology when you're taking care of the garden? How do you control bugs in the garden? Weeds? Have you changed the way you do it?
5. Do you work much with your car? When did you have your first car? What was it like?

Module 12: Social Life

1. Besides your husband/wife (if married) who would you say is your best friend?
Where did you meet him/her?
2. Where do most people around here go to meet people? Church? Parties? Dances?
Work? Where do you usually meet people?
3. When I was in high school, the basketball coach wouldn't let any of the Mormon kids play on the basketball team because he thought that if there was a conflict between a high school game and a church game, they'd pick the church game?
People usually have a lot of different circles they move in. Out of all the circles you move in, which do you think that you'd give priority to, if you had to make a choice?
4. Who would you say you were closer to, your family or your friends? Who do you socialize with more?
5. Do you have any friends who are non-mormon/mormon? How did you meet them?
Do you see them very often? Are there places you go where everyone is mormon?
Non-mormon?

Module 13: Language

1. When you meet someone new, can you tell from how they speak, where they're from? Do people ever remark on the way you speak? Can they tell you're from Lethbridge?
2. Does everyone in Lethbridge speak the same way? What differences are there?
3. When you were a kid, did your parents correct you when you made a mistake? like maybe if you said *ain't* or something? What kinds of things in particular used to annoy them?
4. There are a lot of different English accents in the world. Which accent do you find the most appealing? British? Australian? Newfoundland? Scottish? American South? East Indian?
5. Did you ever know anyone who deliberately changed their accent? What do you think of that?
6. Do you think the way people speak in Lethbridge has changed? Are there things people used to say that you don't hear anymore? Do young people speak differently now, compared to when you were young? What is different/the same? Do you think that school changed the way you speak?
7. There are a lot of different groups of people in Lethbridge, like, for example, Italo-Americans, or Polish-Americans. Is there any group or groups of people in Lethbridge that you can identify just by the way they speak? What about natives? Do they talk differently?
8. **Some people say there is a difference between the way Americans and Canadians speak English, some say there isn't. What do you think? Can you tell if someone's American or Canadian just by how they speak? How can you tell? What differences are there? What exactly?**
9. **Have you ever met someone that you thought "sounded" American? What did they sound like? Can you demonstrate it? What does it mean to "sound" Canadian? Can you demonstrate that?**

Module 14: Media

1. Do you read newspapers and books regularly? What kinds of books? (e.g. sci fi, mystery, romance) Do you have a favourite author?
2. **When did you last watch television? What show(s) did you watch? Are those your favorite? *If no ...* What's your favorite TV show? I think I missed that show, what's it about? How often do you get a chance to watch television? When you watch the news on television do you watch the Canadian news, the American news or both? Do you have a favorite news person?**
3. **Other than the news, do you like to watch Canadian television shows or American? What's your favorite Canadian TV show? When did you see it last? What happened?**
4. Some people think there's too many American TV shows on Canadian channels. What d you think?
5. Do you go to the movies much or do you like to rent them and watch them at home? What was the last movie you saw? What was it about? Do you ever watch foreign films?

Module 15: Political Attitudes

1. I remember in the eighties, Ralph Klein got in a lot of trouble when he claimed that Alberta's crime rate was going up because of "Eastern creeps and bums". What do you think about that? How do you feel about people from the East? Do you think you'd ever move to Ontario? How about the Maritimes?
2. When you were growing up, did you know any French kids? Did you hang out with them much? Do you think it's important to be bilingual in Canada these days? Has that changed? How about in Lethbridge? Do you think you'd ever want to move to Quebec? Why/Why not? In some parts of Canada, like Montreal or Ottawa, almost everybody is bilingual. Have you ever thought you'd like to live somewhere like that?
4. There seem to be a lot of people down on the Royal Family these days. How do you feel about that? Do you think we still need a Queen? There are also some people who seem to be really taken with her. I even know people who've lived in Canada all their life, maybe even were born here, and still have a British accent? What do you think about that?
5. Some people say we're getting more and more 'American' all the time. Do you think we are? What does it mean to be more American? What does it mean to be Canadian? What Canadian things are we losing in place of American things? Do you think that it's a good thing, or a bad thing that we're getting closer to the US culturally?
6. Can you tell if someone's American just by looking at him/her? How can you tell?

Module 18: Lexicon

1. What do you call hot breakfast cereal made with oats? *If oatmeal...* Have you ever called it porridge? *If no response or other response...* Do you call it oatmeal or porridge?
2. What do you call the large piece of furniture that you sit on that you usually find in the living room? *If couch ...* Would you ever call it a chesterfield? *If no response or other response ..* Do you call it a couch or a chesterfield?
3. What do you call a piece of cloth or paper that you use to wipe your hands and face while eating? *If napkin...* Have you ever called it a serviette? *If no response or other...* Do you call it a napkin or a serviette?
4. What do you call window coverings that can be rolled up and down to keep sunshine out and people from looking in? *If shades...* Would you ever call them blinds? *If no response or other ...* Would you prefer to call them shades or blinds?
5. What do you call a roofed ground floor attachment to a house that is completely open to the outside on at least one side that you sit on and maybe drink lemonade in the summer? *If porch ...* Would you ever call it a veranda? *If no response or other...* Would you prefer to call it the porch or the veranda?
6. What's the last letter of the alphabet? *If zee ...* Would you ever call it zed? *If no response or other ...* Would you say zed or zee?

Module 19: Texts

1. My childhood was mostly uneventful until my parents moved to Canada. I was unaccustomed to living in a society that was undeniably un-American. In fact, most of my friends were unaware that this made me uncomfortable. They were under the impression that the American way of doing things was unnatural and unscrupulous and everyone knew it. At least, that's what they thought until the FLQ crisis unmasked the true face of Canadian government. At first, they were uninterested in the unrest in Quebec. Everybody just thought all those Frenchmen were ungovernable but unless practically everybody in Montreal was guilty, and I think they're too unorganized for that, those soldiers must have just marched uninvited into those peoples' homes.

2. I remember the day that I decided that Harry was gonna be my guy.¹ There was this big lout at the end of our street shooting off his mouth about how tough he was and how he could take on all the guys on our street if he wanted to. I could hear every word he was saying because I lived in the house on the corner and I was sitting right on the big old wicker couch on our porch the whole time and besides, he was talking really loud. I mean, there was no doubt in my mind that he could have roused the dead if he wanted to. All the time he was talking, he was whacking this big pipe on the bikestand and putting gouges in the fenders of Harry's new bike. I knew Harry would be mad but when he came around the corner, I could see that the guy had his wish. There was going to be a bout. Harry was really classy. He just walked up to the guy, took his pipe away and then punched him right in the mouth. Then he bowed to the crowd, jumped on his bike and rode away.

¹In retrospect, this would have been better for use with both sexes if it had read 'I remember the day that I decided that Harry was my kind of guy'.

3. It's funny how soon a rumor can seize hold in a small town. The other day, my mother was feeling ill so, since I had to step out for a minute to pick up my suit at the drycleaners anyway, I offered to stop at the drugstore next door. When I got there, I saw that Tylenol was on sale so I took it up to the druggist. He said that, considering her age, for my mother's sake, I should choose something else because Tylenol could be bad for someone with liver problems. I would hate to risk my own mother's liver so I asked him to sell me some aspirin instead. I'm always careful to take heed of these warnings when I hear them. Sara Hess, standing in the next aisle over was all ears, but who'd have thought there was anything odd about that?

The next day, I was in my usual seat in the coffee shop, taking a cautious sip from a very hot bowl of soup, when Ed Oz sits down, sets his toque down on the table and says, "Now, what's this about your mother having a drinking problem?". I looked up in a haze and said, "Saints preserve us, Ed. Get your mind out of the sewer. Who's been giving you a hose job? My mom is eighty years old and she's never even broken the seal on a bottle of hooch in her life. I should wash your mouth out with soap to teach you a lesson for saying a fool thing like that." He hid his head and muttered that everyone knew my mother was always sick with something. I was so upset that I knocked over my soup. The bowl was pretty full and the soup started to seep into everything on the table including Ed's toque and then went right over the edge into my tote bag. "Oops", I said, "I'm sorry. I didn't mean to soak you." Luckily, the waitress rushed to our aid but I'm afraid we created quite a scene.

It wasn't until later that I made sense of the whole thing. I was walking in the neighbourhood park when I realized there was an itch in my foot and it was sore. I stopped to take my sock off and I looked up and there was Sara Hess again. Her face was covered with soot. I guess she'd been hiding behind the little picnic

barbecue. I told her about the accident in the restaurant. About an hour later, I realized that I still owed the waitress for the soup. I rushed back to the cafe but before I could pay the bill, the waitress put me off. "Just a 'sec, sir'", she said. "The tape on the register is stuck. By the way," she said, "How's your foot?" At that moment, I decided to seek out Sara Hess and tell her to mind her own business.

Module 20: Word List

hide	sane
hell	hole
heck	full
sin	hull
seek	hoot

hike	head
hid	heel
hill	hoax
hale	fool
scene	haughty
sun	

	sound
hen	hone
hick	hack
oats	thud
fawn	haul

house	hate
peg	Hal
hook	soon
hat	hot
hag	hock
hog	

ice
fig
hake
suck
fond

BIBLIOGRAPHY

- Ahrend, E. R. (1934). Ontario speech. *American Speech*. 9(2): 136-139.
- Aitken, A. J. (1981). The Scottish vowel-length rule. In M. Benskin & M. L. Samuels (Ed.), *So Meny People Longages and Tonges*. Edinburgh: Benskin and Samuels. 131-157.
- Alba, R. D. & Chamlin, M. B. (1983). A preliminary examination of ethnic identification among whites. *American Sociological Review*. 48: 240-247.
- Allen, H. B. (1973). *The Linguistic Atlas of the Upper Midwest: In Two Volumes*. 1. Minneapolis: University of Minnesota Press.
- Allen, H. B. (1976). *The Linguistic Atlas of the Upper Midwest: In Three Volumes*. 3. Minneapolis: University of Minnesota Press.
- Allen, H. B. (1989). Canadian raising in the upper midwest. *American Speech*. 64: 74-75.
- Allport, G. W. (1976). Formation of in-groups. In A. Dashofsky (Ed.), *Ethnic Identity in Society*. Chicago: Rand McNally College Publishing Company. 73-89.
- Anderson, J. (1993). Morphology, phonology and the Scottish vowel-length rule. *Journal of Linguistics*. 29: 419-430.
- Avis, W. (1973). The English language in Canada: A report. *Current Trends in Linguistics*. 10: 40-74.
- Avis, W. (1979). The phonemic segments of an Edmonton idiolect. In T. Vincent, G. Parker & S. Bonnycastle (Ed.), *Walter S. Avis: Essays and Articles*. Kingston, Ontario: Royal Military College of Canada. 127-141.
- Avis, W. S. (1978/1983). Canadian English in its North American context. *Canadian Journal of Linguistics*. 28(1): 3-15.
- Baar, E. (1983). Patterns of selective accentuation among Niagara Mennonites. *Canadian Ethnic Studies*. 15(2): 49-56.
- Bailey, R. W. (1982). The English language in Canada. In R. W. Bailey & M. Görlach (Ed.), *English as a World Language*. Ann Arbor: University of Michigan Press. 134-176.
- Bailey, R. W. (1991). Dialects of Canadian English. *English Today*. 27: 20-25.
- Bainbridge, W. S. & Stark, R. (1982). Church and cult in Canada. *Canadian Journal of Sociology*. 7: 351-366.
- Baker, M. P. (1986). *Some Functions of Mormon In-Group Language in Creating and Maintaining Ethnic Boundaries*. unpublished Ph.D. dissertation, Arizona State University.

- Banton, M. (1978). *A Theory of Racial and Ethnic Relations: Rational Choice*. University of Bristol: Working Papers on Ethnic Relations, 8. Research United on Ethnic Relations.
- Barth, F. (1969). Introduction. In F. Barth (Ed.), *Ethnic Groups and Boundaries: The Social Organization of Culture Difference*. Boston: Little, Brown. 9-38.
- Beckman, M. E. & Edwards, J. (1990). Lengthenings and shortenings and the nature of prosodic constituency. In J. Kingston & M. E. Beckman (Ed.), *Papers in Laboratory Phonology I: Between the Grammar and Physics of Speech*. Cambridge: Cambridge University Press. 152-178.
- Beecher, M. U. (1990). Mormon women in southern Alberta. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 211-230.
- Bennett, J. W. & Kohl, S. B. (1995). *Settling the Canadian-American West*. Lincoln: University of Nebraska Press.
- Bennett, J. W. & Sherburne, D. S. (1992). Ethnicity, settlement and adaptation in the peopling of the Canadian-American west. In J. Burnet, D. Juteau, E. Padolsky, A. Rasporich & A. Sirois (Ed.), *Migration and the Transformation of Cultures*. Toronto: Multicultural History Society of Ontario. 191-219.
- Berdan, R. (1978). Multidimensional analysis of vowel variation. In D. Sankoff (Ed.), *Linguistic Variation: Models and Methods*. New York: Academic Press. 149-160.
- Blishen, B. R. & McRoberts, H. A. (1976). A revised socioeconomic index for occupations in Canada. *Canadian Review of Sociology and Anthropology*. 13: 71-79.
- Bloomfield, L. (1933). *Language*. New York: Holt.
- Bloomfield, M. W. (1948/1973). Canadian English and its relation to eighteenth century American speech. In J. Chambers (Ed.), *Canadian English: Origins and Structures*. Toronto: Methuen. 3-11.
- Borden, G. J. & Harris, K. S. (1984). *Speech Science Primer*. Baltimore/London: Williams and Wilkins.
- Brinkerhoff, M. B. & Grandin, E. (1991). Contemporary reactions to Mormonism: A case study from rural Alberta. *Canadian Journal of Sociology*. 16: 165-185.
- Britain, D. (1997). Dialect contact and phonological reallocation: "Canadian raising" in the English Fens. *Language in Society*. 26: 15-46.
- Brown, V. R. (1991). Evolution of the merger of /v/ and /ɛ/ before nasals in Tennessee. *American Speech*. 66(3): 303-315.
- Campbell, B. L. & Campbell, E. E. (1976). The Mormon family. In C. H. Mindel & R. W. Habenstein (Ed.), *Ethnic Families in America: Patterns and Variations*. New York: Elsevier. 379-412.

- Campbell, B. L. & Campbell, E. E. (1988). The Mormon family. In C. H. Mindel, R. W. Habenstein & R. Wright Jr (Ed.), *Ethnic Families in America: Patterns and Variations*. New York: Elsevier. 456-494.
- Card, B. Y. (1990). Charles Ora Card and the founding of the Mormon settlements in southwestern Alberta, North-West Territories. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 77-107.
- Carr, P. (1992). Strict cyclicity, structure preservation and the Scottish vowel-length rule. *Journal of Linguistics*. 28: 91-114.
- Cedergren, H. J. & Sankoff, D. (1974). Variable rules: Performance as a statistical reflection of competence. *Language*. 50(2): 333-355.
- Chambers, J. K. (1973). Canadian raising. *Canadian Journal of Linguistics*. 18: 113-135.
- Chambers, J. K. (1980). Linguistic variation and Chomsky's 'homogeneous speech community'. In A. M. Kinloch & A. B. House (Ed.), *Papers from the Fourth Annual Meeting of the Atlantic Provinces Linguistic Association*. Fredericton, N.B.: University of New Brunswick. 10-31.
- Chambers, J. K. (1981). The Americanization of Canadian raising. In M. F. Miller, C. S. Masek & R. A. Hendrick (Ed.), *Papers from the Parasession on Language and Behavior*. Chicago: Chicago Linguistic Society. 20-35.
- Chambers, J. K. (1984). Group and individual participation in a sound change in progress. In H. J. Warkentyne (Ed.), *Papers from the Fifth International Conference on Methods in Dialectology*. Victoria, British Columbia: Department of Linguistics, University of Victoria. 119-136.
- Chambers, J. K. (1986). Three kinds of standard in Canadian English. In W. C. Loughheed (Ed.), *In Search of the Standard in Canadian English*. Kingston, Ontario: Strathclyde Language Unit, Queen's University. 1-15.
- Chambers, J. K. (1987). Introduction: comparative sociolinguistics of /aw/ fronting. *Toronto Working Papers in Linguistics*. 7: 104-108.
- Chambers, J. K. (1989). Canadian raising: Blocking, fronting, etc. *American Speech*. 64: 75-88.
- Chambers, J. K. (1991). Canada. In J. Cheshire (Ed.), *English Around the World*. Cambridge: Cambridge University Press. 89-107.
- Chambers, J. K. (1995). *Sociolinguistic Theory*. Oxford: Basil Blackwell.
- Chambers, J. K. (1997). *The new continental standard in North American English*. Paper presented at NWAVE 26. Quebec City.
- Chambers, J. K. & Hardwick, M. (1986). Comparative sociolinguistics of a sound change in Canadian English. *English World-Wide*. 7: 123-146.
- Chomsky, N. & Halle, M. (1968). *The Sound Pattern of English*. New York: Harper and Row.

- Chrisman, N. J. (1981). Ethnic persistence in an urban setting. *Ethnicity*. 8: 256-292.
- Christensen, H. T. (1972). Stress points in Mormon family culture. *Dialogue: A Journal of Mormon Thought*. 7: 20-34.
- Church of Jesus Christ of Latter Day Saints. (1992). *Temple and Family History Leadership Handbook*. Salt Lake City: Church of Jesus Christ of Latter Day Saints.
- Church of Jesus Christ of Latter Day Saints. (1993). *A Member's Guide to Temple and Family History Work*. Salt Lake City: Church of Jesus Christ of Latter Day Saints.
- Clarke, S. (1984). The role of linguistic feature types in dialect stereotyping. In J. Barnstead et. al. (Ed.), *Papers from the Eighth Annual Meeting of the Atlantic Province Linguistic Association*. Halifax: Dalhousie University Press. 19-32.
- Clarke, S. (1993). The Americanization of Canadian pronunciation: a survey of palatal glide usage. In S. Clarke (Ed.), *Focus on Canada*. Amsterdam and Philadelphia: John Benjamins. 85-108.
- Clarke, S., Elms, F. & Youssef, A. (1995). The third dialect of English: Some Canadian evidence. *Language Variation and Change*. 7(2): 209-228.
- Clyne, M. & Bouma, G. D. (1994). Talking about one's life and faith: A pilot project on language and religion. *Text*. 14(2): 167-184.
- Cohn, A. (1993). *Consonant-vowel interactions in Madurese: The feature lowered larynx*. Paper presented at Chicago Linguistic Society. Chicago Linguistic Society.
- Cook, S. J. (1969). *Language Change and the Emergence of an Urban Dialect in Utah*. unpublished Ph.D. dissertation, University of Utah.
- Dailey-O'Cain, J. (1997). "Canadian" raising in a midwestern U.S. city. *Language Variation and Change*. 9(1): 107-120.
- Dashefsky, A. (1975). Theoretical frameworks in the study of ethnic identity: toward a social psychology of ethnicity. *Ethnicity*. 2: 10-18.
- Dashefsky, A. (Ed). (1976). *Ethnic Identity in Society*. Chicago: Rand McNally College Publishing Company.
- Davis, L. W. (1985). The problem of social class grouping in sociolinguistic research. *American Speech*. 60(3): 214-221.
- Davison, J. (1987). On saying /aw/ in Victoria. *Toronto Working Papers in Linguistics*. 7: 109-122.
- Dawson, C. A. (1936). *Group Settlement: Ethnic Communities in Western Canada*. Toronto: MacMillan.
- Dawson, C. A. & Young, E. R. (1940). *Pioneering in the Prairie Provinces: The Social Side of the Settlement Process*. 7. Toronto: Macmillan.

- de Wolf, G. D. (1992). *Social and Regional Factors in Canadian English*. Toronto: Canadian Scholar's Press.
- de Wolf, G. D. & Hasebe-Ludt, E. (1988). Canadian urban survey methodology: a summary of research techniques and results. In A. Thomas (Ed.), *Methods in Dialectology: Proceedings of the Sixth International Conference held at the University College of North Wales*. Clevedon: Multilingual Matters. 55-66.
- DeCamp, D. (1971). The pronunciation of English in San Francisco. In J. V. Williamson & V. M. Burke (Ed.), *A Various Language: Perspectives on American Dialects*. New York: Holt, Rinehart and Winston, Inc. 549-569.
- den Otter, A. A. (1982). *Civilizing the West: The Galts and the Development of Western Canada*. Edmonton: University of Alberta Press.
- den Otter, A. A. (1990). A congenial environment: Southern Alberta on the arrival of the Mormons. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 53-74.
- Denes, P. B. & Pinson, E. N. (1993). *The Speech Chain*. New York: W.H. Freeman and Company.
- Denning, K. (1989). *The Diachronic Development of Phonological Voice Quality, with Special Reference to Dinka and the Other Nilotic Languages*. unpublished Ph. D. dissertation, Stanford University.
- Di Paolo, M. (1988). Pronunciation and categorization in sound change. In K. Ferrera, B. Brown, K. Walters & J. Baugh (Ed.), *Linguistic Change and Contact: Proceedings of the Sixteenth Annual Conference on New Ways of Analyzing Variation*. Austin, Texas: University of Texas, Department of Linguistics. 84-92.
- Di Paolo, M. (1993). Propredicate *do* in the English of the intermountain west. *American Speech*. 68(4): 339-356.
- Di Paolo, M. & Faber, A. (1990). Phonation differences and the phonetic content of the tense-lax contrast in Utah English. *Language Variation and Change*. 2(2): 155-204.
- Dinkhalter, W. C. (1954). *A Sociological Analysis of the Official Literature of The Church of Jesus Christ of Latter Day Saints*. Unpublished thesis, University of Denver.
- Doucette, L. & Edwards, J. (1987). Ethnic salience, identity and symbolic ethnicity. *Canadian Ethnic Studies*. 19: 52-62.
- Dubois, S. & Horvath, B. M. (1998). *From accent to marker: The Cajun English of Southern Louisiana*. Paper presented at NWAV(E) 27. University of Georgia.
- Easson, G. J. (1997). *Testing the apparent time hypothesis: (aw) fronting revisited*. Paper presented at NWAVE 26. Quebec City.
- Eckert, P. (1989). The whole woman: Sex and gender differences in variation. *Language Variation and Change*. 1(3): 245-267.

- Eckert, P. (1991). Social polarization and the choice of linguistic variants. In P. Eckert (Ed.), *New Ways of Analyzing Sound Change*. New York: Academic Press. 213-232.
- Eckert, P. (1996). (ay) goes to the city: exploring the expressive use of variation. In G. R. Guy, C. Feagin, D. Schiffrin & J. Baugh (Ed.), *Towards a Social Science of Language: Papers in Honor of William Labov*. Amsterdam/Philadelphia: John Benjamins Publishing Company. 47-68.
- Economist. (1998). Logged in. *The Economist* 347(8068): 79.
- Esling, J. H. & Warkentyne, H. J. (1993). Retracting of /æ/ in Vancouver English. In S. Clarke (Ed.), *Focus on Canada*. Amsterdam and Philadelphia: John Benjamins. 229-246.
- Faber, A. (1992). Articulatory variability, categorical perception, and the inevitability of sound change. In G. W. Davis & G. K. Iverson (Ed.), *Explanation in Historical Linguistics*. Amsterdam: John Benjamins. 59-75.
- Faber, A. & Di Paolo, M. (1995). The discriminability of nearly merged sounds. *Language Variation and Change*. 7: 35-78.
- Fant, G. (1967). Auditory patterns of speech. In W. Wathen-Dunn (Ed.), *Models for the Perception of Speech and Visual Form*. Cambridge, Mass.: MIT Press. 111-125.
- Feinstein, M. H. (1980). Ethnicity and topicalization in New York City English. *International Journal of the Sociology of Language*. Intl. J. Soc. Lang. 26: 15-24.
- Fishman, J. (1977). Language and ethnicity. In H. Giles (Ed.), *Language, Ethnicity and Intergroup Relations*. London: Academic Press. 15-57.
- Fishman, J. A. (1985). Language, ethnicity and racism. In J. A. Fishman, M. H. Gertner, E. G. Lowry & W. G. Milán (Ed.), *The Rise and Fall of the Ethnic Revival: Perspectives on Language and Ethnicity*. Berlin: Mouton. 3-13.
- Foster, D. W. & Hoffman, R. J. (1966). Some observations on the vowels of Pacific Northwest English. *American Speech*. (2): 119-122.
- Frazer, T. C. (1983). Sound change and social structure in a rural community. *Language in Society*. 12(3): 313-328.
- Frazer, T. C. (1994). Perception and gender in Virginia speech: The case of /aw/. *American Speech*. 69(2): 145-154.
- Giles, H. (1978). Linguistic differentiation in ethnic groups. In H. Tajfel (Ed.), *Differentiation Between Social Groups*. London/New York: Academic Press. 361-393.
- Giles, H. (1979). Ethnicity markers in speech. In K. R. Scherer & H. Giles (Ed.), *Social Markers in Speech*. Cambridge: Cambridge University Press. 251-289.
- Giles, H., Bourhis, R. Y. & Taylor, D. M. (1977). Towards a theory of language in ethnic group relations. In H. Giles & R. St. Clair (Ed.), *Language, Ethnicity and Intergroup Relations*. London: Academic Press. 307-348.

- Gordon, M. (1964). *Assimilation in American Life*. New York: Oxford.
- Görlach, M. (1991). The identity of Canadian English. In M. Görlach (Ed.), *Englishes: Studies in Varieties of English 1984-1988*. Amsterdam/Philadelphia: Benjamins. 108-121.
- Government of Canada. (1902). *Fourth Census of Canada 1901*. Ottawa: S.E. Dawson.
- Grabb, E. G. & Lambert, R. D. (1982). The subjective meanings of social class among Canadians. *Canadian Journal of Sociology*. 7(3): 297-307.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*. 78: 1360-1380.
- Gravetter, F. J. & Wallnau, L. B. (1988). *Statistics for the Behavioral Sciences*. St. Paul, MN: West Publishing Company.
- Gray, J. H. (1971). *Red Lights on the Prairies*. Toronto: MacMillan.
- Gregg, R. J. (1973). The diphthongs ai and at in Scottish, Scottish-Irish and Canadian English. *Canadian Journal of Linguistics*. 18: 136-145.
- Gregg, R. J., Murdoch, M., Hasebe-Ludt, E. & de Wolf, G. (1981). An urban dialect survey of the English spoken in Vancouver. In H. J. Warkentyne (Ed.), *Papers from the Fourth International Conference on Methods in Dialectology*. Victoria: University of Victoria. 41-65.
- Gumperz, J. (1968). The speech community. In A. S. Dil (Ed.), *Language in Social Groups: Essays By John J. Gumperz*. Stanford, California: Stanford University Press. 114-229.
- Habick, T. (1991). Burnouts versus rednecks: Effects of group membership on the phonemic system. In P. Eckert (Ed.), *New Ways of Analyzing Sound Change*. New York: Academic Press. 185-212.
- Haeri, N. (1996). "Why do women do this?" Sex and gender differences in speech. In G. R. Guy, C. Feagin, D. Schiffrin & J. Baugh (Ed.), *Towards a Social Science of Language: Papers in Honor of William Labov*. Amsterdam/Philadelphia: John Benjamins Publishing Company. 101-114.
- Harris, Z. S. (1951). *Structural Linguistics*. Chicago: University of Chicago Press.
- Hinton, L. (1987). Sound change on purpose: A study of Highland Mixtec. In K. M. Denning, S. Inkelas, F. C. McNair-Knox & J. R. Rickford (Ed.), *Variation in Language NWAV-XV at Stanford: Proceedings of the Fifteenth Annual Conference on New Ways of Analyzing Variation*. Stanford, California: Department of Linguistics, Stanford University. 197-211.
- Hinton, L., Moonwomon, B., Bremner, S., Luthin, H., Van Clay, M., Lerner, J. & Corcoran, H. (1987). *It's not just the Valley girls: A study of California English*. Paper presented at Proceedings of the Thirteenth Annual Meeting, Berkeley Linguistics Society. University of California, Berkeley.

- Hoffman, M. (1998). *Looking for a theng: the progress of lax vowel lowering*. Paper presented at NWA V(E) 27. University of Georgia.
- Hombert, J.-M., Ohala, J. J. & Ewan, W. G. (1979). Phonetic explanations for the development of tone. *Language*. 55(1): 37-58.
- Horowitz, D. L. (1975). Ethnic identity. In N. Glazer & D. P. Moynihan (Ed.), *Ethnicity: Theory and Experience*. Cambridge, Mass.: Harvard University Press. 111-140.
- Hung, H. (1987). Canadian raising à la Montréalaise. *Toronto Working Papers in Linguistics*. 7: 123-139.
- Hung, H., Davison, J. & Chambers, J. K. (1993). Comparative sociolinguistics of (aw) fronting. In S. Clarke (Ed.), *Focus on Canada*. Amsterdam and Philadelphia: John Benjamins. 247-267.
- Isaacs, H. R. (1975). Basic group identity: The idols of the tribe. In N. Glazer & D. P. Moynihan (Ed.), *Ethnicity: Theory and Experience*. Cambridge, Mass.: Harvard University Press. 29-52.
- Isajiw, W. W. (1974). Definitions of ethnicity. *Ethnicity*. 1: 111-124.
- Isajiw, W. W. (1990). Ethnic-identity retention. In R. Breton, W. W. Isajiw, W. E. Kalbach & J. G. Reitz (Ed.), *Ethnic Identity and Equality: Varieties of Experience in a Canadian City*. Toronto: University of Toronto Press. 34-91.
- Jankunis, F. J. (1972). Urban development in southern Alberta. In D. F. Jankunis (Ed.), *Southern Alberta: A Regional Perspective*. Lethbridge: University of Lethbridge. 74-85.
- Jarvis, G. K. (1990). Demographic characteristics of the Mormon family in Canada. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 281-301.
- Jensen, J. T. (1993). *English Phonology*. Amsterdam/Philadelphia: John Benjamins.
- Johnston, A. & den Otter, A. A. (1985). *Lethbridge: A Centennial History*. Lethbridge: The City of Lethbridge and The Whoop-Up Country Chapter, Historical Society of Alberta.
- Joos, M. (1942). A phonological dilemma in Canadian English. *Language*. 18: 141-144.
- Karttunen, L. (1993). Finite-state constraints. In J. Goldsmith (Ed.), *The Last Phonological Rule*. Chicago: University of Chicago Press. 173-194.
- Kaye, A. S. (1991). A so-called dialect of English. In J. R. Dow (Ed.), *Language and Ethnicity*. Amsterdam: John Benjamins. 169-181.
- Kaye, J. (1990). Whatever happened to dialect B? In J. Mascaró & M. Nespó (Ed.), *Grammar in Progress: GLOW Essays for Henk van Riemsdijk*. Dordrecht: Foris. 259-263.

- Keiser, S. H. (1996). *From Amish to Mennonite: language maintenance and language death in a Pennsylvania German community*. Paper presented at NWAVE 25. Las Vegas, Nevada.
- Keller, E. (1994). *Signalize*. 3.12. Lausanne: InfoSignal.
- Kinloch, M. (1983). The phonology of central/prairie Canadian English. *American Speech*. 58: 31-35.
- Kinloch, M. & Ismail, F. M. (1993). Canadian raising: /au/ in Fredericton, New Brunswick. *Linguistica Atlantica*. 15: 105-114.
- Kralt, J. (1990). Ethnic origins in the Canadian census. In S. S. Halli, F. Trovato & L. Driedger (Ed.), *Ethnic Demography: Canadian Immigrant, Racial and Cultural Variations*. Ottawa: Carleton University Press. 13-29.
- Kroch, A. R. (1978). Toward a theory of social dialect variation. *Language in Society*. 7(1): 17-36.
- Labov, W. (1963). The social motivation of a sound change. *Word*. 19: 273-309.
- Labov, W. (1966/1982). *The Social Stratification of English in New York City*. Washington, D.C.: Center for Applied Linguistics.
- Labov, W. (1969). Contraction, deletion, and inherent variability of the English copula. *Language*. 45(4): 715-762.
- Labov, W. (1971). Some principles of linguistic methodology. *Language in Society*. 1(1): 97-120.
- Labov, W. (1972a). The isolation of contextual styles. In W. Labov (Ed.), *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania. 70-109.
- Labov, W. (1972b). The social origins of sound change. In W. Labov (Ed.), *Locating Language in Time and Space*. New York: Academic Press. 251-265.
- Labov, W. (1972c). *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Labov, W. (1981). Resolving the Neogrammarian controversy. *Language*. 57: 267-309.
- Labov, W. (1984). Field methods of the project on linguistic change and variation. In J. Baugh & J. Sherzer (Ed.), *Language in Use: Readings in Sociolinguistics*. Englewood Cliffs, N.J.: Prentice Hall. 28-53.
- Labov, W. (1990). The intersection of sex and social class in the course of linguistic change. *Language Variation and Change*. 2(2): 205-254.
- Labov, W. (1991). The three dialects of English. In P. Eckert (Ed.), *New Ways of Analyzing Sound Change*. San Diego: Academic Press. 1-44.
- Labov, W. (1994). *Principles of Language Change: Volume 1: Internal Factors*. Oxford, UK and Cambridge, MA: Blackwell.

- Labov, W. (1996a). *Plotnik*. 2.1. Philadelphia: University of Pennsylvania.
- Labov, W. (1996b). When intuitions fail. In L. McNair, K. Singer, L. M. Dobrin & M. M. Aucoin (Ed.), *CLS 32: Papers from the Parasession on Theory and Data in Linguistics*. Chicago: Chicago Linguistic Society. 77-105.
- Labov, W., Ash, S., Boberg, C., Albergottic, J., Banuazizi, A., Bowic, D., Henderson, A., Maciejewski, T. & Orr, C. (1998). *The Phonological Atlas of North America*. Web Page. www.ling.upenn.edu/phono_atlas/maps/MapsW/Map1W.html.
- Labov, W., Cohen, P., Robbins, C. & Lewis, J. (1968). *A Study of the Non-Standard English of Negro and Puerto-Rican Speakers in New York City* Final Report. US Regional Survey.
- LaCharité, D. (1992). *The Internal Structure of Affricates*. unpublished Ph.D. dissertation, University of Ottawa.
- Ladefoged, P. (1996). *Elements of Acoustic Phonetics*. Chicago: University of Chicago Press.
- Laferriere, M. (1979). Ethnicity in phonological variation and change. *Language*. 55(3): 603-617.
- Lakoff, G. (1993). Cognitive phonology. In J. Goldsmith (Ed.), *The Last Phonological Rule*. Chicago: University of Chicago Press. 117-145.
- Lambert, R. D. & Hunter, A. A. (1979). Social stratification, voting behaviour, and the images of Canadian federal political parties. *Canadian Review of Sociology and Anthropology*. 16(3): 287-304.
- Lavender, A. D. (1975). Disadvantages of minority group membership: the perspective of a "nondeprived" minority group. *Ethnicity*. 2: 99-119.
- Le Page, R. B. & Tabouret-Keller, A. (1982). Models and stereotypes of ethnicity and of language. *Journal of Multilingual and Multicultural Development*. 3(3): 161-192.
- Le Page, R. B. & Tabouret-Keller, A. (1985). *Acts of Identity: Creole-based Approaches to Language and Ethnicity*. Cambridge: Cambridge University Press.
- Lehn, W. (1975). Vowel contrasts in a Saskatchewan English dialect. In J. K. Chambers (Ed.), *Canadian English*. Toronto: Methuen. 109-116.
- Lehr, J. C. (1988). Polygamy, patrimony, and prophecy: The Mormon colonization of Cardston. *Dialogue: A Journal of Mormon Thought*. 21(4): 114-121.
- Lerner, J. (1986). *California /æ/* unpublished manuscript. University of California, Berkeley.
- Lieberman, P. & Blumstein, S. E. (1988). *Speech Physiology, Speech Perception, and Acoustic Phonetics*. Cambridge: Cambridge University Press.
- Lillie, D. (1998). *The Utah Dialect Survey*. unpublished MA Thesis, Brigham Young University.

- Lindblom, B. E. F. & Sundberg, J. E. F. (1971). Acoustical consequences of lip, tongue, jaw, and larynx movement. *The Journal of the Acoustical Society of America*. 50(4): 1166-1179.
- Louder, D. R. (1990). Canadian Mormon identity and the French fact. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 302-327.
- Luthin, H. W. (1987). The story of California (ow): The coming-of-age of English in California. In K. Denning, S. Inkelas, F. C. McNair Knox & J. R. Rickford (Ed.), *Variation in Language. NWAV-15 at Stanford*. Stanford, California: Department of Linguistics, Stanford University. 312-324.
- Manaster-Ramer, A. (1994). */ail-raising*. Linguist List 4: 949, 1. November 10.
- Mann, M. F. & Harris, B. P. (1989). Dialect contact and dialect transition: A case study. *Working Papers of the Linguistics Circle of the University of Victoria*. 8(1): 59-73.
- Martin, W. (1965). *Kingdom of the Cult*. Minneapolis: Bethany House.
- Mauss, A. L. (1990). Mormons as ethnics: Variable historical and international implications of an appealing concept. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 332-352.
- May, D. L. (1980). Mormons. In S. Thernstrom (Ed.), *Harvard Encyclopedia of American Ethnic Groups*. Cambridge, Mass: Harvard University Press. 720-731.
- McCafferty, K. (1998a). Barriers to change: Ethnic division and phonological innovation in Northern Hiberno-English. *English World-Wide*. 19(1): 7-32.
- McCafferty, K. (1998b). Shared accents, divided speech community? Changes in Northern Ireland English. *Language Variation and Change*. 10(2): 97-121.
- McGillivray, D. (1992). Canadian English: Under-40 women are Americanizing the language. *Ottawa Citizen* Aug 26, 1992.
- McKinnic, M. & Dailey-O'Cain, J. (1998). *A perceptual dialectology of anglophone Canada from the perspective of young Albertans and Ontarians*. Paper presented at NWAV(E) 27. University of Georgia.
- Meechan, M. (1992a). *In search of the missing link: Copula contraction in Canadian English*. Paper presented at NWAV-XXI. Ann Arbor, Michigan. October 1992.
- Meechan, M. (1992b). *Register in Khmer: The Laryngeal Specification of Pharyngeal Expansion*. unpublished MA Thesis, University of Ottawa.
- Meechan, M. (1996). *One of us say milk and the other says melk: Lax vowel lowering in Canadian English*. Paper presented at NWAVE 25. Las Vegas.
- Meechan, M. (1998a). *I guess we have Mormon language: American English in a Canadian setting*. In S. Poplack (Ed.), *Perspectives on Linguistic Variation: The View from 70 Laurier, special issue of Cahiers Linguistiques d'Ottawa*. Ottawa: Department of Linguistics: University of Ottawa. 39-54.

- Meechan, M. (1998b). *There's a whole new crowd out there now: Dimensions of (aw) western style*. Paper presented at NWA VE 27. University of Georgia.
- Meinig, D. W. (1965). The Mormon culture region: strategies and patterns in the geography of the American west, 1847-1964. *Annals: Association of American Geographers*. 55: 191-220.
- Meyerhoff, M. (1994). Sounds pretty ethnic, eh?: a pragmatic particle in New Zealand English. *Language in Society*. 23: 367-388.
- Millett, D. (1975). Religion as a source of perpetuation of ethnic identity. In P. M. Migus (Ed.), *Sounds Canadian: Languages and Cultures in Multi-Ethnic Society*. Toronto: Peter Martin Associates. 105-109.
- Milroy, L. (1980). *Language and Social networks*. Baltimore: University Park Press.
- Muf'wene, S. (1996). The founder principle in creole genesis. *Diachronica*. 13(1): 83-134.
- Murdoch, M. M. (1983). *Are Canadian diphthongs on the move?* Paper presented at Annual Meeting of the Canadian Linguistic Association. Vancouver.
- Nearey, T. M. & Assmann, P. F. (1986). Modeling the role of inherent spectral change in vowel identification. *Journal of the Acoustical Society of America*. 80(5): 1297-1308.
- Nelson, L. (1952). *The Mormon Village*. Salt Lake City: University of Utah Press.
- Nespor, M. & Vogel, I. (1986). *Prosodic Phonology*. Dordrecht: Foris.
- Niedzielski, N. (1995). *Acoustic analysis and language attitudes in Detroit*. Paper presented at NWA VE 24. University of Pennsylvania.
- Niedzielski, N. (1996). *Out and about with Detroiters: Social factors and the perception of sociolinguistic variables*. Paper presented at NWA VE 25. University of Nevada, Las Vegas.
- Nylvek, J. (1992). *Canadian English in Saskatchewan: A Sociolinguistic Survey of Four Selected Regions*. unpublished Ph. D. dissertation, University of Victoria.
- Nylvek, J. (1993). A sociolinguistic analysis of Canadian English in Saskatchewan: A look at urban versus rural speakers. In S. Clarke (Ed.), *Focus on Canada*. Amsterdam/Philadelphia: Benjamins. 201-227.
- O'Dea, T. F. (1954). Mormonism and the avoidance of sectarian stagnation: a study of church, sect, and incipient nationality. *The American Journal of Sociology*. 60(3): 285-293.
- O'Dea, T. F. (1957). *The Mormons*. Chicago: University of Chicago Press.
- Owens, T. W. (1985). Testing for linguistic insecurity in language variation studies. In H. J. Warkentync (Ed.), *Papers from the Fifth International Conference on Methods in Dialectology*. Victoria, B. C.: Department of Linguistics, University of Victoria. 341-350.

- Owens, T. W. & Baker, P. M. (1984). Linguistic insecurity in Winnipeg, Canada: validation of a Canadian index of linguistic insecurity. *Language in Society*. 13: 337-350.
- Palmer, H. (1985). Patterns of immigration and ethnic settlement in Alberta: 1880-1920. In H. Palmer & T. Palmer (Ed.), *Peoples of Alberta*. Saskatoon, Saskatchewan: Western Producer Prairie Books. 1-27.
- Palmer, H. (1990a). *Alberta: A New History*. Edmonton: Hurtig Publishers.
- Palmer, H. (1990b). Polygamy and progress: The reaction to Mormons in Canada, 1887-1923. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 108-135.
- Paradis, C. (1980). La règle de Canadian Raising et l'analyse en structure syllabique. *Canadian Journal of Linguistics*. 25: 35-45.
- Parry, K. (1990). Mormons as ethnics: A Canadian perspective. In B. Y. Card, H. C. Northcott, J. E. Foster, H. Palmer & G. K. Jarvis (Ed.), *The Mormon Presence in Canada*. Edmonton: The University of Alberta Press. 353-365.
- Payne, A. (1976). *The Acquisition of the Phonological System of a Second Dialect*. unpublished Ph.D. dissertation, University of Pennsylvania.
- Payne, A. C. (1980). Factors controlling the acquisition of the Philadelphia dialect by out-of-state children. In W. Labov (Ed.), *Locating Language in Time and Space*. New York: Academic Press. 143-178.
- Picard, M. (1977). Canadian raising: the case against reordering. *The Canadian Journal of Linguistics*. 22(2): 144-155.
- Poplack, S. (1990). Variation theory and language contact: Concepts, methods and data. In *Papers for the Workshop on Concepts, Methodology and Data*. Basel: European Science Foundation. 33-65.
- Priestley, F. E. L. (1951). Canadian English. In E. Partridge & J. Clark (Ed.), *British and American English since 1900*. London: Duckers. 72-79.
- Pringle, I. (1983). The concept of dialect and the study of Canadian English. *Queen's Quarterly*. 90: 100-121.
- Pringle, I. (1985). Attitudes to Canadian English. In S. Greenbaum (Ed.), *The English Language Today: Public Attitudes to English*. Oxford: Pergamon. 183-205.
- Pringle, I. & Padolsky, E. (1983). The linguistic survey of the Ottawa Valley. *American Speech*. 58: 325-344.
- Rand, D. & Sankoff, D. (1992). *Goldvarb 2.1: A Variable Rule Application for the MacIntosh*. Montréal: Centre de recherches mathématiques: Université de Montréal.

- Reitz, J. G. (1980). Language and ethnic community survival. In J. E. Goldstein & R. M. Bienvenue (Ed.), *Ethnicity and Ethnic Relations in Canada: A Book of Readings*. Toronto: Butterworths. 111-129.
- Rickford, J. (1985). Ethnicity as a sociolinguistic boundary. *American Speech*. 60: 99-125.
- Roberts, J. (1997). Hitting a moving target: acquisition of sound change in progress by Philadelphia children. *Language Variation and Change*. 9(2): 249-266.
- Romaine, S. (1982). What is a speech community? In S. Romaine (Ed.), *Sociolinguistic Variation in Speech Communities*. London: Edward Arnold. 13-24.
- Ross, D. P., Shillington, R. & Lochhead, C. (1994). *The Canadian Fact Book on Poverty*. Ottawa: Canadian Council on Social Development.
- Ross, J. A. (1979). Language and the mobilization of ethnic identity. In H. Giles & B. Saint-Jacques (Ed.), *Language and Ethnic Relations*. Oxford: Pergamon Press. 1-13.
- Sagan, C. (1997). *The Demon-Haunted World: Science as a Candle in the Dark*. New York: Ballantine Books.
- Sankoff, D. (1982). Sociolinguistic method and linguistic theory. In L. J. Cohen, J. Los, H. Pfeiffer & K. P. Podewski (Ed.), *Logic, Methodology, Philosophy of Science VI*. Amsterdam: North Holland & Warsaw: Polish Scientific. 677-89.
- Sankoff, D. (1988a). Problems of representativeness. In U. Ammon, N. Dittmar & K. Mattheier (Ed.), *Sociolinguistics: An international handbook of the science of language and society*. Berlin: Walter de Gruyter. 899-903.
- Sankoff, D. (1988b). Variable rules. In U. Ammon, N. Dittmar & K. J. Mattheier (Ed.), *Sociolinguistics: An International Handbook of the Science of Language and Society*. Berlin: Walter de Gruyter. 140-161.
- Sankoff, D., Cedergren, H., Kemp, W., Thibault, P. & Vincent, D. (1989). Montreal French: Language, class, and ideology. In R. W. Fasold & D. Schiffrin (Ed.), *Language Change and Variation*. Amsterdam/Philadelphia: John Benjamins. 107-118.
- Sankoff, D. & Laberge, S. (1978). The linguistic market and the statistical explanation of variability. In D. Sankoff (Ed.), *Linguistic variation: Models and methods*. New York: Academic Press. 239-250.
- Sankoff, D. & Labov, W. (1979). On the uses of variable rules. *Language in Society*. 8(2): 189-222.
- Sankoff, G. (1974). A quantitative paradigm for the study of communicative competence. In R. Bauman & J. Sherzer (Ed.), *Explorations in the ethnography of speaking*. Cambridge: Cambridge University Press. 18-49.
- Sapir, E. (1921). *Language*. New York: Harcourt, Brace Inc.

- Scargill, M. H. (1955). Canadian English and Canadian culture in Alberta. *Journal of the Canadian Linguistic Association*. 1(1): 26-29.
- Scargill, M. H. & Warkentyne, H. J. (1972). The survey of Canadian English: a report. *English Quarterly*. 5: 47-104.
- Schneider, E. W. (1984). The use of the computer in American, Canadian and British English dialectology and sociolinguistics. In H. Goebl (Ed.), *Dialectology*. Brockmeyer: Bochum. 15-60.
- Scott, P. (1998). Death gamble bound to fail. *Lethbridge Herald* August 28th, 1998: A8.
- Segalowitz, N. & Garbonton, E. (1977). Studies of the non-fluent bilingual. In P. Hornby (Ed.), *Bilingualism: Psychological, Social and Educational Impacts*. New York: Academic Press. 77-89.
- Shields, C. (1997). A letter from home and the heart. *Enroute Magazine*, December: 19-22.
- Southern Alberta Institute of Religion Council. (1995). *Young Adult Handbook*. Provo, Utah: Community Press.
- Statistics Canada. (1993a). *Profile of Census Tracts in Lethbridge and Red Deer - Part A*. Publications Division.
- Statistics Canada. (1993b). *Religions in Canada*. Publications Division.
- Statistics Canada. (1994). *Profile of Census Tracts in Lethbridge and Red Deer - Part B*. Publications Division.
- Summers, W. V. (1987). Effects of stress and final consonant voicing on vowel production: Articulatory and acoustic analyses. *Journal of the Acoustical Society of America*. 82(3): 847-863.
- Tagg, M. S. & Palmer, A. E. (1968). *A History of the Mormon Church in Canada*. Lethbridge: Lethbridge Stake.
- Tagg, M. S. & Pulmer, A. E. (1978). Mormonism in America and Canada: Accommodation to the nation state. *Canadian Journal of Sociology*. 3(2): 161-181.
- Tajfel, H. (Ed). (1978a). *Differentiation Between Social Groups*. London: Academic Press.
- Tajfel, H. (1978b). Interindividual behavior and intergroup behavior. In H. Tajfel (Ed.), *Differentiation Between Social Groups*. London/New York: Academic Press. 27-60.
- Thernstrom, S. (1973). *The Other Bostonians: Poverty and Progress in the American Metropolis, 1880-1970*. Cambridge, MA: Harvard University Press.
- Thomas, E. R. (1989 [1993]). Vowel changes in Columbus, Ohio. *Journal of English Linguistics*. 22(2): 205-215.
- Thomas, E. R. (1991). The origin of Canadian raising in Ontario. *Canadian Journal of Linguistics*. 36(2): 147-170.

- Toombs, R. H. W. (1920). *Mormonism*. The Board of Home Missions and Social Service. The Presbyterian Church in Canada.
- Trigo, L. (1991). On pharynx-larynx interactions. *Phonology*. 8: 113-136.
- Trudgill, P. (1983). *Sociolinguistics: An Introduction to Language and Society*. Harmondsworth, Middlesex: Penguin Books.
- Trudgill, P. (1986). *Dialects in Contact*. New York: Basil Blackwell.
- Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (Ed.), *Social Identity and Intergroup Relations*. Cambridge: Cambridge University Press. 15-40.
- Ursenbach, M. & Jensen, R. (1976). The oft-crossed border: Canadians in Utah. In H. Papanikolas (Ed.), *The Peoples of Utah*. Salt Lake City: Utah State Historical Society. 279-301.
- van den Hoonaard, W. C. (1991). *Silent Ethnicity: The Dutch of New Brunswick*. Fredericton, N.B.: New Ireland Press.
- Vance, T. J. (1987). 'Canadian raising' in some dialects of the Northern United States. *American Speech*. 62: 195-210.
- Vogt, E. Z. & Albert, E. M. (1966). *People of Rimrock: A Study of Values in Five Cultures*. Cambridge: Harvard University Press.
- Warden, M. (1979). The phonetic realization of diphthongs. In P. R. Léon & P. Martin (Ed.), *Toronto English: Studies in Phonetics*. Ottawa: Didier. 36-47.
- Waters, M. C. (1990). *Ethnic Options: Choosing Identities in America*. Berkeley: University of California Press.
- Weinreich, U., Labov, W. & Herzog, M. (1968). Empirical foundations for a theory of language change. In W. P. Lehmann & Y. Malkiel (Ed.), *Directions for Historical Linguistics*. Austin: University of Texas Press. 95-195.
- Wells, J. C. (1982). *Accents of English*. 3: Beyond the British Isles. Cambridge: Cambridge University Press.
- White Jr., O. K. (1978). Mormonism in America and Canada: Accommodation to the nation-state. *Canadian Journal of Sociology*. 3(2): 161-181.
- Williams, F., Whitehead, J. L. & Miller, L. M. (1971). Ethnic stereotyping and judgements of children's speech. *Speech Monographs*. 38: 166-170.
- Wilson-Smith, A. (1997). Why Chrétien is rooting for Klein. *Maclean's* 110(8): 9.
- Wolfram, W. (1969). *A Sociolinguistic Description of Detroit Negro Speech*. Washington: Center for Applied Linguistics.
- Wolfram, W. (1974). *Sociolinguistic Aspects of Assimilation*. Arlington, VA: Center for Applied Linguistics.

- Wolfram, W. (1991a). *Dialects and American English*. Englewood Cliffs, N.J.: Prentice Hall.
- Wolfram, W. (1991b). The linguistic variable: Fact and fantasy. *American Speech*. 66(1): 22-32.
- Wolfram, W. (1993a). Identifying and interpreting variables. In D. Preston (Ed.), *American Dialect Research*. Amsterdam/Philadelphia: Benjamins. 193-221.
- Wolfram, W. (1993b). *The sociolinguistic vacation: Continuity and change in 'quaint' island communities*. Paper presented at NWAVE 22. Ottawa, Ontario, Canada.
- Woods, H. (1993). A synchronic study of English spoken in Ottawa: Is Canadian English becoming more American? In S. Clarke (Ed.), *Focus on Canada*. Amsterdam and Philadelphia: John Benjamins. 151-178.
- Woods, H. B. (1979). *A Sociodialectology Survey of the English Spoken in Ottawa: A Study of Sociological and Stylistic Variation in Canadian English*. unpublished Ph.D. dissertation, University of British Columbia.