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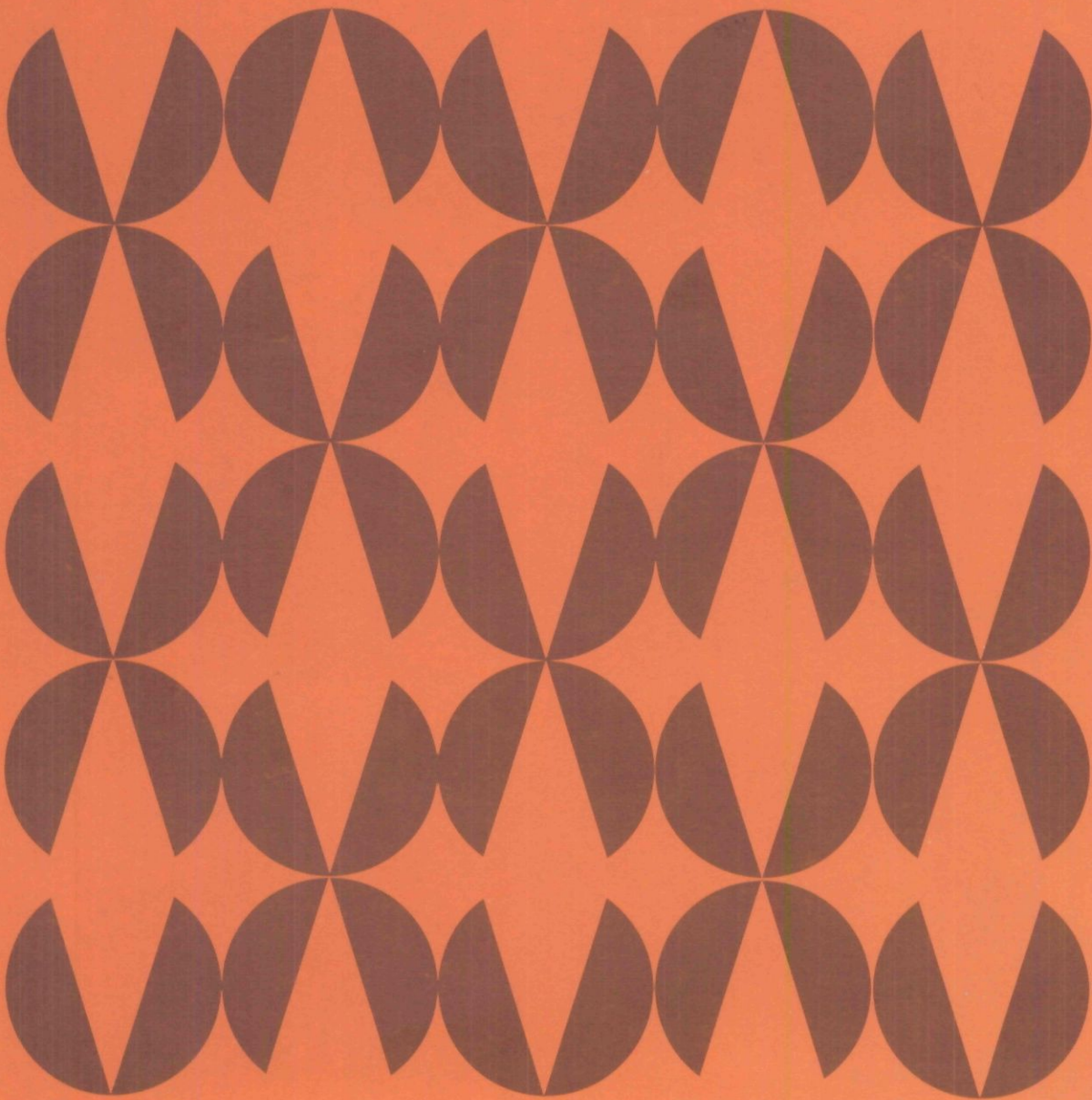
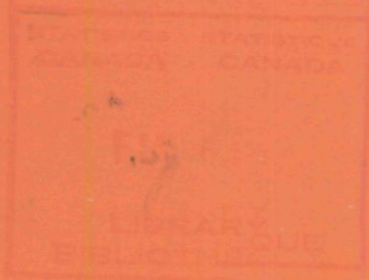
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Language Use in Canada

By John de Vries and Frank G. Vallee



Census Analytical Study

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FOREWORD

The Canadian censuses constitute a rich source of information about the condition of groups and communities of Canadians, extending over many years. It has proved to be worthwhile in Canada, as in some other countries, to supplement census statistical reports with analytical monographs on a number of selected topics. The 1931 Census was the basis of several valuable monographs but, for various reasons, it was impossible to follow this precedent with a similar program until 1961. The 1961 Census monographs received good public reception, and have been cited repeatedly in numerous documents that deal with policy problems in diverse fields such as manpower, urbanization, income, the status of women, and marketing. They were also of vital importance in the evaluation and improvement of the quality and relevance of Statistics Canada social and economic data. This successful experience led to the decision to expand the program of census analytical studies by entering into an agreement with the Social Science Federation of Canada. The present series of analyses is focused largely on the results of the 1971 Census.

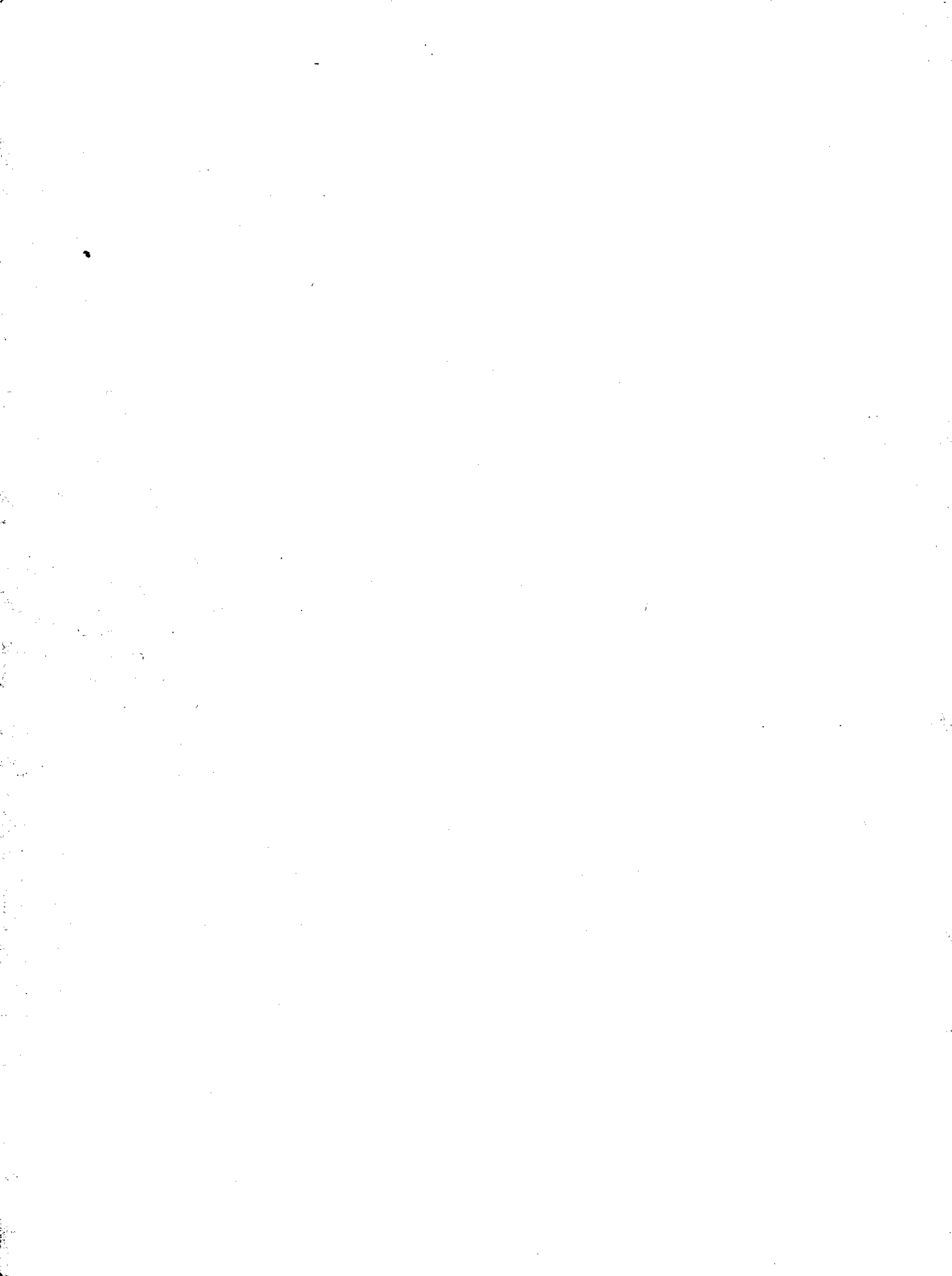
The purpose of these studies is to provide a broad analysis of social and economic phenomena in Canada. Although the studies concentrate on the results of the 1971 Census, they are supplemented by data from several other sources. These reports are written in such a way that their main conclusions and supporting discussion can be understood by a general audience of concerned citizens and officials, who often lack the resources needed to interpret and digest the rows of numbers that appear in census statistical bulletins. For these persons, interpretive texts that bring the dry statistics to life are a vital dimension of the dissemination of data from a census. Such texts are often the only means that concerned citizens and officials have to personally perceive benefits from the national investment in the census. This particular report is one of a series planned to be published concerning a variety of aspects of Canadian life, including income, language use, farming, family composition, migration, adjustment of immigrants, human fertility, labour force participation, housing, commuting and population distribution.

I should like to express my appreciation to the universities that have made it possible for members of their staff to contribute to this program, to authors within Statistics Canada who have freely put forth extra effort outside office hours in preparing their studies, and to a number of other members of Statistics Canada staff who have given assistance. An Advisory Panel of the Social Science Federation of Canada organized and conducted an author selection process for several studies, and arranged for review of seven manuscripts in their original version. In addition, thanks are extended to the various readers, experts in their fields, whose comments were of considerable assistance to the authors.

Although the monographs have been prepared at the request of and published by Statistics Canada, responsibility for the analyses and conclusions is that of the individual authors.

Peter G. KIRKHAM,

Chief Statistician of Canada.



PREFACE

In this study, we have attempted to analyse a variety of language characteristics of the Canadian population, using the data in the 1971 Census of Population as our source of information. We have tried to restrict ourselves to those analyses where the various language characteristics are dependent variables, and have deliberately excluded from the study all analyses in which language characteristics were either independent or intervening variables. Thus, the reader will find analyses of the relationship between education and bilingualism; the reader will not find analyses of the relationship between bilingualism and income.

Many of our analyses have, to the best of our knowledge no precedent, neither in Canada nor elsewhere in the world. Especially in those cases, our findings should be regarded with some caution, until additional evidence is available.

We would like to acknowledge financial support, for the research on which this study is based, from Statistics Canada. For the many complex tasks which always accompany a work of this kind we are indebted to our research assistant, Zbigniew Gryz. We would like to thank the many colleagues and students, as well as the three anonymous reviewers who commented on earlier drafts of the manuscript, as well as Dr. L.O. Stone for his editorial assistance. Special thanks are due to Frances Aubry and her staff for rigorous copy editing and preparation of final copy.

Finally, we would like to thank the members of our families for their patience and understanding in the years when this manuscript took its final shape.

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CHAPTER 1

AN OVERVIEW OF THE STUDY: AIMS AND SCOPE

1.1. Introduction

It is hardly necessary to insist on the importance of research on language characteristics in Canada. Recent political events in the country have a direct bearing on language. The Official Languages Act of 1969 sought to define Canada as officially bilingual. The declaration of a multicultural policy in 1971 implied some degree of official support for the maintenance of languages other than English and French. Legislative developments in the province of Quebec since the election of the Parti Québécois in 1976 have fortified the link between language and ideology, thus heightening the salience of language issues for the continued survival of Canadian society as we know it.

Furthermore there has been a surge of interest in the languages of the Native Indian and Inuit people as important components of their cultures and identities and attempts are under way to tackle problems of maintaining, and in some cases reviving, these languages (see, e.g., Darnell, 1977:410; Hobart, 1977:391,394). Although these problems can hardly compete with national unity for the attention of the general public and of political decision-makers, they do deserve full attention.

If language conflicts are to be resolved, good legislation devised, and workable programs developed, we need valid and reliable information about the linguistic composition of the country and the linguistic needs of its people. Systematic research can go a long way to meeting this need.

It is not our intention in this study to deal directly with issues of language policy. Rather, it is our aim to analyze the linguistic make-up of Canada's population as revealed in the 1971 Census for the purpose of identifying the demographic and sociological constraints within which policies and programs must operate.

As the history of Canada has evolved, the languages spoken by its people have been considered to fall into four basic categories: English; French; the various Native Indian languages and Inuktitut, the language of the Inuit; and "immigrant" languages such as Chinese, German, Italian, and Ukrainian, to name but a few. We have something to say about each of these language categories. However, because the census of Canada publications provide detailed information at the level of provinces and census tracts for only a limited number of separate languages, we are restricted to considering only this limited range in the study.

Although a number of different issues are studied in the chapters that follow, they have one factor in common. All the issues seek to explain the linguistic characteristics of the Canadian population. These characteristics are dependent variables, and given the fact that we are concerned only with linguistic characteristics as dependent variables, we simply describe the characteristics and analyze their social and demographic determinants without dealing with their consequences.

1.2. An Overview of Topics and Findings

In the body of the text which follows, the following topics are treated and the major findings with respect to each topic are summarized.

A. Chapter 2 discusses the census questions which formed the basis of earlier work in this area and which, naturally, form the basis for our work. This chapter also summarizes and discusses a selection of earlier research on the language characteristics of the Canadian population. Some findings of earlier research are put to the test in this study.

B. Chapter 3 analyzes "Official bilingualism", that is, the ability, as reported in the census data, to speak both English and French. Our analysis is partly descriptive in that we present an array of systematic variations in the prevalence of official bilingualism. We examine such patterns in the spatial sense using provinces, and to some degree, counties and census divisions as our units of analysis. We also examine various aspects of population composition, specifically age, sex, mother tongue and education. We then examine the joint effects of spatial and compositional characteristics on the prevalence of official bilingualism.

In addition, we attempt, in this chapter, to test several hypotheses which deal with prevalence of bilingualism, hypotheses derived from theories of second language acquisition and maintenance.

The major findings from this chapter are summarized as follows:

1. There has been an increase in the percentage of officially bilingual persons since the 1961 Census. Some of the reported increase is spurious, being the result of editing procedures (see Chapter 2), but some of it is genuine.
2. For Canada as a whole, those of French mother tongue have a much higher proportion officially bilingual than those of any other mother tongue, although in the province of Quebec those of non-French mother tongue have higher proportions bilingual than do the French.
3. Much of the variations in the prevalence of bilingualism can be explained by the notion of minority adaptation. The French are a language minority in North America and have a higher proportion bilingual than others for Canada as a whole; certain non-French mother tongues are in a minority position in Quebec and their speakers have a higher proportion bilingual than the French there.
4. The province of Quebec and the bordering counties in New Brunswick and Ontario contain more than 86% of all official bilingual persons in Canada, and the Montréal Metropolitan Area contains 35% of all official bilingual persons in Canada.
5. Males have higher proportions officially bilingual than do females.
6. The association between age and official bilingualism is curvilinear, with the maximum proportions bilingual in the young adult ages.
7. Within certain limits, there is a positive correlation between years of schooling and tendency towards official bilingualism. We infer that education has contributed more than any other sector to the increase in bilingualism.

C. Chapter 4 deals with what we call "Unofficial bilingualism", that is, a respondent's ability to speak two or more languages, at least one of which is neither English nor French. We label those who speak English and at least one additional language other than French "unofficially bilingual-English", and those who speak French and at least one additional language other than English "unofficially bilingual-French".

Our analysis of unofficial bilingualism requires the simultaneous use of several census questions on language in novel combinations.

A résumé of the major findings from this chapter follows:

1. In Canada there are as many persons who are unofficially bilingual as there are officially bilingual.
2. The great majority of unofficial bilinguals combine English rather than French with another language. In other words, individuals whose mother tongue is neither English nor French are much more likely to have English as the official language, even in Quebec.
3. Whereas the official bilinguals are most numerous in Quebec and the counties bordering it in New Brunswick and Ontario, the unofficial bilinguals are concentrated in the western provinces and in most parts of Ontario.
4. Higher percentages of unofficial bilinguals than official bilinguals are found among the older age groups.
5. The correlation of education and official bilingualism found in Chapter 3 does not hold for unofficial bilingualism.
6. The earlier the year of immigration to Canada the stronger the likelihood that the immigrant will be unofficially bilingual.
7. The younger the immigrant was on arrival in Canada, the stronger the likelihood the immigrant will become unilingually English.

D. Chapter 5 analyzes language maintenance and shift. Here we have used the census data in an innovative way: we combine the data on ethnic origin, mother tongue, and home language to analyze the variations in two forms of language shift. One form we call "ancestral shift" since it can be shown that any inferred language shift of this type must have occurred among the ancestors of the respondent. We call the other "current shift", since it can be shown that any inferred language shift of this type must have occurred during the lifetime of the respondent.

Some of the major findings from this chapter are summarized as follows:

1. Ancestral language shift, measured by percentage of a given ethnic origin with mother tongue corresponding to that origin, is overwhelmingly towards English; in Quebec there is a slight shift to French, especially on the part of people of British and Italian origin.

2. The greatest extent of ancestral shift is found among ethnic groups whose immigration histories extend back the farthest. Scandinavian, Jewish, German, and Dutch ethnic origins show the highest degree of ancestral shift to English. The lowest degree of shift is found among the Chinese and Italians. Other origins are in an intermediate position on this scale.
3. The shift of French origin to English mother tongue increases on a gradient extending outward from Quebec. It is only in the bordering counties of New Brunswick and Ontario (especially the former) that French has any appreciable retaining power, but even in these areas there is substantial shift of French origin to English mother tongue.
4. Ancestral language assimilation is highest in the Atlantic provinces, next highest in the northern territories and in Saskatchewan, Alberta and British Columbia, rather lower in Manitoba and Ontario, and lowest in Quebec.
5. Patterns of current language shift, measured by percentage of a given mother tongue speaking that mother tongue in the home, are consistent with patterns of ancestral language shift. For example, by far most of the current shift is to English rather than to French.
6. The highest rates of current shift to English are found among those of Scandinavian, Dutch, German, and Yiddish mother tongue. The highest degrees of language maintenance, apart from the English and French, are among the mother tongue categories whose peak immigration is most recent (e.g., Chinese and Italian) and among the Native Indian and Inuktitut mother tongues, especially those residing in the northern parts of provinces and the Northwest Territories.
7. For both ancestral and current shift there is a convergence towards English associated with age and with length of time in Canada. The differences between ethnic origins or mother tongues in language maintenance are shrinking, as higher proportions of these groups are Canadian-born and have at least one Canadian-born parent.

E. Chapter 6 examines patterns of language use, as indicated by the home language reported for bilingual individuals. We examine all groups of bilinguals in this chapter, using the classification of linguistic ability developed in Chapter 4. Some of the inferences made in this chapter refer to the analysis of language acquisition and of language maintenance and shift.

A résumé of the major findings from this chapter follows:

1. To a great extent bilinguals, and especially official bilinguals, continue to use their mother tongue as home language.
2. In certain areas outside Quebec there is a considerable shift to English home language among French mother tongue bilinguals.
3. Among the unofficially bilingual population, acquisition of English has a much larger probability of shift to English as the home language than does the acquisition of French.
4. Among bilinguals, home language use follows the patterns revealed in previous chapters for the prevalence of bilingualism and of both ancestral and current language shift.

5. Of the Canadian-born unofficial bilinguals those of Native Indian and Inuktitut mother tongues in the Northwest Territories and northern parts of some provinces have only a small degree of language shift - i.e., they mostly speak their mother tongues in the home.
6. Among the unofficial bilinguals who are foreign-born, the tendency to use English as the home language is strongly related to length of residence in Canada. This relationship is not as clear or strong for the unofficially French bilinguals.
7. Those whose acquisition of a second language is primarily through the school are less likely to speak that second language in the home than are those whose acquisition of the second language is primarily in settings outside school.

F. Chapter 7 analyzes patterns of linguistic and ethnic intermarriage. As in the preceding chapters, we are studying problems which until recently have not been studied very intensively in Canada on a national scale. Our approach is, again, primarily descriptive and inductive. As in the other analyses of this study, we use both spatial and compositional controls in our attempts to specify the nature of the observed patterns.

The most important findings from this chapter are summarized as follows:

1. The percentage marrying within their own ethnic group (ethnic endogamy) is highest in those regions where members of that group are most concentrated.
2. With the exception of the British, French, and Native peoples, the Canadian-born have lower rates of endogamy than do the foreign-born.
3. Marriage between persons of the same mother tongue (language or linguistic endogamy) occurs more often than marriage between persons of the same ethnic group (ethnic endogamy).
4. With linguistic endogamy we find the ranking familiar to us from previous discussions of language shift: that is, the Scandinavians have the highest rate of marriage outside their category while English, French, Italian, and Native Indian and Inuktitut mother tongues have the lowest rate, and the other mother tongues rank in between.
5. For both ethnic origin and mother tongue, endogamy generally increases with age, although there are interesting exceptions to be noted.
6. Linguistic segregation among Canadians of different mother tongues appears to be declining, especially for those of Scandinavian, Dutch, German, Polish and Ukrainian backgrounds. This is an aspect of the convergence process noted in Chapter 5.

Chapter 8 is the concluding chapter. In it some implications of the findings are discussed and several suggestions for further research are advanced.

1.3. Some Methodological Issues

Our analysis is almost completely based on data contained in Canada's 1971 Census of Population. We should not have to explain our reasons for that decision: one of the primary purposes of the research programme which provided the funding for our research was to promote analysis of the 1971

Census. Having made this basic commitment in our original research proposal, we were obviously bound by these constraints. We have only in a few instances gone beyond the 1971 Census data. Pressures of time, as well as rather limited resources and the generally poor quality of other data, made further excursions into alternative sources of information almost impossible.

We should point out that the validity and reliability of census data on linguistic characteristics are far from universally accepted, as we shall see especially in Chapter 2. There is, for example, a considerable body of opinion among professional linguists, which rejects the validity of "self-report" data. Some scholars hold the view that both the stimuli and the responses in self-administered questionnaires are too "crude" to provide the detailed information required for an acceptable analysis.

On the other hand, a variety of studies aimed at the validation of self-reported measures of linguistic characteristics has been conducted. The findings of these studies give us sufficient confidence in the validity of self-report data on language. For evidence on this statement, interested readers might wish to consult, for example, Lamy (1977) or Fishman and Terry (1969).

It is our view that despite some shortcomings, to be specified later, census data on linguistic characteristics have sufficiently high validity to be used in a systematic analysis. We will show that that our measures not only display regular patterns, thus negating the idea that we are just measuring random observations, but also that these observed variations can, to a large degree, be explained by theoretical approaches which were developed prior to, and independent of, the present data analysis. Thus, we feel that the 1971 Census data on language have at least an acceptable degree of construct validity.

There is some evidence to indicate that the 1971 Census data have acceptably high degrees of reliability as well. Brackstone (1977) discusses the various sources of error in the data and indicates the magnitude of these errors and their effect on the resulting data set. Although the data are certainly not without errors, we feel comfortable with their reliability for the purpose of the analyses in this study.

In our approach to most of the topics we analyze, our strategy is predominantly descriptive and inductive. Although there are theoretical statements and research studies dealing with some of our topics, there are many facets of the linguistic make-up of the Canadian population which, to our knowledge, have never been studied. In fact, we feel that a large share of what we attempt to do has no precedent anywhere in the scientific literature known to us. Clearly, in such areas, replications of earlier analyses are impossible. Even analyses based on theoretical perspectives are sometimes difficult to implement, either because no adequate theories can be found, or because the available data do not permit the testing of a particular theory. Thus, we have tried to test hypotheses wherever possible, and to provide descriptions and develop "theories" in those situations for which a deductive, hypothesis-testing approach was not suitable.

We have kept our methods of analysis simple for a variety of reasons. The mainstays of our analysis are the frequency table and its transformation, the percentage table. We do use a strategy of elaboration, where univariate patterns are decomposed into bivariate patterns and into more complex, multivariate structures. We also, from time to time, employ correlation and regression analyses, primarily to exploit the full range of variation available in several of our variables. This deliberate preference for the use of "simple" methods derives from our view that this study should be accessible to a large audience, rather than making sense only to a small group of professional social scientists. We are quite aware of the existence of more "powerful" or "sophisticated" modes of data analysis. Moreover, we are engaged in a number of exploratory analyses for which the superiority of more sophisticated techniques is debatable. Explorations frequently depend on finding rather subtle deviations from expected patterns. All too often, use of complex techniques leads to the failure on the part of researchers to spot deviations and to follow them up.

Although we have taken a firm stand in defense of the use of census data on linguistic characteristics, we should point out immediately that such data are not without deficiencies. In Chapter 2 we will provide, among other things, relatively detailed discussions of the language questions contained in the census and of their limitations. In addition, we have made some effort to indicate specific problems relating to our analyses. These discussions will be found in all of the analytical chapters. An awareness of these limitations is especially important in those cases where we have constructed new variables.

In addition to problems associated with single questions on language, or combinations thereof, there is yet another issue which should be raised. Since the census data are intended to refer to one specific point in time, all we get is a "cross-section" of a population, a "snapshot" so to speak. Much of what we want to do deals with the results of "processes". That is, we would like to reconstruct the various actions and decisions which produced a given condition. This is possible to some degree with the census data. For example, a comparison of an individual's place of birth with his place of residence permits us to make some inferences about past residential mobility. Such inferences are obviously imperfect. We may be able to infer that a given individual moved at least once, but we will normally not be able to say anything about the year in which a move took place, nor will we know anything about the decisions which led to a specific move. A well-known danger of such dynamic inferences from cross-sectional data becomes manifest in the analysis of data on birth cohorts or, in more common terminology, age groups. It is tempting to translate observed variations among different age groups into interpretations based on the individual's life cycle. In many cases, such inferences are either too simplistic or just plain incorrect. The truth, or falseness, of these inferences can generally only be established if we have access to additional data for a different point in time. Unfortunately, such data are only occasionally available. We have tried to move with great caution in this area, but it is likely that on occasion we have slipped up. Caveat emptor!

Another shortcoming of census data is that they do not provide us with information on social structures. Our thinking is based on, and employs, such terms as "community", "society", "institution", and so on, with the implicit assumption that these terms capture relatively structured patterns of social interaction. Even under the best of circumstances, census data only allow us to use "proxy"

measures for these terms. Unfortunately, there is normally little or no opportunity to check the validity of such assumptions. As an example, consider the term "language group". Much of the existing literature on ethnic and language relations is based on the assumption that members of a given language group would share some elements of culture. There are, in addition, at least implicit assumptions that members of such a group will interact more often with each other than with "outsiders". The census data only allow respondents to classify themselves into one language category. Such measures are obviously not very reliable as indicators of individual patterns of interaction.

A final methodological point worth noting is that a large part of our initial analysis was done with the Public Use Sample Tapes, both the individual sample and the census family sample. The Public Use Sample Tapes contain data on 1% of the Canadian population. Despite some shortcomings — the main one being that residents of Prince Edward Island, the Yukon and the Northwest Territories are not included in the sample — these files proved to be of great use to us. Our experience with the Public Use Samples is that the distributions are highly representative of those observed for the total population. Differences are generally quite small and have, so far, not led to substantially divergent conclusions. However, most of the tables in the study refer to the total population.

CHAPTER 2

LANGUAGE PATTERNS AND TRENDS IN CANADA

2.1. Introduction

In this chapter, we examine the array of ethnic and language-related questions which have appeared in the Canadian censuses of population. We then present a brief review of the research on language maintenance and shift in Canada.

A substantial share of the published research on language and ethnicity in Canada has been based on information from the population census and this study, as we have indicated, follows that tradition, in that our analyses are almost exclusively based on data from the 1971 Census of Population. It is important to discuss the language questions in some detail, and point out the problems inherent in the research applications of these data. A very good treatment of the census questions can be consulted in two recent profile studies by John Kralt, Language in Canada (1976) and Ethnic Origins of Canadians (1977).

Although there are problems with the census questions on language, and although the total array of questions does not approach the thorough coverage of language behaviour which is advocated by Lieberman (1966), the questions probably do form the most extensive set of data of this nature for any nation-state.

2.2. Canadian Census Questions on Language and Ethnic Origin

The earliest question of interest to appear in Canada's censuses of population was one designed to measure the ethnic composition of the population. A question of this type has appeared in every decennial census of Canada since 1871, with the exception of 1891. Initially, respondents were asked to indicate their "racial origin" (through 1941), while the more recent censuses asked for the "ethnic or cultural" origin of the respondents. Although the main task for respondents was to identify themselves with some racial, cultural or ethnic group by tracing their paternal ancestry, there have been exceptions to this general rule. Hurd (1941:29) noted the exceptions: for individuals in which ancestors on either the father's or mother's side belonged to the "black, yellow or brown races", the origin was listed according to the race of the non-white parent. The offspring of Indian and white marriages were, in the 1941 Census, listed as half-breeds.

In 1891, the fine-grained classification of ethnic or racial origin and nativity was replaced by a much cruder set of categories. Respondents were subdivided by nativity into "native-born" and "born outside Canada". The "native-born" group was further subdivided into a "French-speaking" group and "all others". For reasons which have not been specified by the census-takers, the 1901 Census reverts to the earlier pattern. This pattern has not changed since that time. This lengthy series of questions, and the responses thus elicited, provides some interesting clues to Canadian history, but to elaborate on these would force us to deviate too much from the topic at hand.

Questions related directly to language appeared for the first time in the census of 1901 and every decennial census since has had at least one question directly related to language characteristics. A convenient résumé on the series of language questions is contained in Figure 1 of Kralt's Profile Study on Language in Canada (1976:5), a version of which is presented in Figure A below. As Kralt (1976:4) indicates, the language data obtained in the censuses prior to 1931 are, for a number of reasons, of limited use in historical analysis. The main reason is that before 1931, data were available only for persons aged 10 or older. In addition, elaborations on the "mother tongue" concept vary sharply, as Figure A demonstrates. Finally, the published tabulations for these earlier censuses, especially for 1901 and 1911, contain very little information on language. In fact, no tabulations on the language questions appear anywhere in the census volumes for 1911.

From 1931 through 1971, we have a remarkably stable series of language questions. The "official language" question, using the same question wording and response categories throughout, measures the respondent's ability to speak English, French or both well enough to carry on a conversation.

Figure A: Language Concepts, 1901-71

Year	Official language	Mother tongue	Home language
1901	The ability to speak English, French or both well enough to carry on a conversation (English only, French only, both, neither).	Mother tongue is one's native language, the language of his race, but not necessarily the language in which he thinks, or which he speaks most fluently, or uses chiefly in conversation.	Not asked
1911	Same	Not asked	Language spoken most often in the home.
1921	Same	The language of customary speech employed by the person.	Not asked
1931	Same	The language learned by children and still spoken or the language of the home whether the person has learned it or not (e.g., infants).	Not asked
1941	Same	The first language learned in childhood if still understood by person. Persons who no longer understand the first language they learned reported the next language learned and still understood.	Not asked
1951	Same	Same	Not asked
1961	Same	Same	Not asked
1971	Same	Same	The language spoken most frequently by the person in his home.

Source: Kralt, 1976, page 5.

A slight change in the question on mother tongue occurred in 1941. While the earlier definition of one's mother tongue stipulated that the language still be spoken, the 1941 to 1971 Censuses required only that the language still be understood by the respondent. Especially for those groups which are quite far along in their assimilation to Canadian society, this change in definition obviously impaired any longitudinal analysis.

In 1971, respondents were asked, additionally, to indicate which language they spoke most often in the home. This question was added on the recommendation of the Royal Commission on Bilingualism and Biculturalism (1967:18). It also is in accordance with the recommendations regarding language and ethnicity for the 1970 Census made by the United Nations (see Shryock and Siegel, 1973:276 for details).

Although the Canadian census data on language and ethnicity are generally regarded to be of high quality, they are not without faults. Indeed, throughout the social science literature one can find critical comments on one or more of the questions. The most incisive criticism on the ethnic origin question was probably raised by Ryder (1955). The following points are worth noting:

- (a) before 1951, there was no clear definition of the concept of "origin". Hurd (1941:29) points out that the terms "racial" or "ethnic origin" have no clear and simple meaning, but asserts that respondents appear not to have had any great difficulty in answering the question;
- (b) criteria for allocating oneself to an ethnic category have been a hodge-podge of factors, including skin colour, language, religion and birthplace-cum-nationality;
- (c) responses, for several of the categories provided, fluctuate widely from census to census in a fashion which does not permit an explanation in terms of "true" movements of people. In other words, the identification of respondents with particular ethnic categories is not an unambiguous decision, but is affected by changing political conditions. The number of respondents indicating German as ethnic origin declined, for example, between 1931 and 1941. The involvement of various nations in the Second World War probably played an important role in this phenomenon; and
- (d) Ryder concludes that the Canadian data on origin are only useful for analysis if we produce a four-fold classification of British, French, Other Whites and Non-whites (1955:476).

Until recently, Ryder's article stood virtually alone as detailed published criticism of the Canadian origin statistics. Almost no reaction to it is evident on the part of those who designed the census questionnaires in the years following Ryder's article. An exception is Krotki's Dominion Bureau of Statistics Technical Memorandum #3 (1965), entitled "Some Comments on Norman Ryder's Article on Ethnic Origin". It should be noted that there is a delay of almost exactly a decade between the publication of Ryder's article and Krotki's memorandum. Krotki does little more than raise rather weak objections to some of the points in Ryder's paper. Some of these objections appear to be based on misunderstandings or on differences in interpretation. Since 1974, there has been a considerable increase in the amount of published criticism of the origin question (consider, for example: Henripin, 1974, 1975; Gryz, 1977).

Until recently, many scholars have either used the ethnic origin data uncritically, or have first cited Ryder's article as caveat and then proceeded to use the ethnic origin data anyway. For example, data on ethnic origin have frequently been used as the basis for the estimation of language shift. Comparisons between the number of individuals reporting a particular language as mother tongue, and the number of individuals reporting a corresponding ethnic origin, usually show that the former quantity is smaller than the latter. The inference is then drawn that the difference between the two quantities is equal to the number of persons belonging to that ethnic group who have shifted to English or French mother tongue. Given the way in which an individual's ethnic origin is determined, however, it is possible that this assimilation took place in an earlier generation. Recent publications (e.g., Henripin, 1975:135ff) show an awareness of the need to take into account the distinction between what we call ancestral and current language shift (see Chapter 5 of this study).

Given all the difficulties we identified in the ethnic origin question, our conclusion is that of all the census questions available, the one on ethnic origin tells us the least about language characteristics.

Although the question about mother tongue appears to give a better measure of current language characteristics of the Canadian population it, too, is not without problems. We already noted the difference in definitions between 1931 and 1941. With either definition, that is, whether the language first learned in childhood is still spoken (before 1941), or only understood (1941 and after), it is safe to assume that some connection between the respondent and the language still exists. We should realize that the census definitions enable individuals who are in the process of changing their linguistic behaviour, to "change" their mother tongue. Once an individual is no longer able to understand the language first learned in childhood, another language, learned more recently, becomes the mother tongue. Indeed, Lieberman has suggested that this has occurred to a slight degree between the 1951 and 1961 Censuses (1966:146-147; 1970:17). Further discussion on the issue of redefining mother tongue as well as an account of a cohort analysis of the intercensal changes in mother tongue distribution up to 1971, is presented by Vallee and de Vries (1975:28-33).

Another problem of the mother tongue question is that multiple responses were not permitted in the 1971 Census. (We are happy to report that the 1976 Census has permitted multiple responses to the question.) Thus, for 1971, we have no information on the number of individuals who learned two or more languages simultaneously in childhood. Evidence that there are substantial numbers of such people in Canada is given in a survey sponsored by the Department of the Secretary of State in 1975 and carried out as a supplement to the Monthly Labour Force Survey. This survey asked the mother tongue question in the same phrasing as was used in the census. However, one unique response category was added: "Both English and French". On the basis of the survey responses, it can be estimated that approximately 300,000 persons in the target population (persons 15 years or older, in the civilian non-institutional population of Canada - but excluding residents of the Yukon and Northwest Territories) claimed having learned English and French simultaneously as mother tongue (see Castonguay, 1977:8).

In the 1971 Census, respondents were asked to fill only one circle among the following as "the language first learned in childhood and still understood":

- o English
- o French
- o German
- o Italian
- o Other (specify)

Note that there were four "mark-in" categories as well as a "write-in" option. Where persons entered more than one language as their mother tongue, only one was selected on the basis of a very detailed editing procedure. This procedure gave preference to the "mark-in" languages over the "write-in" option. If two "mark-in" circles were filled, selection was based on the darkness of the pencil marks (see Kralt, 1976:7 for details). Because no tallies were kept of the number of responses edited, or of the results of such edits, there is no way in which we can estimate the effect of the editing procedures on the mother tongue data.

Despite these shortcomings, and despite the fact that the mother tongue question is not designed to provide information on language use in everyday life, the linguistic "content" of the mother tongue question is undoubtedly more meaningful than that of the ethnic origin question.

The question on official language, while giving no information on actual language use, permits us to make some more reliable inferences about language behaviour than either the mother tongue question or the ethnic origin question. Respondents were queried on their ability to speak English or French well enough to carry on a conversation. Four response categories are provided: English Only; French Only; Both English and French; Neither English nor French. The Instruction Booklet which accompanied the 1971 Census questionnaires constrained respondents' interpretation of this question by specifying that they should report only those languages in which they were "able to carry on a conversation of some length on various topics". Because almost all of the data in the 1971 Census were collected by a self-enumeration method, one might suspect that individual interpretations of what is meant by "conducting a conversation" would vary from the ability to buy a loaf of bread in the supermarket to having discussions about national unity at cocktail parties. However, there is evidence to suggest a generally high correlation between self-reported language characteristics, and measures obtained by more probing interview schedules (Lamy, 1977), or various tests measuring components of linguistic proficiency (Fishman and Terry, 1969).

Another point to note about the official language data is that editing procedures used by Statistics Canada resulted in some "corrections", inflating the number of officially bilingual persons. Specifically, individuals whose mother tongue was English, but who responded "French Only" to the official language question, would have had their response to the official language question changed to "Both English and French". The same decision-rule was applied to persons whose mother tongue was French but who responded "English Only" to the official language question. In our comments on the mother tongue question, we reported that there is evidence that some individuals do "forget" their mother tongue; editing procedures such as those specified here implied that persons who learned English or French as their first language could not forget that language.

The 1961 Census did develop into a major source for studies of official bilingualism, language maintenance and shift by researchers outside the federal government. It is hard to say how much of this research was inspired by the activities of the Royal Commission on Bilingualism and Biculturalism, launched in 1963. Although much language-related research was sponsored directly by the Commission, the only study of language maintenance and shift carried out for it was "Étude des aspects démographiques des problèmes ethniques et linguistiques du Canada" by Henripin, Charbonneau and Mertens. It was never published, although frequent reference is made to it in Volume I of the Commission's report, The Official Language (1967) and in Volume IV, The Cultural Contribution of the Other Ethnic Groups (1969). Because the 1961 Census did not contain the home language question, Henripin et al. based their analyses on the data on ethnic origin, mother tongue and official languages, using provinces, counties and census divisions, and the larger cities as their spatial units of analysis.

In 1967, the year in which Volume I of the Commission's report appeared, Richard Joy published his book Languages in Conflict, a work of historical demography which analyzes the geographic dispersion of Canada's French-speaking populations, and advances historical explanations for changes in these patterns of dispersion. Perhaps the most important contribution of this work is a clear delineation of "linguistic regions" of Canada. These regions are built up from counties and census divisions, grouped according to the composition of the population by mother tongue and official language. Joy has since produced several additional papers, refining and developing his initial work and updating it on the basis of the 1971 Census data (see, for example, Joy, 1977).

The division of Canada into these linguistic regions provided a framework for subsequent analyses of the historical, demographic and sociological characteristics of these zones. (See, for an example, Vallee and Dufour, 1974.) It also influenced the research carried out for the Bilingual Districts Advisory Board (e.g., Cartwright, 1976).

Since 1967, apart from the works just mentioned, a large number of reports, papers and books have appeared which use census data to analyze patterns and trends in language maintenance and shift among English and French speakers in Canada. With few exceptions, to be mentioned presently, most of these studies are restricted to the description of patterns and trends at various levels of aggregation — Canada, the provinces or specified metropolitan areas. Moreover, several of these studies contain projections of these observed trends to some future date. Especially among the studies conducted by French-speaking researchers, there is considerable speculation about the political implications of the observed trends and the projected developments. Examples of this concern can be seen in the many articles which have appeared in recent years in the Cahiers Québécois de Démographie, one issue of which (Volume 5, Number 3) is given to the predicaments of the French language. Notable studies on this topic include Arès, 1975; Castonguay, 1976a; Henripin, 1974, 1975; and Maheu, 1970. Understandably, these authors are chiefly concerned with the future of the French language and culture in Canada. Given that overriding concern, especially in the light of the declining rate of natural increase in Quebec, these authors have paid little attention to bilingualism as a topic in itself. Moreover, they have not shown much concern with alternative explanations of the observed patterns. Consequently, attention is paid to only a very restricted set of variables, primarily demographic or ecological in nature, such as regional location, population density, age and sex.

As an example of this type of study, we mention the work of Robert Maheu. In his Les Francophones du Canada (1970), he undertakes a study of age-specific rates of assimilation of Francophones to English, for the census data from 1941 to 1961. These rates are then extrapolated through 1991 under various assumed patterns of fertility and migration. An outstanding feature of the analysis, not used by earlier researchers in this genre, is the use of birth cohorts. As do the other authors we named, Maheu also pays attention to the effects of regional location.

In Henripin (1975:136), we find a brief résumé of the findings of many of these studies:

- (a) the shift from French to English increases in intensity as the distance from the province of Quebec increases, especially among the younger age groups living in areas where the French-speaking population forms only a small proportion of the total population;
- (b) the retention of French is strong in Quebec, where French "losses" to English are counterbalanced by French "gains" from English;
- (c) immigrants adopt English in greater numbers than they adopt French, even in the province of Quebec; and
- (d) marriage to a non-Francophone partner sharply increases the probability of subsequent language shift to English.

In the literature under review, few studies go beyond a limited set of variables and attempt to provide more elaborate explanations for the observed phenomena. A notable exception is Lieberman's Language and Ethnic Relations in Canada (1970). The title is misleading for the book contains very little discussion of languages other than English and French.

Lieberman relies heavily on census data up to and including 1961 but, unlike Joy, supplements this with data from other sources such as the language or languages used in the yellow pages of the telephone directories in several cities, and in employment advertisements in Montréal newspapers. The two topics discussed most extensively in this study are the causes of bilingualism and mother tongue maintenance. Following an orientation spelled out earlier by Fishman (1966), Lieberman argues that bilingualism is a necessary but not a sufficient condition for intergenerational mother tongue shift. He brings in a variety of approaches and data, and a large number of indices, some of which appear to have been developed especially for this particular analysis. In an introductory statement, Lieberman sets the study of "quantitative importance of a minimal number of forces" as his goal rather than using a very large array of explanatory variables. He states:

"Language behavior is viewed as a form of adaptation to a set of institutional and demographic conditions in the society, namely, population composition, both linguistic and ethnic, the degree of segregation, the occupational forces generated by the industrial structure of the society, and age." (1970:14).

Estimates of the number of persons whose responses were changed by this editing procedure, and some idea of the direction and magnitude of the distortion resulting from it are given by Kralt (1976:7). He observes that the edits "resulted in an inflated estimate of the extent to which Canadians classify themselves as 'Bilingual'". Vallee and de Vries (1975:20) provide the following figures:

- (a) English Only reported as 14,469,540, underreported by 97,000;
- (b) French Only reported as 3,879,225, underreported by 32,000;
- (c) both English and French reported as 2,900,155, overreported by 129,000; and
- (d) neither English nor French reported as 319,360, not affected.

Aside from illustrating the magnitude of the effects of the editing, these figures give us a clue to the number of persons who, according to the information provided in the 1971 Census questionnaire, have forgotten their mother tongue. For example, there are 97,000 persons of French mother tongue who reported being able to speak English only. This represents 1.7% of the total French mother tongue population.

The most recent addition to the battery of census questions on language, "what language do you most often speak at home now?" was welcomed by those interested in language matters in Canada. It is the only question in the 1971 Census which provides information on actual language use. However, certain limitations of the question, and of the data based on it, have been mentioned by various authors. One of these limitations, which restrains respondents from mentioning more than one language, is shared with the mother tongue question. Obviously, there are many homes where two or more languages are spoken with more or less equal frequency. Although the intent of the question is to elicit responses about an individual's language use, the phrasing of the question unfortunately permits the alternative interpretation of "collective" language use. In cases where respondents did indicate use of more than one language, editing procedures similar to those described for the mother tongue data reduced these multiple mentions to a single response.

There is probably another bias towards uniformity at the household level. It is likely that in most households one individual would fill out the questionnaire for all household members. In cases where household members used two or more languages with roughly equal frequency, we would suspect that the person reporting the information would record one and the same language as home language for all members. Thus, the resulting data may tell us more about the linguistic characteristics of households than about the language use of individuals.

Finally, we should note that language behaviour is, for many persons, a multifaceted phenomenon. The field of linguistics uses the concept of "domains" to organize the different facets. These domains are, to a large degree, comparable to what in sociology is called "institutions". Although the linguistic literature presents different schemes to delineate the different domains, there is a high degree of consensus that these domains include the family, the school, the church, the work place and the peer group (friends). (See de Vries, 1977; Darbelnet, 1977; and the references cited there for a discussion of the concept of domains.) The home language question obviously measures, at best, language use in one of these domains, the home. Regrettably, no census data provide information language use in other domains.

2.3. A Brief Overview of Past Research on Language in Canada

A recent survey of the research enterprise on language in Canada (Coons, 1977) impresses one with the wide range and great variety of studies which have some relevance to language. Using many different methods of gathering their data, anthropologists, demographers, linguists, political scientists, psychologists, and sociologists try to answer many different questions about such topics as language acquisition, the behaviour and attitudes of people with different language background in settings where they intermingle, and conflicts over language rights. Of this rather impressive body of literature, we select for special attention only those studies which use as their "universe" the total Canadian population, or the population of an entire province or region, or an ethnic group. Because of their scope, studies in this category tend to work with single methods of data gathering. The mainstay is the sequence of data on language and ethnic origin made available in the census of population, but most recent studies have also made use of national surveys.

The earliest work of this kind is formed by a sequence of three census monographs in which the ethnic and racial origins, language composition, nativity and nationality of the Canadian population were studied (Hurd, 1929; 1937; 1941). The main emphasis in these monographs, based on data from the censuses of 1921, 1931 and 1941 respectively, was on the assimilation of immigrants into Canadian society. With regards to language behaviour, this concern manifested itself with the analysis of the acquisition of English or French by individuals whose mother tongue was not one of the official languages. Somewhat surprisingly, at least as seen from a contemporary perspective, no effort was made in these monographs to analyze the available information on official bilingualism. In fact, very little of the discussion in any of the three monographs is pertinent to the analysis of relations between the English and French segments of the Canadian population. To illustrate, this, we can briefly summarize the pertinent components of the 1941 Monograph: Chapter 9 deals with "language" in a total of six pages (126-131). The largest part of this chapter (pages 127-130) deals with those unable to speak either official language, while the next largest portion (pages 130-131) deals with the acquisition of English or French by people with "other" mother tongues.

The Canadian government's interest in the analysis of linguistic aspects of ethnicity and the adaptation of immigrants appears to have declined sharply in the years following the Second World War. The 1941 Census monograph was only released under restricted distribution in 1964. The otherwise very extensive programme of monographs based on the 1961 Census did not contain any single, self-contained study of ethnicity or language characteristics, and, those monographs which did use breakdowns of the population by ethnicity or language tended to be restricted to use of the not very reliable ethnic origin data, occasionally supplemented with data on mother tongue.

In short, the census monographs from 1921 through 1961 - precursors, in a sense, of the present study - provide much more detailed information on speakers of one or neither of the official languages than on official language bilinguals or on such topics as retention of, and shift from, the French language.

We will deal with various aspects of Lieberson's analysis during the following chapters. Here, we mention only a few of the highlights of that analysis. Lieberson showed that the proportion bilingual among Francophones varied inversely with the degree of residential segregation. Segregation was positively correlated with intergenerational mother tongue retention among the French. Several of the preceding studies had made similar points, but Lieberson goes much further in demonstrating the complexity of the causal mechanisms which explain these patterns.

Lieberson notes a sharp rise in second language acquisition during the school ages, and argues that pressures associated with schooling are more influential than those associated with the neighbourhood (1970:22-23). He also shows, however, that both community support and schooling are of great importance where the minority language speakers (French outside Quebec, English in Quebec) are numerically weak. From the late teens onward, there are significant differences in the prevalence of bilingualism between males and females, the former showing a higher proportion than the latter. Lieberson suggests that this is caused primarily through the higher labour force participation of males. Certain sectors of the work environment are more likely than others to foster bilingualism, and thereby add a positive factor to the risk of intragenerational language shift. For example, in an English-dominated economic setting, the white collar sector makes strong demands for the use of English, even where the majority of the region's population is not originally English speaking. In the same region, demands for English usage in the manufacturing sector would not be as strong (Lieberson, 1970:27).

Lieberson also shows that the influence of the occupational sector on both bilingualism and mother tongue maintenance varies according to the population composition of regions and communities. In what he calls "lesser cities", places where those of French mother tongue form less than 10% of the population, there is a rather uniformly high rate of bilingualism for the French mother tongue population, but the intergenerational rates of retention of the French mother tongue vary considerably from city to city (1970:236ff). This is only one of several instances mentioned by Lieberson to show the independence of the causes of bilingualism from those of mother tongue maintenance and shift.

Lieberson's work contains a wealth of innovative ideas and is undoubtedly a landmark in the demographic study of language in Canada, but it suffers from some major shortcomings. Firstly, in several instances the reported findings and conclusions are a direct function of the assumptions made. Since these assumptions are not always stated explicitly, the findings for some of his analyses invite a more definitive interpretation than is warranted. Gryz (1977) clearly demonstrates this in an alternative estimation of intergenerational mother tongue shift. Secondly, many of the analyses are still somewhat superficial, seldom moving beyond the bivariate level of analysis. In some instances, multivariate techniques of analysis can show the deficiency, even incorrectness, of the bivariate analysis (see, for example, de Vries, 1975). Later in this study (especially in Chapter 3) a number of additional illustrations will be provided.

From this overview of past research on language in Canada - it should be evident that, as is the case with other facets of Canadian society, very little attention is paid to the conditions among Canada's Native people: Native Indians and Inuit. Kralt mentions regional concentrations of the speakers of Indian and Inuktitut languages (1976:28) and, very briefly, notes certain particular features of those groups; for example, their very low numbers of officially bilingual persons, and the very

low degree of use of either official language among those who have retained their mother tongue as their home language (1976:53). Vallee and de Vries (1975) stress regional differences (especially along the north-south dimension), urban-rural contrasts and age differences as accounting for variations in language maintenance and shift among Canada's Native people. They also quote a survey of language in the Mackenzie District of the Northwest Territories which showed that the single most important factor influencing language use among Native people was the extent to which a given language was the dominant language of a community (Barrados and Van Dine, forthcoming). In other words, among Native people, language density was a key factor in the explanation of patterns of language use, as well as rates of language maintenance and shift.

In addition to the works mentioned so far, all of which were based almost completely on census data, there are some studies based largely on surveys. None of these surveys deals with the total Canadian population as its universe. The Royal Commission on Bilingualism and Biculturalism sponsored a fairly large number of surveys on specified sub-populations. The main ones were the survey of Canadian teenagers (Johnstone, 1969), the study of federal civil servants (Beattie, 1975) and the survey of Canada's Armed Forces (Coulombe, n.d.). In Quebec, the Gendron Commission sponsored a number of surveys dealing mainly with language use in the work world (Gendron, 1972). An offshoot of the work of the Royal Commission is the survey of the non-official languages sponsored by the Ministry of the Secretary of State (O'Bryan et al., 1975).

The main strength of these surveys is that they often provide supplementary information on language behaviour in the domains for which census data contain no evidence. In particular, language use at work is covered rather extensively by these surveys.

Their main weakness is that they tend to work with somewhat restricted populations (only civil servants, or only teenagers) and, moreover, tend to have relatively small sample sizes. For example, the Johnstone survey uses a national sample of 1,365 respondents between the ages of 13 and 20. Especially when one wishes to do rather fine-grained spatial breakdowns of variations in language behaviour, such samples become uncomfortably small, and their utility for analysis severely restricted. We will refer only sporadically to the findings of these surveys in our own analyses.

Where do we see our own analysis fitting in with the earlier work on language in Canada summarized in this chapter? First of all the present analysis of the Canadian scene in its entirety is our universe. For most of our analyses we try to deal with the total Canadian population (in our analysis of bilingualism, for example) or, at least, with all members of the Canadian population who are exposed to a particular risk (as in our analysis of ethnic and linguistic intermarriage, where our investigations deal with all husband-wife families where both spouses are present). Secondly, we work with the data from the 1971 Census, thereby updating those studies which did not have these 1971 data at hand. Thirdly, we see the analyses in the study doing more than just updating previous studies. We have attempted to produce fairly complex explanations of the observed variations in language patterns, using a large number of special tabulations. Moreover, we are tackling several topics which none of our predecessors have touched. For example, our analysis of unofficial bilingualism, however elementary, has no counterpart in earlier studies. Similarly, our analyses of language use by bilinguals, touches new ground.

Finally, we have tried to keep an open mind in providing explanations. Being fully aware of the uncertain scientific status of post hoc explanations, we have tried to give several explanations of observed phenomena, wherever possible. In so doing, we have from time to time questioned common knowledge and long-accepted explanations. Although we would not wish to advance strong claims that our alternative explanations are superior, we hope that we may have cast some doubts on some generally accepted statements about language characteristics in Canada, and stimulate appetites for research on these issues.

CHAPTER 3

DETERMINANTS OF OFFICIAL BILINGUALISM

3.1. Introduction

As we indicated in our introductory chapter, our first analysis deals with official bilingualism, defined as the ability of individuals to speak English and French. We measure official bilingualism by the answer to the following question, "Can you speak English or French well enough to conduct a conversation?" The response categories are: (a) English only; (b) French only; (c) Both English and French; and (d) Neither English nor French.

We should reiterate that, for the purpose of this analysis, we are not concerned with the degree of linguistic competence of people; we accept the respondent's self-rated ability to speak both English and French as a valid measure of official bilingualism.

Earlier studies of bilingualism in Canada have, to a large degree, set the scene for our analysis. As we mentioned in Chapter 2, we view the works of Arès, Henripin, Joy, Lieberman and others who have done research on Canadian language trends in what we have called the "macro" category of research as the predecessors for our own analysis. These studies have pointed up the importance of such variables as ethnic origin, mother tongue, region, rural-urban residence, age, and sex for the explanation of systematic variations in the prevalence of official bilingualism in Canada.

This chapter begins with the analysis of individual characteristics which have been used to "explain" variations in the prevalence of official bilingualism. We begin with the set of explanatory variables which emerged from our predecessors' studies. As we already stressed in our introductory chapter, we consider several of these independent variables jointly, rather than separately, in the hope of isolating the separate effects which each of these variables has on official bilingualism.

In the second part of the chapter, our emphasis shifts from study of the bilingualism of individuals to study of the prevalence of bilingualism in counties and census divisions. In Chapter 2, we indicated that there are quite distinct geographical variations in virtually all aspects of language use in Canada. It can be argued that the contextual characteristics of communities and regions have their own effects on the bilingualism of individuals, in addition to the individual characteristics which we discuss in the first part of this chapter. The second part of this chapter, then, is an attempt to link these two groups of factors.

3.2. Individual Aspects of Official Bilingualism

3.2.1. Spatial Distribution

For the total country, we find that over two-thirds of the population can speak English only, a little more than one-sixth can speak French only, a little less than one-seventh can speak both English and French, and the remainder is unable to speak either official language.

Although, at least initially, we present information on all four of these categories, we concentrate on the bilinguals in our analysis for this chapter. To reduce the amount of awkward phraseology, we will use the following terms: Anglophones, for those able to speak English only; Francophones, for those able to speak French only; Bilinguals, for those able to speak English and French; and Allophones, for those who can speak neither English nor French (Table 3.1).

It is obvious that each of the four categories has its own pattern of regional concentration in Canada. The Anglophones find their highest concentration in the Atlantic provinces (with the exception of New Brunswick), Ontario, the western provinces and the Yukon. The Francophones are concentrated in the province of Quebec, with additional large blocks in the two adjacent provinces of New Brunswick and Ontario. Note, however, that Ontario's Francophones, although almost as large in number as those of New Brunswick, amount to only 1.2% of the population, while New Brunswick's Francophones constitute almost 16% of the population of that province. The Bilinguals are concentrated heavily in Quebec, again with substantial numbers in Ontario and New Brunswick, and, the latter province again shows a higher proportion of Bilinguals than the former, although the absolute number is considerably smaller. The Allophones are most heavily concentrated in Ontario. In terms of relative concentration we should also note the Northwest Territories, where Allophones constitute one-fifth of the population. A similar discussion on the spatial distributions of the population by mother tongue and home language may be found in Kralt (1976:21-28). In simple terms, we can say that the provinces of Quebec and, to a much lesser degree, New Brunswick, are the only strongholds of the French language in Canada, while the English language dominates in the rest of the country.

This Canadian dualism may be seen more clearly in Tables 3.2 and 3.3, where we find that Quebec accounts for 94.6% of the Francophone population, although it contains only 27.9% of the total Canadian population. Almost all of the Francophones outside the province of Quebec are found in the provinces of New Brunswick and Ontario. These three provinces together contain 99.6% of the Francophone population, while the remaining provinces and territories increase the cumulative percentage from 99.6% to 100% — a small proportion indeed.

In contrast, the Anglophone population is much more dispersed. Ontario contains the largest share, or almost half, of the Anglophone population, and only 35.7% of the total population. Ontario, British Columbia and Alberta only contain 71.2% of the Anglophone population. Recall that the three provinces with the largest number of Francophones together contain 99.6% of the Francophones.

TABLE 3.1. Distributions of the Population by Official Languages, Canada and Provinces, 1971

Province	Total	Official language			
		English only	French only	Both	Neither
<u>Numerical distribution</u>					
Canada	21,568,311	14,469,540	3,879,260	2,900,150	319,360
Newfoundland	522,104	511,625	510	9,350	625
Prince Edward Island	111,641	101,820	680	9,110	30
Nova Scotia	788,960	730,700	4,190	53,035	1,030
New Brunswick	634,557	396,855	100,985	136,115	600
Quebec	6,027,764	632,510	3,668,015	1,663,790	63,440
Ontario	7,703,106	6,724,100	92,845	716,065	170,095
Manitoba	988,247	881,710	5,020	80,930	20,585
Saskatchewan	926,242	867,315	1,830	45,985	11,115
Alberta	1,627,874	1,525,575	3,305	81,005	17,995
British Columbia	2,184,621	2,054,680	1,775	101,435	26,725
Yukon	18,388	17,130	5	1,210	35
Northwest Territories	34,807	25,500	100	2,120	7,085
<u>Percentage distribution</u>					
Canada	100.0	67.1	18.0	13.4	1.5
Newfoundland	100.0	98.0	0.1	1.8	0.1
Prince Edward Island	100.0	91.2	0.6	8.2	0.0
Nova Scotia	100.0	92.6	0.5	6.7	0.1
New Brunswick	100.0	62.5	15.9	21.4	0.1
Quebec	100.0	10.5	60.9	27.6	1.1
Ontario	100.0	87.3	1.2	9.3	2.2
Manitoba	100.0	89.2	0.5	8.2	2.1
Saskatchewan	100.0	93.6	0.2	5.0	1.2
Alberta	100.0	93.7	0.2	4.6	1.1
British Columbia	100.0	94.1	0.1	4.6	1.2
Yukon	100.0	93.2	0.0	6.6	0.2
Northwest Territories	100.0	73.3	0.3	6.1	20.4

Source: 1971 Census of Canada, Catalogue 92-726, Bulletin 1.3-5, Table 27.

TABLE 3.2. Percentage Distribution of the Population, by Official Language and Province, Canada, 1971

Province	Total population	English only	French only	Both	Neither
Newfoundland	2.4	3.5	0.0	0.3	0.2
Prince Edward Island	0.5	0.7	0.0	0.3	0.0
Nova Scotia	3.7	5.0	0.1	1.8	0.3
New Brunswick	2.9	2.7	2.6	4.7	0.2
Quebec	27.9	4.4	94.6	57.4	19.9
Ontario	35.7	46.5	2.4	24.7	53.3
Manitoba	4.6	6.1	0.1	2.8	6.4
Saskatchewan	4.3	6.0	0.0	1.6	3.5
Alberta	7.5	10.5	0.1	2.8	5.6
British Columbia	10.1	14.2	0.0	3.5	8.4
Yukon	0.1	0.1	0.0	0.0	0.0
Northwest Territories	0.1	0.1	0.0	0.0	2.2
Canada	100.0	100.0	100.0	100.0	100.0

Source: 1971 Census of Canada, Catalogue 92-726, Bulletin 1.3-5, Table 26.

TABLE 3.3. Cumulative Percentage of Total Population and Official Language Categories, by Province, Canada, 1971

Province	Cumulative percentage	Province	Cumulative percentage	Province	Cumulative percentage
<u>Total population</u>		<u>English only</u>		<u>French only</u>	
Ontario	35.7	Ontario	46.5	Quebec	94.6
Quebec	63.6	British Columbia	60.7	New Brunswick	97.2
British Columbia	73.7	Alberta	71.2	Ontario	99.6
Alberta	81.2	Manitoba	77.3	Manitoba	99.7
Manitoba	85.8	Saskatchewan	83.3	Nova Scotia	99.8
Saskatchewan	90.1	Nova Scotia	88.4	Alberta	99.9
Nova Scotia	93.8	Quebec	92.8	Saskatchewan	100.0
New Brunswick	96.7	Newfoundland	96.3	British Columbia	100.0
Newfoundland	99.1	New Brunswick	99.0	Prince Edward Island	100.0
Prince Edward Island	99.6	Prince Edward Island	99.7	Newfoundland	100.0
Northwest Territories	99.8	Northwest Territories	99.9	Northwest Territories	100.0
Yukon	99.9	Yukon	100.0	Yukon	100.0
<u>Both</u>		<u>Neither</u>			
Quebec	57.4	Ontario	53.3		
Ontario	82.2	Quebec	73.2		
New Brunswick	86.9	British Columbia	81.6		
British Columbia	90.4	Manitoba	88.0		
Alberta	93.2	Alberta	93.6		
Manitoba	96.0	Saskatchewan	97.1		
Nova Scotia	97.8	Northwest Territories	99.3		
Saskatchewan	99.1	Nova Scotia	99.6		
Newfoundland	99.6	Newfoundland	99.8		
Prince Edward Island	99.9	New Brunswick	100.0		
Northwest Territories	100.0	Yukon	100.0		
Yukon	100.0	Prince Edward Island	100.0		

Source: Derived from Table 3.2.

The officially bilingual population tends to be found in the same provinces which also have high concentrations of monolingual Francophones (Quebec, Ontario and New Brunswick), but in addition we find substantial numbers of officially bilingual persons in the four western provinces.

Finally, the Allophone population is most highly concentrated in the provinces of Ontario, Quebec and British Columbia. The largest share, a little over half of all Allophones in Canada, is found in Ontario, while extremely few persons belonging in this category are found in the Atlantic provinces.

Another angle on the relative dispersion described above may be seen by reading across the columns of Table 3.3, which is organized according to language category. For example, on the third line we see that the three largest provinces with regard to total population (Ontario, Quebec and British Columbia) contain 73.7% of the total Canadian population. When we consider the four language categories in descending order of concentration within three provinces, we see 99.6% of the Francophones concentrated in Quebec, New Brunswick and Ontario (the three provinces with the largest shares of the Francophone population); 86.9% of the bilingual population in Quebec, Ontario and New Brunswick; 81.6% of the Allophones in Ontario, Quebec and British Columbia; and only 71.2% of the Anglophone population in Ontario, British Columbia and Alberta.

This picture of regional concentration by language category is highlighted even more when we calculate indices of segregation, using the provincial distributions from Table 3.2 as a basis.¹ We present the matrix of values of the segregation indices for the four categories in Table 3.4.

TABLE 3.4. Indices of Segregation Between Four Categories of Response to the Official Language Question, Based on Provincial Frequencies, Canada, 1971

Official language	Official language			
	French only	Both	Neither	English only
French only	—	37.2	74.7	90.2
Both	37.2	—	37.5	55.0
Neither	74.7	37.5	—	22.6
English only	90.2	55.0	22.6	—

Source: Derived from Table 3.2.

The Anglophones and Francophones are quite strongly segregated from each other, as is shown by a segregation value of 90.2. Note that complete segregation would be indicated by an index value of 100. Complete segregation, in this case, would mean that no province of Canada would contain

See footnote(s) on page 74.

Anglophones as well as Francophones. To put the index value in words, we could say that 90.2% of all Francophones (or of all Anglophones) would have to be moved to other provinces for the two distributions to be equal.

The Bilingual and Allophone categories assume intermediate positions. The Bilinguals are relatively close to the Francophones, the segregation index for these two categories being 37.2, while the Allophones are relatively close to the Anglophones. The segregation index for those two categories (22.6) is the lowest value in Table 3.4. We should also point out that the segregation index is, to some degree, a function of the areal units over which the distributions are measured. Had we used a finer breakdown, for example, counties and census divisions, the segregation indices would probably have been even larger than the ones reported in Table 3.4. At best, they could have the same value as those in Table 3.4; they could not be lower.

We can observe that the patterns of regional concentration by language category form a rough gradient centred around the province of Quebec. Going from east to west, we find Newfoundland with 98% Anglophones. The proportion of Anglophones declines to a value of 10.5% in Quebec, then increases again to a maximum value of 94.1% for British Columbia at the western periphery. In complete contrast to this pattern are the ones for the Francophones and for the Bilinguals, both of which show their lowest densities on the two oceanic coasts and their highest density in Quebec. The Allophone category is somewhat deviant. It is virtually absent in the Atlantic provinces, reaches its highest level, 2.2%, in Ontario, then declines slightly as we go further westward, and finally rises again slightly for British Columbia. The Allophone pattern is made even more deviant by the Northwest Territories, which have the highest concentration of Allophones, at 20.3%. It is interesting to observe that the east-west gradient for the Bilinguals was found to hold for all earlier censuses, going back to 1901 (Vallee and de Vries, 1978).

If we apply a finer areal distribution than provinces, we find that the concentration of the Bilinguals is even more pronounced than the preceding analysis indicated. We have shown the extreme concentration of Bilinguals in the province of Quebec. Within this province, the largest segment of the Bilinguals is found in the Census Division formed by Île-de-Montréal, which alone contained over 800,000 Bilinguals, or about 29% of all Bilinguals in the country. When we extend our view slightly, to the Montréal Metropolitan Area, we find a total of somewhat over one million official Bilinguals, or 35% of all Bilinguals in the whole country.

3.2.2. Urban/Rural Residence

When we divide the population by residence — that is, urban, rural non-farm and rural farm — we find that the four categories of official language characteristics have somewhat different distributions, as Table 3.5 indicates.

TABLE 3.5. Percentage Distribution of Official Language Categories by Urban and Rural Residence, Canada, 1971

Official language	Canada	Urban	Rural non-farm	Rural farm
English only	67.1	66.2	68.5	73.1
French only	18.0	17.3	20.5	19.8
Both	13.4	14.9	9.7	6.4
Neither	1.5	1.6	1.3	0.6
Total	100.0	100.0	100.0	100.0

Source: 1971 Census of Canada, Catalogue 92-726, Bulletin 1.3-5, Table 27.

We see that there are considerably higher concentrations of Bilinguals and Allophones in the urban population than in either segment of the rural population. In other words, official language monolingualism appears to be a more dominant feature of rural than of urban milieux in Canada, while official bilingualism and the inability to speak either official language seem to be more characteristic of urban residence. It is interesting to note that the higher prevalence of bilingualism in urban areas has been observed in research on other societies (for example, see de Vries, 1975, for findings on Finland and for Whites in the Republic of South Africa).

3.2.3. Urban/Rural Residence by Province

It is tempting to explain the patterns noted above — more Bilingual and Allophone cities and more monolingual rural areas — with simple, common sense notions about the homogeneity and isolation of rural areas and the heterogeneity of cities, with their large intake of immigrants. However, when we examine urban/rural differences in official language patterns at the level of provinces and census divisions, we see that residential factors are more complex than they appear to be from the data on Canada as a whole. Table 3.6 shows the results of the cross-tabulations carried out in Table 3.5, but this time for each province separately.

As far as official bilingualism is concerned, Table 3.6 shows that the national ordering revealed in Table 3.5 holds only for New Brunswick, Quebec, Alberta and British Columbia. If we combine the two rural segments of non-farm and farm, the national pattern also holds true for Newfoundland, Ontario, the Yukon, and the Northwest Territories. However, for Nova Scotia, Manitoba and Saskatchewan we find more official bilingualism in the rural non-farm areas and less in urban and rural farm areas. This is because of the settlement patterns of French origin and French mother tongue people outside the province of Quebec.

In Section 3.2.6 on mother tongue and official bilingualism later in this chapter, we demonstrate what is already common knowledge: that those of French mother tongue contribute much

TABLE 3.6. Percentage Distribution of Official Language Categories by Residence and Province, Canada, 1971

Official language	Urban	Rural non-farm	Rural farm	Urban	Rural non-farm	Rural farm	Urban	Rural non-farm	Rural farm	
		<u>Newfoundland</u>			<u>Prince Edward Island</u>			<u>Nova Scotia</u>		
English only	97.6	98.6	97.7	92.7	88.8	93.5	94.3	90.0	95.3	
French only	0.2	0.0	0.0	0.1	1.1	0.5	0.2	1.0	0.4	
Both	2.2	1.2	2.3	7.2	10.0	6.0	5.3	8.9	4.2	
Neither	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	
		<u>New Brunswick</u>			<u>Quebec</u>			<u>Ontario</u>		
English only	66.6	56.1	67.0	11.7	6.0	4.0	87.1	86.9	91.2	
French only	9.8	24.6	19.2	56.2	78.1	87.6	0.9	2.6	2.1	
Both	23.5	19.2	13.8	31.0	15.0	8.4	9.4	9.6	6.1	
Neither	0.1	0.1	0.0	1.1	0.9	0.1	2.5	0.9	0.6	
		<u>Manitoba</u>			<u>Saskatchewan</u>			<u>Alberta</u>		
English only	90.6	83.8	89.2	94.6	90.9	94.0	93.9	92.3	94.0	
French only	0.4	0.9	0.7	0.1	0.3	0.2	0.2	0.3	0.3	
Both	7.7	10.1	8.4	4.6	5.6	5.2	5.0	4.9	4.8	
Neither	1.4	5.2	1.7	0.7	3.1	0.6	0.9	2.6	0.9	
		<u>British Columbia</u>			<u>Yukon¹</u>			<u>Northwest Territories¹</u>		
English only	93.7	95.2	95.7	92.5	94.2		85.6		61.6	
French only	0.1	0.1	0.0	0.0	0.0		0.4		0.2	
Both	4.9	4.0	3.4	7.3	5.5		9.3		3.0	
Neither	1.4	0.7	0.9	0.1	0.3		4.7		35.2	

¹The rural data for Yukon and Northwest Territories are the sums of rural non-farm and rural farm.

Source: 1971 Census of Canada, Catalogue 92-726, Bulletin 1.3-5, Table 27.

more to the officially bilingual population than do those of non-French mother tongues. In Nova Scotia the primarily Acadian-origin, French mother tongue population is over-represented among the rural non-farm populations in the villages and hamlets of fewer than 1,000 inhabitants, especially in the counties of Digby, Inverness, Richmond, and Yarmouth. (See Report of the Bilingual Districts Advisory Board, 1975:53-58.) Like Nova Scotia, the provinces of Manitoba and Saskatchewan also have many villages and hamlets with sizeable populations of French mother tongue Bilinguals, descendants of the French immigrants to bloc settlement two or more generations ago (de Vries and Vallee, 1975:63).

The distribution of Allophones also shows variations across the provinces. The national pattern of declining proportions of Allophones from urban to rural farm, is found only in Quebec, Ontario, British Columbia, and New Brunswick. In Newfoundland, Manitoba, Saskatchewan and Alberta, we find an over-representation of Allophones in the rural non-farm population. The Northwest Territories has a very heavy concentration of Allophones in its rural population. Finally, the remaining areas, Prince Edward Island, Nova Scotia, and the Yukon, have so few Allophones that we are not justified in analyzing their distribution separately.

The chief reason for the relatively high proportion of Allophones in the rural non-farm parts of the areas noted above is that these are regions of concentration for people of other than English or French mother tongue. In the Northwest Territories and northern parts of several provinces, the proportion of Native Indian and Inuktitut language speakers is quite high (de Vries and Vallee, 1975:43-55). Another Allophone category, primarily of Slavic language origin, is strongly represented in bloc settlements, particularly in Saskatchewan. An account of the cultural and linguistic features of these settlements may be found in Anderson (1977: 187-236).

The national patterns for the two monolingual categories also turn out not to be uniform across the provinces. Anglophones are over-represented in the urban areas of Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Manitoba, Saskatchewan, Alberta and the Northwest Territories. In other words, most provinces do not follow the national pattern. Anglophones are, moreover, under-represented in the rural non-farm areas of Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.

Francophones follow the national pattern much more closely at the provincial level than do those in the other language categories. Only in Newfoundland, British Columbia and the Northwest Territories does the urban population contain a higher concentration of Francophones than the rural population. Moreover, the two segments of the rural population do not follow the national pattern in all provinces; the rural non-farm populations of Quebec and Alberta have lower concentrations of Francophones than their rural farm populations.

It is obvious, then, that the national patterns, which we identified in the preceding section of this chapter, appear to be the result of "composition effects". That is, the national pattern for the officially bilingual category comes out in the way it does because it is the pattern for Quebec and New Brunswick, where we find the majority of Canada's officially bilingual persons. Similarly,

the Allophone national pattern shows an urban predominance because this is what we observe for Ontario and Quebec. The Anglophone national pattern is heavily dominated by the patterns of Ontario and British Columbia, while the Francophone national pattern is basically that of Quebec. We will return to the analysis of urban/rural differences when we examine the patterns of official bilingualism by mother tongue and education.

3.2.4. Sex

While males have a slightly higher proportion of officially bilingual persons than females, the latter have a somewhat higher representation among the Allophones. Table 3.7 shows that the sex differential in official bilingualism is essentially the same as that reported for earlier Canadian censuses by Lieberson (1970), Joy (1967) and de Vries (1975), and also matches those found by de Vries for Finland, 1950, and for the Republic of South Africa, 1951 (1975). The sex difference for the Allophones is similar to that generally reported in studies about the assimilation of immigrants.

TABLE 3.7. Percentage Distribution of Official Language Categories by Sex, Canada, 1971

Official language	Total	Males	Females
English only	67.1	67.3	66.8
French only	18.0	16.8	19.1
Both	13.4	14.6	12.3
Neither	1.5	1.2	1.8
Total	100.0	100.0	100.0

Source: 1971 Census of Canada, Catalogue 92-726, Bulletin 1.3-5, Table 25.

Although the following inferences must be considered to be somewhat speculative, we can at least say that the observed pattern is consistent with the following statements about language acquisition:

- (a) males with neither English nor French as mother tongue are more likely to learn an official language than are females of corresponding language backgrounds;
- (b) persons with mother tongues other than English or French are more likely to learn English than to learn French;
- (c) males of French mother tongue are more likely to learn English than are females of French mother tongue; and
- (d) the probability that persons of English mother tongue learn French is lower than the probability that persons of French mother tongue learn English, regardless of sex.

We will return to this set of postulated relations in the next chapter, which deals with "unofficial bilingualism".

3.2.5. Age

When we cross-classify the official language categories with age, we obtain some distinct patterns, as can be seen in Table 3.8. Considering the Anglophones first, we find that their share of the total population in a given age group is highest for the youngest two groups (0-4 and 5-9). We then find a slight decline through age 19, an almost constant proportion of the total age group through age 29, then moderate increases with increasing age.

TABLE 3.8. Percentage Distribution of Official Language Categories by Age Group, Canada, 1971

Age group	Official language			
	English only	French only	Both	Neither
0-4	69.2	23.4	2.8	4.5
5-9	70.1	23.9	5.2	0.8
10-14	68.0	23.6	8.3	0.2
15-19	63.6	19.5	16.6	0.3
20-24	63.5	15.6	20.1	0.8
25-29	63.3	16.1	19.4	1.1
30-34	65.0	15.5	17.9	1.6
35-39	65.5	15.3	17.5	1.7
40-44	66.0	14.9	17.4	1.6
45-49	67.3	14.1	17.1	1.5
50-54	68.2	14.0	16.5	1.3
55-59	68.8	14.3	15.2	1.7
60-64	68.9	15.0	14.0	2.2
65-69	69.9	15.2	12.3	2.6
70-74	71.2	14.8	11.1	2.9
75-79	73.6	13.8	9.7	2.8
80-84	75.7	12.9	8.5	2.9
85-89	77.6	11.9	7.7	2.7
90-94	79.0	11.1	7.2	2.8
95 and over	77.3	11.6	8.3	2.9

Source: 1971 Census of Canada, Catalogue 92-733, Bulletin 1.4-5, Table 10.

The Francophones show their highest levels for the 0-14 age groups, rather sharp declines through age 24, then a fairly constant proportion through age 74, followed by a slight decline in the advanced ages. The Bilinguals show steady, and fairly strong, increases from the youngest age group (0-4) through age 24. After this, we see steady decreases in official bilingualism in the older ages.

The Allophone category, finally, shows a somewhat curious pattern. Its highest concentration is found in the youngest age group. The concentration falls to minimal levels for the 10-14 age group, then increases slowly with increasing age.

Before we begin to make inferences, based on these data, about mechanisms pertaining to language acquisition, maintenance and loss, we must point out the dangers inherent in making such dynamic inferences on the basis of cross-sectional data. For example, the fact that the 20-24 age group is more bilingual than the 30-34 age group may have several explanations. One could assume, firstly, that the older groups have to some degree forgotten their second language. The basic assumption is that 10 years ago the older group was as bilingual as the younger group is now, but, through lack of use of the second language, the group's bilingualism declined. A second possibility is that groups which entered the school system or labour force more recently are simply more bilingual than groups which went through the same transitions in earlier years. If one holds that governmental policies regarding bilingualism have any effect at all, we cannot ignore this second factor, and may not ascribe observed variations in bilingualism by age to the first factor only.

One method by which we can estimate the degree to which the historical changes have played a role in producing the observed pattern by age is by means of a cohort analysis. That is, we trace groups of people who were born in a particular period through earlier censuses, and reconstruct their language history from such data. If "language loss" were the only factor at work, we should find bilingualism for those who were in the 30-34 age group in 1971 to have been higher in 1961 than it was in 1971. In fact, we should find a value not too different from that which we observed for the 20-24 age group in 1971. If the "historical change" factor operates, we should find that the bilingualism of birth cohorts has changed little or not at all during the period 1961-71. Let us examine Table 3.9, which gives the proportions bilingual in 1961 and 1971 for birth cohorts.

It would appear that both the explanations of "language loss" and "historical change" are operating to some degree. Reading across columns, we find increases in bilingualism, between 1961 and 1971, for the youngest birth cohorts, ending with those born after 1941. For all of the older cohorts, with the exception of the oldest one, we do see slight decreases in official bilingualism. These decreases become, in fact, proportionately larger for the older groups. This would argue for the "language loss" factor. With aging, people gradually withdraw from social involvement as their children leave their family of origin, spouses die, people retire from the labour force, and so on. As the circle of contacts becomes smaller, language use reverts more and more to earlier patterns. Languages acquired later in life are used less frequently and may well be forgotten (see Edwards, 1977, on "loss").

Moreover, the "historical change" factor also seems to operate. To analyze this, we must compare the figures for 1961 in Table 3.9 with the figures two lines higher in the table for 1971. For example, those aged 10-14 in 1961 can be found on the third line in the table, with a percentage officially bilingual of 7.5. The group aged 10-14 in 1971 (that is, the group which is

at a corresponding stage in the life cycle) is found on the top line of the column for 1971, with 8.3% officially bilingual. As we can see, the first four comparisons all show higher values for the more recent census than for the earlier census. This covers the ages 10-29 and thus encompasses virtually all of the in-school population. Thus, it appears that Canadian society and, more specifically, the educational system, produced a somewhat higher percentage of bilinguals in the years just prior to the 1971 Census than was produced in the years prior to the 1961 Census.

TABLE 3.9. Percentage Officially Bilingual for Five-year Birth Cohorts, Canada, 1961 and 1971

Birth years	Percentage of cohort bilingual		Difference (1971-1961)
	1961	1971	
1957-61	1.7	8.3	6.6
1952-56	4.5	16.6	12.1
1947-51	7.5	20.1	12.6
1942-46	15.6	19.4	3.8
1937-41	18.5	17.9	-0.6
1932-36	18.2	17.5	-0.7
1927-31	18.0	17.4	-0.6
1922-26	18.0	17.1	-0.9
1917-21	17.7	16.5	-1.2
1912-16	17.0	15.2	-1.8
1907-11	16.2	14.0	-2.2
1902-06	15.0	12.3	-2.7
1897-1901	13.8	11.1	-2.7
1892-96	12.2	9.7	-2.5
1887-91	10.5	8.5	-2.0
1882-86	9.1	7.7	-1.4
1877-81	8.4	7.2	-1.2
1876 and earlier	7.9	8.3	0.4

Source: 1961 Census of Canada, Volume I - Part 3, Table 96; and
1971 Census of Canada, Catalogue 92-733, Bulletin 1.4-5, Table 25.

It could be argued that the "historical change" factor causing the increase in official bilingualism in the 10-29 age cohort for Canada as a whole is attributable to trends in the province of Quebec. To test this hypothesis we compare the association between age and bilingualism in Quebec and the rest of Canada. Table 3.10 reveals that Quebec shows the same profile as the rest of Canada, although the values for bilingualism in Quebec are higher than they are for the rest of Canada, a fact which is hardly in dispute.

An interesting feature of the link between age and bilingualism in Quebec which does not apply in the rest of Canada, is that for the age cohort with most of its members in school (those aged 5-19), it was those of mother tongues other than English or French that contributed the largest proportion of their numbers to the officially bilingual population of that province, as can be seen in Table 3.11.

TABLE 3.10. Percentage Officially Bilingual for Five-year Birth Cohorts, Province of Quebec and the Rest of Canada, 1961 and 1971

Birth years	Province of Quebec			Rest of Canada		
	Percentage of cohort bilingual			Percentage of cohort bilingual		
	1961	1971	Difference (1971-1961)	1961	1971	Difference (1971-1961)
1957-61	1.8	12.6	10.8	1.6	6.5	4.9
1952-56	5.7	28.0	22.3	3.9	11.8	7.9
1947-51	11.6	40.2	28.6	5.6	11.8	6.2
1937-46	32.4	38.6	6.2	9.7	10.3	0.6
1927-36	38.6	38.3	-0.3	9.4	9.2	-0.2
1917-26	40.8	38.6	-2.2	9.0	8.7	-0.3
1907-16	39.1	34.3	-4.8	8.2	7.6	-0.6
1906 and earlier	30.7	25.7	-5.0	6.5	6.0	-0.5

Source: 1961 Census of Canada, Volume I - Part 3, Tables 95 and 96; and 1971 Census of Canada, Catalogue 92-733, Bulletin 1.4-5, Tables 10 and 11.

TABLE 3.11. Percentage Officially Bilingual by Mother Tongue and Age Group, Province of Quebec, 1971

Age group	Mother tongue		
	English	French	All other
0-4	10.4	3.4	6.7
5-19	32.1	12.6	38.9
20 and over	42.1	36.1	34.4

Source: 1971 Census of Canada, unpublished data.

It is likely that the increase in bilingualism for the younger age groups since 1961 in Quebec is accounted for, not by an increase in French mother tongue Bilinguals among young people, but by the increase in bilingualism among those of English and other mother tongues (Vallee and de Vries, 1978). This matter is taken up again in connection with the discussion of mother tongue and of the results of our multivariate analysis later in this chapter.

In several places in this study we try to take into account the effects of migration and mortality on language trends. We do not have the data at hand to isolate the effects of migration between the provinces. However, we do have some data which warrant our exploration of the possible effects on official bilingualism trends of immigration between 1961 and 1971. People who immigrated to Canada in that intercensal decade, who were still alive and still resided in Canada, would show up in the 1971 Census data, but not in the data for 1961. Moreover, there was some emigration from Canada in the same intercensal decade. Hence, some people are contained in the 1961 data, but not in those for 1971. Finally, death took its toll in all cohorts, again with the result that some individuals were included in the census data for 1961, but not for 1971. Unfortunately, accurate data are not available to permit the estimation of the effects of mortality and emigration. We have been able to produce a rough estimate of immigration's effect on cohort changes in official bilingualism between 1961 and 1971. To do this, we first obtained the number of persons by cohort who immigrated between 1961 and 1971. We then obtained the distribution of these immigrants by official language. To obtain "corrected" cohort values for the proportion officially bilingual, we subtracted the total number of immigrants from the 1971 cohort totals, and the number of bilingual immigrants in each cohort was subtracted from the number of Bilinguals in the cohort. The results can be seen in Table 3.12.

TABLE 3.12. Comparison of Bilingualism for Five-year Birth Cohorts, Canada, 1961 and 1971

(Excluding Persons Who Immigrated to Canada Between 1961 and 1971)

Birth years	Percentage of cohort bilingual		Difference (1971-1961)
	1961	1971	
1957-61	1.7	8.3	6.6
1952-56	4.5	16.7	12.2
1947-51	7.5	20.7	13.2
1942-46	15.6	20.2	4.6
1937-41	18.5	18.8	0.3
1932-36	18.2	18.0	-0.2
1927-31	18.0	17.7	-0.3
1922-26	18.0	17.3	-0.7
1917-21	17.7	16.7	-1.0
1912-16	16.9	15.3	-1.6
1907-11	16.2	14.2	-2.0
1902-06	15.0	12.5	-2.5
1901 and earlier	11.4	9.8	-1.5

Source: 1961 Census of Canada, Volume I- Part 3, Table 96; 1971 Census of Canada, Catalogue 92-733, Bulletin 1.4-5, Table 25 and Catalogue 92-740, Bulletin 1.4-12, Table 33; and Public Use Sample Tape.

After correcting for the effects of immigration, we see an even clearer picture. The degree of second language loss for cohorts is a fair bit smaller after the correction than it was before. The cohort loss also appears to start at an older age than we first inferred from Table 3.9 (ages 35-39 in 1971, rather than 30-34). When we look at comparable stages in the life cycle, we see even larger increases due to "historical change" than we did in Table 3.9. Another difference is that the slight declines which we found in Table 3.9 for ages 30-44 have now turned into very slight increases.

We should keep in mind, of course, that inferences such as these are based on imperfect and incomplete data, and use imperfect estimation techniques. However, on the basis of the materials presented we are inclined to favour the predominance of historical change in explaining age differences in official bilingualism. That is, we are postulating that society has increased its "productivity" of bilingual individuals, probably primarily through the educational systems of the country.

After this diversion into cohort analysis, let us see what else we can pick up from the patterns in Table 3.8. We can, in fact, generate several hypotheses about language acquisition and language loss from these data. It should be kept in mind that the data only give a cross-section of information, making dynamic inferences less than perfectly reliable. For example, the decline in the Anglophone share from ages 5-9 through ages 25-29 could be attributed to the acquisition of French by these Anglophones, presumably through the educational system. We could then hypothesize that those persons who begin as monolingual English speakers, and who later on become bilingual, will generally do so during their secondary schooling. The fact that we find increasing proportions of Anglophones in the older age groups may reflect some loss of second language among English mother tongue Bilinguals, but it could also reflect a lower tendency in earlier years for persons of English mother tongue to learn French. The relatively constant share of the Anglophones for ages 15-29 suggests that few Anglophones learn French after leaving school.

The Francophone pattern for young ages is similar to that for the Anglophones. Here, too, we find a maximum for the 5-9 age group, and then declines through age 24. It appears that monolingual French speakers also acquire a second language through the educational system or elsewhere during this period of their lives.

The next facet which requires some thought deals with the data for the older ages. We see that the Anglophone proportion increases steadily from age 45 on, while the Bilingual proportion declines almost as steadily with almost the same magnitude of change. For the oldest age groups (from 70 on) we also find decreases in the Francophone proportion. We can hypothesize that one or both of two processes could be at work here. On the one hand, we already mentioned the notion that advancing age could bring with it the loss of the more recently acquired language. The cross-sectional data in Table 3.8 then lead to a somewhat curious inference. Since it is the most recently

learned language which would be lost, and since the Anglophone proportion increases with increasing age, while the Francophone proportion decreases, we would have to conclude that it is primarily the Bilinguals of English linguistic background who are suffering second language loss in the higher ages. This is a little surprising since the contribution of the English mother tongue group to official bilingualism is, and has been, rather small in comparison to that of the population of the French mother tongue group, as we shall see later in this chapter. But recall our warning of caution about making dynamic inferences from cross-sectional data. The cohort patterns did indeed show some decline in official bilingualism for the older birth cohorts, but it is not clear that the observed patterns can be explained fully by this factor. Especially in the oldest age groups, the increase in the Anglophone share cannot be explained by second language loss among official Bilinguals of English mother tongue.

There is, however, an additional explanation, that of differential mortality. From the literature on social class we know that life expectancy varies positively with social status (for example, see Moriyama and Guralnick, 1956). By implication, age-specific mortality rates will then vary inversely with social status, within a given population. We also know that generally, Canadians of English background tend to be of higher social status than Canadians of French or other backgrounds (see Porter, 1965). Combining these two points, we can hypothesize that Anglophones would have somewhat lower mortality rates than Francophones and Bilinguals. Consequently, the proportion of Anglophones would increase with age, as larger proportions survive than do those in the other categories.

Finally, a comment about the pattern for the Allophones. For the older ages (basically from 65 on) we find relatively high proportions in each age group. This might reflect either the larger impact of immigration in the earlier decades of this century (in other words, historical factors) or second language loss among immigrants of mother tongues other than English or French (in other words, the consequences of the aging process), or both.

Another interesting point in the Allophone pattern is the relatively high proportion in this category in the youngest age group. We have two explanations for this phenomenon. On the one hand, it could reflect the behaviour of immigrants with mother tongues other than English or French. In this case, the figure would appear to indicate that such persons may have a tendency to raise their children originally in the "other" mother tongue. Note that the Allophone share drops considerably for the 5-9 age group, reflecting the entrance of these children into Canadian schools. An alternative explanation is that this youngest cohort contains a relatively large proportion of children who are indeed, literally, reported to be unable to speak any language. Although the instructions in the census questionnaire indicate that in such cases the language spoken most often in the home needs to be reported, it may well be that a fairly large number of parents ignored the instructions and took the question somewhat too literally.

3.2.6. Mother Tongue

The next variable to be considered in our array of explanatory variables with regard to official bilingualism is mother tongue. Recall that the census definition of a "mother tongue"

stipulates that the language must still be understood by the respondents, but not necessarily still be spoken. We have noted that editing procedures have introduced some new elements in the figures on official Bilinguals by adding in those people who were of English mother tongue but claimed to be able to speak French only, as well as those who were of French mother tongue but claimed to be able to speak English only. Now let us go on with the analysis.

We find considerable variation in official bilingualism between the major mother tongue categories in Canada. These variations can be seen in Table 3.13 in which we have ordered the mother tongue categories by descending proportions officially bilingual.

TABLE 3.13. Percentage Distribution of Official Language Categories for Major Mother Tongue Categories, Canada, 1971

Mother tongue	Official language			
	English only	French only	Both	Neither
French	xxx	66.0	34.0	xxx
Italian	57.0	6.5	13.9	22.6
Polish	84.8	0.7	8.9	5.5
Other	75.0	1.7	8.8	14.5
Dutch	91.9	0.1	6.5	1.6
English	94.5	xxx	5.5	xxx
German	91.3	0.4	5.0	3.3
Ukrainian	92.0	0.2	4.0	3.8
Scandinavian	96.6	0.1	2.7	0.6
Native Indian and Inuktitut	77.1	2.6	1.6	18.7

"xxx" indicates that no cases are logically possible for this cell.

Source: 1971 Census of Canada, Catalogue 92-776, Bulletin SP-6, Table 1.

The various mother tongue categories fall into several distinct classes. First, we have the French mother tongue as a separate class. Just over one-third of the French mother tongue population has acquired English. The next class consists of Italian, Polish and "other" mother tongues. These categories are characterized by relatively low proportions speaking English only; somewhat higher proportions than the next class speaking French only; somewhat higher proportions than the next class officially bilingual, and a relatively high proportion speaking neither English nor French. It is, of course, the case that the "other" category is a miscellaneous collection of mother tongues whose numbers are too small to be handled separately in our analysis, and which contains such widely divergent languages as Spanish, Greek, Chinese and Portuguese. Therefore, not too much reliance should be placed on the data for "other" mother tongue categories in this context.

The next class is formed by those with Dutch, English, German, Ukrainian or Scandinavian mother tongues. In addition to those of English mother tongue, we find here those groups which are characterized by relatively early migration to Canada. This class is characterized by very high

proportions speaking English only, very low proportions speaking French only, low proportions officially bilingual, and very low proportions speaking neither French nor English. Finally, as a class all by itself, we find those of Indian and Inuktitut mother tongues, characterized by lower proportion speaking English only than the classes discussed above, comparatively high proportions than these classes speaking French only, extremely low proportions officially bilingual, and high proportions able to speak neither English nor French. Were it not for the very low degree of official bilingualism, the Native people might have been included in the class containing the Italian, Polish and "other" mother tongues.

Our findings confirm the often noted fact that the French mother tongue segment of the Canadian population is the major contributor to official bilingualism in Canada. In terms of proportions, no other mother tongue group comes even close with regard to the prevalence of bilingualism. In absolute numbers, there are 1,971,225 official Bilinguals of French mother tongue, which is 68% of all official Bilinguals. By comparison, just a little under 27% of the total Canadian population was of French mother tongue. In terms of relative proportions, only those of Italian mother tongue can be said to have a fairly large proportion officially bilingual. As we shall see later in this chapter, much of this difference between Italians and the remainder of the mother tongues can be attributed to the strong concentration of Italians in the province of Quebec.

What could be called the "Quebec effect" on the national official language patterns under review can be seen clearly in the contrast of these patterns between the province of Quebec and the rest of Canada. Table 3.14 presents the data on official languages separately for Quebec and the rest of Canada, and these data show how misleading it is to attribute to the mother tongue factor alone a determining effect in producing official language patterns.

TABLE 3.14. Percentage Distribution of Official Language Categories For Major Mother Tongue Categories, Quebec¹ and the Rest of Canada, 1971

Mother tongue	Official language			
	English only	French only	Both	Neither
French	xxx(xxx)	22.2(74.3)	77.8(25.7)	xxx(xxx)
Italian	71.6(13.7)	0.7(23.6)	4.9(40.4)	22.8(22.3)
Polish	89.3(50.4)	0.1(5.8)	5.1(37.7)	5.5(6.1)
Other	81.2(47.3)	0.3(8.2)	4.6(28.1)	14.0(16.3)
Dutch	93.3(51.0)	0.1(2.5)	5.2(44.6)	1.5(2.2)
English	96.5(63.3)	xxx(xxx)	3.5(36.7)	xxx(xxx)
German	93.4(55.2)	0.1(6.3)	2.6(35.3)	3.3(3.1)
Ukrainian	93.6(51.7)	0.1(2.8)	2.6(40.5)	3.7(5.1)
Scandinavian	97.3(68.9)	0.0(1.6)	2.1(27.0)	0.6(2.5)
Native Indian and Inuktitut	81.4(40.6)	0.1(23.9)	1.1(5.1)	17.4(30.3)

"xxx" indicates that no cases are logically possible for this cell.

¹Quebec percentages are in brackets.

Source: Same as Table 3.13.

The contrast between the pictures presented in Table 3.13 and Table 3.14 is sharpest in the columns on official bilingualism. Whereas in the rest of Canada those of French mother tongue outrank by far those of other mother tongues in bilingualism, in Quebec they are lower on that count than any other mother tongues, except for Native Indian and Inuktitut. In Quebec those of Dutch, Ukrainian, and Italian mother tongues provide a higher proportion of official Bilinguals than any others, although in none of these cases does the proportion of Bilinguals reach 50%.

3.2.7. Education

It has been asserted that individuals learn second and more languages in several social contexts: their family of origin, the neighbourhood in which they reside, the schools which they attend, the place where they work and, possibly, their family of orientation. We could probably add other domains to this list, but the general view is that those named above are the most important ones (see, for example, Gardner, 1977:112-114 for a discussion of "language acquisition contexts").

In considering the role of education with regard to the acquisition of a second (or a second and third) language, it should be obvious that, *ceteris paribus*, people have a higher probability of being bilingual if they have more education. We are obviously over-generalizing at this point. We have not taken into account the different educational requirements or opportunities which are characteristic of the provincial educational systems. We also have not taken into account that different mother tongue groups may have different patterns of educational attainment. By-passing those objections, let us consider the data in Table 3.15.

TABLE 3.15. Percentage Distribution of Official Language Categories by Highest Level of Education Attained, Population Five Years and Over, Canada, 1971

Education	Official language			
	English only	French only	Both	Neither
University - 5 or more years	59.8	4.8	35.2	0.2
University - 1 to 4 years	67.2	5.3	27.3	0.1
High School - Grade 13	86.9	0.8	11.9	0.4
High School - Grade 12	75.6	8.3	15.9	0.2
High School - Grades 9-11	68.3	15.0	16.5	0.3
Elementary - Grades 5-8	61.9	24.2	12.3	1.6
Elementary - Grades 1-4	64.3	26.0	7.6	2.2
No schooling (includes kindergarten)	64.2	23.1	5.5	7.2
Total	66.9	17.5	14.4	1.2

Source: 1971 Census of Canada, unpublished data.

What we find is that, by and large, more education does translate into higher prevalence of official bilingualism. Reading the Bilingual column in Table 3.15 from the lowest category (no education or kindergarten) to the highest level of education (five or more years of university), we find an increase from 5.5% bilingual in the lowest category, to 16.5% for those who completed a highest Grade between 9 and 11, then some decline for those who completed Grade 12 or Grade 13, then again very large increases through 35.2% of those with the highest levels of formal education.

While official bilingualism seems to increase with the level of formal education obtained, we also see positive correlations between the level of education and the ability to speak English. For both the Francophone and the Allophone columns which, together, make up the total population unable to speak English, we observe increasing proportions as we move to lower levels of education (with the exception of those whose highest level of education was Grade 13, a point which we will discuss below). Of those with at least some university education, only about 5% are unable to speak English, while of those with less than high school (the lowest three categories in the educational scale) over 25% are unable to speak English. This correlation holds separately for the Francophones and the Allophones. Both categories show increasing proportions as we move to lower educational levels: Francophones increase from about 5% to about 25%, and Allophones from about 0.1% to 7.2% for the lowest category.

To some degree, the orderly picture of language by level of education is distorted by the two highest grades of secondary schooling. We should point out that the "Grade 13" category is strongly over-represented by persons who received their highest level of education in Ontario, the only province with a Grade 13. Both Grades 12 and 13 are strongly under-represented by residents of Quebec. The percentages living in Quebec are 27.3% for Grades 9 and 10; 30.0% for Grade 11; 19.5% for Grade 12, and 6.0% for Grade 13 (1971 Census of Canada, Bulletin 1.2-8). Thus, one would expect the Grade 12 and Grade 13 categories to have lower proportions of Francophones and Bilinguals than the adjacent educational levels on either side.

If we compare the percentage distributions by educational level with that for the total population five years or older (given as the last row of Table 3.15), we can detect very clear patterns of over- and under-representation. The groups speaking French only, or speaking neither English nor French, are over-represented in the lowest three categories, while the officially bilingual group is over-represented in the two university categories, as well as in Grades 9-12 at the high school level. If we remember that Grade 13 is seriously under-represented with Quebec residents, it should be clear that this upper level high school grade is also over-represented in terms of official bilingualism. Finally, the group speaking English only shows over-representation for the lowest category, and then for all high school grades as well as the first four years of university, however slightly. Part of the high school over-representation is, again, due to the differences between the Quebec and Ontario secondary school systems. In other words, 86.9% of those with Grade 13 speak English only, mainly because virtually all these people received their education in Ontario and are still Ontario residents.

Again, these patterns suggest a language acquisition mechanism. As people progress through the educational system, they appear to pick up a second language. The fact that we find an inverse relation between the patterns for the French group and the bilingual group appears to indicate, again, that it is mainly the people with French mother tongue who learn English in the schools. It appears that this pattern is most pronounced at the university level, where we find only about 5% monolingual French. This acquisition mechanism is almost certainly not as strong for the English speakers. We do not get the same rapid decline in the monolingual English group which we noted for the monolingual French.

Several comments must be made before we leave this particular inference. First of all, the observations made above fit with those made in the discussion of the relation between age and bilingualism, and between mother tongue and bilingualism. Secondly, we must be cautious with this type of dynamic inference from cross-sectional data. The fact that we find higher proportions of bilingualism as we look at higher levels of education might indeed reflect second language learning within the school system. It might also reflect a selection mechanism. There is evidence that the level of education attained is strongly correlated with social status, in the sense that children from high status families are likely to go further in school than children of low status families (see, for example, Porter et al., 1973). It has also been noted that high status individuals appear to be more successful in acquiring a second language (see Gardner, 1977:111 and the references mentioned there). Consequently, it could be that persons who proceeded further into higher education were already more likely to be bilingual than those who did not. We are unable to test this particular hypothesis with the available census data, but the reader should be aware of the possibility of this alternative explanation of the observed patterns.

A final point to be made at this stage of our analysis relates to the increasing spread of English as one goes up the education scale. In the lowest category, 30.3% of individuals are unable to speak English, while in the highest two categories only between 5% and 5.4% are unable to speak English. We do not find similarly strong patterns for the French language. At the lowest level, 71.4% are unable to speak French, while at the highest levels, between 60% and 67.3% are unable to speak French (as compared with 68.1% for the total population five years and over). It is obvious, therefore, that the English language has penetrated virtually the whole Canadian system of higher education, including that in Quebec, and, to a lesser degree, the high school system as well. At the university level this appears to have occurred to a large degree at the expense of French.

3.2.8. The Effects of the Location of Education

In addition to the quantitative effects of education, we can consider the locational effects. The census contains information on the place (province or country) in which the highest grade of elementary or secondary education was obtained. There is obviously no measure of migration during the educational career, and as such it is obviously an imperfect measure of the performance of education systems. However, consider Table 3.16.

TABLE 3.16. Percentage Distribution of Official Language Categories by Place Where Highest Level of Elementary or Secondary Schooling Was Attained, Population 15 Years and Over, Canada, 1971

Item	Official language			
	English only	French only	Both	Neither
Quebec	7.5	56.0	36.5	0.0
Other Canadian province	89.0	0.1	10.0	0.1
Outside Canada	80.2	3.0	9.6	7.2
No schooling	54.6	16.2	8.5	20.7

Source: 1971 Census of Canada, unpublished data.

Despite the shortcomings of this variable, we note that the same general pattern which we found for the analysis by province of residence, that is, high prevalence of bilingualism, is associated with the province of Quebec. A little over one-third of those whose highest level of education was obtained in Quebec report themselves to be officially bilingual. In contrast, there appears to be very little utility, as far as official bilingualism is concerned, in being educated elsewhere in Canada. Of those whose highest level of schooling was received elsewhere in Canada, 10% were bilingual, compared with 9.6% of those educated outside Canada, and 8.5% of those with no schooling.

3.2.9. Multivariate Analyses

In the preceding sections we set the initial parameters for the analysis of the determinants of official bilingualism. To summarize, we have shown that the prevalence of official bilingualism varies systematically with the following factors:

- location: the strongest contrast is between the province of Quebec and the rest of the country, with some important exceptions where there are French mother tongue concentrations outside Quebec;
- residence: for Canada as a whole, the highest degree of bilingualism is in urban areas, but important variations are noted among the provinces;
- sex and age: we have shown that males are generally more bilingual than females, and that the association between age and bilingualism is curvilinear, with the maximum proportions in the young adult ages;
- mother tongue: for Canada as a whole, those of French mother tongue contribute a much higher proportion to the bilingual population than do other mother tongues, with some important exceptions in the province of Quebec where most non-French mother tongue categories have higher proportions bilingual than do the French; and

education: we have inferred that the educational sector is more important than other sectors in producing whatever increase there has been in bilingualism and that bilingualism generally co-varies with the amount of education.

Our next task is to show, through a process of elaboration, how these relations among variables reinforce each other, cancel out, or prove to be spurious. We do this by selecting some of the above variables and re-examining their relation to official bilingualism, this time with the addition of controls.

The first variable we re-examine is age. We noted that the observed pattern suggests a mechanism of second language learning in the early years of life (ages 0-24), both in the family of origin and in the schools. This is followed by second language maintenance during the working ages, and loss of second language in the higher ages, especially after retirement from the labour force. We have suggested several factors which should operate differently for males and females. For the ages in which schooling is universal, we should not expect any great differences between males and females (say until about age 16). In the higher levels of schooling, males are more likely to continue than females. Therefore, if there is any second language learning at these levels, males should be more bilingual than females. After controlling for education, these differences should diminish. After age 19 or so, labour force participation might play a role. If labour force participation supports the maintenance of a second language, males should have higher bilingualism ratios than females. After controlling for labour force participation, these differences also should diminish. Our strategy, then, will be as follows: we will first introduce sex as a control, then education, then labour force status.

3.2.9.1. Official Bilingualism by Age and Sex

For these and following multivariate analyses, we will restrict ourselves to reporting the percentages, in any category or combination of categories, of persons indicating that they speak both English and French. For the joint effects of age and sex on official bilingualism, see Table 3.17.

The data show that our original hypothesis is not quite borne out by the observations. While we expected to find no differences in the prevalence of official bilingualism between boys and girls, the data show a clearly higher level of bilingualism for females in all of the younger age groups. In fact, the female advantage increases up to age 20, which is contrary to our expectations.

From age 20 on, our hypotheses appear to be supported by the evidence. The difference between male and female bilingualism reverses to the expected direction for ages 20-24, increases to an almost level of 5% for the ages 25-54, then declines as we enter the highest age groups.

We are left with an unexplained pattern for those below age 20. Why is female bilingualism more prevalent than male bilingualism at those ages? It should be obvious that, at least for ages up to 15, educational attainment itself can hardly be an explanation. At this age, we are still dealing with virtually universal school attendance because of legal requirements. The explanation

must lie in the content of education, or in the different socialization patterns, by gender, to which Canadian pupils are subjected. Gardner (1977:116) cites evidence from Australia and Great Britain which has some bearing on this. An Australian study found that girls are more likely than boys to select language courses in those conditions where such a selection is possible.

TABLE 3.17. Percentage Reporting to Be Officially Bilingual, by Age Group and Sex, Canada, 1971

Age	Males	Females
0-4	2.8	2.9
5-9	5.1	5.3
10-14	7.8	8.7
15-19	15.3	17.9
20-24	21.5	18.7
25-29	22.0	16.8
30-34	20.6	15.2
35-39	20.1	14.9
40-44	20.0	14.8
45-49	19.9	14.4
50-54	19.0	14.1
55-59	17.5	13.0
60-64	16.2	11.9
65-69	14.1	10.6
70-74	13.2	9.4
75-79	11.8	8.2
80-84	9.9	7.4
85-89	9.1	6.8
90-94	8.3	6.5
95 and over	10.7	7.1

Source: 1971 Census of Canada, Catalogue 92-733, Bulletin 1.4-5, Table 10.

Gardner mentions, in passing, that he has found similar differences in selection in his own research. A study from Great Britain indicated that girls tended to achieve higher levels of second language proficiency than boys, especially in situations where such courses are compulsory. Where second language courses are optional, low-achieving students tend to drop out, resulting in a predominance of girls. Gardner concludes this section of his paper by noting that it is doubtful that biological differences could explain differences in proficiency, but that one would be forced to search for the reasons either in differential child-rearing practices, or in the female bias of language programmes (as indicated, for example, by a preponderance of women among language teachers).

3.2.9.2. Official Bilingualism by Age, Sex and Education

When we simultaneously control for age, sex and education, we obtain the patterns displayed in Table 3.18. The data in this table display a complex pattern. We postulated that controlling for education would reduce the age-specific differences in official bilingualism between males and females. Now let us proceed through the age groups and see what we find. For the youngest group we find the same pattern after controlling for education as we did before. Girls have just slightly higher proportions bilingual than boys, but the difference is too small to be worth considering. The 10-14 age group shows somewhat smaller differences between males and females after educational controls than before. Note that the data for Grade 12 in this age group are rather hard to believe. Educational career acceleration at that rate is not likely to have occurred. The bases for these ratios are, in fact, rather small: 530 males and 500 females.

TABLE 3.18. Percentage Reporting to Be Officially Bilingual, by Age, Sex and Highest Level of Schooling Attained, Population Five Years and Over, Canada, 1971

Age group	Males	Females	Males	Females	Males	Females
	<u>University</u>		<u>Grade 13</u>		<u>Grade 12</u>	
5-9	xxx	xxx	xxx	xxx	xxx	xxx
10-14	xxx	xxx	xxx	xxx	23.6	20.0
15-19	28.8	34.4	19.5	28.6	18.5	20.7
20-24	30.9	31.5	14.5	15.8	17.0	15.8
25-29	32.5	27.3	11.7	11.8	16.6	14.4
30-39	31.3	24.5	11.5	10.4	17.0	13.5
40-64	30.6	23.3	10.4	8.8	17.9	12.1
65 and over	25.2	16.4	6.4	6.0	15.9	10.6
Total	30.8	26.7	11.8	12.0	17.4	14.8
	<u>Grades 9-11</u>		<u>Grades 1-8</u>		<u>No schooling</u>	
5-9	xxx	xxx	5.5	5.7	4.2	4.4
10-14	12.3	13.9	7.4	8.1	xxx	xxx
15-19	14.4	16.6	10.3	10.1	5.8	4.7
20-24	22.0	18.1	14.8	11.6	6.3	4.2
25-29	23.0	17.4	16.6	12.4	6.2	4.3
30-39	20.1	15.5	17.6	13.2	7.6	5.7
40-64	17.9	13.8	17.7	13.6	12.9	7.3
65 and over	12.8	9.2	11.6	8.9	11.7	6.0
Total	17.9	15.2	11.8	9.9	6.1	4.9

"xxx" indicates that no cases are logically possible for this cell.

Source: 1971 Census of Canada, unpublished data.

For the 15-19 age group we see a peculiar pattern develop. From Table 3.17, we found an age-specific difference of 2.6% between the female figure and the male figure. Controlling for education has the effect of yielding even larger differences for those with Grade 13 or at least some university education; smaller differences (but still with higher female bilingualism) for those with an educational level between Grades 9 and 12; and a reversal of the order (males more bilingual than females) for those with eight years or less of formal education.

For the 20-24 age group, the marginal distribution in Table 3.17 shows a slightly higher proportion of bilingualism among males than females, the difference amounting to 2.8%. Educational controls have the effect of revealing higher female bilingualism for the highest two categories, reducing the male advantage from 2.8% to 1.2% for those with Grade 12, and increasing the male differential for those with between one and 11 years of education.

For the older ages, male-female differences were generally around 5% for the ages 25-54. We see that for those with at least some university education, the differences are somewhat larger than 5%; the differences, in fact, increase with age. Differences are rather small for those with Grade 13, but the overall levels of bilingualism are much lower for this category anyway. For those with Grades 9-12, differences are smaller in the younger age groups but tend to increase with age. Finally, for the lowest two educational levels, differences tend to be somewhat lower, as are the overall levels of bilingualism, for males as well as females.

What inferences can we draw from these patterns? We made the suggestion, when we dealt with age-specific differences for the youngest respondents, that one explanation might lie in the content, rather than in the quantity, of education. It is fair to say that the educational controls bear this out. Clearly, at the lower end of the educational distribution, we cannot really speak of the content of education. It is obviously irrelevant for people without any formal schooling, and the freedom to choose subjects would generally not exist for the first six to eight grades. Indeed, for those categories the differences between male and female bilingualism are either very small, or are in favour of the males. After we control for age (in the lowest groups), the female advantage in regards to official bilingualism seems to increase with increasing education.

Another point may be drawn from this table. We suggested, in our analysis of the age patterns, that society, and the school system in particular, may have been generating more Bilinguals in recent years than in earlier years. Table 3.18 appears to give at least partial support for that inference. There are gradients supporting this suggestion for females with at least some university education; for both males and females with Grade 13; for females with Grade 12 (however, because the figures for the youngest age group within the Grade 12 category are somewhat untrustworthy, we should not pay too much attention to the value for males aged 10-14); and at least through age 20-24 for females with Grades 9-11. It is harder to make the same case for males with university education and Grades 9-12. Again, the fact that the age gradient is missing for those with the lowest levels of education, where probably very little thorough second language training occurs, points in the same direction.

Finally, consider the data in the "no schooling" category. We find, for males, a distinct positive correlation between age and bilingualism. To a lesser degree, the same pattern shows up for males with 1-8 years of education. Especially in the case of those with no schooling, we cannot advance any explanations based on the educational system and its changing nature. Obviously, these individuals must have learned their second language elsewhere than in school. We have, here, cases of what MacNamara has called "street learning" (MacNamara, 1973). Obviously, the chances of acquiring a second language through "street learning" would increase with increasing exposure. If we accept the idea that adult males have higher rates of participation than women in various public areas, it should not be surprising that we find a pronounced positive relation between official bilingualism and "street learning" for men, but not for women.

3.2.9.3 Official Bilingualism by Sex, Education and Labour Force Status

We suggested in our earlier analyses that the sex differences in bilingualism might be reduced if we controlled simultaneously for the effects of education and labour force participation. For the sake of comparison, we should mention that the percentage officially bilingual for males 15 years and over is 18.6; the corresponding figure for females is 14.9.

Table 3.19 shows that the differentials are indeed less, when we control for labour force status, for all labour force categories. The differences are larger for the category "not in the labour force". The exception is formed by the "no schooling" category, where all differences between male and female bilingualism are large and, with the exception of the unpaid family workers, of about the same magnitude.

TABLE 3.19. Percentage Officially Bilingual by Sex, Education and Labour Force Status, Population Aged 15 and Over, Canada, 1971

Education	Males	Females	Males	Females
	<u>Employed</u>		<u>Unpaid family worker</u>	
University	30.5	28.1	29.2	21.6
Grade 13	11.6	13.2	17.2	8.9
Grade 12	16.3	15.0	15.2	10.1
Grades 9-11	18.6	16.6	10.5	11.0
Grades 1-8	16.5	13.7	8.2	9.3
No schooling	11.6	6.5	7.1	5.1
Total	19.2	17.0	11.6	10.6
	<u>Unemployed</u>		<u>Not in Labour Force</u>	
University	31.7	33.0	34.2	27.4
Grade 13	16.3	19.7	14.5	13.7
Grade 12	19.2	16.8	23.1	14.9
Grades 9-11	20.1	16.6	22.4	15.4
Grades 1-8	17.9	13.6	18.3	13.4
No schooling	13.6	5.2	11.9	6.0
Total	20.4	18.1	21.6	15.9

Source: 1971 Census of Canada, unpublished data.

A second point to be noted is the extremely low level of official bilingualism generally found among the unpaid family workers. Note that for census purposes, unpaid family workers include those who reported that they helped in the operation of a family business or farm without receiving regular money wages. For both male and female unpaid family workers, the values for official bilingualism tend to be quite a bit lower than those found in the category "not in the labour force". We have no explanation for this pattern at this time.

Finally, we should note that by controlling for education and sex simultaneously, the effects of labour force participation appear to be rather small. We are getting fairly large differences between male and female percentages in the "not in the labour force" category because, for some reason, male percentages officially bilingual tend to be higher for the "not in the labour force" category than for the employed category (with marginal percentages of 21.6 and 19.2 respectively), while the observe relationship holds for females (with marginal percentages of 15.9 and 17.0).

Considering the data separately for males and females, there appears to be a slight tendency for women not in the labour force to be less bilingual than women in the labour force. The differences are rather small, however, and we would prefer not to take these data as strong support for the "language loss" hypothesis which has generally been advanced in the research literature.

3.2.10. Further Elaboration of the Spatial Patterning of Official Bilingualism

The second strand of our multivariate analyses deals with those variables which have a strong locational component. We saw that official bilingualism was high among persons of French mother tongue in Canada as a whole, and among persons of several mother tongues in the province of Quebec. In this section, we will attempt to disentangle the effects of these two factors in explaining variations in the prevalence of official bilingualism.

If the mother tongue factor were the only significant one operating, we would expect to find that the French mother tongue population was highly bilingual in all provinces, and all other mother tongues would be associated with less bilingualism. If the "Quebec" factor were the only significant one, we would find that all mother tongue categories would be more bilingual in Quebec than in the rest of the country. If both factors operated independently of each other, we should find that those of French mother tongue in Quebec would be the category with the highest degree of bilingualism. To summarize these possibilities, we set up the following diagrams:

	I		II		III	
	<u>Mother tongue only</u>		<u>Quebec only</u>		<u>Both</u>	
	Quebec	Non-Quebec	Quebec	Non-Quebec	Quebec	Non-Quebec
French	High	High	High	Low	Very high	High
Non-French	Low	Low	High	Low	High	Low

The evidence required to put each of these "models" to the test to discover which provides the best fit is presented in Table 3.20.

TABLE 3.20. Percentage Officially Bilingual, by Mother Tongue and Province, Canada, 1971

Province	Mother tongue		
	English	French	Other
Newfoundland	1.1	86.1	7.3
Prince Edward Island	2.3	90.9	6.5
Nova Scotia	2.3	89.5	6.0
New Brunswick	5.2	53.0	9.2
Quebec	36.7	25.7	33.1
Ontario	4.3	81.7	5.0
Manitoba	2.9	92.1	2.3
Saskatchewan	1.9	94.6	1.5
Alberta	2.4	93.4	2.4
British Columbia	2.9	96.2	3.6
Yukon	4.2	98.9	4.4
Northwest Territories	4.8	92.2	1.6
Total	5.5	34.0	7.8

Source: 1971 Census of Canada, Catalogue 92-776, Bulletin SP-6, Table 2.

Inspection of Table 3.20 shows that none of our three diagrams fits nicely with the data. It is true that those of French mother tongue have higher percentages officially bilingual than the other two categories, in all provinces except Quebec. It is also true that those of English mother tongue and of "other" mother tongues are more bilingual in Quebec than outside it. Those of French mother tongue in Quebec, however, are less bilingual than those in the other provinces. We appear, then, to have a negative interaction between the two factors we had identified — "French mother tongue" and "Québec residence". This could be represented by a fourth diagram:

IV		
Negative interaction		
	Quebec	Non-Quebec
French	Intermediate	Very high
Non-French	High	Very low

What we have here is a situation where minorities adapt to the language "mix" in their environment. Clearly, the population of French mother tongue is in the minority in all provinces except Quebec. Even at the level of counties and census divisions, this is true for almost all cases except some counties in the "bilingual belt" in New Brunswick and Ontario. Similarly, those of

mother tongues other than French are a minority in the province of Quebec (and in all counties of that province, except Brome and Pontiac). Model IV suggests an interpretation in which minorities adapt to their environment by learning the language of the majority. Given the facts that Quebec is a French linguistic minority within an overwhelmingly English North America and has, for about two centuries, contained an English-speaking minority which, until very recently, had extremely free access to institutions operating in English, the adaptation mechanism operates more strongly on the minorities with French mother tongue outside Quebec than on the non-French minority in Quebec.

3.2.11. Summary of the Multivariate Analyses

So far, we have found that three major factors are involved in the explanation of variations in the prevalence of official bilingualism. First, there is the individual's mother tongue: persons with French mother tongue have a higher propensity of being officially bilingual in Canada than persons with mother tongues other than French. Secondly, there is the language composition in the individual's environment: the propensity to be officially bilingual is negatively correlated with the "relative density" of the mother tongue. In other words, minorities have, *ceteris paribus*, higher propensities of being officially bilingual than majorities. Thirdly, there is the effect of formal education: within certain limits, there is a positive correlation between the amount of formal education attained and the propensity to be officially bilingual. Our analyses by age and sex have suggested that, in addition to the quantity of education, the content should also be considered, but census data do not give any evidence regarding the effects of this component.

3.3. Spatial Aspects of Official Bilingualism

3.3.1. Multiple Regression Analysis

We have taken the adaptation model, which emerged out of our multivariate analyses of individual bilingualism, a step further. If the model holds, it should hold at lower levels of spatial aggregation. The next lower level of aggregation for which data can be readily obtained, and for which analyses can be done conveniently, is that of counties and census divisions. Since the number of such units is large, multiple regression analysis was used.

Guided by our earlier findings, we used several independent variables for this analysis. We computed the proportion of the population which has French as its mother tongue. We would expect to find that official bilingualism among those of French mother tongue would be correlated negatively with this variable. We also computed the proportion of the population with English as mother tongue and postulate a negative correlation between the value for this variable and the percentage officially bilingual among those of English mother tongue.

In order to evaluate the effects of linguistic composition on official bilingualism for the total population, we computed an index of heterogeneity, which in the linguistic and sociological literature is normally identified as A_w (see Greenberg, 1956; Lieberman, 1970; de Vries, 1975). Briefly defined, the index measures the probability that two members of a population, chosen at random, will not have the same mother tongue. In a totally homogeneous population with regards to

mother tongue, the index would assume a value of 0, while the theoretical maximum (reached when all categories have an equal number of members) equals $1-1/K$, where K is the number of categories used in the measurement of heterogeneity.

For the educational composition, we calculated the percentage of the total population which had at least nine years of education. We also included a measure of nativity: the percentage of the population born in Canada.

Finally, we carried out some of our analyses separately for the counties of Quebec, both by excluding all counties and census divisions outside Quebec, and by including dummy variables which assumed values of zero for all spatial units outside Quebec.

Our regression analyses of official bilingualism can be split into three separate lines of analysis: bilingualism of the total population; bilingualism of the population of English mother tongue; and bilingualism of the population of French mother tongue.

3.3.2. Official Bilingualism of the Total Population

We carried out a stepwise multiple regression analysis, using a forward inclusion option. This means that independent variables are entered into the equation only if they meet certain statistical criteria, usually a value on a sequential F-test significantly different at some specified significance level. When we analyzed the data for the entire Canadian population, we found the sequence of regression equations which has been summarized in Table 3.21.

The main equations of interest are Equations 4 (with the largest number of independent variables) and 5. The latter equation shows that the explanation of the relative frequency of official bilingualism is, in fact, not constant across the country. So, we need two explanations, one for the counties in Quebec, and one for the remainder of the country. As Equation 5 shows, a county in Quebec would have a higher proportion of its population officially bilingual, at specific levels of mother tongue heterogeneity and specific proportions of the population with French as mother tongue, than would a county or census division outside Quebec.

This difference between Quebec and the rest of the country can be explained partly by the differing nature of mother tongue heterogeneity. In Quebec, this heterogeneity is largely attributable to the joint presence of persons with English or French as mother tongue. A high measure of heterogeneity in Quebec would indicate relatively large concentrations of English speakers and French speakers in the same area, a situation which leads to official bilingualism whenever a person with one mother tongue learns the language of the other. Outside Quebec, mother tongue heterogeneity is largely the result of the presence of persons of English mother tongue and persons of "other" mother tongues; that is, neither English nor French. Obviously, the latter condition does not produce an officially bilingual individual whenever a person of one mother tongue learns the language of the other segment of the population.

There is, however, more to the differences in explanations than just the differences between the groups which make up the linguistically heterogeneous population of a county or census divisions. Let us take a hypothetical example of two counties, both of which contain only individuals with English or French as mother tongue. Assume that one county is in Quebec and that 85% has French as mother tongue. For such a county, the index of mother tongue heterogeneity has a value of 0.25. Using the regression coefficients in Equation 5 from Table 3.21, we can estimate that the percentage officially bilingual in this hypothetical county would be equal to:

$$[- 1.1 + (0.17 \times 85) + (22.3 \times 0.25) + (29.5 \times 0.25)] = 26.3$$

TABLE 3.21. Summary of the Multiple Regression Analysis of Official Bilingualism on Selected Independent Variables, for Counties and Census Divisions, Canada, 1971

Independent variable ¹	Equation				
	1	2	3	4	5
% FMT	0.16	0.21	0.25	0.23	0.17
Aw	—	27.0	28.3	38.3	22.3
Nine +	—	—	0.28	0.76	—
% Can	—	—	—	0.84	—
Quebec/Aw interaction	—	—	—	—	29.5
Regression constant	5.5	-2.5	-18.2	-121.5	-1.1
R ²	0.32	0.52	0.54	0.62	0.58
Standard error of estimate	9.5	8.0	7.8	7.1	7.5

"—" indicates variable not used in the equation.

¹ The definitions of the variables are:

- % FMT: percentage of the population with French as mother tongue;
- Aw: index of mother tongue heterogeneity;
- Nine +: percentage of the population with at least nine years of education;
- % Can: percentage of the population born in Canada; and
- Quebec/Aw interaction: a variable with values set to 0 for units outside Quebec, but set equal to Aw for the counties in Quebec.

Assume that the second county is outside Quebec and that the relative sizes of the two mother tongue segments are reversed. This hypothetical county has 15% of its population with French as mother tongue and 85% with English as mother tongue. We still have an index of heterogeneity equal to 0.25. With the regression coefficients of Equation 5, we can calculate the estimated percentage officially bilingual to be:

$$[- 1.1 + (0.17 \times 15) + (22.3 \times 0.25)] = 7.0$$

Thus, the model of "minority adaptation", which we developed in the preceding segment of this chapter, needs to be modified even further. Our hypothetical example above indicates that under comparable circumstances, the majority in Quebec, the population of French mother tongue, is more likely to acquire the other official language than the majority in the counties and census divisions outside Quebec.

Equation 4 in Table 3.21 shows that mother tongue composition does indeed have a very strong effect on the relative prevalence of official bilingualism. In addition, there appears to be some relation to the educational level of the population. When we control for mother tongue composition, we find that the percentage officially bilingual grows with increasing percentages of the population with at least nine years of education.

Finally, there appears to be a positive correlation between the prevalence of official bilingualism and the extent to which the population was born in Canada. The obvious inference from this observation is that native-born Canadians appear to have higher propensities for official bilingualism than do foreign-born Canadians. It should be pointed out, however, that this inference is spurious. Counties with high proportions of native-born Canadians are predominantly also counties with high proportions of French mother tongue. The "nativity" measure is in fact no more than yet another measure of French mother tongue concentration.

In addition to the overall interpretations on the "ecology of bilingualism" based on these regression analyses, we can gather more specific information. While the equations provide rather good descriptions of the spatial variation in the prevalence of official bilingualism, there are always cases which do not "fit the equation" very well. When we investigate those counties and census divisions for which the regression analyses do not give good estimates, that is, cases for which the actual prevalence of bilingualism differs by a large amount from that "predicted" by the equations, we find that these "outliers" are almost exclusively those counties in Ontario and New Brunswick which Joy mentioned as part of the "bilingual belt" (1967). The clearest and most persistent outliers are the counties of Hull in Quebec, Prescott, Russell and Stormont in Ontario, and Gloucester and Kent in New Brunswick. In all these cases, observed bilingualism was considerably higher than that expected on the basis of the regression analyses. One inference we can draw from this is that the nature of "minority adaptation" is not entirely a function of the characteristics of the immediate environment, approximated, in this analysis, by the population of the county or census division itself. Ideally, we should take into consideration how counties are situated with regards to the surrounding populations. Those located in the bilingual belt may well have to adapt to the characteristics of two adjacent population segments, those of French mother tongue and those of English mother tongue.

We followed up the notion of "minority adaptation" in yet another fashion. While the regression summary showed that the main factor explaining the prevalence of official bilingualism was the relative concentration of the population of French mother tongue, it could be argued

that this does not make much sense in the counties of Quebec. There it is obviously the English mother tongue segment which constitutes the minority, at least in the numerical sense. Thus, we conducted a separate regression analysis of official bilingualism in Quebec, using the relative concentration of the population of English mother tongue as our independent variable. The resulting regression equation is given as Equation 6 in Table 3.22.

TABLE 3.22. Summary of Various Multiple Regression Analyses of Official Bilingualism on Selected Independent Variables, for Counties and Census Divisions, Canada, 1971

Independent variable ¹	Equation					
	6	7	8	9	10	11
% EMT	1.5	-0.67	-0.64	-0.38	—	—
(% EMT) ²	-0.02	—	—	—	—	—
Aw	—	—	-47.2	-22.5	—	—
Quebec/Aw interaction	—	—	—	-68.2	—	—
Quebec intercept	—	—	—	33.8	—	—
% FMT	—	—	—	—	-0.85	-0.57
Quebec/FMT interaction	—	—	—	—	—	-0.28
Regression constant	10.5	58.2	69.4	40.5	97.4	96.0
R ²	0.71	0.78	0.90	0.92	0.96	0.97
Standard error of estimate	5.8	12.6	8.4	7.6	6.9	5.6

"—" indicates variable not used in the equation.

¹The definitions of the variables are:

% EMT: percentage of the population with English as mother tongue;
 (% EMT)²: squared value of the English mother tongue percentage;
 Aw: index of mother tongue heterogeneity;
 Quebec/Aw interaction: as in Table 3.21;
 Quebec intercept: a variable set to 0 for units outside Quebec, and to 1 for units in Quebec;
 Quebec/FMT interactions: a variable set to 0 for units outside Quebec, and set equal to % FMT for units in Quebec; and
 % FMT: percentage of the population with French as mother tongue.

It is obvious that, as expected, it is the percentage of the population with English as mother tongue which provides the best explanation of the prevalence of official bilingualism in Quebec. Note that the relationship found in Equation 6 is curvilinear. The maximum prevalence of official bilingualism in Quebec counties is expected to occur when 38% of the population is of English mother tongue. At this point, the expected percentage officially bilingual in the total population is 39%. For concentrations of English mother tongue persons higher or lower than the 38%, we find declines in the estimated prevalence of bilingualism. If there were a county in Quebec with at least 80% of the population of English mother tongue, the expected prevalence of official bilingualism would converge to zero. Of course, there are no such counties. At the other extreme, counties with no persons of English mother tongue would still have an estimated 10.5% of the population bilingual.

3.3.3. Official Bilingualism of the English Mother Tongue Population

We conducted some additional regression analyses of the prevalence of official bilingualism within the English and French mother tongue segments of the Canadian population separately. If the "minority adaptation" hypothesis is correct, we should expect negative correlations between the relative concentration of a mother tongue in an area, and the prevalence of official bilingualism among persons with that mother tongue. The analyses for the population of English mother tongue are summarized as Equations 7, 8 and 9 in Table 3.22.

The degree to which the population of English mother tongue is officially bilingual varies inversely with its relative concentration, which was what we expected. As Equation 7 shows, the predictive value of the relative concentration alone is not particularly high. Although over three-quarters of the variance in official bilingualism in the English mother tongue population is explained, the standard error of estimate is relatively high. When we introduce a measure of mother tongue heterogeneity, the predictive precision of the equation improves fairly strongly, as shown both by the increase in variance explained and the decrease in the standard error of estimates. Evidently, the relation between relative English mother tongue concentration and its official bilingualism is a curvilinear one, rather than a linear one. Comparisons between Equations 7 and 8 show that the linear relationship postulated by Equation 7 underestimates the prevalence of official bilingualism for the English mother tongue population when it is either a very small minority, or when it is an extremely large majority. For example, when the relative concentration of the English mother tongue population is very close to zero, the linear model of Equation 7 would predict that at most, 58.2% of that segment would be bilingual (given by the regression constant for the equation), while the curvilinear model of Equation 8 would predict a value of 69.4% bilingual. If the relative concentration of the English mother tongue approached 100%, Equation 7 would give the empirically impossible prediction that a negative percentage (-3.8) would be bilingual, while Equation 8 predicts a more realistic value of 5.4%.

Equation 9 shows that the inverse relationship holds both inside and outside Quebec, but it is considerably stronger in Quebec. This obviously is additional support for the "minority adaptation" model we developed earlier. For example, in cases where the relative concentration of the English mother tongue approached zero, the predicted degree of official bilingualism would be close to 74% if the county were in Quebec, but only about 40% if it were outside Quebec.

3.3.4. Official Bilingualism of the French Mother Tongue Population

Comparable analyses of the prevalence of official bilingualism among persons of French mother tongue produced information summarized as Equations 10 and 11 in Table 3.22. We should point out that we excluded from our analyses all those counties in which the population of French mother tongue was less than 100 individuals.

Again, the evidence strongly supports the "minority adaptation" model. A comparison with the comparable equation for the English mother tongue segment (Equation 7 in Table 3.22) shows that the description is, in fact, more precise for the French segment than for the English segment. That fact is consistent with the notion that persons of French mother tongue, regardless of their relative concentration at the level of the county, are a minority at the national and continental levels. Consequently, even where no need for adaptation to local conditions is present, there is always a need for some proportion of the population segment to deal with the world outside, which happens to be dominated by users of the English language.

Further support for the adaptation model is given by the values in Equation 11. Under equal levels of relative concentration, official bilingualism among the French mother tongue population outside Quebec would be higher than in Quebec. For example, in counties where 50% of the population is of French mother tongue, we would expect to find 53.5% of the French mother tongue population to be officially bilingual if the county were in Quebec, but 67.5% if the county were elsewhere in Canada.

3.4. Conclusions

To conclude our analysis of the prevalence of official bilingualism, let us review our major findings and speculate on some implications.

We found that official bilingualism in the Canadian population is rather strongly correlated with a location in, or near to, the province of Quebec. Within Quebec, we showed that the major concentration is situated in the Metropolitan Area of Montréal. Outside Quebec, official bilingualism is most clearly associated with the French mother tongue segment of the population. This factor explains, for example, interprovincial variations in the prevalence of official bilingualism for rural and urban areas.

We found that the prevalence of official bilingualism by age and sex followed the pattern observed by earlier researchers, such as Lieberman (1970): higher bilingualism for males than for females, and a curvilinear relation between age and bilingualism, with a maximum reached in the early adult ages. We did, however, advance some alternative explanations for these patterns which would appear to be supported more convincingly by detailed analyses than the explanations advanced in earlier research. The major revisions we would like to advance are that the observed relationship between age and bilingualism is not so much the result of individuals forgetting their second language, but rather the consequence of differences in the tendency to acquire the second language in the first place. We have raised the possibility that educational systems in more

recent years (i.e., before 1971) have had more success in "producing" bilingual students than they did in earlier years.

Another aspect of the relation between education and bilingualism which emerged from our detailed analyses was that researchers would do well to pay attention to the content of an individual's educational experience, in addition to the customary measures of the quantity, usually measured in terms of years of completed schooling. Only variables of this nature may explain differences in bilingualism between males and females which are manifest after controls for age, education and labour force status.

The analysis of the interactions between education, age and sex, brought out yet another factor worth noting. The study of that segment of the population with very little or no schooling made us realize the fact that there is a variety of possible sources for the acquisition of a second language. We have grouped all the "informal" sources — everything not involving formal language education — under the heading "street learning", borrowing a term from MacNamara (1973). Census data do not allow one to analyze the effects of the source of language acquisition upon subsequent linguistic behaviour with much detail, although the census does provide one with further leads when language use data (i.e., language of the home) are combined with data from the other language questions. This operation is carried out in Chapter 6 where we return to the issue of "school learning" versus "street learning". To probe more deeply into the differential effects of these two modes of learning requires more detailed analyses of language data collected through surveys or interviews.

In our analyses of the "ecology" of bilingualism, we have shown that the acquisition of the second official language by persons of English or French mother tongue follows an "adaptation" model. Especially, the latter point requires some further thought because it has some fundamental implications for our theories of behaviour in linguistically plural communities.

Let us explain what we mean by postulating two possible models of such communities. On one extreme, we could consider a "segregation" model in which all community members interact only with those persons who have the same mother tongue. In this model, bilingualism would not be necessary for communication between members of the community; it would occur randomly and have no statistical relation to the relative concentrations of the various linguistic segments of the population.

At the other extreme, we could consider a "random interaction" model in which all interactions between two members of the community have equal probabilities of occurring. Under this model, a certain proportion of all possible interactions would involve persons who do not have the same mother tongue. Therefore, at least one of the two persons in such interactions would have to be bilingual. Obviously, in this second model, bilingualism would not occur at random, but would be proportionately higher among the minority than among the majority, because a higher proportion of the interactions of minority members would involve others with a different mother tongue.

From our discussion of the findings, it should be clear that the "adaptation" model is, in fact, extremely close to the "random interaction" model, and contrary to the "segregation" model. We should point out that A_w , the index of heterogeneity, measures the probability that two individuals, selected at random, would not have the same mother tongue.

In summary, the data on official bilingualism in the 1971 Census of Canada lead us to believe that interaction in linguistically plural communities takes place, to a large degree, across linguistic boundaries, or, more precisely, appears to ignore linguistic boundaries, and that individuals adapt to these conditions by becoming bilingual. Minorities are generally under more pressure to adapt than majorities, so they have a greater propensity for becoming bilingual. These findings raise considerable doubts about the tenability of such notions as "boundary maintenance" (Barth, 1959), "institutional completeness" (Breton, 1964), "community closure" (Neuwirth, 1969) and other concepts which are associated with a "segregation" model of interaction, at least for the analysis of variations in bilingualism.

FOOTNOTE

¹Segregation is traditionally measured by an index formally called an "index of dissimilarity"; the informal name for the index is "delta", due to the fact that the mathematical symbol for the index is the Greek letter delta (Δ). A complete absence of segregation between two groups would result in a value of 0 for the index; complete segregation between two groups would produce an index value of 100. For a description of the index and methods of calculation, see Taeuber and Taeuber, 1965, Appendix A.

CHAPTER 4

DETERMINANTS OF UNOFFICIAL BILINGUALISM AND MULTILINGUALISM

4.1. Introduction

In this chapter we proceed with our analyses of bilingualism in Canada. In contrast to our work in Chapter 3, however, in this one we deal with the phenomena of "unofficial bilingualism" and of "multilingualism". By "unofficial bilingualism" we mean the ability to speak two languages, at least one of which is not an official language of Canada, that is, English or French. We define "multilingualism" as the ability to speak three or more languages.

Before we proceed, we reiterate that the census data by no means provide us with perfect measures of these phenomena. Recall that only the questions dealing with language spoken most frequently at home and with official languages spoken really measure the ability to speak particular languages, whereas the question on mother tongue is a much weaker measure of linguistic ability. Moreover, the fact that for both home language and mother tongue only one answer was provided, means that no one can be recorded in the census as speaking more than four languages. Specifically, we take it that the data on English and French are adequate measures of the potential of those two languages. In addition, we hold that mention of one other language as home language is sufficient indication that the respondent is capable of speaking that language. However, any other languages he may be able to speak are almost certainly not measured by the census data. Despite these deficiencies, we decided that it was still important to conduct our analysis. As we shall see, unofficial bilingualism is an important feature of Canadian life, even as assessed with the deficient census measures. It is, in fact, safe to state that there are probably as many people who are unofficially bilingual as there are people speaking English and French in the country.

To conduct our analyses, we constructed a new variable to which we will refer as "linguistic ability". It was constructed from logical combinations of the answers to the questions on mother tongue, official languages spoken, and home language. The resulting categories are:

1. "unilingual other": persons who have indicated one mother tongue and (identical) home language, not English or French, and who indicate that they are unable to speak either official language.
2. "unilingual English": persons with English mother tongue and home language, and "English only" as official language.
3. "unilingual French": persons with French mother tongue and home language, and "French only" as official language.
4. "officially bilingual": persons with various combinations of English and French, but no additional languages mentioned (examples: English mother tongue and French home language, or French mother tongue, English home language, etcetera. In all cases the official language question must be recorded as "Both").
5. "unofficially bilingual-English": persons with English and one other language (not French) mentioned as mother tongue and home language. Official language: English only (example: Italian mother tongue, English home language).

6. "unofficially bilingual-French": persons with French and one other language (not English) mentioned as mother tongue and home language. Official language: French only.
7. "multilingual" or "unofficially bilingual-other": persons in this category mentioned three or four different languages, or two other languages (neither English nor French). This latter category is extremely small.

In contrast to our previous chapter, the present analysis does not build on earlier research. To our knowledge, no analysis of unofficial bilingualism has ever been conducted on the basis of Canadian census data, nor on any other census data for that matter. Moreover, we are unable to make any detailed comparisons with earlier census data, since the question on home language was introduced in 1971 and did not exist in earlier censuses except that for 1911.

As in Chapter 3, we begin our analysis with a sequence of bivariate analyses, in which the prevalence of unofficial bilingualism is studied with regards to selected independent variables. In the last segment of our analysis, we combine some of the preliminary findings into a few multivariate analyses.

4.2. Individual Aspects of Unofficial Bilingualism

4.2.1. Marginal Distribution

Table 4.1 presents our findings on the distribution for Canada as a whole of linguistic ability, as previously defined. We suggest that insights into the mechanisms of language acquisition are provided in a comparison between Table 4.1 and the corresponding data in Table 3.1 of Chapter 3.

TABLE 4.1. Distribution of Linguistic Ability, Canada, 1971

Linguistic ability	Number	Per cent
Unilingual other	312,895	1.4
Unilingual English	12,177,385	56.5
Unilingual French	3,817,870	17.7
Officially bilingual	2,670,515	12.4
Unofficially bilingual-English	2,244,410	10.4
Unofficially bilingual-French	60,375	0.3
Multilingual	284,865	1.3
Total	21,568,310	100.0

Source: 1971 Census of Canada, unpublished data.

For the English language categories (Rows 2 and 5) we find the following figures: in Chapter 3, we found that 67.1% of the total population was able to speak English only (response to the question on official language). In Table 4.1, above, we find that 56.5% of the population is unilingual English, and 10.4% is unofficially bilingual-English. The remainder, or about 0.2%, would be multilinguals who have other mother tongues and home languages. Thus, out of the segment reported as speaking English only in the official language tables, approximately one-sixth consists of people who speak an additional language, either as home language or mother tongue, or both.

In contrast, consider the French language categories (Rows 3 and 6). In Chapter 3, we found that 18.0% of the total Canadian population was able to speak French only (response to the question on official language). Table 4.1 shows that 17.7% of the population is unilingual French, and about 0.3% is unofficially bilingual-French, which means proficiency in French and one other language which is not English. In other words, only one-fiftieth of the French only segment is able to speak another language which is neither English nor French.

For the officially bilingual group, Table 3.1 gave us a figure of 13.4%, while in Table 4.1 above we find that 12.4% is able to speak English and French, with no additional languages involved. Thus, the difference, or about 1.0% of the population, should be multilingual. In other words, about one in 13 of those speaking English and French in Canada reports at least one additional language, either as mother tongue or as home language.

Finally, the group which was unable to speak English or French was given as 1.5% in Table 3.1, whereas we find 1.4% as "unilingual other" in Table 4.1 above. The remainder, or about 0.1% of the population, must consist of persons who report two different "other" languages for mother tongue and home language. That is to say, approximately one in 15 of the people who are unable to speak English or French do speak more than one language.

The patterns which we have described here reinforce our findings in Chapter 3: individuals whose mother tongue is neither English nor French are drawn in the English, rather than the French, speech community.

4.2.2. Provincial Distribution

It should not be surprising, after our analyses of official bilingualism in Chapter 3, that the unofficially bilingual groups also have varying provincial concentrations. These variations appear in Table 4.2.

Taking the English categories first (Columns 2 and 5) we see that our original finding in Chapter 3, of an over-representation of English speakers in all provinces except Quebec and New Brunswick, has to be modified somewhat. The unilingual English are over-represented in all provinces except Quebec and the Northwest Territories. For this group there is, in fact, little difference between New Brunswick and Manitoba. The concentration of the unilingual English speakers is highest in the Atlantic provinces, but is much less marked in the provinces west of Quebec and in the Yukon.

TABLE 4.2. Percentage Distribution of Linguistic Ability by Province, Canada, 1971

Province	Unilingual			Bilingual			Multilingual
	Other	English	French	Official	English	French	
Newfoundland	0.1	97.4	0.1	1.7	0.6	0.0	0.1
Prince Edward Island	0.0	90.2	0.6	8.1	1.0	0.0	0.1
Nova Scotia	0.1	90.7	0.5	6.6	1.9	0.0	0.2
New Brunswick	0.1	61.4	15.9	21.3	1.2	0.0	0.1
Quebec	1.0	8.2	59.9	25.4	2.2	0.9	2.3
Ontario	2.2	73.5	1.1	8.4	13.4	0.1	1.3
Manitoba	2.0	64.5	0.5	7.5	24.3	0.0	1.1
Saskatchewan	1.2	72.1	0.2	4.6	21.3	0.0	0.6
Alberta	1.1	75.3	0.2	4.5	18.1	0.0	0.7
British Columbia	1.2	79.9	0.1	4.1	14.0	0.0	0.8
Yukon	0.2	79.6	0.0	5.9	13.5	0.0	0.8
Northwest Territories	20.3	44.1	0.2	5.2	29.0	0.1	1.0
Canada	1.5	56.5	17.7	12.4	10.4	0.3	1.3

Source: 1971 Census of Canada, unpublished data.

Moreover, we find in contrast to what we saw in Table 3.2, that the unilingual English group is clearly under-represented in the Northwest Territories. Except for Quebec, no other province or territory has such a low concentration of unilingual English speakers.

For the unofficially bilingual-English category, we find extremely low concentrations in the Atlantic provinces and Quebec, then high concentrations for Ontario, the western provinces and the northern territories, with the highest concentration in the Northwest Territories, followed by Manitoba.

For the French categories (Columns 3 and 6) no distinct differences in regional concentration can be observed between the data in Table 4.2 and the patterns described in Chapter 3. Given the extremely small size of the unofficially bilingual-French category, this does not come as a surprise. Only in the province of Quebec do they have a noticeable representation, but even here they are far outnumbered by the unofficially bilingual-English category. The multilinguals, finally, are most concentrated in the provinces of Quebec and Ontario, although we also find them in concentration of approximately 1% in the western provinces and the Territories.

We can again consider the relative concentration of the various language groups in the Canadian provinces. Table 4.3 reminds us of the very high concentration of French speakers in very few provinces: 94.6% of all the unilingual French and 90.3% of the unofficially bilingual-French group are in Quebec.

TABLE 4.3. Cumulative Percentage Distribution of Categories of Linguistic Ability, by Province, Canada, 1971

Province	Cumulative percentage	Province	Cumulative percentage	Province	Cumulative percentage
<u>Unilingual other</u>		<u>Unilingual English</u>		<u>Unilingual French</u>	
Ontario	53.2	Ontario	46.5	Quebec	94.6
Quebec	73.1	British Columbia	60.8	New Brunswick	97.3
British Columbia	81.5	Alberta	70.9	Ontario	99.6
Manitoba	87.9	Nova Scotia	76.8	Manitoba	99.7
Alberta	93.5	Saskatchewan	82.3	Nova Scotia	99.8
Saskatchewan	97.0	Manitoba	87.5	Alberta	99.9
Northwest Territories	99.3	Newfoundland	91.7	Saskatchewan	99.9
Nova Scotia	99.6	Quebec	95.7	British Columbia	100.0
Newfoundland	99.8	New Brunswick	98.9	Prince Edward Island	100.0
New Brunswick	100.0	Prince Edward Island	99.8	Newfoundland	100.0
Yukon	100.0	Northwest Territories	99.9	Northwest Territories	100.0
Prince Edward Island	100.0	Yukon	100.0	Yukon	100.0
<u>Officially bilingual</u>		<u>Unofficially bilingual-English</u>		<u>Unofficially bilingual-French</u>	
Quebec	57.4	Ontario	45.9	Quebec	90.3
Ontario	81.8	British Columbia	59.6	Ontario	98.0
New Brunswick	86.8	Alberta	72.7	British Columbia	98.5
British Columbia	90.1	Manitoba	83.4	Manitoba	99.0
Manitoba	92.9	Saskatchewan	92.2	Alberta	99.4
Alberta	95.7	Quebec	98.2	New Brunswick	99.7
Nova Scotia	97.6	Nova Scotia	98.9	Saskatchewan	99.9
Saskatchewan	99.2	Northwest Territories	99.4	Nova Scotia	99.9
Prince Edward Island	99.6	New Brunswick	99.7	Northwest Territories	100.0
Newfoundland	99.9	Newfoundland	99.8	Newfoundland	100.0
Northwest Territories	100.0	Yukon	99.9	Prince Edward Island	100.0
Yukon	100.0	Prince Edward Island	100.0	Yukon	100.0
<u>Multilingual</u>					
Quebec	47.9				
Ontario	82.7				
British Columbia	88.9				
Alberta	93.1				
Manitoba	97.0				
Saskatchewan	98.9				
Nova Scotia	99.3				
New Brunswick	99.7				
Newfoundland	99.8				
Northwest Territories	99.9				
Yukon	100.0				
Prince Edward Island	100.0				

Source: 1971 Census of Canada, unpublished data.

If, as in Chapter 3, we read across the third row of the table, we find in descending order of concentration the unilingual French in Quebec, New Brunswick and Ontario; the unofficially bilingual-French in Quebec, Ontario and British Columbia; the multilinguals in Quebec, Ontario and British Columbia; the officially bilingual in Quebec, Ontario and New Brunswick; the unilingual other in Ontario, Quebec and British Columbia; and, finally, both the unofficially bilingual-English and unilingual English in Ontario, British Columbia and Alberta.

The differences we should note are those between the unilingual English group and the unofficially bilingual-English group. In the former case, we find much less concentration in the first four provinces mentioned - 76.8% compared to 83.4%. Furthermore, we find somewhat less domination of the western provinces (e.g., Manitoba has 5.3% of the unilingual English population, but 10.7% of the unofficially bilingual-English population), and somewhat stronger domination of the Atlantic provinces (e.g., Nova Scotia has 5.9% of the unilingual English population, but only 0.7% of the unofficially bilingual-English group).

It appears that, instead of the dualism which we described in Chapter 3, we really have a three-fold regional pattern. French speakers are concentrated in Quebec and the adjacent provinces of New Brunswick and Ontario, the English speakers in the west and the east, and the speakers of other languages in all provinces west of Quebec. To put it another way, the Atlantic provinces are almost completely unilingual English, New Brunswick is a mixture of unilingual English speakers and French speakers who are almost evenly divided between unilinguals and people who speak English and French. Quebec is predominantly French, with a modest English minority and a small "other" minority. The remainder of the country is essentially a mixture of unilingual English speakers and unofficially bilingual-English people.

As in Chapter 3, we can examine these language distribution patterns by calculating segregation indices. How these indices are derived is explained in Footnote 1 of Chapter 3. In Table 4.4 the groups are arranged according to their similarity in provincial distributions; consequently, adjacent groups are most similar, while groups at opposite ends are least similar in their distributions.

In Table 4.4 we do in fact find four clusters of groups: the French ones (i.e., unilingual French and unofficially bilingual-French), with an index of dissimilarity of 6.8; the English ones (i.e., unilingual English and unofficially bilingual-English) with an index of dissimilarity of 14.2; the officially bilinguals and the multilinguals, with an index of dissimilarity of 16.3; and finally, the "unilingual other" group, with a lowest index of dissimilarity of 23.2 with the unofficially bilingual-English segment. The most dissimilar are the unilingual French, concentrated in Quebec and New Brunswick, and unofficially bilingual-English, concentrated in Ontario and British Columbia, with an index value of 90.9.

In Chapter 3, we found a value of 90.2 to indicate the dissimilarity between Francophones and Anglophones. We now find that the more detailed categories yield four index values between 84.3 and 90.9. The lowest of these four values involves the unofficially bilingual groups. In Chapter 3 we found a value of 37.2 for the dissimilarity between Francophones and the officially bilingual group,

TABLE 4.4. Segregation Indices Between Categories of Linguistic Ability, Based on Provincial Frequencies, Canada, 1971

Linguistic ability	Unilingual French	Unofficially bilingual-French	Officially bilingual	Multilingual	Unilingual other	Unofficially bilingual-English	Unilingual English
Unilingual French	—	6.8	37.2	49.0	77.1	90.9	90.6
Unofficially bilingual-French	6.8	—	32.9	42.4	70.4	84.3	86.3
Officially bilingual	37.2	32.9	—	16.3	44.4	57.8	55.3
Multilingual	49.0	42.4	16.3	—	28.5	41.9	43.9
Unilingual other	77.1	70.4	44.4	28.5	—	23.2	26.0
Unofficially bilingual-English	90.9	84.3	57.8	41.9	23.2	—	14.2
Unilingual English	90.6	86.3	55.3	43.9	26.0	14.2	—

Source: 1971 Census of Canada, unpublished data.

while in Table 4.4 we find index values of between 32.9 and 49.0 between the two French groups and the bilingual-multilingual cluster. The lowest of these values involves the officially bilingual group; the highest ones are associated with the multilingual segment.

Finally, note that the east-west gradients mentioned in Chapter 3 must be somewhat re-specified when we deal with these more detailed figures. We found a U-shaped curve for the Anglophone population, with maxima in the two peripheral provinces. Table 4.2 gives a somewhat more detailed picture. The pattern for the unilingual English is somewhat distorted by Ontario, which has a higher proportion unilingual English than Manitoba and Saskatchewan. For the unofficially bilingual-English group, we find a completely different gradient: lowest, but without great regularity, in the eastern provinces, including Quebec, then a steep increase to a maximum in Manitoba, and gradual decreases going westward through British Columbia. The Yukon is quite similar to British Columbia, while the Northwest Territories shows the highest proportion of unofficially-English bilinguals. The other patterns generally coincide with the ones we already noted. The unofficially bilingual-French and unilingual French patterns are essentially the same, and the multilingual pattern is comparable to the pattern displayed for those speaking English and French, but with a somewhat stronger western component in comparison.

4.2.3. Urban/Rural Residence

Dividing the population by residence, as in Chapter 3, we find some fairly strong differences in residential characteristics among the various categories. We already noted the concentration of the Allophones in the urban parts of the country, as compared with the rural parts. Similarly, we noted the urban concentration of that segment of the population which speaks English and French. We now see that the pattern for those who speak English and French is even more pronounced for the multilinguals. Of the urban population, 1.5% is multilingual while the corresponding figures are 0.6% of the rural farm group, and 0.3% of the rural non-farm population. We should note that the multilinguals are the most urbanized of all, with 92.4% living in urban areas, reflecting the strong tendency of immigrants to settle in cities.

TABLE 4.5. Percentage Distribution of Linguistic Ability by Residence, Canada, 1971

Linguistic ability	Canada	Urban	Rural non-farm	Rural farm
Unilingual other	1.5	1.6	1.1	0.6
Unilingual English	56.2	55.4	59.7	56.8
Unilingual French	17.9	17.0	20.8	20.6
Officially bilingual	12.4	13.6	9.4	5.7
Unofficially bilingual-English	10.5	10.5	8.5	15.7
Unofficially bilingual-French	0.3	0.3	0.2	0.1
Multilingual	1.2	1.5	0.3	0.6
Total	100.0	100.0	100.0	100.0

Source: 1971 Census of Canada, Public Use Sample Tapes.

There are some differences between the residential patterns of the population's Anglophone segment (which reports "English only" to the official language question) and the unofficially bilingual-English segment. While the unilingual English segment has a slight under-representation in the urban population, and a slight over-representation among the rural non-farm population, the unofficially bilingual segment has its largest over-representation among the rural farm residents, and an under-representation among rural non-farm residents. Comparison with the data in Table 3.5 suggests that roughly one in eight Anglophones among the rural non-farm population is unofficially bilingual, compared with a little over one in five for the rural farm population, and slightly more than one in seven for the urban population.

For the unofficially bilingual-French population, we note its strong over-representation in the urban population. In fact, the rural segments of this language category are almost negligible. The little attraction that the French language in Canada holds for speakers of other languages appears to be almost completely concentrated in the urban areas, while the English language appears not to have this strong urban bias. We can state in summary that, as in our initial analyses in Chapter 3, English unilingualism and French unilingualism seem to be of a somewhat more rural nature, while unilingualism in "other" languages, official bilingualism, multilingualism and unofficial bilingualism-French appear to be more urban in nature. The unofficial bilingualism-English has its' own distinct pattern, being least common, in the rural non-farm population and most common in the rural farm segment. Before we make too much of this point, we should once again consider the rural-urban distributions by province.

4.2.4. Urban/Rural Residence by Province

For this analysis, we will not consider the Atlantic provinces. As we saw in Chapter 3, they are either almost completely unilingual English, or a mixture of unilingual English, unilingual French and persons who speak English and French. For these provinces, there is little point in discussing variations in unofficial bilingualism and multilingualism. However, there is good reason to spell out these variations for the remainder of the country, as we do in Table 4.6.

Quebec should be considered separately because it is the only province where we need to deal with unofficially bilingual-French. We see here that all categories which include a language other than French are over-represented in the urban areas. Closer inspection of the data shows that the Montréal region contains the main share of these categories. The Île-de-Montréal area contains 83.5% of the "unilingual others" in Quebec, 64.2% of the unilingual-English category, 47.1% of those who speak both English and French, 83.7% of the unofficial-English bilinguals, 75.5% of the unofficial-French bilinguals and 86.7% of the multilinguals. In contrast, only 22.8% of the unilingual-French category is in the same area. As a basis for comparison, 36.3% of Quebec's total population lives in this area.

Note that the categories with the highest degree of concentration in the Montréal area are those involving "other" languages; that is, not English or French. Although the categories for the unilingual English and for those speaking English and French are over-represented in the Montréal area, they are less so than the other categories. This reflects the fact that we are dealing with two separate groups. On the one hand, we have those of English mother tongue who are concentrated in the

TABLE 4.6. Percentage Distribution of Linguistic Ability by Residence for Selected Provinces, Canada, 1971

Linguistic ability ¹	Urban		Rural		Urban		Rural	
	30,000 or over	Under 30,000	Non-farm	Farm	30,000 or over	Under 30,000	Non-farm	Farm
	<u>Quebec</u>				<u>Ontario</u>			
Uni-other	1.51	0.04	0.86	0.07	3.01	0.53	0.83	0.34
Uni-English	10.32	4.53	5.22	3.66	70.27	80.37	78.39	79.02
Uni-French	49.09	74.31	77.81	88.19	0.61	1.80	2.61	2.32
Off. bilingual	30.98	20.15	14.12	7.65	8.16	9.48	9.47	5.40
Unoff.-English	3.43	0.30	1.10	0.10	16.43	7.34	8.21	12.42
Unoff.-French	1.27	0.23	0.59	0.16	0.07	0.01	0.04	0.03
Multilingual	3.40	0.44	0.30	0.16	1.47	0.47	0.44	0.48
	<u>Manitoba</u>				<u>Saskatchewan</u>			
Uni-other	1.54	1.33	5.48	1.75	0.74	1.08	2.97	0.78
Uni-English	68.74	71.90	53.90	53.41	78.98	73.16	64.56	69.00
Uni-French	0.46	0.47	0.83	0.61	0.10	0.10	0.25	0.30
Off. bilingual	7.20	5.00	9.41	8.12	3.59	5.56	5.24	4.88
Unoff.-English	21.06	20.30	29.90	34.75	15.88	19.42	26.15	24.53
Unoff.-French	0.02	0.00	0.00	0.00	0.03	0.00	0.00	0.04
Multilingual	0.98	1.01	0.48	1.37	0.67	0.67	0.84	0.47
	<u>Alberta</u>				<u>British Columbia</u>			
Uni-other	1.03	0.57	2.67	0.84	1.71	0.73	0.75	0.69
Uni-English	76.98	78.45	68.32	70.67	78.64	81.33	81.81	75.07
Uni-French	0.18	0.17	0.26	0.63	0.06	0.09	0.11	0.00
Off. bilingual	4.33	5.40	4.40	3.92	4.45	4.24	3.58	2.49
Unoff.-English	16.50	14.94	23.93	23.18	14.40	13.04	13.36	20.22
Unoff.-French	0.03	0.00	0.00	0.08	0.02	0.02	0.02	0.02
Multilingual	0.94	0.47	0.42	0.67	0.72	0.55	0.37	1.52

¹Uni-other = Unilingual other
 Uni-English = Unilingual English
 Uni-French = Unilingual French
 Off. bilingual = Officially bilingual
 Unoff.-English = Unofficially bilingual-English
 Unoff.-French = Unofficially bilingual-French

Source: 1971 Census of Canada, Public Use Sample Tapes.

Montréal area and in some other regions of the province, primarily the Eastern Townships and the West Quebec counties of Pontiac and Hull. On the other hand, those of "other" mother tongues are quite highly concentrated in the Montréal area, but are found only in small numbers in the peripheral areas.

What is remarkable is the very small size of the unofficial-French category even in Quebec. Especially in the Montréal area, this category is far outnumbered by those in the unofficial English category. There are over 113,400 unofficial English in the Montréal area, but only 41,160 unofficial French. There are also 118,370 multilinguals in the Montréal area. The inference is obvious. Most persons in these three categories are of "other" language backgrounds and have acquired either English, or French, or both. Thus, those who do acquire an official language of Canada opt overwhelmingly in favour of English, even in the province of Quebec. The relative sizes of the unofficial-French group and the multilingual group suggest that those who acquire French do so, to a large degree, either simultaneously with, or after, acquiring English.

For the other five provinces included in Tables 4.6, we do not need to deal with the small numbers of unofficial French bilinguals who seem to be concentrated in the larger cities. Even here, concentrations are extremely low.

For the unofficially bilingual-English category, we find two distinctly different patterns — one for Ontario and British Columbia, and another for the three Prairie provinces. The first pattern, which is less marked in British Columbia, shows over-representation in the larger cities and among the rural farm population. It is possible that we are dealing with two "waves" of immigrants; a recent one which is primarily attracted to the larger cities, and an earlier migration which settled predominantly in farm areas. Note that these two provinces also have a strong over-representation of "unilingual others" in the larger urban areas, in contrast to the three Prairie provinces.

The second pattern is found for the three Prairie provinces: unofficial-English bilingualism is a feature found more often among rural than urban populations. The pattern is strongest for Manitoba and weakest for Alberta. The peculiar thing is that these three provinces also have unusually high concentrations of "unilingual others" in the rural non-farm areas: 5.48% for Manitoba, 2.97% for Saskatchewan and 2.67% for Alberta. It would appear that this relatively high proportion of "unilingual others" is comprised of two elements — the Native Indians on reserves in the northern areas, and an early wave of immigrants of European origin, such as the Ukrainians and Mennonites who settled in and around small towns of the Prairie provinces, rather than in the larger urban centres of those provinces.

The multilingual group tends to behave somewhat differently again. In fact, the five provinces show five different patterns. The Ontario pattern is one of high concentration in the larger urban areas, with much lower representation among the other three segments. The Manitoba and Saskatchewan patterns are nearly mirror images of each other. Manitoba shows highest values for rural farm, lowest values for rural non-farm, and intermediate values for urban areas. Saskatchewan shows highest values for rural non-farm, lowest for rural farm, and intermediate values for the urban areas. Both Alberta and British Columbia show higher values for larger urban areas than for smaller urban areas, and higher values for rural farm than for rural non-farm. British Columbia shows higher values for larger urban

areas than for smaller urban areas, and higher values for rural farm than for rural non-farm, but the rural farm area of British Columbia has the highest proportion of multilinguals in the province, while in Alberta the large urban areas have the highest proportion of multilinguals. No explanation for these variations spring readily to mind. It is likely that, because we are dealing here with relatively small numbers of cases, the variations are the effect of sampling variability.

4.2.5. Sex

The distribution of language characteristics by sex shows approximately the same patterns which we outlined in Chapter 3, where we hinted at several mechanisms of language acquisition in our analysis of official bilingualism. The data in Table 4.7 confirm these inferences.

TABLE 4.7. Percentage Distribution of Linguistic Ability by Sex, Canada, 1971

Linguistic ability	Males	Females	Total
Unilingual other	1.2	1.7	1.5
Unilingual English	56.1	56.8	56.5
Unilingual French	16.6	18.9	17.7
Officially bilingual	13.4	11.4	12.4
Unofficially bilingual-English	11.0	9.8	10.4
Unofficially bilingual-French	0.3	0.3	0.3
Multilingual	1.5	1.2	1.3

Source: 1971 Census of Canada, unpublished data.

We hypothesized that males with mother tongues other than English or French were more likely to acquire English or French than females of similar language backgrounds. Moreover, we hypothesized that both males and females in these categories are more likely to learn English than French. Accordingly, we would expect a female surplus in the "unilingual other" category, matched with a male surplus in the unofficially bilingual-English group, and only a slight male excess in the unofficially bilingual-French group. Indeed, we find 1.2% of the males, and 1.7% of the females in the "unilingual other" group, while the figures for the unofficially bilingual-English groups are 11.0% and 9.8%. For the unofficially bilingual-French groups, males and females have the same percentages. Finally, male multilingualism exceeds female multilingualism by a slight 0.3 percentage point.

The other hypotheses which we raised dealt with the acquisition of French by persons of English mother tongue, and of English by persons of French mother tongue. We suggested that males are more likely than females to acquire the other official language, and that English is more likely to be acquired by persons of French mother tongue. We would, then, expect a male surplus among those persons who speak English and French, a small female surplus among the unilingual English, and a somewhat larger female surplus among the unilingual French. Table 4.7 indeed bears this out.

4.2.6. Age

Cross-classification of linguistic ability with age shows a refinement of the patterns described in Chapter 3. There we noted that the Anglophones, who speak English only, had a curve which showed a maximum for the youngest two age groups, then slight declines through age 19, constant proportions through age 29, then moderate increases with increasing age. The Anglophones of Chapter 3 - the unilingual English and the unofficially bilingual-English - show up in two groups in this chapter. A small fraction also shows up in the multilingual group, but its contribution there is so small that we may safely ignore it here.

TABLE 4.8. Percentage Distribution of Linguistic Ability by Age, Canada, 1971

Age	Unilingual			Bilingual			Multilingual
	Other	English	French	Official	English	French	
0-4	4.5	63.8	23.2	2.7	5.3	0.2	0.3
5-9	0.8	62.9	23.7	4.8	7.0	0.2	0.6
10-14	0.2	61.0	23.4	7.5	6.9	0.1	0.8
15-19	0.3	56.8	19.4	15.2	6.7	0.1	1.5
20-24	0.8	55.2	15.3	18.6	8.1	0.2	1.7
25-29	1.1	52.9	15.7	18.0	10.2	0.4	1.7
30-39	1.6	50.3	14.8	16.2	14.7	0.5	1.9
40-64	1.6	53.2	14.1	15.0	14.2	0.3	1.6
65 and over	2.7	57.6	14.1	10.0	14.2	0.2	1.3
Total	1.5	56.5	17.7	12.4	10.4	0.3	1.3

Source: 1971 Census of Canada, unpublished data.

Table 4.8 shows that the inferences we made in Chapter 3 were too simple. They do not explain the observed patterns in Table 4.8. The Anglophone pattern, it turns out, is really the combination of two different patterns. For the unilingual English group we observe declining proportions through age 39, then moderate increases with increasing age. For the unofficially bilingual-English group, we find a minimum for the 0-4 age group, a relatively constant proportion through age 19, then a modest rate of increase with age.

There is no simple explanation for these patterns. Clearly, part of the attrition among the unilingual English speakers will be due to their learning French. It is too much to maintain, however, that this process continues after age 24 or so. But the decline continues through the next 15 years of age, so some other factors must be operating. One possibility is that immigrants with other mother tongues who have learned English themselves, thereby falling into the unofficially bilingual-English category, pass on English as the first language to their children. The observed pattern for the youngest age groups lends itself to two different explanations; either the proportion of immigrants which passes on English only is increasing over time (hence, declining proportions unofficially bilingual among the more recently born age groups) or some children acquire the other language somewhat

later in life. It may be, of course, that both these factors are operating simultaneously. Unfortunately, we cannot check these inferences by using earlier census data for a comparison. A second factor which may help to explain the systematic variations in the proportion unilingual English could be that parents who speak English and French increasingly pass on English, rather than French, or rather than both English and French, to their children.

The patterns for the unofficially bilingual-French and the unilingual French categories are essentially the same as those described for Francophones in Chapter 3. The patterns for those who speak English and French and the multilingual categories closely resemble that described for bilinguals in Chapter 3.

Finally, an interesting comparison can be made between that group which speaks English and French and the unofficially bilingual-English group. In overall magnitude, these two groups differ relatively little. Moreover, they are similar to a fairly large degree in that they reflect the acquisition of English by those of French mother tongue in the former case, and by those of "other" mother tongues in the latter case. Although the marginal proportions are not all that different, the age-specific differences are fairly large. For the two youngest age groups, unofficial bilingualism exceeds official bilingualism. For ages 10 through 64, however, official bilingualism dominates, very strongly at first (through age 29), then rather weakly. For the highest age group (age 65 and over), unofficial bilingualism dominates again.

Several things may be said about these contrasting patterns. In the younger age group, it appears that parents of "other" mother tongues are more likely to pass on two languages (both English and an "other" language) than bilingual parents of French mother tongue. It appears possible that parents who speak English and French are somewhat more inclined to pass on English as the first language to their children.

The fact that official bilingualism "takes over" from age 10 on appears to reflect the effects of education. As children pass through the school system, they are exposed to the learning of the other official language and, as we have shown in Chapter 3, some of them do learn it. There is no comparable situation for those of "other" mother tongues, who, with very few exceptions, are able to speak one of the official languages when they enter the school system, and therefore are unofficially bilingual. The educational system, then, can yield only minimal, if any, increases in unofficial bilingualism. From the very slight decline from ages 5-9 through ages 15-19 it would appear that the educational experience has a slight tendency to push out the other language to the benefit of English.

The increase in unofficial bilingualism from ages 20-24 through 30-39 obviously reflect the fact that this group finds its main source of sustenance in immigration, while the group which speaks English and French is only very marginally affected by immigration. Immigrants tend to arrive in this country in the young adult ages, and in the great majority of cases they either already know English and/or French when they arrive, or acquire one of these languages after a few years.

The fact that unofficial bilingualism again overtakes official bilingualism in the oldest age group reflects two factors. On the one hand, as we have suggested, Canadian society as a whole has become slightly more bilingual, which indicates that older persons are the "products" of less bilingual phases of Canadian history. On the other hand, the older unofficial bilinguals represent relatively large flows of immigrants into Canada. These flows have tended to decline in more recent years. Moreover, the older immigrants have been exposed to English for a longer period of time than their more recent counterparts.

4.2.7. Mother Tongue

Our analysis by mother tongue tells two separate stories. For the official languages, we find the familiar imbalance between English and French in the respective proportions who learned the other official language: 5.5% of those of English mother tongue learned French, while 33.6% of those of French mother tongue learned English. For the other groups, however, the story is more interesting. Here we can begin to see to what extent speakers of various mother tongues have acquired English, or French, or both.

TABLE 4.9. Percentage Distribution of Linguistic Ability by Mother Tongue, Canada, 1971

Mother tongue	Unilingual			Bilingual			Multilingual
	Other	English	French	Official	English	French	
English	xxx	93.8	xxx	5.5	0.6	xxx	0.1
French	xxx	xxx	66.2	33.6	xxx	0.1	0.1
German	3.2	xxx	xxx	xxx	90.6	0.3	5.9
Italian	23.2	xxx	xxx	xxx	56.2	6.2	14.4
Dutch	1.6	xxx	xxx	xxx	91.5	0.1	6.8
Polish	4.1	xxx	xxx	xxx	82.6	0.8	12.5
Scandinavian	0.5	xxx	xxx	xxx	94.6	0.2	4.6
Ukrainian	3.7	xxx	xxx	xxx	90.5	0.1	5.7
Native Indian	18.0	xxx	xxx	xxx	77.3	2.9	1.8
Other	14.4	xxx	xxx	xxx	73.7	1.7	10.2
Total	1.5	56.2	17.9	12.4	10.5	0.3	1.2

"xxx" indicates that no cases are logically possible for this cell.

Source: 1971 Census of Canada, Public Use Sample Tapes.

The more interesting columns in Table 4.9 are the three columns on the right-hand side of the table. The unofficially bilingual-English column represents, for those of English mother tongue, the proportion who speak an "other" language in the home - a negligible 0.6 %. For the other groups, excluding the French, it represents the proportion who reported ability to speak English only to the question on official language.

Roughly the same classes show up again which we identified in Chapter 3. We find those of Scandinavian, Dutch, German and Ukrainian mother tongues, of whom between 90.5% and 94.6% have acquired English. The second class consists of those of Polish, Native Indian and Inuktitut, "other" and Italian mother tongues, of which between 56.2% and 82.6% have acquired English.

Within the first class, we find extremely small differences with regards to their distribution of linguistic ability. Hardly any are unable to speak English or French; only a tiny fraction is unofficially bilingual-French, and only a small proportion is multilingual by our definition.

In contrast, the second class shows larger differences. Whereas only 4.1% of those of Polish mother tongue are unable to speak any other language, 23.2% of the Italians are unilingual. Those of Native Indian and Inuktitut mother tongues also show a fairly large degree of unilingualism. The residual group, which is composed of a large variety of smaller language groups, shows 14.4% unilingual. In regard to unofficial bilingualism with French as the official language, those of Italian mother tongue stand out with 6.2% being bilingual, the other groups having only very small percentages. The Italians, with 14.4% also have the maximum value in the multilingual category, but they are closely followed by the Poles and the residual group of "others". Native Indians and Inuit have very few in the multilingual category.

It would appear that the French language only has some success with regards to those of Italian mother tongue. Of this group, 20.6% have acquired French as opposed to only 13.3% of the Polish mother tongue group (the second highest), and only 4.9% of the Scandinavian mother tongue group (the lowest among the "immigrant" language groups). But even for the Italians, a little over two-thirds who are able to speak French are also able to speak English. Note that for the other mother tongue groups this proportion is even higher, except for those of Native Indian and Inuktitut mother tongues, where the corresponding proportion is less than 40%.

4.2.8. Education

In the previous chapter we argued for, and demonstrated, the importance of education in acquiring the second official language. It is not so obvious that the same impact should be observed with regards to unofficial bilingualism. Since most of the unofficial bilingualism reflects the acquisition of English and, to a small degree, French, by immigrants or their children, it is likely that this form of bilingualism is more strongly related to the degree of exposure to English and, again, to French in a smaller degree in all domains of behaviour, rather than exposure just to the educational domain.

Indeed, in Table 4.10, we notice an absence of any systematic positive correlation between unofficial bilingualism and education. For example, the highest proportion unofficially bilingual-English is found among those with no schooling, while the lowest proportion is found for those with 9-11 years of education. For the unofficial French component of bilingualism there is, in fact, a negative relationship with level of education.

TABLE 4.10. Percentage Distribution of Linguistic Ability by Highest Level of Education Attained, Population Five Years and Over, Canada, 1971

Education	Unilingual			Bilingual			Multilingual
	Other	English	French	Official	English	French	
No schooling	11.9	41.3	22.0	5.4	17.2	0.7	1.5
Grades 1-8	1.7	50.2	24.2	9.8	12.5	0.4	1.2
Grades 9-11	0.2	59.6	14.8	15.5	8.5	0.2	1.1
Grade 12	0.2	65.7	8.2	14.9	9.7	0.1	1.2
Grade 13	0.4	74.2	0.7	9.5	12.3	0.1	2.8
University	0.2	55.4	5.1	25.8	9.8	0.1	3.6
Total	1.2	55.8	17.2	13.3	10.9	0.3	1.4

Source: 1971 Census of Canada, unpublished data.

What we defined at the beginning of this chapter as the "multilingual" category does show approximately the same pattern as the one we described for official bilingualism in Chapter 3. Especially for the respondents with more than secondary education, there is a fairly strong over-representation of multilingualism, reaching a maximum of 3.6% for those with at least some university education. It is likely that for these multilinguals, the first official language, most often English, is acquired in a variety of contexts, the school being one of these, while the second one is probably acquired, to a greater extent, in the educational system. As we noted in Chapter 3, this may be either the effect of "true" language learning in the higher levels of the educational system, or the higher probability of progress through the educational system for persons who are bilingual or, in this case, multilingual.

4.2.9. Period of Immigration

While it would be difficult to argue that, for official bilingualism, period of immigration could be used as an explanatory variable, we argue that it is an important variable when we deal with unofficial bilingualism. We have already shown that the large majority of the unofficial bilinguals are persons of mother tongues other than English or French who have acquired English (see Table 4.9). We have also shown that the effect of formal education on unofficial bilingualism is essentially non-existent. Finally, we have suggested that learning one's first official language is related to the degree of exposure to that language. Thus, we should find higher proportions unofficially bilingual for persons who have resided longer in Canada.

In contrast to our findings in Chapter 3, the data in Table 4.11 do show some clear patterns. We argued that unofficial bilingualism should show fairly clear covariation with the length of residence in Canada. We do, indeed, find fairly regular increases in the unofficial English variant of bilingualism, from a low of 30.2% for those who immigrated in the period 1966-71, to a high of 51.0% for those who immigrated in the period 1946-55. The exception is formed by the pre-1946 immigrants, where we see a decline in unofficial bilingualism (with English) to 30.2% which is paralleled by a

sharp increase in the proportion unilingual English, from 31.1% to 58.9%. The explanation for this last deviation from the expected pattern lies in the differing compositions of the immigrant groups by country of birth. For the pre-1946 immigrants, we find that 408,540 persons were born in the United Kingdom, and 164,800 in the United States. These two countries made up 60% of all immigrants to Canada who arrived before 1946 and were still alive in 1971. In contrast, the corresponding figures for the period 1946-55 were: out of 789,035 immigrants, 194,960 were born in the United Kingdom and 24,340 in the United States. In total, only 28% of the immigrants who arrived in Canada during the period 1946-55 and who were still alive in 1971 came from these two countries.

TABLE 4.11. Percentage Distribution of Linguistic Ability by Period of Immigration, Canada, 1971

Period of Immigration	Unilingual			Bilingual			Multilingual
	Other	English	French	Official	English	French	
1966-71	12.8	41.5	2.5	4.9	30.2	1.7	6.4
1961-65	10.3	34.7	2.1	5.4	37.0	2.4	8.1
1956-60	6.5	31.0	1.2	4.8	46.1	2.1	8.4
1946-55	3.3	31.1	0.7	4.6	51.0	1.2	8.1
Before 1946	2.0	58.9	1.2	5.0	30.2	0.1	2.5
Canadian-born	0.6	59.1	20.6	13.7	5.4	0.1	0.5
Total	1.5	56.5	17.7	12.4	10.4	0.3	1.3

Source: 1971 Census of Canada, unpublished data.

We notice that the multilingual group follows approximately the same pattern as the unofficially bilingual-English group, that is, increasing in proportion with increasing residence in Canada. Again, we see a sharp decline for the pre-war immigrants, from 8.1% to 2.5%.

It is again obvious that the French language has relatively little attraction for immigrants of other mother tongues. We see very little variation in the proportions bilingual with French and an "other" language, and no distinct patterns over time. Extended residence in Canada appears to have virtually no effect on the acquisition of French, whereas that effect does exist for the English language.

4.2.10. Place of Birth

In order to assess the effects of nativity, we have analyzed linguistic ability as defined at the beginning of this chapter, controlling for place of birth. To keep the number of categories to a reasonable level, we have subdivided those born in Canada into only three categories: Quebec, New Brunswick, and the rest of Canada. As we saw in the preceding analyses, these three broad groupings are ordered by decreasing presence of the French language.

For the foreign-born, we have grouped together those countries and areas which have some linguistic similarities:

1. France, Belgium, Switzerland and Africa are all areas in which some segments of the population speak French, although for Africa our classification is debatable. However, very few immigrants have come from the English-speaking parts of Africa.
2. Italy, Portugal and Spain are Mediterranean countries in which Romance languages are spoken by nearly 100% of the inhabitants. These three countries are, in addition, characterized by relatively recent immigration to Canada.
3. The United Kingdom, the Republic of Ireland and the United States are characterized by having an almost 100% English-speaking population.
4. Other foreign places of birth are a mixture of countries, almost none of which are characterized by having segments of the population with English or French as mother tongue. This category includes the Eastern European nations such as Poland and Russia, as well as the Central and Western European nations such as Germany and the Netherlands. The distributions are given in Table 4.12.

TABLE 4.12. Percentage Distribution of Linguistic Ability by Place of Birth, Canada, 1971

Place of birth	Unilingual			Bilingual			Multilingual
	Other	English	French	Official	English	French	
Quebec	0.5	8.0	63.1	26.5	0.9	0.3	0.8
New Brunswick	0.1	59.7	14.9	24.7	0.6	0.0	0.1
Rest of Canada	0.7	83.4	0.8	7.0	7.8	0.0	0.3
France, Belgium, Switzerland, Africa	0.9	14.6	20.8	31.4	15.4	2.0	14.9
Italy, Spain, Portugal	24.6	1.9	0.3	0.7	52.9	6.9	12.7
U.K., Ireland, U.S.A.	0.1	88.0	1.0	7.0	3.6	0.0	0.3
Other foreign places	6.2	15.5	0.4	1.9	67.2	0.4	8.4
Total	1.5	56.5	17.7	12.4	10.4	0.3	1.3

Source: 1971 Census of Canada, unpublished data.

Within Canada, we find the familiar patterns which we have described by province of residence. About one-fourth of those born in Quebec or New Brunswick speak English and French, in contrast to only 7% for those born elsewhere in Canada. Quebec is, again, different in that it produced a large proportion which is unilingual French. In fact, only a little under 10% of those born in Quebec are unable to speak French. We notice that for those born in other Canadian provinces, unofficial-English bilingualism occurs with higher frequency than official bilingualism, even if we add the multilinguals to the official bilinguals.

The most interesting category among the foreign-born is that of France, Belgium, Switzerland and Africa. Remember that not all residents of these areas have French as their mother tongue. Only about half of the Belgian population and less than one-third of the Swiss population are French speaking, for example. Yet, the group of persons born in these territories displays the highest proportion of official bilinguals (31.4%), as well as the highest proportion of multilinguals. An extremely high proportion of these persons must have acquired English, and a fair number of those must also have acquired French, in addition to their mother tongue.

We made the point, earlier on, that the Italians appear to be the only ones for whom the French language seems to have any substantial attraction. This point is confirmed in Table 4.12, in that those born in Italy, Spain or Portugal have by far the highest concentration of unofficial French bilinguals. The raw frequencies show, in fact, that over half of the unofficial French bilinguals were born in one of these three countries. However, even for the Mediterranean-born immigrants, English is much more attractive than French: even in this category, the unofficial French bilinguals are outnumbered by the unofficial English bilinguals by a ratio of about eight to one.

There is extremely little difference between the distributions for those born in the almost completely English-speaking societies of the United Kingdom, Ireland and the United States, and for those born in the "non-French" rest of Canada. The major difference is that there are somewhat more unilingual English speakers among the foreign-born and somewhat more unofficial English bilinguals among the Canadian-born category. However, with respect to the acquisition of French, there is no observable difference between these two groups. This is a devastating comment on the "production" of French speakers in those parts of Canada where the French language does not have an extremely dominant position.

4.3. Multivariate Analyses of Unofficial-English Bilingualism

What we have shown in the preceding sections of this chapter through bivariate analysis with regards to unofficial bilingualism, is that unofficial-English bilingualism is represented by a substantial proportion of the Canadian population, but that its systematic variation is quite different from the official bilingualism which we analyzed in the preceding chapter. We also showed that the "multilingual" category behaved in essentially the same fashion as the category for those who speak English and French. Finally, we showed that the unofficial-French form of bilingualism occurs very infrequently, is concentrated in the province of Quebec (primarily in the Montréal area) and finds its strongest support among persons born in the southern European countries of Italy, Spain and Portugal.

Given these findings, we will only pursue the unofficial-English variety of bilingualism in any greater depth. We found some systematic relations between unofficial-English bilingualism and age, sex, mother tongue, period of immigration and place of birth. We will elaborate on these findings in several multivariate analyses.

4.3.1. Unofficial-English Bilingualism by Age and Sex

Earlier in this chapter we saw that the prevalence of unofficial-English bilingualism is somewhat higher among males than it is among females. We also showed that the distribution by age fell into three separate patterns: relatively low prevalence for the youngest age group, virtually level prevalence for the ages 5-19, then increases with increasing age. For official bilingualism we showed that simultaneous controls for age and sex revealed more complex relationships, but Table 4.13 shows that the same cannot be said in the case of unofficial-English bilingualism.

TABLE 4.13. Percentage Unofficially Bilingual-English by Age and Sex, Canada, 1971

Age group	Male	Female	Total
0-4	5.3	5.4	5.3
5-9	7.0	7.1	7.0
10-14	6.9	6.9	6.9
15-19	6.8	6.5	6.7
20-24	8.4	7.8	8.1
25-29	10.5	9.9	10.2
30-39	15.7	13.7	14.7
40-64	15.2	13.1	14.2
65 and over	17.5	11.5	14.2
Total	11.0	9.8	10.4

Source: 1971 Census of Canada, unpublished data.

For the youngest age groups (up to age 20), differences between male and female bilingualism are minimal and not worth discussion. We note increasing differences by sex for the higher age groups.

As our analysis of the effects of education revealed, most of the unofficial bilingualism must be explained by street learning since there are no observable systematic differences with increasing level of education. We can assume that generally, males are more exposed to "street learning" than females, so one would indeed expect the increasing difference between male and female bilingualism with age.

4.3.2. Unofficial-English Bilingualism by Age and Period of Immigration

If the argument about "street learning" is correct, we should find that the observed relationship between bilingualism and age is, to a large degree, a function of the duration of residence in Canada; that is, longer residence in Canada should have an effect on the prevalence of bilingualism. For those born in Canada, age should have no systematic relationship with unofficial bilingualism. Let us consider Table 4.14.

As always, we see that the elaborated pattern is more complex than we anticipated. We were right in our expectations about the Canadian-born segment. First of all, for each age group, unofficial bilingualism is less prevalent among those born in Canada than among the foreign-born, for any

period of immigration. We were also correct in our expectations that we would not find a systematic relation between age and unofficial bilingualism for the Canadian-born segment. Indeed, that column of the table shows very wide fluctuations without any obvious pattern.

TABLE 4.14. Percentage Unofficially Bilingual-English by Age and Period of Immigration, Canada, 1971

Age group	Period of immigration					Canadian-born	Total
	1966-71	1961-65	1956-60	1946-55	Before 1946		
0-4	15.0	xxx	xxx	xxx	xxx	5.1	5.3
5-9	29.7	25.0	xxx	xxx	xxx	5.9	7.0
10-14	36.6	34.1	28.6	xxx	xxx	5.4	6.9
15-19	40.5	44.3	36.4	29.9	xxx	4.2	6.7
20-24	34.5	50.8	45.8	40.3	xxx	3.2	8.1
25-29	32.0	45.5	54.4	41.9	16.4	4.0	10.2
30-39	32.5	39.8	55.3	61.0	32.3	6.1	14.7
40-64	22.3	30.0	44.5	53.5	29.2	7.0	14.2
65 and over	11.7	14.6	26.6	44.0	31.1	4.4	14.2
Total	30.2	37.0	46.1	51.0	30.2	5.4	10.4

"xxx" indicates that no cases are logically possible for this cell.

Source: 1971 Census of Canada, unpublished data.

For the foreign-born, the expected relationships between age, period of immigration and bilingualism are more complicated than we anticipated. We had expected to find, within each age group, a positive correlation between unofficial bilingualism and length of residence in Canada. We should add, by the way, that the pre-war immigrants would likely be exceptions to that pattern, since an extremely high percentage of these immigrants came from English-speaking areas. The postulated pattern holds for the oldest age groups; that is, for all age groups of 30 years and up, we find increasing percentages bilingual with increasing length of residence, with the exception of those who immigrated to Canada before 1946. For the younger age groups, specifically those between ages 5 and 19, we find deviations from the postulated pattern. The earliest immigrants all are somewhat less bilingual than immigrants who came to Canada in more recent years. Indeed, for those aged 10-14, we find a completely negative correlation. Stated more systematically, for all age groups from 10 through 29, we find a negative correlation between bilingualism and length of residence in Canada.

Consider what these categories, by age and period of immigration, have in common. For any age group, earlier period of immigration equals lower age upon arrival in Canada and it seems that persons arriving in Canada at younger ages are less likely to become unofficially bilingual. It is doubtful that they are, in fact, less likely to acquire English; thus, one would expect that they are less likely to have retained the "other" mother tongue. To check this out, consider Table 4.15.

TABLE 4.15. Percentage Unilingual English Among Immigrants for Selected Age Groups, by Period of Immigration, Canada, 1971

Age group	Period of immigration				
	1966-71	1961-65	1956-60	1946-55	Before 1946
0-4	57.3	xxx	xxx	xxx	xxx
5-9	54.9	60.8	xxx	xxx	xxx
10-14	48.8	50.0	54.5	xxx	xxx
15-19	32.4	31.1	40.1	46.6	xxx
20-24	37.0	21.4	31.5	38.3	xxx
25-29	41.0	28.4	25.7	42.3	66.6

"xxx" indicates that no cases are logically possible for this cell.

Source: 1971 Census of Canada, unpublished data.

Indeed, for the relevant categories, we find increasing proportions unilingual English by increasing length of residence. Observe that the relationship between length of residence and the tendency to still understand one's mother tongue ceases to operate in the bottom left-hand corner of Table 4.15. For these categories, we are dealing with ages upon arrival in Canada in the upper teens and lower twenties. In other words, the relationship between the tendency to retain the "other" mother tongue and age upon arrival in Canada is not a linear one; it is quite pronounced for the first 15 years of age, or thereabouts, but appears not to exist for older ages.

We thought it possible that the association between age of arrival in Canada, and the prevalence of English unilingualism, reflects the fact that immigrant arrivals in Canada are heavily weighted with people in the youngest age groups from English-speaking countries, and with people in the older age groups from non-English-speaking countries. This possibility was explored using data from the annual reports on Immigration Statistics for the years 1956 to 1971 (Department of Citizenship and Immigration, 1956-1965; Department of Manpower and Immigration, 1966-1971). These data show cross-classification of country of last permanent residence with age of arrival in Canada. Indeed, it was found that there is an over-representation of immigrants in the youngest age groups from English-speaking countries (British Isles, Australia, New Zealand, U.S.A., West Indies) but that the magnitude of this over-representation was not great enough to account for much of the strong association between age of arrival in Canada and English unilingualism revealed in Table 4.15.

4.3.3. Unofficial-English Bilingualism by Age, Period of Immigration and Country of Birth

It could be argued that the patterns we observed in the preceding sections are the results of changing compositions in the national origins of the foreign-born. We have indicated that this is indeed demonstrable for the pre-war immigrants. Let us pursue this line somewhat by considering those immigrants who were born in the Southern European countries of Italy, Spain and Portugal. We showed, in Table 4.12, that this category has the highest prevalence of unofficial-English bilingualism, as well as the lowest prevalence of English unilingualism. If our inference about the effects of age at

the point of immigration is a valid one, it should be sustained as clearly when we deal only with those born in these three countries, which we do in Table 4.16.

TABLE 4.16. Percentage Multilingual and Unofficially Bilingual-English by Age and Period of Immigration, for Persons Born in Italy, Spain or Portugal, Canada, 1971

Age group	Period of immigration				
	1966-71	1961-65	1956-60	1946-55	Before 1946
0-4	33.9	xxx	xxx	xxx	xxx
5-9	75.2	83.8	xxx	xxx	xxx
10-14	87.0	90.3	88.2	xxx	xxx
15-19	71.6	93.2	92.3	83.9	xxx
20-24	52.3	78.9	91.9	85.3	xxx
25-29	49.8	69.1	85.6	88.9	74.0
30-39	42.1	59.8	73.9	84.2	67.0
40-64	22.2	33.4	53.0	72.9	76.4
65 and over	10.8	14.0	14.7	35.2	78.8
Total	49.8	63.4	70.4	77.0	76.8

"xxx" indicates that no cases are logically possible for this cell.

Source: 1971 Census of Canada, unpublished data.

The general pattern we observed in Table 4.14 does hold up when we deal only with those born in Southern Europe, although the relationship is not as pronounced as in the more inclusive analysis. On the other hand, the pre-war immigrants no longer behave in such a "contrary" fashion. With the exception of those who were between 30 and 39 years old in 1971, the older immigrant groups all show positive correlations between length of residence in Canada and bilingualism. For those arriving in Canada at the lower ages (the upper right-hand side of the table) we again find positive correlations between age on arrival and bilingualism.

Finally, consider the most recent arrivals in Canada, those who immigrated during the 10 years immediately prior to the 1971 Census. We find very clear relationships between age and bilingualism for these categories. With the exception of the two youngest age groups among those who arrived after 1965, there is a very strong negative correlation between age and bilingualism. For the older age groups, we are clearly dealing with lower tendencies in acquiring English and higher proportions of "unilingual other", while for the two "deviant" lower age groups, we may well be dealing with a pattern in which parents first raise their children in the "other" mother tongue, while English is acquired only at a later stage; for example, upon entry into the school system. Here too, we could expect higher proportions of "unilingual other". Indeed, we find, for those who immigrated during the period 1966-71, that about 58% of the youngest age group, and about 86% of the oldest age group are in the "unilingual other" category, compared with 42% for all age groups combined.

4.4. Conclusions

In this chapter we have focused attention on unofficial bilingualism, which was defined as ability to speak two languages, at least one of which is neither English nor French. Two subgroups of this category are of special interest to us: the unofficially bilingual-English whose knowledge of or ability to speak a language other than English or French is combined with an ability to speak English, but not French; and the unofficially bilingual-French whose knowledge of or ability to speak a language other than English or French is combined with an ability to speak French, but not English.

We have shown that the Canadian population contains just about as many unofficial bilinguals as official bilinguals, a fact which seems to have been missed by most students of language patterns in Canada. Detailed analyses have illustrated the broad differences between the two types of bilinguals. The unofficial bilinguals, almost all of whom are of the unofficial English variety, are concentrated in Ontario and the western provinces, while the official bilinguals are concentrated in Quebec and New Brunswick. In contrast to the age distribution for official bilinguals, that for unofficial bilinguals shows a generally higher prevalence of bilingualism for the older population, with a maximum reached for the 30-39 age group. Whereas for official bilingualism we showed a clear correlation between education and bilingualism, no such correlation appears to exist for the unofficial bilinguals. Evidently, increasing amounts of education do not increase the probability that persons of other mother tongues acquire a working knowledge of English or French.

While the amount of formal education attained does not have any systematic relation to the propensity to acquire English, several factors associated with nativity do. For immigrants, the prevalence of unofficial bilingualism correlates with the length of residence in Canada, and is associated with particular countries of origin. More detailed analyses showed that the prevalence of unofficial bilingualism was also related to the age at which the foreign-born arrived in Canada. Those who arrived at very young ages tended to become unilingual English in higher proportions than those who arrived at older ages.

CHAPTER 5

LANGUAGE MAINTENANCE AND SHIFT

5.1. Introduction

This analytical chapter deals with the complementary phenomena of language maintenance and shift. "Language shift" has been defined by linguists as "... the change from the habitual use of one language to that of another ..." (Weinreich, 1952:68). In a logically obvious sense, then, "language maintenance" is the absence of language shift or, to put it differently, the continued habitual use of a language.

We observed in Chapter 2 that in the Canadian census data, research on language maintenance and shift has so far concentrated on the relation between ethnic origin and mother tongue. To a lesser degree, the relationship between ethnic origin and official languages spoken has been explored as well. The main argument made in this type of analysis is that any discrepancy between a person's ethnic origin and his mother tongue constitutes language shift. A shift towards English or French is viewed as "assimilation". (Cf., e.g., Henripin, et al., 1966; Royal Commission on Bilingualism and Biculturalism (RCBB), Volumes I and IV.)

A problem with this approach is that for many ethnic groups this assimilation took place several generations before the present one. Recall that the question on ethnic origin requires the respondents to trace their ancestry through the paternal line back to the first male ancestor to arrive in North America. For many persons, this requires their going back to the previous century or even earlier. The German, Dutch and Scandinavian ethnic categories are especially affected by this early settlement pattern (see RCBB, Volume IV, 1969: 17-32 for more details). Therefore, when we speak of the language assimilation of persons of German ethnic origin, we may be referring to something which occurred more than a century ago. Recall further that the mother tongue question refers to the language first learned in childhood and still understood. In the case of an individual of German ethnic origin and English mother tongue, for example, we are considering an individual who already learned English as his first language in childhood. Obviously, in most cases of this kind, English was already spoken in the home and thus, the respondent's parents had probably already shifted from German to English. It is, in fact, conceivable that the shift took place in an even earlier generation. Since we are unable to specify the exact generation in which the shift occurred, but since it almost certainly took place among the respondent's ancestors, we will refer to this form of language shift as "ancestral shift". The absence of ancestral shift is of course "ancestral maintenance", i.e., those cases where an individual's mother tongue corresponds with his ethnic origin.

Even with this historical specification we have to use this type of data with great care. First of all, it has been documented that the ethnic origin data for several of the major groups in earlier censuses have been of questionable validity. Problems with special reference to the German, Dutch and Ukrainian ethnic origin data are treated in some detail in Ryder (1955) and de Vries (1974). Secondly, there are several ethnic groups for which no one-to-one match with mother tongue can be made. Among those of central European origins, the Hungarians, Czechs, Slovaks, Poles, we

find many people who have traditionally spoken German. Among those of Finnish origin, we find a small proportion, probably about 10%, who have traditionally spoken Swedish, and among those of British ethnic origin some are from Welsh or Gaelic linguistic backgrounds and, possibly, some who once spoke such exotic languages as Cornish or Manx.

We will be mainly interested in shifts from various "other" ethnic groups to English and to French, rather than shifts, whether apparent or real, between various "other" groups. For example, when we consider the proportion of all persons of Hungarian ethnic origin whose mother tongue was English, we are not concerned with the fact that some of these people, or their ancestors, might once have spoken German, others Rumanian, and others Hungarian.

With the language questions in the 1971 Census, we have an additional measure of language shift. We can compare the data on home language with those on mother tongue. Home language, we have argued, is a measure of current language use (with admitted deficiencies), while mother tongue is a measure of language use in the respondent's childhood. Any difference between the answers to those two questions may be taken as a measure of current language shift; that is, if language shift indeed took place, it must have taken place during the respondent's lifetime.

5.2. Analysis of Ancestral Language Shift

5.2.1. Marginal Distribution

Analysis of the patterns of ancestral language shift shows the major effects of immigration history. The "older" immigrant groups have, to a large degree, shifted to English, even at the point in time where the respondents to the 1971 Census were in their childhood. Table 5.1 shows that the great majority of those of Scandinavian, Jewish, German, and Dutch ethnic origins are now of English mother tongue. Some aspects of their cultures of origin are possibly still meaningful for such people, but language is not likely to be one of them.

The coincidence between ethnic origin and mother tongue is strongest for those of British and French origin. To the extent that language is regarded as a key component of culture, the ethnic origin data in the census can be treated as a valid indicator of ancestral cultural maintenance or shift for the British and French. It will be recalled that in our critique of the ethnic origin question in Chapter 2, we cited the view of Ryder (1955) that for categories other than these, the ethnic origin question was of doubtful utility for analysis. If we were urged to expand, beyond the British and French, the number of categories in our sample for whom the ethnic origin census data reveal clear-cut patterns of cultural maintenance and shift at the national level, we should probably include the Chinese and Italians, because less than 30% of people with these origins have English as their mother tongue.

It follows that in our opinion, the mother tongue question is a more valid measure of cultural attachment than is the ethnic origin question. We realize that language is only one basis for cultural affiliation and identity, but in this study we are dealing only with the corpus of Canadian census data and examining the responses to census questions to find what they suggest

TABLE 5.1. Population by Ethnic Group and Mother Tongue, Canada, 1971

Ethnic origin	Total	Mother tongue				Mother tongue corresponding to ethnic group		Other	
		English		French		Number	Per cent	Number	Per cent
		Number	Per cent	Number	Per cent				
British ¹	9,624,115	9,402,135	97.7	148,630	1.5	xxx	xxx	73,350	0.8
French	6,180,120	644,715	10.4	5,516,915	89.3	xxx	xxx	18,490	0.3
Austrian ²	42,120	22,555	53.5	495	1.2	16,485	39.1	2,585	6.1
Chinese	118,815	24,195	20.4	610	0.5	90,925	76.5	3,085	2.6
Czech and Slovak	81,870	36,595	44.7	720	0.9	39,630	48.4	4,925	6.0
Finnish ³	59,215	23,625	39.9	305	0.5	33,135	56.0	2,150	3.6
German	1,317,195	813,145	61.7	19,860	1.5	472,820	36.0	11,370	0.9
Hungarian ⁴	131,895	52,265	39.6	1,465	1.1	70,875	53.7	7,290	5.5
Italian	730,820	183,400	25.1	27,695	3.8	514,800	70.4	4,925	0.7
Japanese	37,260	20,390	54.7	120	3.3	15,755	42.3	995	2.7
Jewish ⁵	296,945	206,950	69.7	11,215	3.8	49,175	16.6	29,605	10.0
Indian and Inuit	312,765	126,685	40.5	13,515	4.3	168,655	53.9	3,910	1.2
Netherlands ⁶	425,945	262,795	61.7	2,870	0.7	137,820	32.4	22,460	5.3
Polish ⁷	316,430	164,525	52.0	4,360	1.4	121,420	38.4	26,125	8.3
Russian ⁸	64,475	30,370	47.1	650	1.0	23,875	37.0	9,580	14.9
Scandinavian	384,795	299,195	77.7	2,485	0.6	76,990	20.0	6,125	1.6
Ukrainian	580,660	281,665	48.5	3,270	0.6	283,660	48.8	12,065	2.1

"xxx" indicates that no cases are logically possible in this cell.

¹English assumed as associated mother tongue.

²German used as associated mother tongue; most "Others" are Ukrainian.

³Most "Others" speak Swedish (no language shift).

⁴Most "Others" speak German.

⁵Yiddish assumed as corresponding mother tongue; most "Others" are Hungarian, Polish or German.

⁶Ethnic origin data are contaminated with a large group which is really German.

⁷"Others" are Ukrainian and German.

⁸Most "Others" speak German.

Source: 1971 Census of Canada, Catalogue 92-736, Bulletin 1.4-8, Table 21.

about cultural maintenance. Where we find a coincidence of ethnic origin with the mother tongue associated with that origin, we say there is a higher probability of ancestral cultural maintenance than where ethnic origin and mother tongue do not coincide. To illustrate, let us reduce the ethnic origin classification to a trichotomy: British, French, and "other". Our data show that the British ethnic group does not contain any significant proportion of non-English mother tongues. Similarly, we know that the French ethnic group contained about 10% which did not have French mother tongue, but an error of that magnitude could be tolerated. However, the association between most "other" ethnic origins and "other" languages is not all that clear. We know that more than half of the "other" ethnic category has English as mother tongue. Although one cannot justifiably argue that this segment has no attachments to the cultures of their ancestors, it is likely that a considerable proportion of these people can indeed not be distinguished from other English-speaking North Americans, except by the "ethnic" nature of their surnames.

Table 5.1 shows strikingly how the attraction of English far exceeds the attraction of French in terms of the linguistic assimilation of immigrants. Virtually all of the population of French mother tongue is of French ethnic origin. Very substantial numbers of non-British ethnic origin have English mother tongue, while only those of British (148,630) and Italian (27,695) ethnic origins are substantially represented in the French mother tongue segment.

Finally, the right-hand column of Table 5.1 shows the substantial linguistic heterogeneity among those of Russian, Polish, Austrian, Dutch, Hungarian, Jewish, Czech and Slovak ethnic origins. We reiterate that the sources of this heterogeneity are not the same for all these groups. For the Russians, Poles, Hungarians and Jews, they relate to real linguistic diversity in the original ethnic group; for the Austrians, they result from the historical shrinkage in the former Austro-Hungarian empire, and for the Dutch, they are the result of incorrect reporting of ethnic group membership by persons who are really "Deutsch" (that is, German). A detailed analysis of this problem is presented in Ryder (1955) and de Vries (1974).

5.2.2. Provincial Patterns

From our initial discussion, it should be clear that most of the ancestral shift we have been able to observe has been from some non-British ethnic origin to English. In addition, we have noted some shifts to French, but this was limited to relatively small numbers from British, Italian and German ethnic origins. Finally, we have noted some shift from French ethnic origin to English mother tongue. Since we are concentrating in this chapter on language shift, we have compressed the information for the following tables. Reported percentages will, generally, deal with those persons classified as shifting to English mother tongue from origins other than British and, in some instances, to French mother tongue from ethnic origins other than French. We present the provincial patterns in Tables 5.2 and 5.3.

Considering first the data in Table 5.2, we find that the shift from French origin to English mother tongue is strongest as one moves away from the province of Quebec. Even in Quebec itself, we have a shift of 1.9% from French origin to English mother tongue, but this is more than offset by the shift of 16.5% of those of British ethnic origin to French mother tongue as shown in

TABLE 5.2. Percentage of Ethnic Group Shifting to English Mother Tongue, by Province, Canada, 1971

Province	Ethnic group							
	French	German	Italian	Jewish	Dutch	Polish	Scandinavian	Ukrainian
Newfoundland	80.3	80.4	83.8	80.8	80.6	84.2	92.8	52.8
Prince Edward Island	54.6	89.0	86.4	----	71.9	71.4	85.2	88.0
Nova Scotia	53.9	96.1	66.6	85.0	87.8	81.3	84.0	81.4
New Brunswick	12.3	87.0	58.8	85.0	86.9	55.8	82.5	80.8
Quebec	1.9	30.2	8.8	63.0	48.3	29.2	58.6	33.9
Ontario	39.3	65.5	27.2	73.9	62.0	47.8	73.5	50.2
Manitoba	35.5	43.1	30.2	67.4	46.3	52.2	73.9	41.0
Saskatchewan	47.4	62.2	51.6	73.2	63.5	57.7	78.8	40.8
Alberta	54.1	63.8	38.2	76.5	62.3	60.1	82.0	50.3
British Columbia	65.4	61.4	45.1	80.0	62.0	69.3	77.8	68.1
Yukon	65.4	69.1	51.5	----	76.0	73.5	85.9	76.2
Northwest Territories	51.3	71.1	26.0	----	74.6	70.4	86.1	70.1
Canada	10.4	61.7	25.1	69.7	61.7	52.0	77.7	48.5

"----" indicates fewer than 100 persons.

Source: 1971 Census of Canada, Catalogue 92-736, Bulletin 1.4-8, Table 23.

TABLE 5.3. Percentage of Ethnic Group Shifting to French Mother Tongue, Province of Quebec, 1971

Ethnic group	Percentage
British	16.5
German	27.7
Italian	14.4
Jewish	7.7
Dutch	14.3
Polish	11.7
Scandinavian	17.8
Ukrainian	8.3

Source: 1971 Census of Canada, Catalogue 92-736, Bulletin 1.4-8, Table 23.

Table 5.3. The provinces where in earlier years (during the lives of the ancestors of the census respondents) the attrition of the French group was strongest are Newfoundland, British Columbia, the Yukon, Prince Edward Island, Nova Scotia and Alberta. Outside of Quebec, the French ethnic group appears to have strong retaining power only in New Brunswick, but even here there is a shift of 12.3% from French ethnic group to English mother tongue, a shift which is not offset to any substantial degree by a shift of 2.1% from British ethnic origin to French mother tongue. In Chapter 3 we reported higher degrees of official bilingualism for persons of French mother tongue as we moved away from Quebec. It is clear that this pattern is just a continuation of the process which started in earlier generations: in provinces where ancestral shift from French to English was already high, the proportionately small French mother tongue group is highly bilingual. In the next part of this chapter, we shall see to what degree these two phenomena are related to current language shift, from French mother tongue to English home language.

Looking across the country, we find that assimilation to English has been strongest in the Atlantic provinces. We are dealing here with relatively small non-British ethnic groups and with generally very "old" immigration, so that the average time-span during which shift could take place is longer than it is for the same ethnic groups in other provinces.

In the province of Quebec, we find that all ethnic groups have lower proportions shifting to English than we found for the total country. To some degree, this is of course due to the existence of two speech communities of French and English. However, if we add the percentages shifting to English and those shifting to French in Quebec, we find that generally the proportions shifting are still lower than in the rest of the country, or about the same. For the German, Italian, Polish and Ukrainian ethnic groups, the combined shift percentages are considerably lower than those for the whole country, while for the Dutch, Jewish and Scandinavian groups the shift is about the same. In the western part of the country, we find that generally Manitoba has the lowest degree of ancestral assimilation of any province except Quebec. However, the most assimilative environments in Canada, after the Atlantic provinces, are in the regions west and north of Manitoba. As Table 5.2 shows, the shift in most ethnic origins to English mother tongue is quite pronounced in Saskatchewan, Alberta and British Columbia and the northern territories.

Comparing ethnic origins, we see in Table 5.2 that the national patterns hold generally across all the provinces; that is, in all provinces those of Scandinavian origins show extremely high proportions shifting to English mother tongue, as do the Jewish, German and Dutch groups. The only exceptions to this observation are the Germans and the Dutch in Manitoba, and many of the latter are, in fact, Germans by ethnic origin, as we have shown earlier. At the lower end of the language assimilation scale, in most provinces, we find the Italians. We expect that the pattern of high mother tongue retention among those of Chinese origin for Canada as a whole (see Table 5.1) would also hold for all or most of the provinces. Unfortunately, the data available do not permit us to test this expectation. Census reports at the provincial and lower levels merge the Chinese with the Japanese, and in some cases these are merged with Arabic and Indo-Pakistanis into a category labelled Asian, hardly a useful grouping for information about either ethnic origin or mother tongue.

Finally, let us compare the data for Quebec in Table 5.2 with the data in Table 5.3. Of the immigrant groups, only the Italians have in the past shifted more to the French mother tongue than to the English mother tongue. The other groups have all shown greater tendencies to shift to English than to French. In descending order of difference, this applies to those of Jewish, Scandinavian, Dutch, Ukrainian, Polish, and German ethnic origins. The German and Dutch ethnic groups form an interesting contrast in Quebec. Whereas the overall degree of linguistic assimilation, to English or French in Quebec and to English in the rest of the country, is quite similar (at most a few percentage points apart), the Dutch in Quebec have had a much higher tendency to assimilate to English than the Germans, while the latter showed a much stronger tendency than the Dutch to shift to French. It seemed to us likely that, because we are dealing with ancestral shift, we had here an effect of the very early settlement of people of German origin in Quebec, some of it going back to the 17th century (c.f., RCBB, Volume IV:20) in areas of high French language density. However on checking census data back from 1871 to the present, we found that the number of people of German origin in Quebec never exceeded 13,000 until 1961. We were forced to conclude that the early settlement hypothesis could not be sustained. The explanation of the German tendency to outnumber the Dutch, and most other groups in Quebec, in shifting to French, requires further research.

5.2.3. Ancestral Shift by Age

Table 5.4 presents the patterns of ancestral shift to English mother tongue, and from British ethnic origin to French mother tongue. In it we note that for all ethnic groups, the percentage shifting to English mother tongue varies negatively with age. For the "immigrant" groups (that is, all groups except the French and the Native Indians), the explanation appears to be very simple: the younger age groups have higher proportions born in Canada. Canadian-born persons have, of course, been exposed to the use of English and, in the case of Quebec residents, to French, during most, if not all, of their lives. This age effect will be strongest for members of those ethnic groups for which there was substantial immigration in the early parts of this century, but very little immigration in recent decades, such as the Ukrainian ethnic group. The age effect is obviously weakest for groups such as the Italians, whose large-scale immigration has been recent.

TABLE 5.4. Percentage of Ethnic Group Shifting to English Mother Tongue, by Age Group, Canada, 1971

Age group	British to French ¹	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian	Indian and Inuit
0-4	1.5	14.2	80.7	34.3	89.8	81.3	95.8	81.0	45.8
5-9	1.3	13.2	81.2	39.6	89.5	81.0	95.3	78.6	47.8
10-14	1.3	12.0	78.8	39.3	86.3	77.8	95.2	73.7	46.6
15-19	1.5	11.3	75.4	34.2	77.5	70.4	92.1	67.5	45.2
20-24	1.9	11.6	72.8	23.6	57.4	64.3	88.3	66.1	43.9
25-29	2.2	10.2	64.1	20.0	45.4	63.9	84.9	60.6	44.1
30-39	2.0	9.3	49.8	13.8	37.1	52.3	80.3	45.5	38.4
40-64	1.5	7.8	44.9	16.4	37.7	29.4	64.7	25.3	32.2
65 and over	1.0	6.7	39.2	10.9	46.6	15.3	36.3	8.7	24.9
Total	1.0	10.4	61.7	25.1	61.7	52.0	77.8	48.5	40.5

¹Data refer to British ethnic origin shifting to French mother tongue in this case.

Source: 1971 Census of Canada, unpublished data.

Within each age group, we find generally the same ordering which we already found in the marginal distributions. Generally, highest proportions shifting are found for the Scandinavian ethnic group, followed by the Dutch and Germans. At the low end, we find the Italians. The Polish and Ukrainian groups tend to assume an intermediate position.

There are some exceptions to the general pattern. The Dutch category, for ages 20-39, reports ancestral shift to a much lower degree than one would expect on the basis of the marginal distributions. This could be related to the wave of post-war Dutch immigration which had its peak in the 1950s. It is interesting to note that the Ukrainian group has almost the obverse pattern. Ukrainians aged 20-39 shift somewhat more than we would postulate on the basis of the marginals. In addition, Ukrainians in the youngest age group show somewhat higher levels of shift than we would expect.

While some of the above differences and patterns may find their explanation in the immigration histories of the various ethnic groups, we certainly cannot use such explanations for the pattern observed for the Native Indians. This group displays the same age gradient as the immigrant groups, with levels which are generally between 10% and 20% higher than the Italians. Two possibilities come to mind. On the one hand, one could argue that the pressure to acquire English has steadily increased over time, and consequently younger cohorts have learned English as mother tongue in greater proportion than older cohorts. On the other hand, the observed pattern could be the result of increasing understatement of Indian ethnic origin at younger ages to the benefit of British ethnic origin. That is, higher ratios of English mother tongue to Native Indian ethnic origin for the younger ages may be the result of higher relative frequencies for English mother tongue, or of lower relative frequencies for Native Indian ethnic origin.

Finally, let us consider the ancestral shifts to French and English mother tongue, from British and French ethnic origin respectively. We note that the shift from British ethnic origin to French mother tongue is very low in intensity and shows no clear relation to age. There appears to be somewhat of a curvilinear relationship, with highest levels observed for the young adult ages. At this point, no easy explanation comes to our mind.

In contrast, the shift from French ethnic origin to English mother tongue follows the same pattern by age which we found for the other ethnic groups. Since the foreign-born component of the French ethnic group is quite small, the explanation here cannot be its immigration history. We may be dealing with the effects of internal migration of people of French ethnic origin, from Quebec to other Canadian provinces, where the pressure of English is stronger. It may also be that we need to bring in the same explanations which we already suggested for the Native Indians.

5.2.4. Ancestral Shift by Place of Birth

We suggested earlier that much of the differences in ancestral shift between groups was due to differences in the proportion born in Canada. Table 5.5 gives ratios of ancestral shift separately for the foreign-born and those born in Canada.

TABLE 5.5. Percentage of Ethnic Group Shifting to English Mother Tongue, by Place of Birth, Canada, 1971

Ethnic group	Canadian-born			Foreign-born		
	Total	English mother tongue		Total	English mother tongue	
		Number	Per cent		Number	Per cent
British ¹	8,434,535	144,085	1.7	1,189,580	4,550	0.4
French	6,068,130	624,755	10.3	111,990	19,960	17.8
German	993,370	760,060	76.5	323,830	53,085	16.4
Italian	334,940	162,715	48.6	395,880	20,685	5.2
Jewish	186,450	166,410	89.3	110,495	40,540	36.7
Dutch	275,025	235,600	85.7	150,920	27,190	18.0
Polish	210,915	149,200	70.7	105,510	15,325	14.5
Scandinavian	300,085	271,075	90.3	84,710	28,120	33.2
Ukrainian	474,250	271,575	57.3	106,410	10,145	9.5

¹Data refer to British ethnic origin shifting to French mother tongue in this case.

Source: 1971 Census of Canada, Catalogue 92-736, Bulletin 1.4-8, Table 22.

It is obvious that the ordering we found earlier, with Scandinavians, Dutch, Germans and Jewish assimilating to English in rather high degrees, and Italians shifting to English in rather low proportions, can only in part be explained by their proportions native-born versus foreign-born. If the only explanation lay in the nativity, or the length of Canadian residence of the ethnic group, we should expect the same ordering to hold at least approximately for the foreign-born, but not necessarily for the Canadian-born. There may, of course, be some age effects, and presently we shall control for birthplace of parents to specify the relations more exactly. However, it is quite clear from the crude data in Table 5.5 that approximately the same groupings occur when we look at the Canadian-born and the foreign-born separately. In both cases, we find the highest degrees of ancestral shift among those of Scandinavian and Jewish ethnic origins, the lowest degrees for those of Italian and Ukrainian ethnic origins, and the Dutch, German and Polish, in that order, falling somewhere below the highest two groups.

A few points with regard to British and French ethnic origins deserve comment. While we already noted that the shift to French mother tongue was not very common for those of British ethnic origin, this point needs to be made even more strongly when we consider the foreign-born of British ethnic origin, only 0.4% of whom claim an ancestral shift to French mother tongue, compared with 1.7% for the Canadian-born. In contrast, consider the foreign-born of French ethnic origin, 17.8% of whom shifted to English mother tongue, compared with 10.3% of the Canadian-born persons of French ethnic origin.

5.2.5. Further Analyses of the Effects of Nativity

We have mentioned that "nativity" needs to be refined from the crude dichotomy of foreign-born versus Canadian-born. Firstly, we can introduce the factor of the birthplace of the respondent's parents, allowing us to examine a "generational" effect. Secondly, we have seen that within the segment born in Canada, we should differentiate between those born in Quebec and those born in the rest of the country. By jointly introducing these two factors we obtain a nine-fold classification: four classes born in Quebec (subdivided by nativity of parents, both born in Canada, father only born in Canada, mother only born in Canada, both born outside Canada); four classes born in other parts of Canada (subdivided in the same way as those born in Quebec), and the foreign-born. We could produce a four-fold classification of the foreign-born, but the utility of this is questionable. As it is, the decomposition of the data from Table 5.5 into nine categories results in reduced numbers in some cells for most ethnic origins. For instance, there are only 100 cases in the category "Ukrainian ethnic origin with English mother tongue born in Quebec, with father only born in Canada". Despite the reliability problems raised by small numbers in some cells, we feel that the relationship between ancestral language shift and parental nativity is worth presenting, as no analysis of this kind has ever appeared in the literature. The results of the "refined" breakdown appear in Tables 5.6 and 5.7.

Several patterns emerge from these two tables. Let us, first of all, take the "immigrant" groups exposed to the risk of shifting to English mother tongue. We argued that part of the differences in the observed proportion shifting could be the result of the nativity of parents. We see that to a limited degree this is indeed the case. Table 5.5 showed that for those born in Canada, the proportion shifting to English mother tongue ranged from 48.6% for those of Italian ethnic origin, to 90.3% for those of Scandinavian ethnic origin. In Table 5.6 we see that the range is considerably narrowed for those born in the "rest of Canada", that is, any province other than Quebec, and with at least the father born in Canada. For those with two Canadian-born parents, the range is narrowed and goes from a low of 74.2% for those of Ukrainian ethnic origin, to a high of 95.5% for those of Scandinavian ethnic origin. For those born in the rest of Canada with a Canadian-born father and a foreign-born mother, we obtain extremely similar figures. For most ethnic groups, there is very little difference between the two categories with only one Canadian-born parent; that is, the "father only" and "mother only" columns. The exception to this observation is for those of Ukrainian ethnic origin born in the "rest of Canada". For reasons which cannot be explained at the moment, Ukrainians with a Canadian-born mother and a foreign-born father have lower tendencies to shift to English mother tongue than the other categories with a Canadian-born parent.

Finally, looking across the columns in the "rest of Canada" categories, we see that the major criterion explaining patterns in ancestral language shift is to have at least one Canadian-born parent. For most of the immigrant ethnic groups, the major difference between the categories is between those with two foreign-born parents and the other three categories.

TABLE 5.6. Percentage of Ethnic Group Shifting to English Mother Tongue, by Detailed Nativity, Canada, 1971

Ethnic group	Born in Quebec				Born in rest of Canada				Foreign-born
	Both in Canada	Father only	Mother only	Both foreign	Both in Canada	Father only	Mother only	Both foreign	
British ¹	21.5	4.3	13.1	1.9	0.6	0.2	0.3	0.2	0.4
French	1.7	13.9	4.0	8.5	38.1	70.1	52.7	52.1	17.8
German	33.3	67.0	62.3	55.8	86.3	84.4	82.0	52.0	16.4
Italian	24.2	46.9	21.7	10.8	84.3	89.9	90.1	41.3	5.2
Dutch	69.6	90.8	72.0	68.7	84.1	88.0	92.2	86.3	18.0
Polish	52.6	65.1	54.6	40.2	85.8	85.4	79.7	52.0	14.5
Scandinavian	62.2	85.2	76.3	81.4	95.5	93.6	95.3	79.2	33.2
Ukrainian	64.7	76.6	50.0	32.6	74.2	74.0	53.5	31.8	9.5
Indian and Inuit	11.6	37.0	23.3	58.3	44.7	86.0	67.3	70.8	68.7

¹Data refer to British origin shifting to French mother tongue in this case.

Source: 1971 Census of Canada, unpublished data.

TABLE 5.7. Percentage of Ethnic Group Shifting to French Mother Tongue for Persons Born in Quebec, by Nativity of Parents, Canada, 1971

Ethnic group	Nativity of parents			
	Both in Canada	Father only	Mother only	Both foreign
British ¹	21.5	4.3	13.1	1.9
German	61.8	25.3	34.0	5.4
Italian	51.3	21.8	54.8	10.1
Dutch	25.3	9.2	26.8	11.1
Polish	25.0	12.0	30.6	6.1
Scandinavian	34.5	7.4	22.6	1.7
Ukrainian	18.3	0.8	19.4	3.6
Indian and Inuit	34.2	40.7	69.8	27.8

¹Data refer to British origin shifting to French mother tongue in this case.

Source: 1971 Census of Canada, unpublished data.

For the immigrant groups born in Quebec we must combine the data in Table 5.6 with those in Table 5.7. Obviously, we are now considering the general phenomenon of shifting to either English or French as mother tongue.

The combined data show generally the same patterns which we already found for the shift to English mother tongue among those born elsewhere in Canada: the differences between ethnic groups are considerably smaller for those with two Canadian-born parents than for the other categories. Moreover, we again see the importance of having at least one Canadian-born parent, regardless of which parent.

For the shift from French ethnic origin to English mother tongue we find, even more strongly, the unusual effect that those with foreign origins have had higher tendencies to shift to English mother tongue than those with Canadian origins. This is even more clearly so for those individuals of French ethnic origin who were born in Quebec, but it also shows up for those who were born outside Quebec. In addition, we find the peculiar circumstance that the highest tendency to have shifted to English mother tongue is experienced by those with a Canadian-born father and a foreign-born mother. This is peculiar because these persons differ from those with two Canadian-born parents only by the fact that they have a foreign-born mother, but the resulting shift to English mother tongue is considerably higher. It is also higher than the shift observed for persons with two foreign-born parents. Only one explanation comes to mind for this peculiar pattern. Far fetched as it may be, the explanation may lie in a phenomenon known as "war brides". That is, a large segment of the husband-wife families in which the husband is Canadian-born and the wife foreign-born, is undoubtedly made up of couples who married during or shortly after the Second World War, as a result of Canadian military men abroad meeting European women. It is likely that for most of these marriages where the husband was of French ethnic origin, English was the lingua franca (no pun intended) between the spouses, and consequently the language they spoke to their children, resulting in English becoming their children's mother tongue.

Two more ethnic categories require our attention. There is the shift from British ethnic origin to French mother tongue. We notice that outside of Quebec there is no observable difference between being foreign-born or Canadian-born. For the latter group, parentage makes no noticeable difference. For those born in Quebec, parentage does make a difference. For those with two Canadian-born parents, we find that over one-fifth have shifted to French mother tongue. The effect of mother's nativity appears to be stronger than that of father's nativity. With only a Canadian-born mother, a little over 13% shift, but with only a Canadian-born father, just 4.3% shift to English mother tongue.

The last group to be considered is formed by the Native Indians. Because such a small proportion of this group is foreign-born we do not compare Canadian-born and foreign-born. In contrast to the immigrant groups, the important factor for this category appears to be to have two Canadian-born parents. For this category, the shift to English mother tongue is markedly smaller than for the three categories involving at least one foreign-born parent. Quite obviously, there are very few persons born outside Canada who are capable of speaking the Canadian Indian languages (unless they speak the related Indian languages of the United States). This observation holds for

those born in the rest of Canada. It also holds for those born in Quebec, with or without the inclusion of the shift to French mother tongue. Again, we remind the reader of the small numbers in some of the cells, particularly for the people of Native Indian and Inuit origin born outside Canada.¹

5.2.6. Ancestral Shift by Period of Immigration

For the foreign-born, we can further investigate the nature of ancestral language shift by controlling for the period in which respondents first immigrated to Canada. Since we are dealing with "Ancestral shift", that is, the shift from an ethnic origin other than British to English mother tongue, we should not expect much of a relationship. In fact, unless we argue that respondents can forget their mother tongue, we should find all the cells in Table 5.8 to be close to zero in value. (Note that we postulate a value close to, but not exactly, zero, since we have to allow for a certain amount of migration in stages, e.g., persons from Eastern Europe who first migrated to Western Europe, but later moved on to Canada. Moreover, we must allow for some persons of native parentage who were born outside Canada.) However, consider Table 5.8.

TABLE 5.8. Percentage of Ethnic Group Shifting to English Mother Tongue, by Period of Immigration, Immigrant Population Five Years and Over, Canada, 1971

Ethnic group	Period of immigration			
	Before 1946	1946-55	1956-60	1961-71
British ¹	0.5	0.3	0.3	0.3
French	19.1	16.8	17.2	16.4
German	23.7	8.0	10.0	28.4
Italian	12.3	5.0	4.1	4.7
Ukrainian	8.6	7.4	19.8	24.6
Indian and Inuit	59.4	52.6	67.6	75.4
All other	24.7	14.6	13.9	22.7

¹Data refer to British ethnic origin shifting to French mother tongue in this case. Source: 1971 Census of Canada, unpublished data.

It is quite evident that very few of the cells in Table 5.8 are close to zero. In fact, out of the 24 cells reflecting the ancestral shift to English mother tongue, three-quarters, or 18 cells altogether, contain values of 10% or over. There is little argument, then, to support the idea of an absence of ancestral shift for immigrants. There appears to be a somewhat higher incidence of ancestral shift among those who immigrated to Canada before 1946. It may, in fact, be the case that we are dealing with a case of forgetting one's mother tongue, a possibility discussed in Chapter 3.

See footnote(s) on page 133.

For the post-war migrants, values are generally somewhat lower than they were for the pre-war migrants of comparable ethnic origins. Some strange exceptions are formed by recent immigrants (1961-71) of German and Ukrainian ethnic origin, whose shift to English mother tongue is even higher than it was for the pre-war migrants of those same ethnic groups. It is not possible, at this point, to work out any plausible explanation for these patterns. The findings displayed in Table 5.8 do, however, shed some doubt on the reliability of the mother tongue data.

5.2.7. The Joint Effects of Age and Nativity

We argued earlier in this chapter that part of the variations in ancestral shift by age would be the result of nativity, in that the younger groups would have higher proportions born in Canada than older groups. We saw that, generally, the foreign-born have lower degrees of ancestral shift to English mother tongue than the native-born.

When we control jointly for the effects of age and nativity, we should find that the contrasts by age decrease within each of the categories of nativity. We would not expect the patterns to disappear completely; there is obviously still the generational effect which we mentioned in a preceding segment of this chapter. Thus, we would expect, for those born in Canada, a decreasing proportion displaying ancestral shift with increasing age, since the older native-born are more likely to have had foreign-born parents than the younger native-born. For those born outside Canada, we would not expect much of the age gradient to persist, since no generational effect is likely to have played a role. The relevant information is provided in Tables 5.9 through 5.12.

Our expectations are partly supported by the data. Let us first consider Table 5.10, which deals with persons born in Canada outside Quebec. We find, as postulated, differences in ancestral shift by age, following a gradient which is generally less steep than the one for the total ethnic group (see Table 5.4 for comparison). This observation holds for those of German, Dutch, Polish, Scandinavian and Ukrainian ethnic origins. The Italians display a more complex pattern in which ancestral shift first increases with increasing age (through age 24), then decreases. It could be that here we have the effects of two separate "waves" of Italian immigration, before and after 1946.

For those in Quebec, we should combine the values in Table 5.9 and Table 5.12. The two tables give the percentages shifting to English and French mother tongue respectively. Adding the values thus gives the percentage which shifted to either English or French as mother tongue. The resulting patterns are not as clear as those in Table 5.10. Proportions displaying ancestral shift are close to constant for those of Dutch and Scandinavian ethnic origins. The Ukrainians generally show some decline with age, as do those of Polish ethnic origin although to a lesser degree. The Italians and the Germans show the same curvilinear relation between ancestral shift and age which we already noted for Italians born elsewhere in Canada, again without any clear explanation.

While one could hold that we were not all that far wrong with our expectations regarding ancestral shift for the native-born, we clearly were quite wrong with regards to the foreign-born. Gradients by age are, if anything, steeper than the corresponding ones for the Canadian-born were, as a comparison of Table 5.11 with Table 5.9 shows. Moreover, percentages shifting are extremely

TABLE 5.9. Percentage of Ethnic Group Shifting to English Mother Tongue, by Age, for Persons Born in Quebec, Canada, 1971

Age group	British ¹	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
0-4	17.7	2.1	47.2	9.2	68.2	48.3	66.1	56.7
5-9	14.9	2.0	52.8	13.3	74.0	52.9	76.5	57.4
10-14	15.4	1.9	51.7	17.0	68.7	51.3	77.9	51.9
15-19	17.0	1.9	47.5	21.7	74.2	45.2	76.2	45.4
20-24	21.3	2.2	37.1	28.6	69.1	54.2	70.8	52.2
25-29	24.6	1.9	37.1	24.9	62.7	45.7	63.4	54.2
30-39	22.1	1.8	35.6	21.9	68.3	46.3	66.7	45.6
40-64	16.3	1.7	34.0	18.0	73.8	40.2	67.4	40.0
65 and over	11.1	1.8	41.0	16.7	71.4	35.3	65.5	32.0

¹Data refer to British ethnic origin shifting to French mother tongue in this case.
Source: 1971 Census of Canada, unpublished data.

TABLE 5.10. Percentage of Ethnic Group Shifting to English Mother Tongue, by Age, for Persons Born in Canada Outside Quebec, Canada, 1971

Age group	British ¹	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
0-4	0.5	50.6	82.6	42.3	91.5	83.9	97.0	81.5
5-9	0.4	48.3	84.3	53.3	92.1	84.6	97.0	79.3
10-14	0.4	45.3	81.9	56.4	89.8	83.7	96.9	74.8
15-19	0.5	43.2	82.5	69.0	85.9	79.4	96.2	69.2
20-24	0.5	44.2	86.2	85.1	86.6	82.5	96.3	71.5
25-29	0.6	40.2	82.1	82.1	85.5	79.5	95.8	64.1
30-39	0.6	36.0	73.3	76.2	64.9	64.9	92.3	47.3
40-64	0.5	29.7	66.0	67.3	51.5	51.5	78.6	31.3
65 and over	0.5	24.6	65.6	55.7	40.9	40.9	61.8	22.5

¹Data refer to British ethnic origin shifting to French mother tongue in this case.
Source: 1971 Census of Canada, unpublished data.

TABLE 5.11. Percentage of Ethnic Group Shifting to English Mother Tongue, by Age, for Persons Born Outside Canada, Canada, 1971

Age group	British ¹	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
0-4	0.7	26.3	55.2	17.3	50.2	53.1	73.6	79.7
5-9	0.5	25.3	46.0	13.7	49.3	46.3	67.4	69.4
10-14	0.4	30.8	44.4	11.9	46.0	31.0	70.3	53.1
15-19	0.4	26.5	29.6	9.3	40.5	29.4	51.2	35.7
20-24	0.3	18.8	25.4	7.2	28.2	29.3	38.1	20.0
25-29	0.3	19.2	18.5	4.7	17.5	26.3	34.7	22.5
30-39	0.3	11.4	9.2	2.9	11.3	12.5	22.5	15.2
40-64	0.4	15.1	11.9	3.3	11.8	10.5	32.3	8.5
65 and over	0.4	15.6	18.2	5.4	21.2	9.9	29.4	5.3

¹Data refer to British ethnic origin shifting to French mother tongue in this case.

Source: 1971 Census of Canada, unpublished data.

TABLE 5.12. Percentage of Ethnic Group Shifting to French Mother Tongue, by Age, for Persons Born in Quebec, Canada, 1971

Age group	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
0-4	31.0	14.8	14.9	18.8	22.3	13.9
5-9	27.8	17.2	17.8	18.3	18.1	13.1
10-14	31.6	20.4	19.3	16.5	18.2	9.7
15-19	40.2	33.2	15.9	16.2	22.5	9.0
20-24	58.7	46.0	21.8	17.5	28.3	13.2
25-29	56.6	46.7	26.7	16.5	31.2	15.9
30-39	56.0	45.4	26.9	13.3	27.1	8.0
40-64	57.3	40.2	19.4	13.2	24.4	8.3
65 and over	44.0	38.6	23.2	21.6	27.3	16.0

Source: 1971 Census of Canada, unpublished data.

high for the younger age groups of Ukrainian and Scandinavian ethnic origins, and, in addition, over half of the youngest age group among the foreign-born of German, Dutch and Polish ethnic origins has shifted to English mother tongue.

We will advance two explanations for these high values. On the one hand, it is possible that a large proportion of these young age groups was not born in the country generally associated with those ethnic groups (such as the Ukraine) but was born in other countries, possibly Great Britain and the United States, where English is the dominant language.

On the other hand, the figures may reflect the tendency for recent immigrant families of Ukrainian, Scandinavian, German, Dutch or Polish ethnic origins to adopt English as the language spoken in the home very shortly after arrival in Canada, in obvious contrast to those of Italian ethnic origin.

5.3. Analysis of Current Language Shift

5.3.1. Introductory Comments

Readers interested in the type of characteristics we are analyzing in this study, and who are familiar with the recent literature in this field, may be aware that what we have called "current language shift" is identical to what in Kralt's Profile Study is called "language transfer". Similarly, there is an identity between our term "language maintenance" and Kralt's term "language retention" (see Kralt, 1976:36). There are some differences between our approach and that followed in Kralt's study. Firstly, a large part of Kralt's analysis is based on the partition of the total volume of transferring individuals, by home language, by mother tongue and by area of residence (see, for example, Kralt, 1976:38). In contrast, our analysis is strictly based on the "exposure to risk" principle. That is, our dependent variable is the proportion (or percentage) shifting within a particular group.

A second difference between our analysis and Kralt's is that, as in preceding analyses, we have introduced a variety of independent variables in an attempt to explain observed patterns. Kralt's approach is much more descriptive in nature.

5.3.2. Marginal Distribution

To begin our analysis of current language shift, we provide data for 18 different mother tongues in Table 5.13. An examination of this table shows that the observations we made with regards to ancestral shift hold up with high consistency for our analyses of current shift. We note the greater attraction of English, compared with French, both for members of the two "charter groups" (i.e., those with English or French mother tongue) and for the other language groups in the Canadian population. For example, we note that 6.0% of those of French mother tongue report that they speak English most often in the home, while in contrast only 0.5% of those of English mother tongue use French most frequently at home.

TABLE 5.13. Percentage Distribution of Home Language by Mother Tongue, Canada, 1971

Mother tongue	Total	Home language							
		English		French		Same as mother tongue		Other	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
English	12,967,445	12,812,770	98.8	69,275	0.5	xxx	xxx	85,400	0.7
French	5,792,710	347,345	6.0	5,436,375	93.8	xxx	xxx	8,990	0.2
Chinese	95,910	23,200	24.2	385	0.4	70,825	73.8	1,500	1.6
Czech	28,525	13,455	47.2	260	0.9	13,130	46.0	1,680	5.9
Slovak	17,350	8,200	47.3	140	0.8	7,840	45.2	1,170	6.7
Danish	27,680	23,235	83.9	105	0.4	3,955	14.3	385	1.4
Icelandic	7,705	6,805	88.3	20	0.3	760	9.9	120	1.6
Norwegian	27,650	25,415	91.9	40	0.1	1,825	6.6	370	1.3
Swedish	21,795	19,660	90.2	60	0.3	1,665	7.6	410	1.9
Inuktitut	15,195	1,315	8.7	10	0.1	13,775	90.6	95	0.6
Native Indian	163,350	48,890	29.9	500	0.3	113,150	69.3	810	0.5
German	558,965	352,750	63.1	4,455	0.8	196,875	35.2	4,885	0.9
Italian	538,765	117,915	21.9	19,040	3.5	399,630	74.2	2,180	0.4
Hungarian	87,465	40,220	46.0	845	1.0	43,825	50.1	2,575	2.9
Dutch	146,690	112,875	77.0	605	0.4	31,295	21.3	1,915	1.3
Polish	136,540	69,100	50.6	1,430	1.0	59,850	43.8	6,160	4.5
Ukrainian	309,890	176,655	57.0	715	0.2	129,990	42.0	2,530	0.8
Yiddish	50,320	30,305	60.2	395	0.8	8,845	37.4	775	1.5

"xxx" indicates no cases are logically possible in this cell.

Source: 1971 Census of Canada, Catalogue 92-776, Bulletin SP-6, Table 1.

For the other languages, only those with Italian mother tongue show some attraction to French, but even among them only 3.5% have French as home language. Over all, we find high degrees of mother tongue maintenance for recent immigrant groups, such as the Italians; highly segregated immigrant groups, such as the Chinese; or highly segregated Native Indian and Inuit groups.

At the other end of the scale, we find very high rates of current language shift to English for those belonging to the "older" immigrant groups, namely those of Scandinavian, Dutch, German and Yiddish mother tongues. Finally, we find some language groups which originated in central and Eastern Europe with noticeable shifts to other home languages: the Slovaks to Czech, the Czechs to Slovak, the Poles to Ukrainian and Yiddish and the Hungarians to German and various Eastern European languages.

It is rather interesting that the intensity of the current language shift by mother tongue is extremely highly correlated with the ancestral language shift for the corresponding ethnic group which we found earlier in this chapter. For the 13 groups for which the comparison can be made, Kendall's tau has a value of 0.92, a very high value indeed. In fact, the magnitudes of the two shifts to English are extremely close to each other in most cases. Exceptions are the Dutch and Scandinavians, for whom current shift exceeds ancestral shift by more than 10%, and the Native Indians and Inuit for whom ancestral shift exceeds current shift by more than 10%. It is hard to find a convincing explanation for this unusually strong co-variation. One argument that makes sense is that current language shift is, in fact, an historical continuation of the ancestral language shift. From this it follows that different ethnic groups have different degrees of "proneness" to language assimilation, whether by virtue of some cultural values, norms or some "typical" group position in the Canadian social structure, which persist through the generations. In this situation, the current language shift would only be the "tail end" of a process that began earlier as ancestral language shift.

5.3.3. Provincial Patterns

As we did with our analysis of ancestral shift, we will deal only with the shift to English home language (except in Quebec, where we will also analyze the shift to French). Consider Tables 5.14 and 5.15.

We note, again, patterns quite similar to those we reported for ancestral shift in Table 5.2. For example, the attrition of the French mother tongue increases as one goes farther away from Quebec in either direction. The attrition in earlier times was, overall, of about the same magnitude. In the Atlantic provinces and Ontario, we find that ancestral shift to English was somewhat stronger than is current shift, while in western Canada current shift is somewhat stronger than was ancestral shift, especially in British Columbia. One could argue that this points to an accelerating rate of decline of French in the western provinces, and to a decelerating rate of decline of French in the Atlantic provinces and Ontario.

TABLE 5.14. Percentage of Mother Tongue Group Shifting to English Home Language, by Province,¹ Canada, 1971

Mother tongue	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
French	43.4	43.2	34.1	8.7	29.9	36.9	51.9	53.7	73.1
Chinese	----	----	----	----	21.2	33.2	27.3	27.1	26.9
Czech	----	----	----	----	41.6	45.8	76.1	54.9	56.1
Slovak	----	----	----	----	44.2	----	----	62.0	58.9
Danish	----	----	----	----	79.4	89.8	92.5	88.7	85.9
Icelandic	----	----	----	----	----	86.4	----	----	91.1
Norwegian	----	----	----	----	85.2	90.8	94.6	95.5	91.6
Swedish	----	----	----	----	82.1	93.7	95.8	95.8	90.3
Native Indian	----	----	18.6	19.1	31.5	24.2	24.3	31.7	58.8
German	----	----	79.6	71.2	57.6	53.6	77.1	69.6	69.3
Italian	----	----	55.2	----	22.8	30.4	57.6	37.9	44.4
Hungarian	----	----	----	----	42.4	48.9	72.3	53.2	56.8
Dutch	----	----	82.1	----	78.4	63.9	77.3	76.7	80.6
Polish	----	----	----	----	45.7	61.0	67.7	61.0	70.3
Ukrainian	----	----	----	----	48.3	56.3	57.5	65.1	78.4
Yiddish	----	----	----	----	61.5	68.3	----	77.2	80.0

"----" indicates that fewer than 100 cases were reported in the population for this mother tongue in this province.

¹Data for province of Quebec given in Table 5.15.

Source: 1971 Census of Canada, Catalogue 92-776, Bulletin SP-6, Table 2.

TABLE 5.15. Percentage of Mother Tongue Group Shifting to English or French Home Language, Province of Quebec, 1971

Mother tongue	To English	To French	Total shift
English	xxx	6.2	6.2
French	1.5	xxx	1.5
Chinese	17.1	3.1	20.2
Czech	35.1	7.7	42.8
Slovak	37.5	4.9	42.4
Danish	69.9	6.1	76.0
Inuktitut	1.5	0.1	1.6
Native Indian	15.6	1.9	17.5
German	47.8	11.3	59.1
Italian	10.7	12.5	23.2
Hungarian	31.8	5.6	37.4
Dutch	60.8	9.6	70.4
Polish	35.2	7.4	42.6
Ukrainian	31.8	4.6	36.4
Yiddish	16.3	11.0	27.3

"xxx" indicates no cases are logically possible in this cell.

Source: 1971 Census of Canada, Catalogue 92-776, Bulletin SP-6, Table 2.

Furthermore, we should note that for most language groups, current language shift is lower in Ontario than in the other provinces, while we indicated that Manitoba was the province with generally the lowest rate of ancestral language shift. It may be that this is related to the tendency for recent immigrants to settle in Ontario. For most of the immigrant groups, Saskatchewan appears to be the province where the largest degree of current shift to English occurs.

Note that for most provinces, the ordering which we identified in the data for the whole country maintains itself. That is, high degrees of current shift can be observed in all provinces for those of the various Scandinavian mother tongues, the Dutch and Germans, while low rates of shift are generally seen for the Italians and Chinese.

Comparison between Table 5.14 and Table 5.15 shows various highlights. Firstly, the shifts to English home language are generally somewhat lower in Quebec than in the rest of the country. As we found in our analysis of ancestral shift in Quebec, even the combined figures for shifts to English and shifts to French are still somewhat lower than they are for the other provinces. But the general ordering is, again, preserved: high degrees of shift for those of Danish, Dutch, and German mother tongues, low shifts for those of Chinese and Italian mother tongues. An interesting exception is formed by the Yiddish mother tongue group in Quebec. In contrast to the other provinces, a fairly small percentage shifts to English or French: 27.3% for Quebec, compared with 61.5% for Ontario, or 60.2% for the whole country. This difference did not show up in the analysis of ancestral shift.

Finally, we again note the low degree of attraction of the French language, even in the province of Quebec, for immigrants of other mother tongues. It is only the Italian group that is shifting more to French than to English, but even here the advantage to French is only slight, and, as we shall presently see, it is less to the advantage of French in the youngest age groups. For the other groups only the Germans, the Yiddish and the Dutch show any noticeable shifts to French, but in all these cases the shifts to English far outdistance those to French.

5.3.4. Current Shift by Age

Table 5.16 presents the patterns of current language shift to English home language (and to French home language for those of English mother tongue) specified according to age and mother tongue.

We find several patterns in these data. Generally, shifts to English home language are lowest in the youngest age groups. This should not be surprising. We have reason to believe that many children under five years of age have already shifted from some mother tongue — Polish, for example — to English as the language they speak most often in the home. Since it was stipulated that the mother tongue was the language first learned in childhood and still understood, these children are already bilingual in Polish and English before their fifth birthday. Especially for the Scandinavian and Ukrainian mother tongue groups, these figures are extremely high: 50.5% and 53.2% respectively. However, even among the lowest group, the Italians, we find 12.3% of the youngest age group shifting to English. In a recent article Duchesne (1978:11) showed that in Quebec the younger Italians are shifting to English much more than to French.

TABLE 5.16. Percentage of Mother Tongue Group Shifting to English Home Language, by Age, Canada, 1971

Age group	English ¹	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
0-4	0.4	2.5	29.7	12.3	43.1	30.8	50.5	53.2
5-9	0.4	3.1	49.8	25.4	69.2	50.8	73.7	61.1
10-14	0.4	3.3	60.6	30.4	76.5	54.5	81.6	57.9
15-19	0.4	4.1	66.4	30.0	80.6	53.4	85.7	60.5
20-24	0.6	6.6	69.7	25.5	85.8	58.1	85.7	67.3
25-29	0.7	7.7	68.5	22.4	85.0	62.4	80.3	78.5
30-39	0.7	8.5	69.2	18.4	85.1	62.7	85.4	80.3
40-64	0.6	8.3	66.7	19.4	74.7	52.0	91.0	59.5
65 and over	0.5	6.7	54.1	26.7	49.6	34.1	91.0	21.6

¹Data refer to English mother tongue shifting to French home language in this case.

Source: 1971 Census of Canada, unpublished data.

The Ukrainian group forms an exception to the overall pattern for the youngest ages. While for the other language groups, the shift for the youngest ages is markedly below the total percentage for that group, for the Ukrainians it is only slightly less.

In general, mother tongue groups have ratios of shift to English home language which are highest in the lower working ages. Shifts are higher than average for Germans aged 15-64; Italians aged 5-29; Dutch aged 15-39 and Polish and Ukrainians aged 5-64. An exception to the general pattern is also formed by those of Scandinavian mother tongue, with lower than average degrees of language shift for those under 40, and figures higher than average for all ages of 40 and over.

For all groups, it appears that many parents initially pass on their "other" mother tongue to their children as home language, but that they shift fairly soon thereafter to the use of English in their homes. The Dutch mother tongue group appears to be the clearest example of this. For the 0-4 age group, 43% has shifted from Dutch mother tongue to English home language, while the corresponding figure for the 5-9 age group was 69%.

5.3.5. Current Shift by Place of Birth

As in our analysis of ancestral shift, we analyzed current shift by place of birth, again using a breakdown into three categories: born in Quebec, born elsewhere in Canada, and foreign-born. The variations in current shift by place of birth appear in Table 5.17.

TABLE 5.17. Percentage of Mother Tongue Group Shifting to English Home Language, by Place of Birth, Canada, 1971

Mother tongue	Place of birth		
	Quebec	Rest of Canada	Outside Canada
English ¹	6.0	0.2	0.3
French	2.0	26.7	15.8
German	43.0	72.0	56.4
Italian	19.0	41.8	16.2
Dutch	62.7	72.9	77.9
Polish	53.0	75.8	38.2
Scandinavian	58.5	93.7	86.4
Ukrainian	50.0	71.7	26.2

¹ Data refer to English mother tongue shifting to French home language in this case.
Source: 1971 Census of Canada, unpublished data.

As with ancestral language shift, the variations in current shift to English home language cannot be explained solely by nativity. Within each of the three categories of nativity we find approximately the same ordering of groups with regards to their current shift: the Scandinavians tend to be highest, followed by the Dutch and the Germans; the Poles and Ukrainians tend to assume an intermediate place, while the Italians are at the lower end. With the two categories of nativity outside Quebec, the French behave approximately the same as the Italians.

Nativity obviously makes some difference. Almost invariably we find highest ratios of current shift among those born in Canada outside Quebec. Quebec takes an intermediate position for those of Italian, Polish and Ukrainian mother tongues, and the lowest position for those of German, Dutch and Scandinavian mother tongues. The Dutch category appears to be an exception to this rule. The shift to English home language here is higher for those born outside Canada than for the Canadian-born. This could reflect the rural/urban distribution of the Dutch, with the more recent immigrants going to cities, and large numbers of those preceding them settling on farms and in rural villages where Dutch language and customs are strongly valued and passed on to the children (see, e.g., Ishwaran, 1971). The data with which we are working do not permit us to test such an hypothesis.

Finally, Table 5.17 reveals the "levelling effect" or "convergence effect" of Canadian nativity, particularly among those born in Canada outside Quebec. By this we mean that the range of differences among various mother tongues in their shifts to English is narrower for the Canadian-born than for the foreign-born.

5.3.6. More Detailed Analyses of the Effects of Nativity

As with ancestral shift, we can study the effects of the nativity of the respondent's parents on current language shift. We are using the same nine-fold classification used in Table 5.6. For the data on current language shift, see Table 5.18.

TABLE 5.18. Percentage of Mother Tongue Group Shifting to English Home Language, by Detailed Nativity, Canada, 1971

Mother tongue	Born in Quebec				Born in rest of Canada				Foreign-born
	Both Canada	Father only	Mother only	Both foreign	Both Canada	Father only	Mother only	Both foreign	
English ¹	7.8	2.9	3.5	1.7	0.2	0.1	0.1	0.1	0.3
French	1.9	5.8	5.8	9.0	25.3	46.9	47.3	55.1	15.8
German	32.5	45.5	70.0	49.7	64.7	75.8	80.5	76.0	56.4
Italian	34.3	40.6	34.2	14.1	78.8	79.8	76.4	34.6	16.2
Dutch	81.6	----	----	53.8	67.7	76.5	68.6	78.1	77.9
Polish	52.9	57.1	63.2	51.8	80.4	78.6	86.1	73.0	38.2
Scandinavian	56.7	----	----	59.6	92.1	91.5	96.4	94.1	86.4
Ukrainian	54.1	48.4	47.9	49.2	75.8	78.6	75.7	68.0	26.2
Native Indian	15.0	66.7	----	----	30.8	65.8	64.0	60.7	52.0

"----" indicates fewer than 100 persons in this category.

¹Data refer to English mother tongue shifting to French home language in this case.

Source: 1971 Census of Canada, unpublished data.

As in our analyses of nativity regarding ancestral shift, we find that the nativity of parents has an effect upon the prevalence of current shift. The patterns are, however, not as clear as in the earlier analysis. We again note that nativity has a "levelling effect". For those born in Canada with at least one Canadian-born parent, the differences, in current language shift to English home language, between different mother tongues narrow considerably, while they widen somewhat for those born in Canada with two foreign-born parents. In fact, for those born in Canada outside Quebec, with two Canadian-born parents, the all-too-familiar rank order is drastically distorted. Although we still find the Scandinavians with the highest degree of current shift, we now find the Dutch and Germans with the lowest degrees of shift. With regards to the German group, it may be that we are dealing with Memmonites and Hutterites, two German-speaking groups with high degrees of segregation from other groups in Canadian society.

For several of the groups, the important factor appears to be whether or not the respondent has at least one Canadian-born parent. Current language shift is markedly higher for persons with at least one Canadian-born parent if they had Italian as mother tongue. The same effect shows up, to a lesser degree, for those of Polish and Ukrainian mother tongues. For those of Scandinavian mother tongue, no relation to nativity shows up. For the French, we again note the somewhat different behaviour of the Canadian-born. We see, in marked contrast to the Italian segment, that current shift to English home language is highest among those with two foreign-born parents (both for respondents born in Quebec or elsewhere in Canada), intermediate for individuals with one foreign-born parent (regardless whether mother or father was foreign-born), and lowest for Canadian-born respondents with two Canadian-born parents.

Native Indians follow the same pattern, with regards to current language shift, as the French. Clearly, in both cases we are dealing with viable North American cultures which do not readily absorb outsiders, even when they speak the language associated with that culture. French-speaking immigrants are, therefore, evidently more inclined to be absorbed into English North American society than are Canadian-born French speakers, at least in Quebec.

Finally, we should consider the aberrant pattern displayed by the Dutch. We already noted the fact that the foreign-born have higher degrees of current shift than the Canadian-born. It now turns out that the relationship is even more complicated. When we compare the four subsets of those born in the rest of Canada, we note the absence of the pattern we observed for the Italians, Poles and Ukrainians. The easiest way to characterize the pattern for the Dutch is to state that current shift to English home language is about 10% higher for those who have a foreign-born mother. The exception is formed by those born in Quebec, but here we are dealing with very small frequencies. For the remaining five categories in Table 5.18, we see that current shift ranges between 76.5% and 78.1% for cases involving a foreign-born mother, and between 67.7% and 68.6% for those with a Canadian-born mother. As with so many other unexpected findings, the reasons for this await further research.

5.3.7. Current Language Shift by Period of Immigration

For the foreign-born, we examine the effects of length of residence upon current language shift. Common sense leads us to expect the degree of current shift to vary with length of residence. Earlier immigration, or longer period of residence, obviously implies a longer period of exposure to the risk of assimilation. One of the aspects of assimilation is the increased usage of the language of the receiving society, especially in the home (which we could regard as the most private domain of language use). The data in Table 5.19 indeed bear out this relationship.

With the exception of the shift from English mother tongue to French home language, which is minimal anyway, we find that the shift to English home language for the immigrants increases with increasing length of residence.

TABLE 5.19. Percentage of Mother Tongue Group Shifting to English Home Language, by Period of Immigration, Canada, 1971

Mother tongue	Period of Immigration				Canadian-born
	Before 1946	1946-55	1956-60	1961-71	
English ¹	0.3	0.3	0.3	0.4	0.6
French	22.1	21.7	15.9	9.1	5.8
German	69.5	56.9	54.9	38.5	71.2
Italian	47.4	21.4	15.4	8.4	35.0
Dutch	84.7	82.3	78.6	54.4	72.6
Polish	47.3	40.4	32.0	21.6	73.5
Scandinavian	93.4	87.4	82.2	57.3	93.1
Ukrainian	30.1	20.3	20.4	17.0	71.0
Native Indian	69.8	60.8	61.8	44.8	29.6

¹Data refer to English mother tongue shifting to French home language in this case.

Source: 1971 Census of Canada, unpublished data.

The effects of nativity are again shown in Table 5.19. Table 5.17 indicated that native-born persons generally have higher degrees of shift to English home language than the foreign-born. There are, however, several exceptions which should be noted. We have discussed the contrast between immigrants of French mother tongue and native-born persons of French mother tongue, concluding that immigrants of French mother tongue behave very much like immigrants of Italian mother tongue with regards to current language shift, with the exception of the pre-1946 immigrants.

The other exception, also previously mentioned, is the Dutch mother tongue group, where the degree of current shift to English home language is higher for those who immigrated before 1961 than for the native-born of Dutch mother tongue. It is not clear whether the anomaly lies in the higher than usual language shift among Dutch immigrants, or in a lower than expected language shift among the native-born of Dutch mother tongue.

Finally, we should note that the same general ordering is again preserved even after we control for length of residence. For all periods of immigration, we find that those of Scandinavian, Dutch and German mother tongues have high degrees of shift to English home language, while those of Italian and Ukrainian mother tongues have relatively low degrees of shift to English home language. We have noted that the range narrows considerably for the native-born groups, with the exception of the native-born population of Italian mother tongue. Quite obviously, there are extremely significant residual variations between mother tongue groups which cannot be explained by nativity or length of residence. It may be that among the more rapidly assimilating groups, a higher proportion was

able to speak English before arriving in Canada than was the case with the more slowly assimilating groups, but in the absence of data this must remain a conjecture.

5.3.8. The Effects of Education

In addition to the effects of nativity, we would expect to find some impact from the educational experience on the degree of shift to English home language. For those who were educated in Canada, at least, more years of education would imply a higher degree of exposure to the use of English in a formal setting (with the exception of those educated in the French language in Quebec). For those educated outside Canada, it is likely that more years of education are related to a higher probability of having learned English in school.

TABLE 5.20. Percentage of Mother Tongue Group Shifting to English Home Language, by Level of Education Attained, Population Five Years and Over, Canada, 1971

Mother tongue	Level of education					
	No schooling	Grades 1-8	Grades 9-11	Grade 12	Grade 13	Some university
English ¹	0.7	0.6	0.6	0.4	0.2	0.5
French	4.8	4.9	7.5	8.7	28.7	8.2
German	41.6	58.7	71.0	72.3	63.9	74.8
Italian	10.2	17.7	36.8	46.3	44.7	41.4
Dutch	44.7	71.0	83.2	83.9	79.1	80.9
Polish	26.5	45.0	62.1	63.1	49.8	56.3
Scandinavian	77.6	89.4	90.6	88.5	82.5	86.4
Ukrainian	18.7	49.2	73.2	75.8	47.2	66.0
Native Indian	12.8	30.6	47.8	54.3	59.2	54.7

¹Data refer to English mother tongue shifting to French home language in this case.
Source: 1971 Census of Canada, unpublished data.

Table 5.20 shows that we do, indeed, find that higher amounts of education are generally related to higher degrees of shift to English home language. The relation, however, is not linear; it is not even monotonic. It appears that for most groups, there is a positive relationship between current shift to English home language and the amount of education attained, through the level of Grade 12. For all groups except the French and the English, there are large differences in the amount of current shift between those with no schooling and those with 1-8 years of education. In addition, there are again marked differences in current language shift between those with 1-8 years and 9-11 years of schooling for all groups, with the exception of the Scandinavians. The difference between those with Grade 12 and those with 9-11 years of education follows no set pattern, but most groups still show some increases in current shift with increasing level of education. As we mentioned in our analysis of the effect of education on official bilingualism in Chapter 3, the regular pattern is distorted by the Grade 13 category. For those of French mother tongue, there is an enormous difference in current language shift between those with Grade 12 and those with Grade 13 (the "Ontario

effect"), while for most other groups the degree of current shift to English home language is lower for those with Grade 13 than for those with Grade 12. Finally, those with at least some university tend to have the highest values observed for those in the middle educational levels (that is, those with education somewhere between Grades 9-13).

Once again, the rank ordering of current language shift by mother tongue group remains approximately invariant when we control for education, the Scandinavian, Dutch and German groups with high degrees of shift, the Italian group with low degrees of shift, the remainder somewhere in the middle. Once again we are left with a residual variation which cannot be explained on the basis of differential amounts of education.

5.3.9. The Effects of the Location of Education

We can explore the effects of education in a somewhat different way by examining the relation between current language shift and the place where the highest level of elementary or secondary education was attained. In order to simplify the analysis, we have subdivided those whose highest level was obtained in Canada into those whose highest level was obtained in Quebec and those who received their highest level of schooling elsewhere in Canada. The resulting data are given in Table 5.21.

TABLE 5.21. Percentage of Mother Tongue Group Shifting to English Home Language, by Place Where Highest Level of Elementary or Secondary Schooling was Attained, Population 15 Years and Over, Canada, 1971

Mother tongue	Quebec	Rest of Canada	Outside of Canada	No schooling
English ¹	7.2	0.2	0.4	1.4
French	2.2	33.0	15.9	8.5
German	58.4	80.6	50.5	42.8
Italian	26.4	56.7	11.6	9.3
Dutch	73.3	87.2	73.5	41.2
Polish	59.0	78.3	32.1	26.1
Scandinavian	78.9	94.8	84.9	78.4
Ukrainian	53.1	72.7	18.9	16.0
Native Indian	22.8	39.7	50.6	11.7

¹Data refer to English mother tongue shifting to French home language in this case.

Source: 1971 Census of Canada, unpublished data.

We see that, generally, the location of the education as well as the amount of education, has a bearing on the tendency to shift to English home language. Those without any schooling generally have lower degrees of language shift than do those who have at least some education. Exceptions are the English mother tongue speakers shifting to French, and those of French mother tongue shifting to English.

For those with at least some education, the smallest shift tends to occur among those whose highest level of elementary or secondary education was attained outside Canada, most markedly so for those of Italian and Ukrainian mother tongues and least markedly for those of Scandinavian and Dutch mother tongues.

For those whose highest level of elementary or secondary education was received in Quebec, we find that the shift from English mother tongue to French home language is well above the average figure for that group, while the opposite is true for the shift from French mother tongue to English home language. Italians educated in Quebec form an interesting group. Aside from the 26% who shifted to English home language, there are an additional 29% who shifted to French home language. Thus, it is obvious that the shift from Italian mother tongue to French home language is heavily affected by the joint operation of living in Quebec and having received the highest level of education in Quebec.

5.3.10. The Joint Effects of Place of Birth and Location of Schooling

In preceding sections of this chapter we noted that there are clear relations between place of birth and current language shift (for most mother tongue groups, shift to English is highest for those born in Canada outside Quebec, lowest for the foreign-born) and between place where the highest degree of schooling was obtained and current language shift (for most mother tongue groups, shift to English is highest for those who received their highest level of education in Canada outside Quebec, lowest for those educated outside Canada). In this section, we examine the joint effects of these two factors, ignoring the very small group which was born in Canada but received its highest level of education outside the country. Thus, we are left with a seven-fold classification: born in Quebec (subdivided into Quebec-educated and educated elsewhere in Canada), born elsewhere in Canada (same subdivision) and foreign-born (subdivided into foreign-educated, Quebec-educated and educated elsewhere in Canada). The results are given in Table 5.22.

For the immigrant groups (Germans, Italians, Dutch, Scandinavians, Poles and Ukrainians), we see that the factors related to the "rest of Canada" have a reinforcing effect. For all groups except the Dutch and, to a minute degree, the Ukrainians, current shift is highest for persons who were born in Canada outside Quebec and who received their highest level of schooling there as well. The Dutch again form an exception. For most of the categories in Table 5.22, current language shift among those of Dutch mother tongue is at an almost constant level, except for the foreign-born who received their highest level of education in Canada outside Quebec.

Comparing the two factors with each other leads us to the conclusion that one cannot claim either one as being more effective than the other. For the Germans, Poles and Ukrainians, nativity appears to have the stronger effect, while for the Italians, place of schooling appears to have the stronger effect.

TABLE 5.22. Percentage of Mother Tongue Group Shifting to English Home Language, by Place of Birth and Place Where Highest Level of Elementary or Secondary Schooling was Attained, Canada, 1971

Mother tongue	Born in Quebec		Born elsewhere in Canada		Foreign-born		
	Educated:		Educated:		Educated:		
	In Quebec	Elsewhere in Canada	In Quebec	Elsewhere in Canada	In Quebec	Elsewhere in Canada	Outside Canada
English ¹	8.1	1.8	3.8	0.2	3.9	0.1	0.3
French	2.0	24.1	10.7	34.0	6.4	49.3	17.1
German	42.3	72.3	76.4	81.0	68.9	79.3	50.5
Italian	33.3	67.7	58.2	78.4	18.6	43.2	11.5
Dutch	75.0	----	----	76.2	71.8	92.6	73.5
Polish	61.8	66.7	75.9	83.4	53.2	67.9	32.1
Scandinavian	66.7	----	----	95.3	87.7	94.1	84.9
Ukrainian	54.8	68.3	74.8	74.5	39.8	58.1	18.4
Native Indian	22.0	21.6	34.3	39.8	----	66.7	49.0

"----" indicates fewer than 100 persons in this category.

¹Data refer to English mother tongue shifting to French home language in this case.

Source: 1971 Census of Canada, unpublished data.

Controlling for the place where the highest level of schooling was attained, we see that shift to English home language is generally higher for the Canadian-born than for the foreign-born, except for the Germans born in Quebec, regardless of where they were educated. Controlling for place of birth, we find that the highest prevalence of current shift is among those educated in the rest of Canada and lowest among those who received their highest level of schooling outside Canada.

For those of English mother tongue shifting to French home language, we also see the importance of both factors. For those persons of English mother tongue who were born and educated in Quebec, the proportion shifting to French home language amounts to a little over 8%. For this particular category, the effects of the education factor are very clearly stronger than those of nativity. For those not born in Quebec but educated in Quebec, the percentage shifting to French home language is a little under 4%; for those born in Quebec, but educated elsewhere in Canada, the percentage drops to 1.8, while for those who were neither born nor educated in Quebec, the percentage drops to between 0.1 and 0.3.

For the shift from French mother tongue to English home language, we again find the somewhat unusual pattern for the foreign-born. The highest percentage shifting is found for the foreign-born whose highest level of education was attained in Canada outside Quebec. For this group, as for the other ones, both nativity and location of schooling have an effect, with location of schooling having a stronger impact than nativity. For those educated in Canada outside Quebec, the percentage shifting ranges from 24 to 29, while for those educated in Quebec, the percentage ranges from 2 to about 11.

Finally, we note the effects of nativity for Native Indians. The foreign-born, almost half of whom were born in the United States, have clearly higher levels of current shift than the Canadian-born, whose lowest level is found among those born in Quebec. Education appears to have relatively little effect upon current language shift among members of the latter group.¹

5.4. Conclusions

Our analysis of language shift shows that the census data yield two measures of this concept, one of which we have called "ancestral shift", the other of which we have called "current shift". We have shown that ancestral shift to English mother tongue shows systematic variations by residence: high in the peripheral provinces of both the eastern and western extremities of Canada, intermediate in Manitoba and Ontario and lowest in Quebec. We have shown that ancestral shift also varies with age (higher for younger ages), place of birth (higher for Canadian-born), and place of birth of parents (highest when at least one parent was born in Canada). Moreover, ancestral shift generally increased with increasing length of residence in Canada for those who were foreign-born.

With regards to current language shift, we found systematic variations with province of residence, age, nativity (of respondent and of parents), period of immigration for the foreign-born and level and location of education attained.

The most compelling findings in the above array are, in our opinion, the following:

1. The persistence of group differences. Our analyses showed that no other controls could reduce the systematic variations in shift between the categories to the point where no order existed. Almost invariably, shift was highest among the Scandinavians, followed by the Dutch and Germans. At the low end, we found almost invariably the Italians, while the Poles and Ukrainians assumed an intermediate level. There appears to be some "cultural residue" which persists against all statistical controls. However, as we see in (3) below, there is a process of levelling, or convergence, which reduces the differences over the generations.
2. Similarity between ancestral and current shift. We found that, generally, levels of ancestral and current shift for the various categories assumed very similar values. One possible interpretation of this finding is that we are dealing with relatively constant processes, of which current shift simply represents the most recent phase.

See footnote(s) on page 133.

3. The levelling effect of the third generation. As we saw in our detailed analyses of the effects of nativity, it is only for the Canadian-born of at least partly Canadian parentage that differences in language shift between individuals of different ethnic origin, or of different mother tongue, are sharply reduced to the point where the class of original membership (ethnic origin for ancestral shift, mother tongue for current shift) has little explanatory power.

4. The convergence between groups toward English showed up in our analyses of current language shift by age. The differences between ethnic groups (or mother tongue groups) are shrinking, as higher proportions of all these groups are Canadian-born and have at least one Canadian-born parent.

This phenomenon of convergences is most clearly demonstrated by the Ukrainians. It is a commonly held belief in Canadian society that the Ukrainian group has demonstrated a rather high degree of language maintenance, in contrast to such rapidly assimilating groups as the Scandinavians, the Germans and the Dutch. Our analyses have shown that these inter-group differences are reduced for the youngest age groups and for those with at least one Canadian-born parent. It is only in the higher ages, and among the foreign-born and the native-born of foreign parentage, that the Ukrainians reveal markedly lower levels of language shift. Thus, the reputedly high level of Ukrainian language maintenance in Canada may well become a thing of the past. (For further analyses of the Canadian census data on Ukrainians, see de Vries, forthcoming.)

FOOTNOTE

¹A cautionary note is called for with reference to the ethnic origin category of Native Indian and Inuit when cross-classified with birthplace. The 1971 Census reports that 4,895 Native Indian and Inuit persons were born outside Canada (1971 Census of Canada, Bul. 1.4-10, Table 28). Because there is much two-way movement across the border of the U.S.A. and Canada, it is not remarkable that 2,685, or about 55%, of these foreign-born people of Native Indian and Inuit origin have the U.S.A. as birthplace. However, what is remarkable and difficult to explain is that 1,930 are reported as having Europe as birthplace and, of these, no fewer than 980 are reported as having been born in Southern Europe. A further 460 are listed as having been born in Asia and 820 as having been born "elsewhere". It seems to us that Europe and Asia are unlikely birthplaces for such substantial numbers of people whose "first ancestors in the male line" were Native Indians and Inuit. If some sort of error is involved, we have no way of ascertaining its source.

CHAPTER 6

LANGUAGE USE BY BILINGUALS

6.1. Introduction

In this chapter, we analyze patterns of language use. Earlier in this monograph it was pointed out that the census data do not provide a very good measure of the current language behaviour of individuals. The only question on language use is labelled "home language", which has several deficiencies. Firstly, respondents are restricted to the language used in only one domain, that is the home. There is no opportunity to mention language use in other domains - such as the school, work, church, etc. Secondly, there is no opportunity to mention more than one language. Obviously, there are many homes where two or more languages are spoken with more or less equal frequency. Respondents were asked to determine which of those languages they spoke most often. In fact, in cases where respondents did indicate more than one language, editing procedures at Statistics Canada, described in Chapter 2, reduced these multiple mentions to a single category. The third point we should make before proceeding with the analysis is that in most households, it is likely that the census data for all household members were provided by one person. Thus, we would suspect that one person would determine which language, if more than one was spoken, was used more frequently in the household. It is, therefore, not clear that the language use data refer to individuals; in households in which more than one language is spoken, it is likely that the data refer to the language spoken most often in the household; rather than by individuals.

The analyses in this chapter are restricted to those individuals who have a choice regarding language use. Persons who report only one language consistently - English mother tongue, only English as official language and English home language, for example - are not included, although obviously their presence may have a strong influence on the language choices made by bilinguals. We will be considering two categories of individuals: (i) persons who report only the ability to speak English and French, whom we have labelled "official bilinguals"; and (ii) those who report the ability to speak one official language and one "other" language, the category of "unofficial bilinguals", discussed at length in Chapter 4. The great majority of these unofficial bilinguals reports English as the official language, the number reporting French as their official language being rather small and concentrated in the province of Quebec.

6.2. Analysis of Language Use Patterns

6.2.1. Marginal Distribution

To begin, let us consider the total distribution of the language use patterns displayed by the two types of bilingual individuals. Taking the official bilinguals first, we note in Table 6.1 that approximately two-thirds of them most often speak French at home. Keeping in mind that the overwhelming majority of official bilinguals in the total Canadian population is of French mother tongue, it is obvious that the acquisition of English by persons of French mother tongue does not automatically imply a shift to the usage of English in the home. On the other hand, while 73% of the official bilinguals are of French mother tongue, only 63% of all official bilinguals use French most often at

home. Obviously, then, there is some net language shift from French mother tongue to English home language for bilinguals, as we have already pointed out in Chapter 5.

TABLE 6.1. Percentage Distribution of Home Languages Reported by Officially Bilinguals, Population Five Years and Over, Canada, 1971

Home language	Officially bilingual	Unofficially bilingual-English	Unofficially bilingual-French	Multilingual
English	36.7	54.2	xxx	30.9
French	63.3	xxx	28.4	8.1
German	xxx	7.9	1.4	5.5
Italian	xxx	9.6	45.1	18.5
Ukrainian	xxx	5.5	0.7	4.6
Other	xxx	22.9	24.3	32.4

"xxx" indicates no cases are logically possible for this cell.

Source: 1971 Census of Canada, unpublished data.

We should note the contrast between the English and French subgroups of the unofficially bilingual populations, who combine English or French, but not both, with one other language. A little over half of the English subgroup uses English most often in the home, while only a little more than one-fourth of the French subgroup uses French most often in the home. Obviously, the acquisition of English by persons of other mother tongues carries with it a greater probability of a shift towards using English in the home than the acquisition of French does with regards to the use of French in the home. Before we leap to conclusions about the lesser attractiveness of the French language, we should keep in mind that the largest bloc of unofficial bilinguals with French as official language are those of Italian mother tongue. Most of these persons are immigrants who arrived much more recently than their German and Ukrainian counterparts in the unofficially bilingual-English segment.

We should note that in both unofficially bilingual segments those speaking Italian most often at home are the largest of the "other" language groups (that is, other than French or English). Although it may be the case that those of Italian mother tongue acquire French to a much greater extent than members of other language groups, and although in addition a large number acquires English, it would appear that the Italian language persists (to a greater extent than other immigrant languages) as the language spoken in the home. Again, we should point out that the relative recency of Italian immigration may explain the comparatively high persistence of the language.

The greater attraction of English compared to French comes out in the figures for the multilingual group. The great majority of people in this category consists of persons of "other" mother tongues who have acquired both English and French. Yet, almost four times as many of these people report using English most often at home than report French. Again, the use of Italian prevails in this category, after English but ahead of French.

6.2.2. Distribution by Province

For the analyses of language choice at the more detailed level we ignore the patterns for the unofficially bilingual-French group, except when we are dealing with the province of Quebec. Moreover, we present the data separately for the official bilinguals and the other groups. The provincial patterns are presented in Tables 6.2 through 6.5.

Taking the official bilinguals first, we see an old and familiar pattern: the increasing power of English as we go either east or west from Quebec. It is only in the provinces of Quebec and New Brunswick that official bilinguals are more likely to use French in the home than English, although Nova Scotia and Manitoba come very close. As in all measures involving comparisons of French and English, the peripheral provinces of Newfoundland and British Columbia show the greatest predominance of English, with the Yukon similar to British Columbia, and the Northwest Territories similar to the Prairie provinces. Recall that the official bilinguals are in increasing proportions of French mother tongue as one goes further away from Quebec. Obviously then, Table 6.2 indicates that for the peripheral minorities, the acquisition of English almost automatically implies the use of English in the home and, as a consequence, almost inevitably the transmission of English as the mother tongue of their children.

The attraction of English is demonstrated, for those who also speak one "other" language, in Table 6.3. We find the proportion speaking English most often at home increasing as we go east or west from Quebec, although the differentials are not as strong as they were for the official bilinguals. As far as the use of other languages is concerned, we find rather marked regional variations. The Prairie provinces show an over-representation of German and Ukrainian, in addition to the over-representation of English which we already noted. We should also note the over-representation of Italian home language in Ontario, as well as the over-representation of "other" languages in the Northwest Territories, the Maritime provinces, Quebec and Ontario. Especially for the last two provinces, these figures reflect the larger number of recent immigrants compared with the Prairie provinces. Although a fair number of immigrants in Quebec and Ontario is able to speak English, usage of English does not yet dominate communications within their households. For the Northwest Territories, the "others" are almost exclusively Native Indians and Inuit who have learned English but, to a large degree, do not speak it most often at home.

For the unofficial bilinguals whose official language is French, one can only compare Quebec with other regions of the country. Further disaggregation leads to numbers which are too small to allow for any meaningful analysis. The contrast between Quebec and the remainder of the country is rather interesting as we can see in Table 6.4. Contrary to expectation, the home usage of French among unofficial bilinguals is actually less prevalent in Quebec than it is in the rest of the country, with the exception of British Columbia. One explanation to account for this unexpected finding is that a large proportion of the unofficially bilingual-French in Quebec are Italians, who have a strong tendency to speak Italian in the home. Another possibility is that outside Quebec, many immigrants in the unofficially bilingual-French category are persons who grew up in overseas multi-lingual countries in which French was one of the official languages (such as Belgium or Switzerland). Such people may already have spoken French in the home before they arrived in Canada.

TABLE 6.2. Percentage Distribution of Home Languages Reported by Officially Bilinguals, by Province, Population Five Years and Over, Canada, 1971

Province	Per cent using English	Per cent using French
Newfoundland	80.8	19.2
Prince Edward Island	58.6	41.4
Nova Scotia	56.0	44.0
New Brunswick	27.3	72.7
Quebec	20.1	79.9
Ontario	60.4	39.6
Manitoba	54.2	45.8
Saskatchewan	67.5	32.5
Alberta	74.2	25.8
British Columbia	89.5	10.5
Yukon	90.1	9.9
Northwest Territories	73.7	26.3

Source: 1971 Census of Canada, unpublished data.

TABLE 6.3. Percentage Distribution of Home Language Used by Unofficially Bilingual-English, by Province, Population Five Years and Over, Canada, 1971

Province	Home language				
	English	German	Italian	Ukrainian	Other
Newfoundland	47.4	4.4	0.5	0.3	47.6
Prince Edward Island	65.5	2.3	0.0	0.5	31.4
Nova Scotia	57.7	2.5	4.0	1.1	34.7
New Brunswick	51.1	2.9	1.0	0.4	44.6
Quebec	36.0	5.8	10.2	3.2	44.8
Ontario	46.8	6.7	17.1	3.7	25.6
Manitoba	56.8	13.8	1.5	12.4	15.5
Saskatchewan	68.3	8.1	0.3	11.0	12.3
Alberta	66.0	8.7	2.3	7.9	15.1
British Columbia	64.7	7.8	4.4	1.4	21.6
Yukon	72.5	4.7	0.6	0.6	21.6
Northwest Territories	32.8	1.0	0.8	0.2	65.2

Source: 1971 Census of Canada, unpublished data.

TABLE 6.4. Percentage Distribution of Home Language Used by Unofficially Bilingual-French, by Region, Population Five Years and Over, Canada, 1971

Region	Home language				
	French	German	Italian	Ukrainian	Other
Atlantic Provinces	47.2	2.8	2.8	2.8	41.7
Quebec	27.7	1.2	46.8	0.6	23.7
Ontario	36.5	2.2	33.3	1.7	26.8
Prairie Provinces	36.7	7.4	10.7	4.1	40.2
British Columbia	19.1	7.4	25.0	1.5	48.5

Source: 1971 Census of Canada, unpublished data.

TABLE 6.5. Percentage Distribution of Home Language Used by Multilinguals, by Region, Population Five Years and Over, Canada, 1971

Region	Home language					
	English	French	German	Italian	Ukrainian	Other
Atlantic Provinces	49.2	8.0	6.4	5.7	1.0	29.7
Quebec	35.8	15.6	4.5	9.6	2.8	31.7
Ontario	31.4	2.2	6.6	12.4	4.7	42.7
Manitoba	33.2	3.2	12.6	3.3	17.2	30.5
Saskatchewan	39.1	3.9	10.1	1.9	20.3	24.8
Alberta	41.2	2.7	7.6	4.5	13.4	30.7
British Columbia	45.2	2.3	9.3	5.2	3.0	34.9

Source: 1971 Census of Canada, unpublished data.

Finally, consider the regional variations in language use by multilinguals, as displayed in Table 6.5. Once again, we note the predominance of English which becomes stronger as one goes west and east from Quebec. At the same time, the attraction of French decreases. Note that even in Quebec, multilinguals use English at home in a proportion which is more than twice as large as that using French at home. For Quebec, we again note the high proportion using Italian at home, as in Ontario. In the western provinces, note the relatively high proportions using Ukrainian and German. We should keep in mind that many of the persons using Ukrainian at home are probably not multilingual Ukrainian-English-French, but are more likely to be persons of "other" mother tongues, such as Polish or Russian, who have switched to the use of Ukrainian through intermarriage. In other words, these people are probably trilingual Ukrainian-English-Polish, or something of that nature.

6.2.3. Distribution by Mother Tongue

From the preceding analyses it should be quite clear that bilinguals, to a very large degree, continue to use their mother tongue in their homes. Taking the official bilinguals first, we see from Table 6.6 that the overwhelming majority of them use their mother tongue as the home language. This is the case especially for the bilinguals of English mother tongue, where only 10.6% use French most often at home. For the bilinguals of French mother tongue, this tendency is somewhat weaker: 17.6% of the French mother tongue bilinguals use English most often in the home. Recall from Chapter 3 that persons of French mother tongue are much more likely, at the outset, to be bilingual than persons of English mother tongue. Although the adoption of English is not exceedingly strong, it is clear that the acquisition of the other official language brings with it a higher risk of the adoption of that language as home language for those of French mother tongue, than it does for those of English mother tongue.

For the unofficial English bilinguals, we see the familiar ordering which has appeared in all of our preceding chapters. Those of Scandinavian, Dutch and German mother tongues are quite likely now to use English most frequently in the home, while those of Italian mother tongue are much more likely than others to cling to their mother tongue.

For the unofficial French bilinguals, we see two patterns. In the German and Dutch mother tongue groups, those who have acquired French, but not English, are very likely to use French most often in the home. For those of Italian, Polish or Ukrainian mother tongue, acquisition of French without the simultaneous or preceding acquisition of English is not very likely to result in the adoption of French as home language.

Comparison between the two unofficially bilingual populations shows that, except for those of German mother tongue, acquisition of English has a much larger probability of a shift to English as home language than does the acquisition of French. The German deviation can be explained in the following way: a substantial share of the unofficial English bilinguals of German mother tongue is formed by the Mennonites and Hutterites, groups which are highly concentrated in rural parts of Manitoba, Saskatchewan and Alberta. Persons of German mother tongue who have acquired only French

TABLE 6.6. Percentage Distribution of Home Language Used by Bilinguals and Multilinguals, by Mother Tongue, Canada, 1971

Mother tongue	Officially bilingual		Unofficially bilingual-English		Unofficially bilingual-French		Multilingual			
	English	French	English	Mother tongue	French	Mother tongue	English	French	Mother tongue	Other
English	89.4	10.6	xxx	xxx	xxx	xxx	xxx	xxx	xxx	100.0
French	17.6	82.4	xxx	xxx	xxx	xxx	xxx	xxx	xxx	100.0
German	xxx	xxx	66.3	33.7	86.1	13.9	52.6	7.6	24.5	15.2
Italian	xxx	xxx	33.0	67.0	26.0	74.0	22.1	13.1	61.9	2.8
Dutch	xxx	xxx	79.8	20.2	69.7	30.3	58.9	4.4	19.7	17.1
Polish	xxx	xxx	57.4	42.6	46.2	53.8	31.4	5.4	28.9	34.3
Scandinavian	xxx	xxx	90.7	9.3	xxx	xxx	49.9	5.5	8.8	35.8 ¹
Ukrainian	xxx	xxx	60.4	39.6	30.3	69.7	39.0	3.9	40.1	17.0
Native Indian	xxx	xxx	38.1	61.9	6.0	94.0	35.4	7.6	32.5	24.5
Other	xxx	xxx	46.2	53.8 ²	37.5	62.5 ²	41.5	10.4	48.1 ²	xxx

"xxx" indicates no cases are logically possible for this cell.

¹ Most of these involve cases where home language and mother tongue are two different Scandinavian languages (i.e., two of Swedish, Norwegian, Danish and Icelandic).

² This is simply the complement of the percentage with English or French as home language. Some of these cases may involve quadrilinguals, whose home language is neither English nor French nor the mother tongue. However, this latter segment is extremely small.

Source: 1971 Census of Canada, unpublished data.

do not belong to either of these religious groups. The multilinguals, finally, show patterns not unlike those for the unofficial English bilinguals. Large proportions of those with German, Dutch and Scandinavian mother tongue have shifted to the use of English in the home, in contrast to considerably smaller proportions of the Italians, Poles and Ukrainians. As in Table 6.1, the multilinguals show a stronger attraction to English than French. Only for the multilinguals of Italian mother tongue do we find more than 10% using French most often in the home. But even for this group, usage of English clearly exceeds usage of French.

The "other" column among the multilinguals provides a measure of the contamination of the language information for some of these groups. The fairly high proportions of contamination for the Dutch and German mother tongue categories are in part based on the erroneous classification of mother tongues (Dutch instead of Deutsch), and in part on the treatment of Dutch and Flemish as two different languages. The high values for the Polish and Ukrainian categories reflect the relatively high degree of integration between these two groups, with very similar languages and fairly high proportions intermarrying. The high value for the Scandinavian category is the result of the fact that "Scandinavian" is a class of languages consisting of Swedish, Norwegian, Danish and Icelandic. The first three of these are mutually intelligible. Again as a consequence of great similarities between the component groups, and of high proportions intermarrying, there is a fair amount of bilingualism involving two of the Scandinavian languages.

6.2.4. Language Use Patterns by Age

For the distribution of language use of bilinguals and multilinguals by age, we will restrict ourselves to the comparison between those who speak an official language most often at home, and those who do not. We do not differentiate among those who speak mostly other languages (German, Italian, Ukrainian, etc.) in the house. For such a fine differentiation, frequencies are too small and, given the sources of error in the reported figures, too unstable to warrant separate analysis.

TABLE 6.7. Percentage Distribution of Home Language Used by Bilinguals and Multilinguals, by Age Group, Canada, 1971

Age group	Officially bilingual		Unofficially bilingual-English		Unofficially bilingual-French		Multilingual		
	English	French	English	Other	French	Other	English	French	Other
0-4	40.8	59.2	36.4	63.6	36.7	63.3	14.5	5.6	79.9
5-9	40.4	59.6	40.1	59.9	35.5	64.5	13.5	5.6	80.9
10-14	42.1	57.9	45.5	54.5	37.9	62.1	22.9	4.9	72.2
15-19	43.2	56.8	49.7	50.3	40.4	59.6	32.2	4.5	63.3
20-24	38.5	61.5	52.9	47.1	29.7	70.3	33.3	6.6	60.0
25-29	35.1	64.9	55.6	44.4	30.6	69.4	33.3	9.5	57.2
30-39	34.2	65.8	56.8	43.2	22.4	77.6	30.9	10.4	58.7
40-64	34.4	65.6	59.7	40.3	24.9	75.1	34.9	9.8	55.3
65 and over	32.8	67.2	50.7	49.3	37.9	62.1	23.9	6.6	69.5

Source: 1971 Census of Canada, unpublished data.

Although there is considerable fluctuation in the age-specific patterns in Table 6.7, a few conclusions may be drawn rather firmly. When we consider the use of English by official bilinguals, we notice that values higher than the group's average are obtained for all age groups under 25, but for none of the older age groups. It is undoubtedly the case that the younger bilinguals are more inclined to use English in the home than the older bilinguals. At this point, we will not provide a definitive explanation for this pattern. It may indicate a progressing attrition of the French language; that is, as the younger cohorts enter the reproductive ages, they will be more inclined to pass on English as their children's mother tongue than the older age groups. On the other hand, it may reflect a larger proportion of persons of English mother tongue among the younger officially bilingual age groups. Other explanations of comparable feasibility could be advanced, and towards the end of this chapter we will provide one such explanation.

For the unofficial English bilinguals a different pattern emerges. Age groups below 25 have proportions using English which are below the average for the total category; persons between the ages of 25 and 64 have proportions using English which are higher than average, while groups of 65 and over have lower than average proportions using English at home. Maximum values are attained for those between the ages of 40 and 64. It is tempting to advance an explanation which is tied to the life cycle. Most of those in the younger age groups are still living at home. Many of them will have foreign-born parents whose ability to speak English may well be limited. The children would, therefore, be compelled to speak their mother tongue (a language other than French or English) with their parents. As we move into the older ages among these children, it could be that we find the effects of the school and the peer group. These children would be increasingly exposed to the use of English outside the home. This could result in a loss of fluency in the mother tongue, and an increasing tendency to speak English at home. Alternatively, one could argue that generally, the parents of older children have resided in Canada for a longer time than the parents of younger children, and, therefore, are more likely to be fluent in English. It is not unlikely that both these factors operate simultaneously and, in fact, reinforce each other.

Several factors could be at work in the 20-64 age group. Firstly the high degrees of participation in the work world, voluntary associations and the like, would increase the use of English in all domains of linguistic discourse. Secondly, intermarriage with persons of other mother tongues could have an effect. English may be the only language which the partners share, or it may be adopted as a lingua franca.

Finally, the pattern for the oldest age group (basically, the decline in the use of English for persons 65 or over) could have several explanations. One is that the older persons revert to earlier patterns of language behaviour after they withdraw from many of the social sectors in which they participated more actively in earlier years. Retirement from the job, the departure of children or the death of a spouse would all result in a shrinking circle of social contacts. As a consequence, English might be required less frequently.

An alternative explanation is that these older people represent earlier immigrants who never adopted the use of English to the same extent as the younger cohorts have done. To test this latter hypothesis, one would obviously require comparable data from earlier censuses, which unfortunately are not available.

For the unofficial French bilingual group we observe a somewhat different pattern. Although there is some increase in the use of French for the younger age groups, the increase is rather minimal for this category of bilinguals. Note that the range is from 35.5% to 40.4%, in contrast to a comparable range among the English bilinguals from 36.4% to 49.7%. The pattern then deviates quite markedly for the adult ages. French is used to a much lower degree by those between the ages of 20 and 64 than was the case for the younger age groups. Finally, there is a large increase in the proportion using French in the highest age group. The explanation for the somewhat unexpected pattern for the adult age groups lies in its internal composition. Table 6.8 gives a more detailed breakdown of the age groups 10-14 through 25-29 for the unofficial French bilinguals.

TABLE 6.8. Home Language Composition of Unofficially Bilingual-French Category, for Selected Age Groups, Canada, 1971

Home language	Age group			
	10-14	15-19	20-24	25-29
French	1,255	1,140	1,390	1,725
German	75	60	85	50
Italian	610	485	1,995	2,455
Ukrainian	35	25	5	5
Other	1,335	1,115	1,200	1,400
Total	3,310	2,825	4,675	5,635

Source: 1971 Census of Canada, unpublished data.

As an inspection of Table 6.8 shows, the cause of the decline in the proportion using French most often in the home is the extreme difference in the size of the Italian segment, which made up less than 20% of the unofficial French bilinguals between 10 and 19 years of age, and a little over 40% of those between 20 and 29 years of age.

For the multilinguals, as for the unofficial English bilinguals, we see increases in the use of English with increasing age, in this case remaining virtually level between ages 15 and 64. The percentage using French is higher for those between 25 and 64 years of age than for those older or younger than that category.

The data in Table 6.7 confirm our inference from the beginning of this chapter. For persons of "other" mother tongues (neither English nor French), learning English is associated with much higher probabilities of adopting that official language as home language than is learning French. When we combine this with our finding in Chapter 4, where we documented that learning English is more probable for persons of "other" mother tongues than learning French, we see that the higher attraction of English for immigrants works through these two factors jointly. It appears, in fact, that even those individuals who acquire French do so, in large proportions, either in conjunction with the acquisition of English or followed by the acquisition of English.

These observations suggest that even if immigrants acquire French rather than English, probabilities appear to be relatively low that this acquisition will lead to the usage of French in the home. A more likely scenario appears to be that the acquisition of French is accompanied or followed by the acquisition of English, with higher probabilities for English to be adopted as home language.

6.2.5. Distribution of Language Use by Period of Immigration

For the effects of the length of residence in Canada, we can examine the relation between the choice of home language of bilingual individuals and the period in which they immigrated. Taking the official bilinguals first, we see from Table 6.9 that English dominates among the foreign-born. There appears to be very little difference among the various categories of periods of arrival. Percentages using English range from 60.5 to 73.0. The immigrants who came after 1960 have a somewhat lower degree of English language usage at home, although differences with the earlier arrivals are not very large. In contrast, Canadian-born official bilinguals predominantly use French at home: 65% of them report French as the language spoken most often in the home. Here again, we can see the persistence of the mother tongue. It should be remembered that the great majority of the native-born official bilinguals is of French mother tongue.

TABLE 6.9. Percentage Distribution of Home Language Used by Bilinguals and Multilinguals, by Period of Immigration, Population Five Years and Over, Canada, 1971

Period of immigration	Officially bilingual		Unofficially bilingual-English		Unofficially bilingual-French		Multilingual		
	English	French	English	Other	French	Other	English	French	Other
Canadian-born	34.9	65.1	66.1	33.9	54.0	46.0	37.9	11.4	50.7
Immigrated:									
Before 1946	62.0	38.1	60.0	40.0	31.8	68.2	37.8	7.2	55.0
1946-55	73.0	27.0	51.5	48.5	18.6	81.4	35.0	6.4	58.6
1956-60	70.0	30.0	43.1	56.9	14.6	85.4	28.5	5.5	66.0
1961-71	60.5	39.5	28.3	71.7	19.5	80.5	18.8	8.0	73.2

Source: 1971 Census of Canada, unpublished data.

For the unofficial bilinguals with English as official language, we see clearly the effects of the length of residence. We find the highest proportions using English at home among the native-born segment of this group. Although these people have not necessarily resided longer in Canada than some of the foreign-born groups, virtually all of the native-born unofficial bilinguals have been exposed to the English language for a large part, if not all, of their lives. They are likely to have been educated in Canadian schools, and to live in predominantly English-speaking areas of the country.

For the foreign-born, we find a gradual increase in the use of English as we look at increasing duration of residence. Of those who were living in the country for at least fifteen years

at the time of the census (who came to Canada before 1956), more than half were using English in the home. Among the most recent immigrants who were able to speak English as well as some other language, only 28.3% had gone as far as using English most often in the home. For the unofficial French bilinguals, we see the same association between length of residence, and propensity to use French in the home, as the corresponding pattern among the unofficial English bilinguals, although the French values are consistently below the corresponding English values.

Finally, for the multilinguals we observe the same association between length of residence in Canada, and the propensity to use English most often in the home, which we noted among the unofficial English bilinguals. Of those who immigrated to Canada before 1946, almost 38% use English as home language. This percentage is virtually identical to that found for the Canadian-born multilinguals. There is no corresponding relationship between length of residence and the propensity to speak French. Highest values among the foreign-born are found for the earliest and the most recent immigrants, but the percentages are all lower than that found for the native-born unofficial French bilinguals.

6.2.6. Distribution of Language Use by Level of Education

We have seen that the level of education is related to the ability to speak both English and French (Table 3.16, Chapter 3), but not at all to the acquisition of English by persons with other mother tongues (Table 4.10, Chapter 4). We now address ourselves to the question whether, given a person's ability to speak a second language, there is some relation between the attained level of education and a tendency to use English at home (or French, as in the case of the multilinguals). The relevant data are displayed in Table 6.10.

TABLE 6.10. Percentage Distribution of Home Language Used by Bilinguals and Multilinguals, by Level of Education, Population Five Years and Over, Canada, 1971

Level of education	Officially bilingual		Unofficially bilingual-English		Unofficially bilingual-French		Multilingual		
	English	French	English	Other	French	Other	English	French	Other
No schooling	38.5	61.5	31.6	68.4	20.1	79.9	10.7	5.2	84.1
Grades 1-8	32.3	67.7	46.9	53.1	23.0	77.0	18.4	8.2	73.4
Grades 9-11	33.9	66.1	65.8	34.2	45.2	54.8	33.9	9.3	56.8
Grade 12	53.5	46.5	67.8	31.2	51.5	48.5	37.9	8.2	53.9
Grade 13	75.9	24.1	56.8	43.2	41.3	58.7	41.8	5.1	53.0
University	50.2	49.8	60.2	39.8	43.7	56.3	45.1	8.0	46.9

Source: 1971 Census of Canada, unpublished data.

We see several distinct patterns here. Taking the official bilinguals first, we notice the percentages using English most often at home are largest in the three highest categories of education. We should discount the figure for those with 13 years of education. As we have pointed out earlier, these are almost all people who received their highest level of education in the province of Ontario, overwhelmingly in the English language. However, for the other categories it is evident that having at least a Grade 12 education has a significant effect on the use of English at home by official bilinguals.

We should note that there is also a somewhat higher than average use of English by bilinguals with no education. To a large degree, that is an age-effect. We noted that the use of English for young children is somewhat above average, and indeed, most of the children under five years of age are included in this group.

For the unofficial English bilinguals, we see that the use of English tends to increase monotonically up to 12 years of education, then decline slightly but remain above average for the group. We have shown that the amount of education has no clear relation to the probability of learning English. However, given that English was acquired, higher levels of education appear to increase the probability that English spreads to the home. Perhaps involvement in education at the higher levels requires that persons be well along the path of assimilation to English. It might also be that the level of English used in the more advanced educational institutions is somewhat more complex than that used in the elementary school. Such complexity could have a "displacement effect" on other languages spoken by the respondents. The somewhat lower values for the group with the highest level of education, that is, the university level, do not lend themselves to a simple explanation. It could be that those with the highest levels of education make special efforts to retain their mother tongue.

For the multilinguals, we see about the same pattern for the use of English as we did for the unofficial bilinguals: monotonic increases in the use of English with increasing levels of education. The critical threshold seems to be the level of eight years of schooling. The percentage using English increases sharply above that level. No such pattern can be observed for the use of French among multilinguals. Again, it would seem that higher levels of education imply a somewhat more intensive use of English, or the use of more elaborated codes, which appear to spill over the language used at home. It appears that no such effect is generated by the French language. For the unofficial French bilinguals, we see a similar pattern of increased use of French for those with more education. Above Grade 8, the relation is far from systematic, but all of the four highest levels of education show above average percentages using French as home languages.

To summarize the relation between language use and education generally, there are positive relationships between the level of education and the propensity to use one of the official languages as home language. For the bilingual groups involving an "other" language, the critical level appears to be at eight years of education. The increment in the percentage using an official language as home language appears to be about 20%. The same pattern holds for the use of English among multilinguals, although the difference is only about 15% in this case. No comparable relationship is observed for the use of French among multilinguals. For the official bilinguals, there appears to be a positive correlation between education and the propensity to use English as home language. Here, too, a "critical level" is found above which percentages are markedly higher than for the lower categories. For English use among official bilinguals, this critical level falls at Grade 11. Again, higher levels of education are associated with about 20% more usage of English in the home.

6.2.7. The Joint Effects of Mother Tongue, Age and Education Upon Home Language of Official Bilinguals

We have shown that official bilinguals of French mother tongue are more likely to use English as home language than official bilinguals of English mother tongue are to use French in the home. We have seen that the use of English is higher than average for official bilinguals under age 25, and lower than average for official bilinguals aged 25 and over. We have also seen that higher levels of education generally are associated with higher prevalence of English home language. It is, of course, the case that these independent variables are correlated with each other. Generally, there is an inverse relationship between age and average level of education attained (excluding, of course, those under age 15, most of whom have not yet completed their education). There is also a somewhat higher level of education for persons of English mother tongue than for those of French mother tongue. In Table 6.11 we provide the percentage using English as home language after controlling for the effects of all three independent variables simultaneously.

We can see that the three patterns which we had identified in the bivariate analyses need to be modified somewhat in light of the evidence given in Table 6.11. Note that Table 6.11 gives the percentage using English. For the comparison between English and French bilinguals, one first subtracts the values in part (a) from 100, then compares the difference with the corresponding value in part (b) of the table.

We have stated that French mother tongue bilinguals were more likely to use the other official language in the home than English mother tongue bilinguals. Cell by cell comparisons between parts (a) and (b) of the table indicate that this is indeed the case, except for the following: those aged 5-9 and those aged 20-24 with no schooling; those between ages 15 and 39 and those aged 65 and over with an education between Grades 1 and 8. There is something peculiar about these exceptions. Leaving aside the 5-9-year-olds with no schooling (most of whom were simply too young to have attended any school at the time of the census), all the persons in this "exceptional" category can be considered to have completed their education. All of them have, obviously, attained very low levels of education. In Chapter 3, noting the relation between education and second language acquisition, we demonstrated that having education past Grade 8 is positively correlated with the probability of becoming bilingual. We inferred that the prime cause of this acquisition is, for the higher educational levels, "school learning". We also stated that for lower levels of education, the prime mechanism for second language acquisition is "street learning". Almost certainly, the great majority of persons in the groups which form our "exceptions" has become officially bilingual through "street learning". Our exceptions seem to tell us, then, that "street learning" is more likely to be associated with a shift from English mother tongue to French home language than with a shift from French mother tongue to English home language. Although these statements are only inferences, they lead us to suggest that there is some connection between the mode of language learning and subsequent linguistic behaviour. Moreover, since there is a very high correlation between education and social class, we can infer that there may well be a connecting chain between the following characteristics: lower socio-economic status - low education - street learning of second official language - shift to second language as home language. Quite clearly, the census data do not enable us to check these linkages empirically. More specific data are obviously required to pursue this line of inquiry further.

TABLE 6.11. Percentage of Officially Bilinguals Using English as Home Language, by Age, Level of Education and Mother Tongue, Population Five Years and Over, Canada, 1971

Age group	Level of schooling					
	No schooling	Grades 1-8	Grades 9-11	Grade 12	Grade 13	University
<u>Part (a) - English mother tongue</u>						
5-9	68.6	82.1	xxx	xxx	xxx	xxx
10-14	xxx	89.3	94.0	90.9	xxx	xxx
15-19	56.7	79.5	94.5	96.3	99.0	98.8
20-24	52.8	72.8	85.8	91.3	98.4	98.0
25-29	64.0	74.7	83.9	89.6	97.7	96.6
30-39	70.7	75.6	87.8	87.5	97.6	95.9
40-64	76.4	81.4	89.8	90.3	97.4	96.6
65 and over	75.6	79.2	86.8	88.3	96.5	94.9
Total	71.7	82.4	90.1	91.8	98.0	97.0
<u>Part (b) - French mother tongue</u>						
5-9	27.7	24.0	xxx	xxx	xxx	xxx
10-14	xxx	20.1	12.0	12.9	xxx	xxx
15-19	48.0	19.3	13.0	8.4	21.0	10.5
20-24	40.3	21.3	14.8	13.8	34.1	10.0
25-29	40.6	21.6	16.3	18.2	39.2	10.7
30-39	39.2	21.3	19.2	18.0	35.1	11.2
40-64	30.4	19.1	18.9	16.7	38.3	12.3
65 and over	27.3	19.0	17.7	15.9	37.8	13.1
Total	29.7	20.2	16.7	14.9	35.0	11.2

"xxx" indicates no cases are logically possible for this cell.

Source: 1971 Census of Canada, unpublished data.

The second statement we made was that the use of English is higher than average for official bilinguals under age 25, and lower than average for official bilinguals from age 25 up. Controlling jointly for mother tongue and education indicates that that conclusion was incorrect. To follow our argument, the reader only needs to compare the age-specific percentages using English with the marginal values (controlling for mother tongue and education) which are given in the bottom line of parts (a) and (b) in Table 6.11. Taking the easiest part first, we can see that the relationship between age and English home language does not at all hold for those of French mother tongue. It is generally the case that for French mother tongue persons 25 years or over, English home language is more prevalent than it is for French mother tongue persons under 15 years of age, holding education constant. The original pattern does hold partly for official bilinguals of English mother tongue. Generally, English mother tongue bilinguals in the younger ages have higher proportions with English home language than those in the older ages, holding education constant. The "turning point" (that point above which values are below the group average) increases with increasing education. It is age 14 for those with 1-8 years of education, age 19 for those with 9-12 years completed, and age 24 for those with Grade 13 or university. There is no "turning point" in the low ages for those with no schooling. This suggests that these turning points are associated with the age at which individuals leave school or, perhaps, leave their family of origin. Clearly, individuals of English mother tongue living with their parents are very likely to use English most often at home. If they are still attending school full-time, it is also very likely that they are doing so in English. After such individuals leave the environment of their youth, they become more exposed to the risk of having to use the other language, through work, the marriage market, and so on.

Given these observations, it should not be difficult to provide a new order where we just created chaos. Consider for a moment the implications of the point we just made with regards to the French mother tongue group. We stated that use of English for this group increases with age (and thus is contrary to the marginal relationship between age and English home language). We can rephrase this to state that the younger age groups with French mother tongue have higher levels of mother tongue maintenance. And that is exactly what we found to hold, with some modification and some exception, for the English mother tongue group as well. Thus, we find that rather than English home language prevailing increasingly with increasing age, for official bilinguals, mother tongue maintenance varies negatively with age. This new pattern holds best for the categories with the highest educational level, i.e., from Grades 9-11 up. For the lower levels of educational attainment, the exceptions to the pattern become more numerous. Without wishing to push this too far, it is tempting, once again, to introduce the "street learning" mechanism as a possible factor.

Finally, we made the statement that higher levels of education generally were associated with higher prevalence of English home language. Again, we have to modify this statement. For those of English mother tongue, we indeed obtain a very good fit between the marginal pattern and the one we find after controlling for age. For the French mother tongue population, we generally obtain a good fit between the more specific patterns in Table 6.11 and the obverse marginal pattern. We should, of course, exclude those with Grade 13 from this analysis. As we pointed out in

earlier chapters, those who have attained Grade 13 as their highest level of education have been almost exclusively educated in Ontario, a province with such a strong concentration of English speakers that chances for shift to English home language are extremely high. If, as we did with the analysis of the relation between home language and age, we reverse the relationship for the French mother tongue group and refer to mother tongue maintenance, we get a very good fit with education. Controlling for age and mother tongue, we find that increasing education is associated with increased mother tongue maintenance for official bilinguals. Note, moreover, that this pattern holds for those of both French and English mother tongue. For the younger age groups, say through age 24, this relationship could, once again, be explained by considering the age at which individuals leave the home environment and the educational system. Controlling for age, at least in the lower age groups, we could argue that higher education is associated with higher probabilities of an individual still living with his parents and using his mother tongue as home language. But note that the pattern also holds almost equally well for those who are not in school any longer, and who are generally not living with their parents anymore. Perhaps the differences between "school learning" and "street learning" are once more responsible for the observed pattern.

6.3. Conclusions

We have shown that the choice of home language by bilingual and multilingual individuals can be explained by a number of relatively simple factors. Analyses have shown that under most circumstances, English has a very high attraction, both for persons of English mother tongue and for persons with mother tongues other than English. The same argument cannot be made for French. We have shown that language usage (indicated by home language) follows the same pattern by province which we already found for the prevalence of bilingualism and of both ancestral and current language shift.

The implications of the joint operation of these spatial patterns for the survival of regional linguistic minorities are extremely serious. Take, for example, the French mother tongue group in British Columbia. In Table 3.20 we saw that 96% of this group is officially bilingual. It is clear from the current analysis that a large percentage of these bilinguals uses English most often in the home and, as a consequence, will raise their children in English, thus contributing to the decline of the French mother tongue minority in British Columbia. We have found that for unofficial bilinguals, the acquisition of English tends to be associated with high probabilities that English is adopted as home language, facilitating the cultural assimilation of immigrants with mother tongues other than English and, even more strongly, their children. We have shown that the same cannot be said about French. The percentage using French as home language, among those who acquired it as a second language, is generally quite small.

We have shown that the use of English in the home among foreign-born unofficial English bilinguals is strongly connected to their length of residence in Canada. The same relation holds for the use of French by unofficial French bilinguals, but at much lower levels.

Finally, we have refined our analyses of the determinants of language choice among official bilinguals by jointly considering the relationships between the prevalence of English as home language and mother tongue, age and education. Our findings led us to postulate differential effects of two modes of second language acquisition, which we had identified in Chapter 3 as "school learning" versus "street learning". We suggested that "school learning" is less likely to lead to mother tongue shift than is "street learning".

At the risk of becoming repetitive, we wish to reiterate our comment that the differential effects of these two modes of learning may have profound consequences for further research, as well as for social and linguistic policy, a point which we take up again in Chapter 8.

CHAPTER 7

PATTERNS OF INTERMARRIAGE

7.1. Introduction

With the 1971 Census, we can conduct the analysis of intermarriage along two lines. The first is to consider the ethnic origins of husbands and wives, and to examine the degree to which members of a given ethnic group are married to spouses belonging to the same ethnic group. The major disadvantage of this approach is that it uses a variable which, we have demonstrated, is quite imperfect as a measure of the linguistic characteristics of the respondents. On the other hand, this approach is the only one which provides some continuity with earlier analyses of intermarriage in Canada, based on census data. For reasons which remain a mystery to us, all existing analyses of intermarriage in Canada based on the census deal with ethnic intermarriage (cf. Report of the RCBB, Volume IV, 1969).

An alternative approach is to consider intermarriage based on the mother tongues of husband and wife. As we argued earlier, the mother tongue criterion is a much more valid measure of current linguistic affiliation. The major disadvantage of this approach is that it provides no continuity with earlier findings.

Before we begin with the analyses, several methodological points need to be made. Firstly, we should point out that our analyses are restricted to cross-sectional studies based on census data. Ideally, studies of intermarriage should be based on "flow" data in addition to, or instead of, "stock" data provided by the census. (See de Vries, 1977:20-25, for an elaboration on the terms "stock" and "flow" data.) That is, we should use the vital statistics on marriage as a base for the study of current intermarriage. Unfortunately, Canadian vital statistics do not contain the necessary information to permit this kind of analysis. We are thus restricted to making dynamic inferences from the static data in the census with all the problems inherent in such an approach.

A second point which should be made is that it is necessary to restrict ourselves to the analysis of intermarriage among husband-wife families; that is, census families in which both spouses are present. We are thus faced with a "residual group", with unknown biases contained in its composition. For example, suppose that linguistically mixed marriages are somewhat less stable than linguistically homogeneous marriages. Since we are considering only a population which we could call "married, spouse present", a higher divorce rate among linguistically mixed couples would result in an upward bias for linguistically homogeneous marriages in the study population. Similarly, the effects of mortality differences among language groups could have biasing effects on the composition of the surviving population. Finally, the effects of differing rates of nuptiality, and the differences in the age composition of linguistic groups, may have significant effects on the analysis. Unfortunately, because most of these factors are of unknown magnitude, and we do not have access to the necessary data to estimate their effects, we are stuck with the data on husband-wife families for our analysis. Interpretations of the findings should be handled cautiously, for the reasons we have already mentioned.

Finally, a point about the mode of analysis. When one considers the analytical structure of the intermarriage problem¹ it should be obvious that this structure is analogous to that of social mobility. In both cases we are dealing with the relationships between two structures. It should, therefore, be possible to handle the analysis of intermarriage in the same fashion. The advantage of such an approach is that we can borrow a powerful methodology which has proven its utility during the past 30 years or so. As an example of the first analysis of intermarriage in Canada using this approach, see Norris (1978). Despite the advantages of the social mobility approach for the present analysis, we will restrict ourselves to percentage tables with controls inserted to specify the exact relationships. In the first place, that approach is simple and easy to understand. Secondly, the social mobility approach requires a fair amount of data manipulation for which we do not have the opportunity at this time.

7.2. Ethnic Intermarriage

7.2.1. Marginal Distribution

Let us begin by considering the cross-tabulation of the ethnic origins of husbands and wives in husband-wife families. It is obvious from Tables 7.1 and 7.2 that there is a strong tendency for members of an ethnic category to marry spouses who have the same ethnic origin. This observation pertains equally to males and to females. We find the customary rank ordering: the Scandinavians have the smallest proportions marrying within their own ethnic category, followed in increasing order of endogamy by those of Polish, German, Dutch, Ukrainian, Native Indian, Italian, British and French ethnic origin. Male and female orderings are approximately the same. The most pronounced deviation is in the Italian group where females have a much higher degree of ethnic endogamy than the males.

The degree of endogamy for those of British ethnic origin is so high because the British ethnic origin category is by far the largest ethnic category in the country. Even if persons of British ethnic origin selected their spouses at random (that is, regardless of ethnic origin), about 45% of their marriages would be with partners of British ethnic origin. Thus, the actual proportion of endogamous marriages is only about twice the proportion we would expect on the basis of a random selection model. In comparison, the French figure is a little over three times the expected value based on random selection, while the Italian values are about 25 times the expected value.

Another word of caution, this time about the "other" ethnic category. The figures of 67.9% and 74.9% are somewhat misleading. We have assumed here that all marriages where husband and wife belonged to "other" ethnic categories were endogamous. That is clearly not a justifiable assumption. Many of these marriages are of course ethnically mixed. Thus, the reported figures are upwardly biased estimates of endogamy along the "other" ethnic categories. On the basis of the available data, it is impossible to state the extent of this bias.

In the ethnically mixed marriages we see the great extent to which members of most ethnic categories have intermarried with those of British ethnic origin. Again, we find the usual ranking: persons of Scandinavian ethnic origin have the highest degree of ethnic intermarriage with the British ethnic

See footnote(s) on page 169.

TABLE 7.1. Percentage Distribution of Ethnic Origin of Wife, by Ethnic Origin of Husband, All Husband-wife Families, Canada, 1971

Ethnic origin of husband	Ethnic origin of wife			
	British	French	Same as husband	Other
British	80.9	6.3	...	12.8
French	10.0	86.2	...	3.8
German	33.0	5.4	49.2	12.4
Italian	11.3	6.2	76.5	6.0
Dutch	31.2	3.7	52.5	12.6
Polish	23.8	5.2	43.3	27.8
Scandinavian	47.2	5.0	26.9	20.9
Ukrainian	21.5	4.3	54.0	20.2
Indian and Inuit	10.8	6.4	73.9	9.0
Other	14.6	4.1	67.9	13.5

"..." indicates not applicable.

Source: 1971 Census of Canada, unpublished data.

TABLE 7.2. Percentage Distribution of Ethnic Origin of Husband, by Ethnic Origin of Wife, All Husband-wife Families, Canada, 1971

Ethnic origin of wife	Ethnic origin of husband			
	British	French	Same as wife	Other
British	79.5	5.8	...	14.7
French	10.4	84.4	...	5.2
German	29.7	4.6	51.1	14.6
Italian	8.1	3.5	83.5	4.9
Dutch	27.7	3.3	56.0	13.0
Polish	22.5	4.3	45.5	27.7
Scandinavian	44.7	4.6	28.5	22.2
Ukrainian	20.9	3.4	54.5	21.2
Indian and Inuit	14.8	7.3	65.9	12.0
Other	12.5	2.4	74.9	10.2

"..." indicates not applicable.

Source: 1971 Census of Canada, unpublished data.

category, followed in descending order by members of the German, Dutch, Polish, Ukrainian, "other", Italian, Native Indian and French ethnic categories. Again, females of Italian ethnic origin are a little bit of an exception with figures below those of the French and Native Indian females.

As in all our preceding analyses, we note the low degree of attraction of the French ethnic category. For the male members of other ethnic categories, between 3.7% and 6.4% had spouses of French origin, while the corresponding figures for females were 2.4% and 7.3%.

Finally, we should note the last column in Tables 7.1 and 7.2. There is considerable variation in the degree to which members of particular ethnic categories marry members of other ethnic categories, excluding the British and French. The values are especially high for those of Polish, Scandinavian and Ukrainian ethnic origin. This reinforces the point we made earlier about the contamination of ethnic origin figures. For husband-wife families of Scandinavian, Ukrainian and Polish ethnic origin, very large proportions of the children have mixed ethnic parentage. To define one's ethnic origin according to paternal ancestry thus forces male line conformity upon the descendants of such families, masking their mixed origins.

As we noted before, there are earlier analyses of ethnic intermarriage in Canada. Comparable data are available from the Censuses of 1961 and 1951. Moreover, data for males have been produced from the birth registrations in 1941. Table 7.3 permits us to compare ethnic origin endogamy ratios from 1941 to 1971.

TABLE 7.3. Ratios of Endogamy by Ethnic Origin and Sex, Canada, 1941, 1951, 1961 and 1971

Ethnic origin	1941 ¹	1951		1961		1971	
	Male	Male	Female	Male	Female	Male	Female
British	..	85.1	85.6	81.3	81.5	80.9	79.5
French	93	89.7	87.7	88.3	85.1	86.9	84.4
German	58	52.0	52.3	52.0	51.0	49.2	51.1
Italian	55	76.7	82.3	76.5	83.5
Dutch	53	42.7	42.9	55.0	55.6	52.5	56.0
Polish	51	55.7	56.7	49.0	53.1	43.2	45.5
Scandinavian	..	36.5	39.4	31.2	32.5	26.9	28.5
Ukrainian	80	74.8	70.9	61.8	60.6	54.0	54.5

".." Data not given in tables from RCBB source.

¹Data for females not available from the 1941 source.

Source: Report of the Royal Commission on Bilingualism and Biculturalism, Volume IV, Appendix A: 279-300; and 1971 Census of Canada, unpublished data.

Several observations can be made about this table. First of all, we note the relatively high degree of persistence in the rank ordering of ethnic endogamy. For the comparison between 1961 and 1971, the male endogamy ratios have a value for Kendall's tau of 0.93 and the female endogamy ratios have a value of 0.88. For the comparison between 1951 and 1961, values are somewhat lower: 0.71 for males and 0.81 for females. The comparison for the male rankings between 1941 and 1951 again shows lower values: tau has a value of 0.60 for the six ethnic groups for which data were available in 1941 and 1951.

Across the four observations, spanning 30 years, we find consistently low values of ethnic endogamy for the Scandinavians, high values for the Italians, while the remaining categories fall somewhere in the middle. The Dutch tend to have somewhat higher values for endogamy than we would expect on the basis of our earlier analyses, while the Poles appear to have somewhat lower values than expected.

The point we made about the relative isolation of the French, with regards to ethnic intermarriage, applies across the time period under review. The French invariably have the highest degree of endogamy, although the values appear to have decreased slightly during the 30-year interval. It is likely that this decline is correlated with the influx of immigrants to the province of Quebec after the end of the Second World War.

When we consider the trends over time for the other ethnic categories, we see the clear reflection of their immigration histories. The Italians experienced a major wave of immigration from 1951 on (see Table A-1, Royal Commission on Bilingualism and Biculturalism, Vol. IV, 1969). Thus, we see an increase in ethnic endogamy for the Italians between 1941, when a relatively high percentage of the population of Italian ethnic origin was native-born, and 1961, when a much higher percentage was foreign-born.

For the Ukrainians, we find increasing percentages native-born in more recent years, coupled with systematically declining values for ethnic endogamy. The same point can be made about the Scandinavian ethnic group, with even lower, and still declining values.

For the Dutch category there were increases in endogamy between 1951 and 1961. We note that the years in which the largest number of immigrants of Dutch ethnic origin arrived in Canada were 1951, 1952 and 1953. The Poles had similar increases in endogamy in the period 1941-51. For the Poles, the years of heaviest immigration were 1948, 1949 and 1951.

This rather simple explanation for the temporal changes in ethnic endogamy does not hold for the Germans. For this category, ethnic endogamy declined from 1941-51, then remained virtually unchanged through 1971. Yet, the heaviest years of immigration for the Germans were 1951, 1952, 1953, 1954, 1956 and 1957. One explanation for the decline in German ethnic endogamy between 1941 and 1951 may be the misstatement of German ethnic origin in wartime censuses (see Ryder, 1955, for details). It may be that the understatement of German ethnic origin in 1941 was more severe in ethnically mixed marriages than in ethnically endogamous marriages involving Germans. Such a differential understatement would result in an inflated measure of ethnic endogamy.

The last category to be considered is the British one, for which we find gradually declining ratios of endogamy from 1951 to 1971. It is likely that this trend reflects the increasing proportions of native-born among the members of other ethnic origins. In other words, it probably reflects the increasing chances that an unmarried person of British ethnic origin meets unmarried persons of the opposite sex belonging to another ethnic category. In demographic terms, we could state that the population exposed to ethnic exogamy with a partner of British ethnic origin has increased. In addition, it may reflect the increasing assimilation of persons of other ethnic origins into Canadian society.

7.2.2. Provincial Patterns of Ethnic Inter-marriage

We begin our elaboration of the pattern of ethnic intermarriage by inspecting the data at the provincial level. As can be seen from their headings, Tables 7.4 and 7.5 deal only with the proportions of marriages which are endogamous, by ethnic origin and province.

Several patterns become manifest in these tables. Looking across provinces, we see that generally the endogamy ratios are lowest in the Atlantic and the Western provinces. This is especially so for the French, which reveals its familiar pattern of weakening cultural maintenance with increasing distance from Quebec. As in earlier analyses, we find that only in Quebec and New Brunswick do the French show convincing evidence of continued viability. For most of the other provinces, half or fewer of the marriages of persons of French ethnic origin are with members of the same ethnic category.

For the British ethnic group, we find higher than average ratios of exogamy in Quebec and all provinces west of Ontario. In the western provinces, we are dealing with relatively high proportions of "early immigrant" groups such as the Scandinavians and the Ukrainians. Exogamy for the British group in these provinces thus reflects the ethnic heterogeneity of these provinces. For the province of Quebec, the British exogamy primarily involves partners of French ethnic origin. Part of this exogamous stream involves persons of British ethnic origin who have assimilated into the French cultural and linguistic community of Quebec; in fact, in many cases this assimilation was "ancestral" and of a depth of several generations. We need only mention such well-known Quebec politicians as Robert Burns, the late Daniel Johnson, Louis O'Neill, and Claude Ryan to illustrate our point.

Over all, we can make the observation that the degree of endogamy for an ethnic category is highest in those provinces in which members are most concentrated. We need mention only the British figures for the Maritime provinces, the French figures for Quebec and New Brunswick, the German figures for Manitoba and the Ukrainian figures for Manitoba and Saskatchewan. Obviously, a more detailed analysis should be based on comparisons between the observed values reported in Tables 7.4 and 7.5, and expected values based on a model of random selection. This analysis is not carried out here.

We should point to the remarkably strong similarity between the corresponding values in Tables 7.4 and 7.5. Generally, values for endogamy show only small differences between the male and female members of ethnic groups. The major exception is the Italian category, for which we already noted that females have markedly higher values for the endogamy ratio than males. This difference holds up for all provinces. Since the denominators for the male and female ratios are identical, higher female endogamy values mean lower numbers of married women of Italian ethnic origin. This may be caused in

TABLE 7.4. Percentage of Husbands Married to a Wife of the Same Ethnic Origin, by Ethnic Origin and Province, Canada, 1971

Province	Ethnic origin							
	British	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
Newfoundland	96.9	35.3	20.0	15.0	25.0	----	6.7	----
Prince Edward Island	92.1	62.8	14.6	----	34.5	----	----	----
Nova Scotia	87.0	50.0	37.3	30.5	26.9	19.9	16.3	19.0
New Brunswick	86.9	85.7	17.8	20.3	18.8	17.2	21.5	6.9
Quebec	65.4	95.0	39.6	76.1	38.3	56.9	22.3	53.2
Ontario	84.5	58.5	47.7	80.7	56.4	51.8	25.0	49.3
Manitoba	74.5	57.3	61.9	67.8	61.8	39.3	28.7	62.6
Saskatchewan	68.6	45.9	56.3	42.5	43.3	31.8	30.1	61.6
Alberta	69.3	38.2	48.9	59.5	53.7	31.4	26.7	57.4
British Columbia	77.6	27.3	46.9	59.0	49.5	25.1	27.4	34.6
Territories	64.8	35.3	35.2	----	23.1	23.8	20.9	24.5

"----" indicates less than 11 cases.

Source: 1971 Census of Canada, Catalogue 93-720, Bulletin 2.2-8, Table 63.

TABLE 7.5. Percentage of Wives Married to a Husband of the Same Ethnic Origin, by Ethnic Origin and Province, Canada, 1971

Province	Ethnic origin							
	British	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
Newfoundland	96.3	39.3	24.2	----	29.6	----	10.8	----
Prince Edward Island	91.4	61.9	19.4	----	45.2	----	----	----
Nova Scotia	85.6	49.1	41.2	38.1	29.3	21.7	20.3	19.4
New Brunswick	87.3	83.1	20.7	30.2	20.6	18.5	24.0	6.3
Quebec	67.0	93.3	43.3	84.9	43.5	62.9	25.3	59.2
Ontario	82.6	56.7	49.4	86.8	60.6	55.0	26.6	51.0
Manitoba	73.5	54.8	65.3	74.4	64.8	41.6	28.8	61.9
Saskatchewan	66.2	43.4	58.5	47.5	43.5	33.1	31.2	62.9
Alberta	67.5	36.2	50.2	67.6	56.3	33.3	28.1	57.4
British Columbia	76.3	26.8	48.5	64.9	52.8	24.3	29.5	32.9
Territories	67.8	37.3	34.9	----	29.0	21.7	24.4	26.0

"----" indicates less than 11 cases.

Source: 1971 Census of Canada, Catalogue 93-720, Bulletin 2.2-8, Table 63.

part by smaller numbers of females among the population of Italian ethnic origin. It may be caused by the operation of stricter norms regarding mate selection for Italian women than for Italian men. See Boissevain (1970:43) for some supporting evidence regarding this last point.

TABLE 7.6. Proportion of Husbands Married to Wives of British Ethnic Origin, by Ethnic Origin of Husband and Province, Canada, 1971

Province	Ethnic origin of husband						
	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian
Newfoundland	61.3	68.7	70.0	62.5	----	81.7	----
Prince Edward Island	36.0	79.2	----	58.2	----	----	----
Nova Scotia	43.1	49.8	51.5	55.5	63.8	64.7	55.0
New Brunswick	13.1	64.0	40.5	65.2	48.3	61.6	72.4
Quebec	3.6	18.3	4.0	32.3	11.9	40.8	14.6
Ontario	32.2	38.9	11.4	31.7	24.3	51.1	26.9
Manitoba	23.5	20.7	15.1	19.4	18.2	44.0	15.2
Saskatchewan	27.1	24.5	26.9	29.1	19.5	42.1	14.4
Alberta	33.6	30.6	18.7	25.1	23.5	45.2	18.6
British Columbia	46.3	34.2	25.1	32.0	39.4	49.2	35.6
Territories	33.1	35.9	----	38.5	42.9	44.0	32.1

"----" indicates less than 11 cases.

Source: 1971 Census of Canada, Catalogue 93-720, Bulletin 2.2-8, Table 63.

The other part of the provincial analysis of ethnic intermarriage deals with the degree to which members of other ethnic groups marry partners belonging to the British ethnic group. Quite clearly, the patterns in Table 7.6 portray generally the complement to what we found in Tables 7.4 and 7.5. Intermarriage with wives of British origin is highest in Ontario, the Atlantic provinces and British Columbia. Generally, intermarriage with persons of British ethnic origin is somewhat lower in Manitoba and Saskatchewan than in the provinces east and west of them. For these two provinces, we find higher than usual figures for intermarriage between members of the "other" ethnic groups, such as Polish and Ukrainian. This reflects the ethnic heterogeneity of the population, especially in Manitoba, which we pointed out earlier.

7.2.3 Ethnic Intermarriage by Nativity of Family Head

It is likely that these differences in intermarriage by ethnic origin are at least in part due to differences in the percentages born in Canada between the various ethnic categories. It is likely that those who were born in Canada, and presumably married in Canada, had more contact with people of other ethnic origins than those who were born outside Canada. Thus, we would expect higher degrees of endogamy among the foreign-born than among the Canadian-born.

TABLE 7.7. Percentage of Husbands Married to Wives of the Same Ethnic Origin, by Ethnic Origin and Place of Birth of Husband, Canada, 1971

Ethnic origin	Canadian-born	Foreign-born
British	79.7	86.3
French	86.5	74.7
German	38.3	68.3
Italian	30.1	88.0
Dutch	26.9	68.9
Polish	24.1	62.8
Scandinavian	13.6	36.6
Ukrainian	45.0	76.4
Indian and Inuit	74.6	42.9
Other	50.6	72.2

Source: 1971 Census of Canada, unpublished data.

This inference is generally supported by the data reported in Table 7.7. Proportions endogamous are higher for the foreign-born than for the Canadian-born of all ethnic origins, except the French and the Native Indians. The range between the various categories narrows for the foreign-born while it widens for the Canadian-born. This statement is somewhat deceptive, however. For the foreign-born, the range also narrows considerably if we omit the British, French and Native Indian categories.

We have previously noted the differences in behaviour between Canadian-born and foreign-born persons of French ethnic origins. The foreign-born in this category appear to be somewhat less strongly connected to a French culture area than the Canadian-born French.

We have also noted the somewhat erratic language behaviour of foreign-born Native Indians. One possible cause of this is the fact that most of these persons are, in fact, Indians from the United States who, apparently, have lower degrees of ethnic endogamy than Indians born in Canada.

With the exception of the British, French and Indians, then, the Canadian-born appear to intermarry quite frequently, while the foreign-born, with the exception of the Scandinavians and the Native Indians, are highly endogamous. We are aware that some foreign-born are married before they arrive and that such couples are more likely to be endogamous than those born in Canada.

7.2.4. Patterns of Ethnic Intermarriage by Age of Husband

Given the different tendencies for native-born and foreign-born individuals, we should expect endogamy to increase with increasing age for most ethnic origins. Generally, the Canadian-born will be younger than the foreign-born, especially when we control for ethnic origin. Age-specific data are presented in Table 7.8.

TABLE 7.8. Percentage of Husbands Married to Wives of the Same Ethnic Origin, by Ethnic Origin and Age of Husband, Canada, 1971

Age of husband	Ethnic origin of husband								
	British	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian	Indian and Inuit
15-19	75.1	65.0	26.0	44.1	20.8	11.1	18.5	31.0	72.7
20-24	73.8	78.4	29.3	56.4	25.4	15.0	9.8	23.9	62.9
25-29	75.4	84.0	34.9	64.9	34.8	21.3	12.9	30.7	66.8
30-34	75.8	84.8	40.6	74.3	43.1	24.4	12.6	34.8	72.5
35-39	77.2	85.7	48.0	78.6	55.5	28.0	16.3	37.8	74.0
40-44	79.1	86.5	54.1	81.4	63.2	37.1	19.1	44.6	76.1
45-49	81.4	86.8	53.8	80.5	62.7	48.1	22.1	55.5	77.3
50-54	83.7	87.1	52.9	76.9	58.1	49.2	21.9	59.3	77.1
55 and over	87.4	90.0	60.3	81.7	58.0	61.6	31.8	79.1	81.6
All ages	80.9	86.2	49.2	76.5	52.5	43.2	26.9	54.0	73.9

Source: 1971 Census of Canada, unpublished data.

The data in Table 7.8 generally suggest increasing degrees of endogamy with increasing age, with minor exceptions. The most obvious inference would be that ethnic endogamy has declined in more recent times. It is fairly safe to assume that marriages in the youngest age groups involved more recently married couples. But note our observation that these data reflect only the "residual" of the ever-married population, of which the widowed as well as the divorced segments have disappeared. Thus, part of the increase in endogamy with increasing age may reflect higher divorce rates among ethnically mixed marriages. It is safe to assume that ethnically mixed marriages also have higher probabilities of being linguistically and religiously mixed.

Whatever the explanations may be, it is very clear that for all ethnic groups, the age-specific patterns fall into two groups: a younger group, in which all endogamy ratios are below the average for that ethnic category, and an older group in which all endogamy ratios are above the average for the ethnic category. The cutting point falls at age 44 for the British, Polish and Ukrainian categories, at age 39 for the German and French categories, at age 34 for the Dutch, Italian and Indian categories, and at age 54 for the Scandinavians. For all ethnic categories we observe an almost perfectly monotonic increase in ethnic endogamy with age. There are some minor deviations from the regular pattern, most of them of a nature which produces a higher than expected endogamy for the youngest age group. Deviations from the common pattern may be observed for those of British, Scandinavian, Ukrainian and Native Indian ethnic origin. It should be remembered that the married population aged 15-19 represents only the earliest marriages for that age group. There is good reason to believe that early marriages differ from marriages at later ages. The data in Table 7.8 lead one to believe that, at least for men of British, Scandinavian or Ukrainian ethnic origins, early marriages are more likely to be endogamous than marriages at higher ages. It is interesting to note that the opposite is the case for the French.

Within each of the age groups, we tend to find the same rank ordering of ethnic categories by the degree of prevalence of ethnic endogamy. With the exception of the very youngest cohort, the French have the highest level of ethnic endogamy followed, in most cohorts, by the British, Italians and Native Indians. With the exception of the youngest age group for the Italians, all these classes have endogamy percentages of over 50. The next categories, following the descending order of ethnic endogamy, are the Ukrainians, Dutch and Germans. The order of these three within age groups varies. The Ukrainians have a comparatively low prevalence of endogamy between ages 20 and 44, but a comparatively high prevalence for the highest two age categories. For these three categories, a little under half of the age-specific endogamy percentages is over 50. Finally, in the ordering, we note that for the Poles, only one age-specific endogamy percentage is over 50.

The observed patterns appear to indicate a gradual diminution of ethnic segregation in Canadian society. In other words, it is likely that Canadian society has not only become more heterogeneous with regards to ethnicity as measured in the censuses of population, but also that members of "other" ethnic origins (neither British nor French origin) have become more and more assimilated into Canadian society, and have become acceptable mates for persons of British ethnic origin. The order in which these others became "accepted" is, with one exception, the order of ethnic endogamy, starting with the lowest one: first the Scandinavians, and then, in no particular order, the Germans, Dutch and Ukrainians, followed by the Native Indians and the Italians.

The Poles are an exception. Although they have low levels of ethnic endogamy, these values are not offset by comparably high levels of intermarriage with wives of British ethnic origin. Table 7.1 gives the reason for this. The Poles have an exceptionally high proportion married to wives of "other" ethnic origins (that is, neither British nor French nor Polish). They have intermarried rather heavily with some of their geographical neighbours in Europe, particularly with the Ukrainians.

Before we close off our analysis of ethnic intermarriage, we should reflect on the implications of the increasing ethnic heterogeneity among the more recent marriages. It should be obvious that children from such exogamous marriages have, in most cases, possible allegiances to two ethnic categories. In all likelihood this will result in rather low degrees of solidarity with either. The earlier findings, regarding the decline of the non-official languages as home languages, reinforce this inference. As the "ethnic" grandparents of these ethnically hybrid children die, the contact with the ethnic culture is likely to diminish, in particular for those groups whose numbers are not replenished through a steady stream of immigrants. If these speculations are indeed correct, there are two consequences worth considering. Firstly, we may find that Canadian society will inevitably become the "melting pot" which popular myth attributes to the United States but not Canada. There are, in fact, several studies which suggest that Canada is, perhaps, already as much of a "melting pot" as the United States. See, for example, Falsetto, 1975, and Veltman, 1976, for data and arguments on this.

The second consequence is much more mundane. The evidence in Table 7.8 lends further support to our arguments in preceding chapters that the ethnic origin question in the Canadian census has become irrelevant as a measure of cultural pluralism in Canadian society. To make an even more drastic statement about origin statistics than Ryder's conclusion, the most reliable classification of ethnic origins would probably consist of four categories: Native (perhaps split into Indian and

Inuit), British, French and "Other". Even this classification leaves a fairly high degree of "noise" in the data on ethnicity.

7.3. Linguistic Inter-marriage

7.3.1. Marginal Distribution

In general, we should expect higher levels of linguistic endogamy than we did for ethnic endogamy. As we have pointed out, ethnic origin is a characteristic one inherits from one's paternal ancestor. Our analyses of ethnic origin have also shown that for many ethnic categories there is, at best, a tenuous connection between one's ethnic origin, as measured in the Canadian census, and one's subculture affinities and life-style. Although, admittedly, it is the case that individuals can also shift from their mother tongue to some other language (and mother tongue is, therefore, also an imprecise indicator of culture affinity and life-style), one's mother tongue usually has a clear connection with the linguistic involvement of the childhood years. There are, then, two reasons why mate selection processes can be expected to have higher proportions by mother tongue than by ethnic origin. Firstly, it is generally assumed that spouses tend to be similar on a large number of socio-economic and cultural characteristics. Thus, similar childhood culture would increase the chances of current cultural similarity and the probability of an endogamous marriage. Secondly, it is safe to assume that marriage partners need to have at least one language in common. Two people with identical mother tongues (especially when measured by means of the census question) have no need for another language in which to communicate. In contrast, when two people have different mother tongues, at least one of them will be required to know a second language in order for the two to communicate.

TABLE 7.9. Percentage Distribution of the Mother Tongue of Wives, by Mother Tongue of Husbands, Husband-wife Families, Canada, 1971

Mother tongue of husband	Mother tongue of wife			
	English	French	Same as husband	Other
English	93.9	2.9	...	3.2
French	6.2	92.8	...	1.1
German	23.0	2.7	68.4	5.9
Italian	8.7	3.7	85.3	2.4
Dutch	21.6	1.4	72.4	4.6
Polish	17.6	2.9	60.3	19.2
Scandinavian	44.3	2.2	37.7	15.7
Ukrainian	18.6	2.3	68.6	10.5
Native Indian	6.3	0.7	92.2	0.8
Other	13.1	2.6	75.4	8.9

"..." indicates not applicable.

Source: 1971 Census of Canada, unpublished data.

Comparisons of the endogamous columns in Tables 7.2 and 7.9 show that linguistic endogamy is indeed higher than ethnic endogamy for all corresponding categories. For example, English linguistic endogamy is 93.9%, while ethnic endogamy for the British origin was only 79.5%. The differences are extremely small for the Italian and "other" groups. For the Italians there is very high agreement between ethnic origin and mother tongue, because they are relatively recent immigrants. It is likely that a large proportion of the "other" mother tongue category and the "other" ethnic origin category also consists of recent immigrants, such as the Portuguese, the Spanish and the Greeks.

With linguistic endogamy, we again find the familiar ranking of English, French, Native Indian and Italian with highest endogamy, and the Scandinavians with the lowest level of endogamy. The remaining categories of Dutch, Germans, Ukrainians and Poles assume intermediate positions.

With linguistic intermarriage we also find additional evidence for the high degree of isolation of the French segment of Canada's population. No more than approximately 4% of the husbands with mother tongues other than French are married to a wife with French as mother tongue. Although firm evidence is lacking, it appears that even among those persons of Italian mother tongue who learn French, only a small fraction marries a wife with French as mother tongue.

7.3.2. Provincial Distribution of Linguistic Intermarriage

Analyzing the prevalence of linguistic intermarriage by province, we find that the rate of endogamy for the English is highest in the Atlantic provinces, with New Brunswick somewhat of an exception. Linguistic endogamy is lowest for the English in Quebec. Ontario and the western provinces have somewhat lower values for English endogamy than the Atlantic provinces. It is likely that English mother tongue endogamy varies inversely with the mother tongue heterogeneity of the province. The same pattern showed up, at lower levels, for British ethnic endogamy, although the eastern and western provinces showed much greater differences with regards to ethnic endogamy than they did with regards to mother tongue endogamy.

TABLE 7.10. Percentage of Husbands Married to Wives With the Same Mother Tongue, by Mother Tongue of Husband and Province, All Husband-wife Families, Canada, 1971

Province	Mother tongue of husband								
	English	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian	Native Indian
Newfoundland	99.5	55.1	35.9	----	----	----	----	----	100.0
Prince Edward Island	97.2	76.1	----	----	68.0	----	----	----	----
Nova Scotia	97.2	67.4	42.6	52.8	68.6	31.0	40.4	38.7	93.8
New Brunswick	92.8	90.9	43.8	40.6	55.8	----	40.4	----	94.7
Quebec	81.7	97.3	60.2	85.3	60.1	69.5	42.0	71.0	93.3
Ontario	95.0	71.1	69.9	87.4	74.4	66.1	42.6	65.6	90.1
Manitoba	91.8	67.6	77.1	79.9	73.4	52.8	40.5	73.8	94.7
Saskatchewan	92.1	57.7	68.8	62.1	66.1	45.3	34.1	72.8	94.4
Alberta	92.8	52.7	65.0	75.8	72.3	46.7	32.6	69.3	91.8
British Columbia	94.5	38.9	65.3	72.8	69.2	45.7	38.8	52.1	87.2
Yukon	92.6	33.3	48.6	----	----	----	----	----	90.0
Northwest Territories	87.4	50.0	46.2	----	----	----	----	----	95.0

"----" indicates less than eleven cases.

Source: 1971 Census of Canada, unpublished data.

The French show a now-familiar pattern: high endogamy in Quebec (as high as the English endogamy in the Atlantic provinces), fairly high in New Brunswick, and declining linguistic endogamy as we go farther away from Quebec. This east-west gradient is most pronounced towards the west, with the Northwest Territories similar to Alberta, and the Yukon similar to British Columbia. Towards the east, the relative positions of Prince Edward Island and Nova Scotia are inverted from the findings of some of our earlier studies (for example, from the provincial pattern of prevalence of official bilingualism as described in Table 3.2). Note, by the way, that in British Columbia and the Yukon, over half the husbands of French mother tongue are married to wives with a language other than French as mother tongue!

For the other mother tongue categories, Ontario tends to be the province with the highest rate of mother tongue endogamy, followed by its neighbours, Quebec and Manitoba. To a large degree this is the result of the settlement patterns of immigrants with those mother tongues. That is probably also the reason why most non-English, non-French categories show very low endogamy percentages in the Atlantic provinces.

7.3.3. Linguistic Inter-marriage by Nativity of Husband

As the provincial patterns indicated, there appears to be a clear correlation between prevalence of linguistic endogamy among mother tongue categories and the proportion foreign-born. Thus, if we separate the husbands who were born in Canada from the ones who were born in other parts of the world, these differences should decrease in magnitude, particularly for the foreign-born. Table 7.11 contains the relevant information.

TABLE 7.11. Percentage of Husbands Married to Wives With the Same Mother Tongue, by Mother Tongue and Place of Birth of Husband, All Husband-wife Families, Canada, 1971

Mother tongue	Canadian-born	Foreign-born
English	93.8	94.3
French	93.1	83.4
German	62.1	71.8
Italian	48.1	88.1
Dutch	70.1	72.6
Polish	37.8	67.6
Scandinavian	26.1	41.9
Ukrainian	60.5	81.8
Native Indian	92.5	77.8
Other	56.6	78.9

Source: 1971 Census of Canada, unpublished data.

As in our analysis of ethnic endogamy, adding controls for the place of birth of the husband results in a slight shrinkage of the range for the foreign-born, and in a noticeable expansion of the range for the Canadian-born. Generally, the order by ascending value of linguistic endogamy is still preserved to a large degree. For the foreign-born, we find an ordering of Scandinavian, Polish, German, Dutch, Native Indian, "other", Ukrainian, French, Italian, and English, while for the Canadian-born we find Scandinavian, Polish, Italian, "other", Ukrainian, German, Dutch, Native Indian, French and English. Peculiar distortions in the original ordering are caused by relatively high levels of endogamy for Canadian-born Dutch and Germans and relatively low levels of endogamy for Canadian-born Italians and for foreign-born French and Native Indians. More detailed analyses of the intermarriage patterns for the Canadian-born Dutch and Germans showed that the national figures were distorted primarily because of the unusual behaviour of Canadian-born individuals with German or Dutch mother tongue, who were living in Census Divisions No. 1 and No. 2 in Manitoba. These two Census Divisions together contain only 0.3% of the husband-wife families with a Canadian-born head, but among the Canadian-born heads of German and Dutch mother tongue, respectively, 8% and 15% are found in these two Census Divisions. The answer is that, in all likelihood, these native-born Dutch and Germans are Mennonites, a group which keeps itself quite separate from other groups, with a very high degree of endogamy. Incidentally, we should remind the reader that, if these Dutch of Canadian birth are in fact Mennonites, their mother tongue is "Deutsch", that is, German (see Ryder, 1955).

Preceding analyses have alerted our readers to the somewhat idiosyncratic behaviour of the foreign-born French and Native Indians. That same aberrant pattern is shown with regards to linguistic intermarriage for both these categories. The foreign-born are less endogamous than the native-born.

7.3.4. Linguistic Intermarriage by Age of Husband

Given the fact that we found generally higher degrees of endogamy for the foreign-born, and that the foreign-born are generally older than the native-born, we should expect increasing endogamy with increasing age. Table 7.12 provides age-specific data to test this hypothesis.

TABLE 7.12. Percentage of Husbands Married to Wives With the Same Mother Tongue, by Age and Mother Tongue of Husband, All Husband-wife Families, Canada, 1971

Age of husband	Mother tongue of husband								
	English	French	German	Italian	Dutch	Polish	Scandinavian	Ukrainian	Native Indian
15-19	94.2	79.7	28.2	59.5	----	----	----	----	92.3
20-24	93.3	89.6	35.2	68.6	32.8	29.4	10.3	35.5	87.6
25-29	93.1	92.0	45.9	77.4	44.1	45.5	28.5	43.4	89.6
30-34	92.7	92.1	54.8	83.3	55.8	42.7	32.0	44.7	90.6
35-39	92.8	92.2	63.1	86.0	70.8	42.0	34.3	49.5	91.2
40-44	93.0	92.6	71.1	88.9	81.3	51.3	39.0	56.3	92.9
45-49	93.9	93.0	74.3	89.6	87.1	58.3	41.1	66.0	94.5
50-54	94.4	93.2	74.9	88.5	87.2	61.3	37.6	70.6	93.2
55 and over	95.5	94.6	79.0	86.9	85.3	70.7	39.6	86.3	94.4
15 and over	93.9	92.8	68.4	85.3	72.4	60.3	37.7	68.6	92.2

"----" indicates less than 50 cases.

Source: 1971 Census of Canada, unpublished data.

As in our analysis of ethnic intermarriage by age, we find that for each mother tongue endogamy generally increases with age. Again, there are some very minor deviations from an almost perfectly monotonic relationship. The exceptions are a declining percentage endogamous for English mother tongue husbands aged 15-34, a slight decline in endogamy for Italians aged 50 and over, for Dutchmen aged 55 and over, for Poles aged 30-39, for Scandinavians and for Native Indians aged 50-54. Finally, the youngest husbands of Native Indian mother tongue have somewhat higher levels of endogamy than one would expect on the basis of the general relationship between endogamy and age.

As with the analysis of ethnic endogamy, we find that the age-specific patterns generally follow the overall ordering which we identify in virtually all our analyses. The Scandinavians have the lowest degree of endogamy, followed, in no fixed order, by the Poles, Ukrainians, Germans and Dutch (though, for most age groups, in that order), then the Italians and finally the Native Indians, French and English (usually in that order).

We again draw the conclusion that linguistic segregation among Canadians of different mother tongues appears to be declining, especially for those of Scandinavian, Dutch, German, Polish and Ukrainian backgrounds. Children of such linguistically mixed marriages are very likely to be raised in English and thus lose contact with the language community to which at least some of their ancestors belonged.

7.4. Conclusions

Even the somewhat superficial analysis of ethnic and linguistic intermarriage which we conducted in this chapter has yielded clear patterns. We found that for both kinds of endogamy, variations between ethnic and linguistic categories have been explained, in part, by nativity. Generally, Canadian-born individuals have a stronger propensity to marry outside their own group than do foreign-born individuals. Thus, if the general decline in the number of immigrants arriving in Canada continues, we could expect intermarriage to increase and the "melting pot" to produce an increasingly culturally homogeneous population. The exceptions would appear to be the Native peoples (for whom there is only a faint age gradient in endogamy and for whom all age-specific levels of endogamy are quite high) and the French in Quebec. It is likely that intermarriage leads to increments to the English mother tongue population, at least in the following generation.

The analyses at the provincial level, by the way, suggest that one could use a model analogous to the migration model first developed by Stouffer of "competing immigrants and intervening opportunities" for the analysis of ethnic and linguistic endogamy (Stouffer, 1940). If we developed this analogous model, we would postulate that endogamy varies positively with the number of available potential mates belonging to the same group; negatively with the average distance to them; negatively with the number of available potential mates belonging to different groups; and positively with the average distance to the latter. This model would lead us to high endogamy measures for the English in all provinces except Quebec and New Brunswick (highest in the peripheral provinces); for the French in Quebec and New Brunswick (lowest in the peripheral provinces); highest for the Native people in the Northwest Territories and, generally, highest for immigrant groups in the central provinces of Quebec, Ontario and Manitoba. The same model would also fit the observed high endogamy values for Canadian-born Dutch and Germans in southern Manitoba (proportionately few "intervening opportunities"). Clearly, more refined analyses with more spatial details would be required to fully develop and test this model.

FOOTNOTE

¹"Problem" should be interpreted in the scientific sense; that is, a situation which needs to be analyzed and explained; and not in the social sense.

CHAPTER 8

SUMMARY

We now discuss some implications of our findings and offer a few suggestions about future research. In our analyses of the various aspects of language in Canada, several points have emerged which need to be reiterated.

First and foremost, we have demonstrated the powerful attraction of the English language on persons of other mother tongues, even in areas of the country where French could have been expected to have stronger attraction than English. This fact was empirically illustrated in all of our analyses. The impact of this attraction on Canada's various minorities can easily be seen. Unless these minorities are regularly supplemented by large numbers of entrants from elsewhere (that is, through sustained flows of immigrants into the country), or unless they establish fairly high degrees of segregation from the English parts of North American society (as do the Native Indians and Inuit, the French in Quebec, and the Mennonites and Hutterites in western Canada), they will eventually be absorbed into an English North American society, in which the only remnants of the original cultural mosaic may well be such things as folk dancing groups, choral societies and various types of handicraft. Strong countervailing forces must be developed and cultivated to enhance the chances of survival for such minorities. Even in the presence of such countervailing forces, the long-range viability of the French minorities outside Quebec and the "bilingual belt" is in serious doubt, as is that of the Ukrainian, German, Dutch and Polish minorities in most parts of the country.

Secondly, we have shown the relation between education and the acquisition of the second official language of the country. This relation is a positive one in the sense that, on the average, more education is related to a higher propensity of being officially bilingual. We have also shown, however, that the relationship is not a simple one. In future research, investigators would do well to establish the relation between bilingualism and location, content and period of education. Moreover, the causal ordering between bilingualism and educational achievement may well be the reverse from what common sense knowledge seems to imply.

Future research using census data could profit from using approaches not attempted in this study. For instance, we have shown that languages spoken in the home follow the same pattern by province which we found for the prevalence of bilingualism and of both ancestral and current shift. Obviously, these three aspects are logically related. Consider the following chain of variables: (a) mother tongue -- (b) bilingualism -- (c) home language. Then (a) -- (b) relates to the prevalence of bilingualism by mother tongue category; (b) -- (c) relates to the language choice of bilinguals; finally (a) -- (c), the product of the other two processes, relates to current language shift. If we converted the various values in these processes, we would have an additive model of current language shift. Recently developed methods of analysis, such as loglinear techniques, can be used to analyse such models.

Our analyses have led us to develop some explanations which are intriguing, but for which empirical evidence is not unambiguous. Although all of them are supported by the data in the 1971 Census, many of them hinge on the existence of unmeasured phenomena.

We have postulated that, with few exceptions, interaction in linguistically plural communities takes place across linguistic boundaries. Much more detailed information on the patterns of interaction of persons belonging to different language groups and living in different types of communities is needed to test that assumption.

Many of the unanswered or partly answered questions raised require data which cannot be found in the census reports and call for research in psycho-linguistics and other specialities. For instance, in Chapter 3 we raised the possibility that some bilingual people at some point fail to retain the second language. Some support for this hunch is found in the pioneering study by Edwards (1977) on the retention of a second language by public servants. He found that the lack of a "supportive environment" results in a tendency for the "loss" of capacity in French to occur among English-speaking public servants (Edwards, 1977:6, 7, 102f). If findings like this were "firmed up" and put into more generalizable form they would be crucial inputs to our decisions as to what factors cause variations in bilingualism by age, sex, mother tongue, and residential location.

Some of our analyses have led us to suggest that language learning through informal means (which we have called "street learning" following MacNamara's terminology) produces different language behaviour than language learning through the educational system. We obviously need to establish the domains in which individuals learned their language and establish whether the correlations which we found can, in fact, be attributed to the mode of language learning. We have, in the course of our analyses, hypothesized that "street learning" is more common among men than women, and is more common among members of the lower class than members of the middle and upper class. More generally, the linkages between social class, language learning, language behaviour and political behaviour (as manifested, for example, in nationalism) must be investigated more intensively. We may speculate that if "street learners" are indeed concentrated in the lower class, and if they have higher chances of language shift, one could question their allegiance to political causes associated with language maintenance. Clearly, earlier analyses of Quebec nationalism, from a quite different perspective, have given hints of this kind of association among variables (see, for example, Guindon, 1964). Again, the census data hinted that such linkages exist, but do not contain data which allow us to test the various hypotheses.

Despite the shortcomings, the census data have proven their utility for the study of language characteristics of a population. The various aspects which we have investigated in Chapters 3 through 7 of this study have tended to fall into very regular patterns. We feel that the regularities we observed, and the explanations which we provided, give a firm foundation for further research. The four or five major points, which we reiterated in this summary, would appear to be a promising further stage in our gaining an understanding of the language behaviour of Canadians. We hope we have made our case convincingly.

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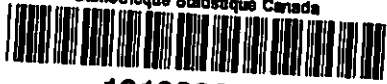
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