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THE UNIVERSITY OF ALBERTA

Minority Group Status And Migration To Quebec: A Census Analysis Of British And French  
Canadians

by  
Manoshi Das 

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF Master Of Arts

in DEMOGRAPHY

Department of Sociology

EDMONTON, ALBERTA

Spring 1990



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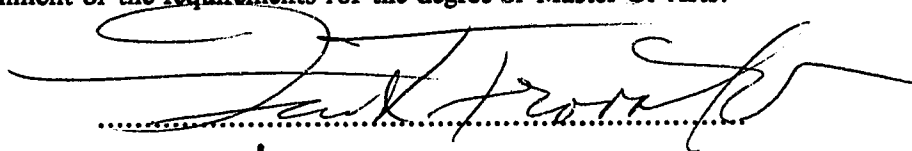
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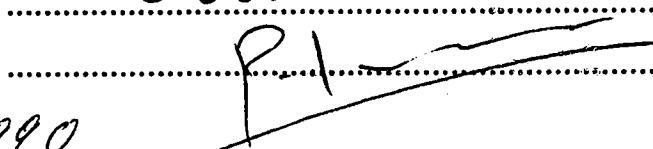
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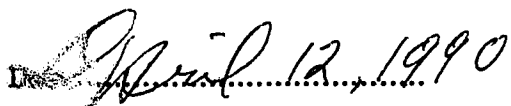
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Date  April 12, 1990

## **ABSTRACT**

This is a sociodemographic study of the migration of the British and the French ethnic groups to Quebec from the rest of Canada during the census periods 1966 to 1971 and 1976 to 1981. Two groups of variables were examined: migrant characteristics (social demographic, ethnic and minority group status) and origin-destination characteristics (economic and subcultural).

The results indicate that the migration rate of the French ethnic group was higher than that of the British ethnic group during both periods examined and that the difference between the two ethnic groups widened during the later period due to a relatively large decline in the migration rate of the British ethnic group. However, there was also a small decline in the migration rate of the French ethnic group between census periods suggesting that Quebec has held less attraction for both groups as a result of the social changes which occurred in the province during the later period (i.e. election of the nationalist Parti Quebecois and implementation of French unilingualism).

Both Individual and Structural level variables were significant in explaining the migration behavior of the two ethnic groups during both census periods. At the Individual level, the most notable changes to occur were that the migration of the two charter groups ceased being male dominated between census periods and ethnic factors in favor of the French group played a slightly stronger role during the later period. There was no evidence for a minority group status effect between the two ethnic groups during either period examined but support for the hypothesis was found within the British ethnic group between individuals having French and English mother tongue during the later period. At the Structural level, conditions in Quebec, the area of destination, appeared to play a larger role during the later period. However, the strict costs/benefits assumptions made about migrants' behavior did not hold very well.

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## Table of Contents

Chapter	Page
I. INTRODUCTION .....	1
A. BACKGROUND .....	1
B. THE MINORITIES .....	3
The Anglophone Minority in Quebec .....	4
Francophone Minorities in the Rest of Canada .....	4
C. MIGRATION .....	5
D. RESEARCH OBJECTIVES .....	6
E. CONCEPTUAL FRAMEWORK .....	8
F. DECISION-MAKING .....	10
II. HYPOTHESES, DATA AND METHODOLOGY .....	11
A. HYPOTHESES .....	11
Individual Level Effects .....	11
Structural (Ecological) Effects .....	18
B. DATA .....	20
C. METHODOLOGY .....	26
III. RESULTS AND DISCUSSION .....	33
A. THE MIGRATION RATES .....	33
B. MULTIPLE REGRESSION .....	34
Descriptive Statistics .....	34
Bivariate Correlations .....	38
Individual Level Effects: 1966 to 1971 .....	41
Individual Level Effects: 1976 to 1981 .....	49
Structural Level Effects: 1966 to 1971 .....	54
Structural Level Effects: 1976 to 1981 .....	64
IV. CONCLUSION .....	76
A. THE MIGRATION RATES .....	77



B. MIGRANT CHARACTERISTICS .....	77
Social Demographic Characteristics .....	77
Ethnic Effects .....	79
Minority Group Status Effect .....	80
C. ORIGIN-DESTINATION CHARACTERISTICS .....	81
Economic Conditions .....	81
Subcultural Conditions .....	82
D. INDIVIDUAL LEVEL - STRUCTURAL LEVEL RELATIONSHIP .....	82
E. CONCLUSIONS AND FUTURE WORK .....	83
BIBLIOGRAPHY .....	86
APPENDIX ONE .....	91
APPENDIX TWO .....	98
APPENDIX THREE .....	102

## LIST OF TABLES

TABLE 1. Out-Migration Rates To Quebec .....	33
TABLE 2. Descriptive Statistics (British and French Groups) .....	35
TABLE 3. Bivariate Correlations .....	38
TABLE 4. Individual Level Effects For 1971 (British and French Groups) .....	42
TABLE 4a. Individual Level Effects For 1971 (British Group) .....	45
TABLE 4b. Individual Level Effects For 1971 (French Group) .....	47
TABLE 5. Individual Level Effects For 1981 (British and French Groups) .....	49
TABLE 5a. Individual Level Effects For 1981 (British Group) .....	51
TABLE 5b. Individual Level Effects For 1981 (French Group) .....	53
TABLE 6. Individual and Structural Level Effects For 1971 (British and French Groups) ..	55
TABLE 6a. Individual and Structural Level Effects For 1971 (British Group) .....	59
TABLE 6b. Individual and Structural Level Effects For 1971 (French Group) .....	62
TABLE 7. Individual and Structural Level Effects For 1981 (British and French Groups) ..	65
TABLE 7a. Individual and Structural Level Effects For 1981 (British Group) .....	68
TABLE 7b. Individual and Structural Level Effects For 1981 (French Group) .....	72

## LIST OF FIGURES

FIGURE 1. Conceptual Model .....	9
FIGURE 2. The Age-Migration Relationship .....	12
FIGURE 3. The Minority Group Status Effect For Migration To Quebec .....	17
FIGURE 4. Data Structure .....	21
FIGURE 5. Further Specification Of The Conceptual Model .....	28
FIGURE 6. Individual Effects .....	29
FIGURE 7. Structural Effects .....	30
FIGURE 8: Structural Equation .....	31

## Chapter I

### INTRODUCTION

#### A. BACKGROUND

The modernization of Quebec has been characterized by considerable conflict between the Canadian and the Quebec governments. At the root of this conflict has been French Quebecers' discontent with the historically inferior cultural and socioeconomic status of the French ethnic group in comparison to the British ethnic group within the country as a whole, despite their coequal status as the two charter members of Canadian society. Particularly grievous has been the historically inferior cultural and socioeconomic status of the French group within the province of Quebec itself where French Canadians are concentrated and have formed a large numerical majority of about eighty percent of the total provincial population since the time of Confederation. In contrast, the British ethnic group has been a shrinking numerical minority, slowly dwindling from about twenty percent of Quebec's total population around the time of Confederation to about ten percent during more recent years, but had managed to maintain a sociological status commensurate with the group's predominance in the country as a whole (Joy, 1978:25). The language policies which have been developed and implemented by both the Canadian and the Quebec governments over recent decades represent two fundamentally different approaches to redressing the discontent of Quebec's French majority with the inferior status of the French group in the Canadian Confederation.

At the federal level, language policy has been guided by the vision of a bilingual and bicultural country in which the nation's two charter groups would share a coast-to-coast equality (Guindon, 1978:223). The view expressed by the Royal Commission on Bilingualism and Biculturalism (RCBB) of the mid 1960s was:

A bilingual country is not one where all the inhabitants necessarily have to speak two languages; rather it is a country where the principal public and private institutions must provide service in two languages to citizens, the vast majority of whom may very well be unilingual. The same is true for a bilingual province or a bilingual institution. (1967:I,xxviii)

Based on the RCBB's recommendations, federal language policy has involved the

implementation and promotion of bilingual programs and services in government institutions throughout the country wherever either official language minority - (i.e. Anglophone or Francophone) - is numerous enough to be viable as a group (RCBB,1967:I,86).<sup>1</sup> The protection of individual minority rights has been a central part of federal language policy. As stated by the RCBB:

The principle of equality implies respect for the idea of minority status, both in the country as a whole and in each of its regions.... Since the English-speaking population is larger across the country, its members are less often in the minority; but they are the minority in some areas, especially in the province of Quebec. The Francophones are usually in the minority outside of Quebec. In either case, however, the principle of equality requires that the minority receive generous treatment. (1967:I,xlvi)

The Federal Official Languages Act of 1969 as well as the subsequent Federal Language Charter of 1977 have been based on the principle of "institutional bilingualism" recommended by the RCBB and have had a two-fold objective: to preserve and protect the status and rights of the British/Anglophone minority in Quebec as much as to improve the status and rights of French/Francophone minorities outside Quebec. To redress the historic inequalities experienced by Francophone minorities, federal language policies have had two concerns. The first concern has been to improve the French group's representation in federal state bureaucracies - particularly in higher executive positions - which historically have operated unilingually in English and presented Francophones with linguistic barriers to both entry and subsequent mobility within its various bureaucratic hierarchies. The second concern has been to improve the treatment of Francophone minorities outside Quebec - especially by provincial governments in their areas of jurisdiction and particularly in the provincial public school systems - in order to bring their status more in line with that of the historically privileged Anglophone minority in Quebec (Guindon, 1978:218-219).

Quebec's solution, on the other hand, has focused on the discrepancy between the numerical and sociological statuses of the two charter groups within Quebec itself and been

---

<sup>1</sup> The Canadian government adopted the principle of establishing bilingual districts where official-language minorities are large enough to justify them and adjusting boundaries of these districts in accordance with language indicators in the census. The RCBB suggested a ten percent official-language minority as the threshold for creating districts (McRae, 1978:331&336).

based on the premise that the collective right of the country's two ethnic/linguistic majorities within the two "regions" of the country - (i.e. Quebec and the rest of Canada) - where each group predominates should prevail as an organizing principle for a national bilingual policy. From Quebec's perspective, a policy of "territorial bilingualism" - i.e. official French unilingualism in Quebec and English unilingualism in the other provinces - provides a more realistic assessment of the viable boundaries of Canada's cultural duality as well as framework for fully developing the equality of the two charter groups within the country taken as a whole. As for the two minorities, Quebec's position has been that both groups must adjust to the realities of the larger societies in which they live.

The language policies which have been implemented in Quebec over recent years - i.e. the Official Language Act of 1974 and the Charter of the French Language in 1977 - have, accordingly, been concerned with establishing French as the sole official language of the province in order to promote the cultural and economic development of the Francophone majority within Quebec. The objective of Quebec's language policies has been to advance French Quebecer's aspirations of becoming "Maitres chez nous" in the one part of the country where they form a large numerical majority and been particularly directed at francization of the province's private corporate sector - a traditional Anglophone stronghold - and integrating new residents in Quebec into the Francophone community through the public school system (Beaujot, 1978:35-36; Castonguay, 1979:11-12; McRoberts and Posgate, 1980:124-134&172-175).

## **B. THE MINORITIES**

The modernization of Quebec and discontent of its Francophone population has had far-reaching consequences for Quebec's Anglophone community and for the Francophone communities in the rest of the country. It has been these two groups which have been caught in the middle of the Quebec-Canada controversy.

### **The Anglophone Minority in Quebec**

The progressive determination of French Quebecers to assert their majority status within the boundaries of Quebec has increasingly forced Quebec's Anglophones to adjust to the reality of being a minority group in a predominantly Francophone society. The adjustment, however, has not been an easy one. As stated by Balthazar:

...Quebec anglophones, far from considering themselves a minority, had for a long time seen themselves as the first Canadians, the pioneers of Canadian development, the proud inhabitants, most of them, of the metropolis of Canada. It is no wonder that their ears remained deaf to the new expressions of Quebec nationalism. It took them at least ten years to realize the painful necessity of adjusting to the reality of living in a francophone society. Since most of them had not even bothered to learn French, let alone to integrate into Quebec society, they had to be confronted with the serious demands of a linguistic law to decide either to adjust (as francophone minorities had always done outside Quebec) or to leave. (1980:63)

This has been the central implication of the postwar changes in Quebec for the Anglophone minority and many have been deciding to leave the province for more congenial areas of the country or continent where their ethnic/linguistic group predominates rather than adjust, a tendency manifested throughout Canadian history. As stated by Joy, "...knowing that they have a whole continent in which they can live and work in their own language, most Anglophones find it easier to leave Quebec than to make the effort required to live in French" (1978:39).

### **Francophone Minorities in the Rest of Canada**

Francophone minorities in the rest of the country have been left ideologically, as well as geographically, isolated from Quebec by the province's postwar transformations. Balthazar states:

...Quebeckers had never taken the decision to abandon their fellow French Canadians in other provinces. It was much more a matter of a new reality that was imposing itself: the necessity for a modern culture to rest on a large network of communications for its development....the fact was not that the French minorities outside Quebec were abandoned, but rather that their objects and those of the French-speaking Quebecers were becoming completely different. The latter wanted to build a new society to fit their culture; the former wanted to preserve some of their institutions in a society that would always inevitably remain English-speaking. (1980:62-63)

While "Quebecois" - i.e. French Canadians in Quebec - had begun to develop a modern

interpretation of the ideology of "la survivance" based on being a majority within the boundaries of Quebec, French Canadians in the rest of Canada had continued to adhere to its traditional interpretation based on being an ethnic minority within the country as a whole (Wieler, 1985:60&76-77).

The original concept of the French Canadian community and group has not, however, proven to be much of a match against the pressures of the larger society in which Francophone minorities outside Quebec live and they have been experiencing an accelerating anglicization in order to adequately cope with modern social conditions. This trend has been particularly evident among communities isolated and distant from Quebec and among the younger generation of Francophones being drawn by both necessity and the desire for socioeconomic advancement into urban areas (Joy, 1978:9-11; Castonguay, 1979:10).

With the postwar changes in Quebec on the one hand, and accelerating pressures towards anglicization in the rest of Canada on the other, the gap between what it means to be a Quebecois and what it means to be a French Canadian in the rest of Canada has been widening.

### C. MIGRATION

Historically, the British/Anglophone group has had a much higher propensity than the French/Francophone group to leave Quebec with shifting economic opportunities in other parts of the country. Leaving Quebec was considered to be a form of exile from the true "homeland" among French Canadians and they also faced considerable hostility and societal pressures to anglicize in the rest of the country (Beaujot, 1979:18-19). This difference in out-migration propensities from Quebec to the rest of the country between the two groups has also been evident during more recent years. For example, Lachapelle and Henripin have demonstrated with census data that of all out-migrants from Quebec to the rest of Canada during the period 1956 to 1961, 48.1 percent were of British ethnic origin while 34.6 were of French ethnic origin. During the period 1966 to 1971, these percentages were 48.8 and 32.1, respectively, indicating that the trend had become slightly more pronounced over time



(1980:204).

In contrast, migration to Quebec from the rest of the country has had a tendency towards predominance by the French ethnic group during recent decades. The data provided by Lachapelle and Henripin indicate that of all migrants to Quebec from the rest of Canada during the period 1956 to 1961, 48.5 percent were of British ethnic origin while 37.7 percent were of French ethnic origin. During the period 1966 to 1971, the percentage of British migrants declined to 41.9 while the percentage of French migrants increased to 43.6 (Lachapelle and Henripin, 1980:204).

#### **D. RESEARCH OBJECTIVES**

This study will examine the migration of the two charter groups to Quebec from the rest of Canada over the two census periods 1966 to 1971 and 1976 to 1981. (While it is acknowledged that the migration of the two groups from Quebec to the rest of the country is also vital to an understanding of migration exchanges between Quebec and the rest of Canada, data for this flow were available for the later period only. Since the interest was in doing a comparative analysis over time, the decision was made to restrict the study to the flow which could be compared over the time periods of interest with the available data.) As indicated by the preceding discussion, there appears to have been a shift to French predominance among members of the two charter groups migrating to Quebec from the rest of the country during the 1966 to 1971 period. The 1960s represented a turning point in Quebec's history. During that decade, Quebec belatedly entered the modern era and underwent fundamental social transformation in what has come to be called a "Quiet Revolution" (Guindon, 1978). Overall, it was a time of relative prosperity, vastly improving cultural and economic conditions for the French group and a resurgence of nationalistic sentiments directed against the British group. The second period which will be examined in this study, i.e. 1976 to 1981, represents another high-water mark in Quebec's history. The social trends evident during the previous decade took a radical turn with the election of the Parti Quebecois in 1976 and the Charter of the French Language in 1977. While these changes were a big step towards making French

Quebeckers a sociological as well as numerical majority in Quebec, the threat of sovereignty-association with the rest of Canada and the reality of French unilingualism also left the British/Anglophone minority in Quebec extremely insecure about its status and future as residents in the province and had a destabilizing, negative effect on Quebec's private sector. Many businesses moved their head offices to Toronto as a consequence.

It is speculated that, overall, the changes in Quebec during the later period strengthened the tendency towards French predominance among members of the two charter groups migrating to the province from the rest of the country apparent during the earlier period. The British/Anglophone group has a wide range of more favorable alternatives in the country where the group predominates. French/Francophone minorities, on the other hand, have one viable alternative to minority status. Only in Quebec does the possibility of living a full life in French as part of the effective majority exist for the French group. It may be speculated that Francophones outside Quebec view federalist attempts to improve their status and shore up their crumbling culture as providing little real hope and accept Quebec's position that socioeconomic improvement and, indeed, the very possibility of a viable Francophone community lies within Quebec alone.

The analysis will be restricted to Canadian-born individuals who are of British or French ethnic origin, have English or French mother tongue and were 20 years of age or older at the end of the respective migration period.

Two specific research questions will be addressed: (1) What is the relationship between minority group status and migration to Quebec from the rest of Canada, and how has this relationship been conditioned by time? and (2) What is the relationship between minority/majority migration to Quebec from the rest of Canada and the characteristics of areas of origin and destination?

For the first research question, three explanations for migration differences in pluralistic societies such as Canada will be evaluated: the Social Demographic Characteristics(age, sex, education, and occupation); the Ethnic Effect(ethnic origin and mother tongue); and the Minority Group Status(an interaction term between ethnic origin and

education) hypotheses (Frisbie and Bean, 1979; Trovato and Halli, 1983). All three hypotheses are based on migrant characteristics. The three explanations will be evaluated over the two census periods.

For the second research question, origin and destination characteristics will be introduced into the equation, again for both census periods, in order to evaluate if and how they have influenced the migration differences between the two groups. The economic (income and unemployment levels) and subcultural (ethnic and linguistic composition) characteristics of the areas of origin and destination will be considered. These structural characteristics of area of origin and of destination are based on the stable or non-migratory population in both areas.

## **E. CONCEPTUAL FRAMEWORK**

The conceptual framework for the analysis is illustrated in Figure 1. The framework was adopted from Lee's 1966 restatement of the "laws of migration" formulated by Ravenstein in the late nineteenth century.

As summarized by Lee, migration occurs as a consequence of "positive" and "negative" factors associated with the areas of origin and destination, intervening obstacles between the two areas and personal factors associated with individual migrants. Positive factors hold or attract - "pull" - potential migrants to an area while negative factors drive away or repel - "push" - potential migrants from an area (1966:49-52). Lee stated: "Clearly the set of + 's and - 's at both origin and destination is differentially defined for every migrant or prospective migrant. Nevertheless, we may distinguish classes of people who react in similar fashion to the same general set of factors at origin and destination" (1966:50).

In the conceptual model illustrated by Figure 1, Individual Effects or migrant characteristics represent personal factors associated with the migrants while the Structural Effects represent pushes and pulls associated with the areas of origin and destination. The framework adopted in this study does not explicitly consider intervening obstacles between the areas of origin and destination. This is because data limitations restrict the areas of origin to

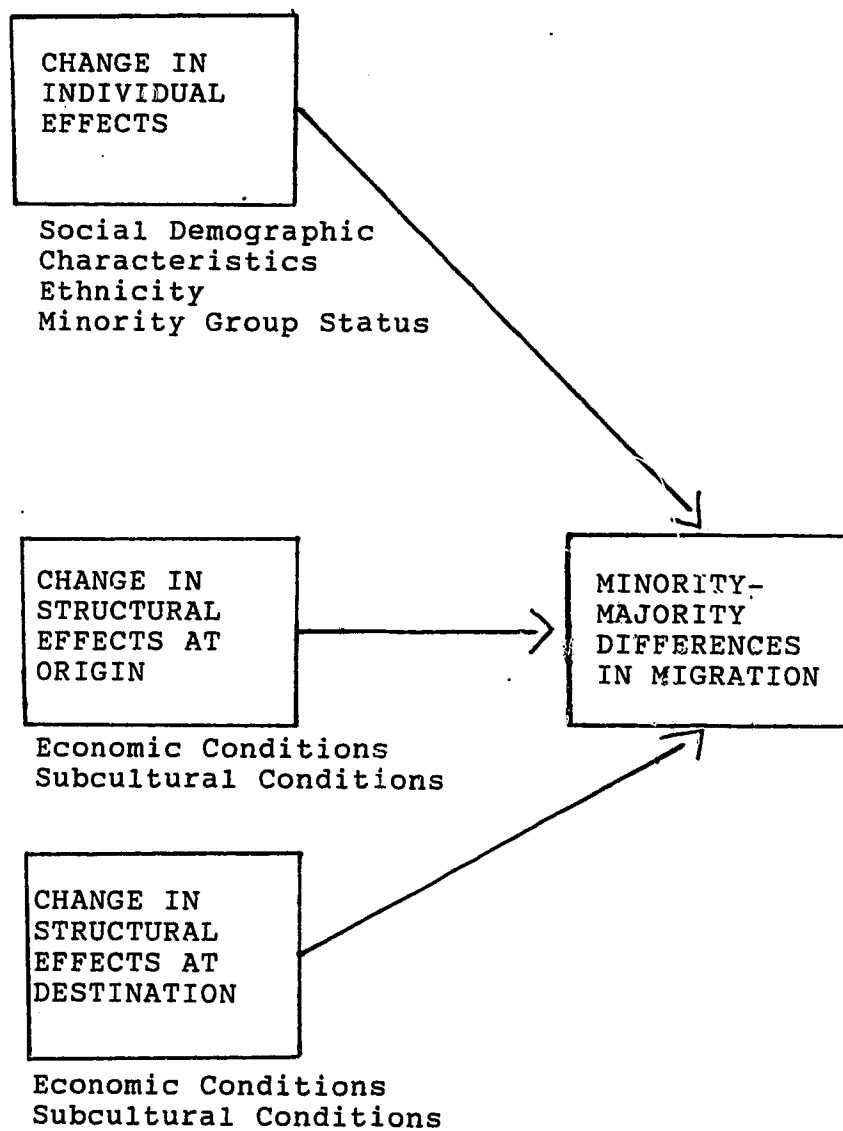


FIGURE 1: CONCEPTUAL MODEL

the single geographical unit "Canada excluding Quebec". Distance between areas of origin and destination is typically used as a proxy for intervening obstacles such as the cost of migrating and the disruption of social ties. However, the distance between "Canada excluding Quebec" and Quebec cannot be calculated.

The restriction of the areas of origin to the single geographical unit "Canada excluding Quebec" also created another serious limitation to this study. "Canada excluding Quebec" is in fact composed of four quite distinct regions: the Maritimes, Ontario, the Prairies and British Columbia. The economic and subcultural characteristics of these regions are quite diverse and to treat them as a single geographical unit entails making a considerable generalization. In fact, the inclusion of the region Quebec as the area of destination entails making a considerable generalization. While these generalizations were made necessary by limitations of the data, it is noted that the structural variables are rather imprecise indicators of the economic and subcultural conditions in the areas of origin and destination faced by the migrants.

#### **F. DECISION-MAKING**

An assumption underlying the conceptual framework adopted for the analysis pertains to decision-making by the migrants about origin and destination economic and subcultural conditions. It is assumed that the decision to migrate is a form of individual optimizing behavior in which migrants attempt to optimize their overall - (i.e. economic, social, cultural, political) - quality of life and in which a long-term view is taken. In this "broadly conceived" costs/benefits perspective of migration, it is assumed that (a) individuals are rational, (b) they seek to maximize their monetary and non-monetary well-being, (c) objectively measured differences between areas convey information that is relevant to decision-making and (d) subject to information constraints, individuals will perceive and evaluate the desirability of alternative destinations on this basis (Shaw, 1985:11&53-54).

The following chapter elaborates upon the hypotheses, data and methodology for the analysis.

## **Chapter II**

### **HYPOTHESES, DATA AND METHODOLOGY**

#### **A. HYPOTHESES**

##### **Individual Level Effects**

###### **The Social Demographic Characteristics Hypothesis**

Age, sex and socioeconomic status (education, occupation) are among the most prominent characteristics associated with the propensity to migrate (Shaw, 1975; Ritchey, 1976; Lee, 1966; Petersen, 1969). Consequently, these social demographic characteristics will be included in the analysis in order to assess their contribution to the migration differences between the British and French groups.

###### **Age**

Research on the association between migration and age has found persons in their late teens, twenties and early thirties to be more likely to move than persons in other age groups, with the greatest propensity to migrate occurring among the 20 to 29 age group. The occurrence of "retirement migration" among older persons - i.e. aged 65+ - results in a small increase for the older age categories (Shaw, 1975:17-20; Ritchey, 1976:378; Petersen, 1969:262; Lee, 1966:48). Figure 2 illustrates the age-migration relationship.

The association between age and migration has generally been interpreted as a reflection of life cycle position. High rates of migration among the young reflect their entry into the labor force and the processes of job search and experimentation during the early working years while deeper social and economic ties at the area of origin constrains migration at the older ages (Petersen, 1969:262; Shaw, 1975:18; Ritchey, 1976:378-382; Lee, 1966:57).

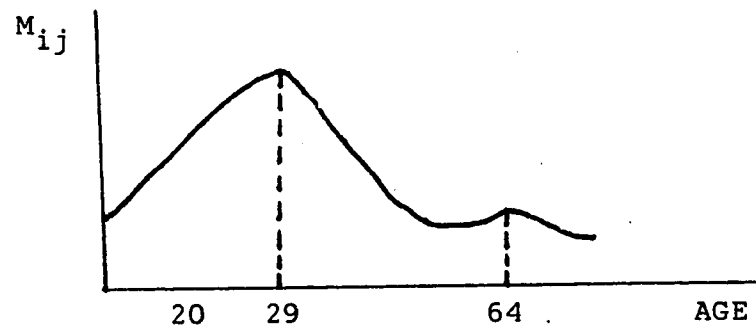


FIGURE 2: THE AGE-MIGRATION RELATIONSHIP

### Socioeconomic Status

The literature indicates that there is, in general, a direct association between socioeconomic status and migration. Among the three SES factors - (i.e. education, occupation and income) the association is strongest and most consistent for education and occupation. The propensity to migrate has been found to vary directly with level of educational attainment while persons of professional and managerial occupations have been found to be more migratory and tend, on average, to migrate further distances than persons with low-skill occupations (Ritchey, 1976:382-384; Shaw, 1975:22-27).

The relationship between education and migration is generally interpreted as reflecting greater awareness among persons with relatively high levels of educational attainment of differential opportunities and amenities to be had at alternative places of residence. The relationship between occupation and migration is generally stated as reflecting labor market conditions in which the market for the highly skilled, in contrast to that for the less skilled, extends from the local, to the regional and national levels resulting in the necessity for those who are highly skilled to cross local labor market boundaries more often (Ritchey, 1976:382-384; Shaw, 1975:22-27).

### Gender

In the nineteenth century Ravenstein argued that one of the "laws" of migration was that 'Females appear to predominate among short-journey migrants' (Lee, 1966:48). Petersen states that the sex ratios of migration flows vary according to circumstances. Historically, the pattern was one in which females dominated short-distance moves as a consequence of the demand for domestic servants in urban areas and males dominated long-distance moves as a consequence of social conditions in areas of destination (Petersen, 1969:263-264). Shaw's review of the relatively recent literature indicates that within industrialized developed societies, sex differences in migration are virtually insignificant suggesting that with improved transportation and communication networks, relative homogeneity between areas,



changing gender roles and increasing female labor force participation, gender may no longer be an important characteristic associated with differentials in migration (Shaw, 1975:20-22). Gender will, however, be included in the analysis in order to evaluate the importance of this characteristic to British-French migration differences.

### The Ethnic Effect Hypothesis

The importance of cultural factors to migration in the North American context has also been well established (Frisbie and Bean, 1979:2-3). Typically, the Ethnic Effect hypothesis has been viewed as an alternative explanation to the preceding one and argues that ethnicity per se - i.e. net of social characteristics - operates as an independent determinant of migration (Frisbie and Bean, 1979:4-6).

The means by which ethnicity is theorized as exerting an independent influence on migration include: the existence of subcultural norms which encourage or discourage members of particular ethnic groups to migrate as for example those relating to social and community ties as well as to familism; the ability or inability to assimilate and adjust to places other than the locality of origin due to factors such as language; and the historical experiences of certain ethnic subpopulations which may have influenced their geographic location and subsequent tendency to migrate (Breton, 1968; Uhlenberg, 1973; Ritchey, 1976; Kobrin and Speare, 1983; Thompson, 1983; Trovato and Halli, 1983; Trovato, 1989).

This study hypothesizes that cultural factors have been operating as independent determinants of the migration differences between the British and French groups. With the increasing cultural differentiation between Quebec and the rest of the country during the postwar period, both groups have alternative milieus within the country in which their respective cultural traditions can be fully accommodated. It is speculated that amongst members of the two groups unable or unwilling to accommodate to the other's traditions - particularly language - a change in community of residence amongst Francophones and continued residence in the rest of Canada amongst Anglophones would be preferable alternatives. Both ethnic origin and mother tongue are included in the analysis in order to

assess the importance of cultural considerations to the British-French migration differences to Quebec.

### The Minority Group Status Hypothesis

As an alternative explanation to the preceding two hypotheses, the Minority Group Status hypothesis originates in the context of explaining ethnic and racial fertility differences (Goldscheider and Uhlenberg, 1969; Frisbie and Bean, 1979). As a general explanation, it argues that the interaction of socioeconomic characteristics with ethnicity may operate as an independent determinant of demographic behavior when socially defined differences are used as a rationale for discriminatory behavior and for limiting a group's power and control of resources. It is theorized that under these conditions, the desire for social mobility among certain minority group members may produce social psychological insecurities which may themselves independently influence certain demographic behavior as a means of offsetting the disadvantageous effects of real and/or perceived discriminatory practices experienced by them during the process of social mobility. In relation to ethnic and racial fertility differences, for example, the social psychological insecurities of minority group members may result in them consciously deferring or limiting childbearing to a greater extent than similar members of the majority group, who do not suffer the same disadvantages in the process of social mobility. The interactive pattern associated with such a minority group status effect is one in which the fertility levels of minority group members are higher than majority groups members at low socioeconomic statuses and lower than majority group members at high socioeconomic statuses (Goldscheider and Uhlenberg, 1969:371-372).

Although the Minority Group Status hypothesis is less well developed in relation to migration, the literature suggests that the statistical interaction of socioeconomic characteristics with ethnicity also operates as an independent determinant of ethnic and racial migration differences (Ritchey, 1976; Trovato and Halli, 1983).

This study proposes that under the conditions associated with minority group status, the desire for upward mobility among minority group members may produce

certain social psychological insecurities which will increase the propensity to move. A minority group is one which has a history of prejudice and discrimination, is disadvantaged economically and has a clearly defined subculture. Important assumed conditions pertinent to this effect are: (1) the higher the education level of minority members, the lower is their subcultural attachments to their local community; (2) minority members experience prejudice and discrimination in their local community; (3) educated minority members will perceive that economic opportunities are better elsewhere; and (4) the lower the education, the greater the minority members' attachment to their local subculture, and hence, the lower their desire to move. Furthermore, it is hypothesized that these conditions produce an interaction effect where at high levels of education the minority members will show a greater propensity to move than the majority members at the same educational levels; and at low educational levels, the majority members will be more inclined to move than will minority members.

In light of the improving socioeconomic status of the French majority in Quebec during recent decades and the historic inequalities experienced by the French group in the rest of the country, the analysis will examine British-French migration differences for a Minority Group Status effect. Figure 3 illustrates the Minority Group Status effect.

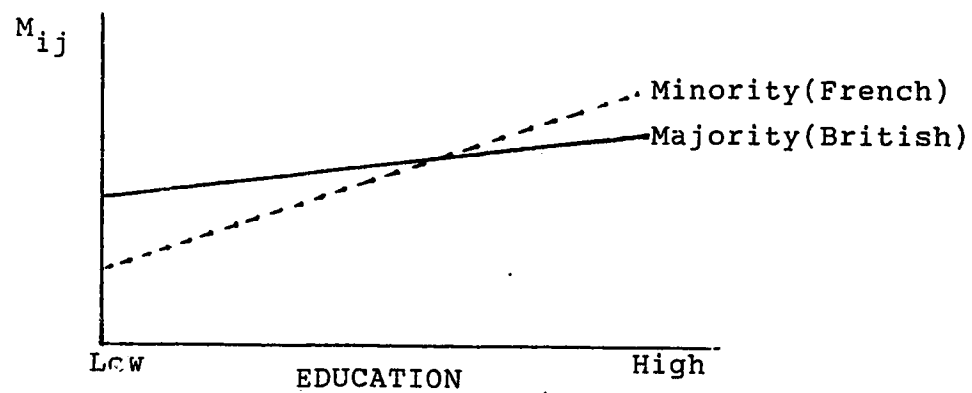


FIGURE 3: THE MINORITY GROUP STATUS EFFECT  
FOR MIGRATION TO QUEBEC

## Structural (Ecological) Effects

### Economic Conditions

Ravenstein argued for the dominance of the economic motive in migration behavior (Lee, 1966:48). Similarly, based on his review of the migration literature, Shaw concludes that economic motivations appear to be a major causative factor in migration, especially among persons of labor force ages (1975:57). Economic "pushes and pulls" in the form of income and employment differences between areas can, therefore, be expected to play a major role in the migration process.

### Income Effect Hypothesis

Income differences between areas have generally been attributed by researchers as having considerable importance in the decision to migrate. The explanation underlying the relationship is the competitive model of factor mobility which predicts that migration of labor will occur in direct response to average real-wage differences between areas and that its volume will increase as the real-wage difference increases. The model assumes full employment and perfect competition - i.e. that people want to maximize income, knowledge of employment opportunities is perfect, workers are many in number and homogeneous in skills and taste, there are no social or economic barriers to migration and that wages are considered in real terms. It may be noted that the model is an ideal type and real life conditions pose considerable challenges to these assumptions (Shaw, 1975:67; Ritchey, 1976:364).

Nevertheless, the literature indicates that, on average, individuals will move from low income to high income areas in order to maximize their returns from employment. Generally, higher income at an area of destination exerts a greater influence on migration between areas as a "pull" than does lower income at an area of origin as a "push" (Shaw, 1975:67-72; Ritchey, 1976:365-370). Wage levels in a sending area have an inconsistent and unpredictable overall effect on migration as when they are low, migration can be impeded due to prohibitive costs and when they

are high, they can exert a negative influence due to income foregone as a result of migration and a positive influence due to greater ease of financing movement (Shaw, 1975:134).

#### Unemployment Effect Hypothesis

The second economic factor which will be considered is the unemployment levels of the areas of origin and destination. Unemployment is typically included in labor migration research as an indicator of the extent to which jobs are available in the areas of concern. Research indicates that a relatively high unemployment rate in an area is associated with relatively high rates of out-migration and relatively low rates of in-migration to the area. A relatively high unemployment level in the area of origin has, however, been found to exert a greater influence in the form of a "push" than a relatively high unemployment level in the area of destination (Shaw, 1975; Ritchey, 1976).

#### Subcultural Conditions

##### Subculture Effect Hypothesis

Ritchey's review of the migration literature concerning community and kinship ties leads him to conclude that, in general, "Kinship and friendship affiliations tend to tie individuals to communities. Within the push-pull framework, if relatives and friends are located in the individual's community of residence, migration is deterred, but if they reside elsewhere, migration is more probable and directed toward their location" (1976:389). Ritchey suggests three explanations for the relationship: the "affinity" hypothesis argues that the presence of relatives and friends is a valued aspect of life that acts to constrain migration; the "information" hypothesis argues that the distant location of family and friends encourages and directs migration by increasing a potential migrant's awareness of conditions such as job opportunities at the distant location; and the "facilitating" hypothesis which argues that the distant location of family and friends encourages and directs

migration by increasing the individual's potential for adjustment through the availability of aid in relocation at an alternative area of residence (1976:389). In the United States this variable, or rather, its commonly used proxy, the percentage of the population that is black, has traditionally been introduced as an influence on black migration and often improves the association between black migration and economic factors where it is thought to play a supportive role in the face of racial discrimination (Ritchey, 1975:375). Lachapelle and Henripin have found the demolingistic composition of areas to be extremely important to French-English migration within Canada and argue that it reflects the differential costs of obtaining information about, and of linguistic and cultural adaptation in, the area of destination (1982:221-222).

To evaluate the influence of sociocultural conditions in the areas of origin and destination on the pattern of French-British migration to Quebec, the analysis will include the comparative ethnic(French-British) and linguistic(Francophone-Anglophone) compositions of the areas of origin and destination.

## **B. DATA**

The Individual Files from Public Use Sample Tapes(PUST) of the Canadian censuses for 1971 and 1981 were used for the computation of data specific to the requirements of the analysis and appropriate for the multiple regression methodology employed. The PUST samples are representative one-in-a-hundred(1971) and two-in-a-hundred(1981) samples of individual records from the respective census Master Files. The structure of the data compiled for the study is illustrated in Figure 4.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
LINE	YEAR	MT	GETH	SEX	AGE	EDUC	OC	MIG	NON	MIG	CAN	CAN	CAN	CAN	CAN	CAN	CAN	CAN	CAN	CAN	CAN	CAN
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
144	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
145	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
146	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
147	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
288	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

FIGURE 4: DATA STRUCTURE



As indicated by column 1, there is a total of 288 lines of data. Column 2 indicates the year with 1971 indexed as 1 and 1981 indexed as 2. Lines 1 to 144 represent data corresponding to 1971 and lines 145 to 288 represent corresponding data for 1981. Columns 3 to 8 indicate migrant characteristics - i.e. the independent variables Mother Tongue, Ethnicity, Sex, Age, Education and Occupation for the Individual Level Effects hypotheses. These variables were computed for Canadian-born persons only.<sup>2</sup>

Mother Tongue(column 3) has two levels: English coded as 1 and French coded as 2. All remaining mother tongue categories were eliminated thereby restricting the analysis to migrants with either English or French as their mother tongue. There were no inconsistencies between the 1971 and 1981 census definitions of mother tongue.

Ethnicity(column 4) also contains two levels: British coded as 1 and French coded as 2. Again, all remaining ethnic categories were excluded restricting the analysis to migrants of either British or French ethnic origin. Ethnicity raised the biggest problem with respect to the comparability of 1971 and 1981 census data. According to the 1971 definition of ethnic origin, only the respondent's paternal ancestry was reported, theoretically resulting in a single ethnic origin for the respondent. (All multiple responses were reduced to a single response by Statistics Canada on an arbitrary basis). The 1981 definition of ethnic origin allowed a respondent to report more than one ethnic origin. To be consistent with the 1971 definition and because a relatively small proportion of respondents reported multiple ethnic origins (7.6% of the non-inmate population) only the single origin categories British and French were

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<sup>2</sup> 1971 Place-of-Birth data was reported for the total population while 1981 birthplace data excluded inmates. Since the sample used to compute the individual characteristics variables was restricted to native-born persons only, this discrepancy between 1971 and 1981 Place-of-Birth data applies to all of the migrant characteristics. However, it may be noted that Mother Tongue, Sex and Age data were reported for the total population in both 1971 and 1981. Ethnicity was reported for the total population in 1971 but excluded inmates in 1981. Education was reported for the total population in 1971 but only for the population aged 15 and over, excluding inmates, in 1981. However, individuals aged 0 to 19 were excluded from the data for the purposes of this study and this discrepancy did not affect the data used for the analysis. Occupation was reported for the population aged 15 and over who had worked since January 1 of the previous year (experienced labor force) in both 1971 and 1981 but excluded inmates in 1981. Again, the ages excluded did not affect the data used for the analysis.

included from the 1981 data file.

The levels for Sex(column 5) are Male coded as 1 and Female coded as 2.

Age(column 6) was collapsed into three levels. These are ages 20 to 29 coded as 1, ages 30 to 64 coded as 2 and ages 65+ coded as 3. All remaining ages - i.e. 0 to 19 - were eliminated thereby restricting the analysis to migrants who were of labor force ages - i.e. 15 to 64 - or older at the beginning of the migration intervals(1966 to 1971 and 1976 to 1981). In 1971, respondents reported their age in completed years as of their last birthday before the census date. In 1981, the value reported referred to the respondent's age at last birthday as of the census date but was derived from the respondent's date of birth.

Education(column 7) was also collapsed into three levels. These are Primary, coded as 1, Secondary, coded as 2, and Post-Secondary, coded as 3. The 1981 definition of education considered the "attainment of a degree, certificate or diploma", to be at a higher level than "years completed or attended without an educational qualification", and "university education" to be above "other non-university", and made distinctions on the basis of these criteria. The 1971 definition referred only to the highest grade or year of elementary, secondary or university attended, differentiating only if the respondents had actually obtained a university degree. However, since education was collapsed into three broad categories, this discrepancy may be considered relatively minor.

Occupation(column 8) was collapsed into two levels. These are Non-Professional coded as 1 and Professional coded as 2.<sup>3</sup>

On the bases of these recategorizations, all possible combinations of the values of the migrant characteristics variables were computed for both 1971 and 1981. As indicated in Figure 4,  $144 = 2 \times 2 \times 2 \times 3 \times 3 \times 2$  unique combinations of variable categories were obtained for each

<sup>3</sup> The relationship between migration, the dependent variable, and the independent variables education and occupation is somewhat problematic. Both of these explanatory variables were measured for individuals at the time of the respective census but may, in fact, have been different at the time of the individual's migration. It must, therefore, be assumed that an individual's education or occupation on the census date was the same as when the individual actually migrated and did not, in fact, change between these two dates. Otherwise, the influence of these variables on the migration being considered becomes questionable.

census year.

Columns 9 and 10 in Figure 4 contain the information used to compute the dependent variable for the analysis - i.e. the migration rate to Quebec from the rest of Canada for native-born individuals with the restricted range of characteristics described in the preceding section. Each row in column 9 indicates the actual number of native-born migrants in Quebec from the rest of the country in the indexed census year(column 2) having the combination of individual characteristics(columns 3 to 8) corresponding to that row.<sup>4</sup> A migrant is defined as an individual who resided in Quebec on the respective census date - i.e. 1971 or 1981 - but had resided in a different province five years earlier - i.e. 1966 or 1976. This definition was derived from the 1971 and 1981 census definitions of migration status which were comparable. It may be noted that the aggregation of individual migrants according to each unique combination of the individual characteristics variables rests on the assumption that all migrants within each combination of categories are homogeneous and that area conditions effect all individuals within each combination of categories in an identical manner.

Column 10 in Figure 4 indicates Non-Migrants in Canada excluding Quebec. Again, based on the 1971 and 1981 census definitions of migration status, non-migrants are defined as individuals who resided in the same province(outside Quebec) on the respective census date - i.e. 1971 or 1981 - as they had resided in five years earlier - i.e. 1966 or 1976. It may be noted that this definition excludes individuals who may have migrated between provinces other than Quebec during each period. The data for 1971 non-migrants exclude individuals who resided in Prince Edward Island, the Yukon and NorthWest Territories as these areas of the country did not meet the Public Use Sample Tape's minimum population criterion of 250,000 persons. These areas were, however, included in the 1981 data on non-migrants. Each row in column 10 indicates the actual number of non-migrants in the indexed census year having the combination of individual characteristics corresponding to that row, with the exceptions of mother tongue and ethnicity. All census categories of these two individual characteristics were included in the computation of non-migrants. In addition, both native and foreign-born

<sup>4</sup> A value of .01 was used if number of migrants was zero for a particular combination of individual characteristics.

persons were included. Non-migrants were used in order to: (1) derive denominators to compute the migration rate and (2) compute origin and destination structural variables.

Column 11 in Figure 4 indicates the migration rate which was computed as follows:  $(\text{Number of Migrants}(\text{column 9}) / (\text{Number of Migrants}(\text{column 9}) + (\text{Number of Non-Migrants}(\text{column 10})))$ . Each row in column 11 contains the migration rate for its particular combination of individual characteristics and indexed census year.

Columns 12 to 17 in Figure 4 indicate origin characteristics for the Structural (Ecological) level effects hypotheses. These were computed on the basis of non-migrants, as defined above.

Origin characteristics are: Average Total Family Income(CanInc:column 12); Percent Unemployed of the Total Labor Force(CanUnemp:column 13); Percentage of French Origin(CanFren:column 14); Percentage of British Origin(CanBrit:column 15); Percentage with French Mother Tongue(CanFrMT:column 16); and Percentage with English Mother Tongue(CanEngMT:column 17).

The average total family income was computed for each combination of non-migrants by taking the midpoint of income categories chosen so that 1971 and 1981 categories would be consistent. There were 17 categories: (1) no income=0; (2) 1 to 999=500; (3) 1000 to 1999=1499.5; (4) 2000 to 2999=2499.5; (5) 3000 to 3999=3499.5; (6) 4000 to 4999=4499.5; (7) 5000 to 5999=5499.5; (8) 6000 to 6999=6499.5; (9) 7000 to 7999=7499.5; (10) 8000 to 8999=8499.5; (11) 9000 to 9999=9499.5; (12) 10000 to 11999=10999.5; (13) 12000 to 14999=13499.5; (14) 15000 to 19999=17499.5; (15) 20000 to 24999=22499.5; (16) 25000 to 49999=37499.5; and (17) 50000+ = 50000. Since the last category was open-ended for both 1971 and 1981 data, the lower limit was used as the value of the category.

Percent unemployed of the total labor force, percentage of French origin, percentage of British origin, percentage of French mother tongue and percentage of English mother tongue were also all computed for each combination of non-migrants in the area of origin - i.e. Canada excluding Quebec. Percent unemployed of the total labor force was based on the non-inmate population classified as being in the labor force. Percentage of French origin and

percentage of British origin were based on persons of all ethnic origins while percentage of French mother tongue and percentage of English mother tongue were based on persons of all mother tongues.

Columns 18 to 23 in Figure 4 indicate the corresponding destination (i.e. Quebec) characteristics: Average Total Family Income(QueInc:column 18); Percent Unemployed of the Total Labor Force(QueUnemp:column 19); Percentage of French Origin(QueFren:column 20); Percentage of British Origin(QueBrit:column 21); Percentage of French Mother Tongue(QueFrMT:column 22); and Percentage of English Mother Tongue(QueEngMT:column 23). The computation of destination characteristics was identical to that of origin characteristics.

Appendix One contains a copy of the completed data file.

### C. METHODOLOGY

Individual Characteristics variables were recoded for the regression analysis. Mother Tongue, Ethnicity, Sex and Occupation were all recoded into dummy variables as follows: Mother Tongue was coded 0 for English and 1 for French; Ethnicity was coded 0 for British and 1 for French; Sex was coded 0 for Male and 1 for Female; and Occupation was coded 0 for Non-Professional and 1 for Professional. Education was retained as a linear variable but recoded 0 for Primary, 1 for Secondary and 2 for Post-Secondary. Age was transformed from its linear form into the two dummy variables Age1 and Age2. Age1 was coded 1 for the 20 to 29 age group and 0 otherwise. Age2 was coded 1 for the 30 to 64 age group and 0 otherwise. By this transformation, the reference category for both Age1 and Age2 was the 65+ age group. Thus, Age1 provided the effect of the 20 to 29 age group while Age2 provided the effect of the 30 to 64 age group, both in comparison to the 65+ age category. A final transformation involved the computation of a Minority Group Status variable(MGS). This was computed as a multiplicative term formed from ethnicity x education. It may be noted that a limitation with this operationalization of the MGS variable is that the presence of social psychological insecurities must be assumed and are not directly measured. All Structural

variables were retained in their interval-level form.

Figures 5 to 7 provide further specifications of the conceptual model and hypotheses. The complete structural equation for the regression analysis is illustrated by Figure 8.

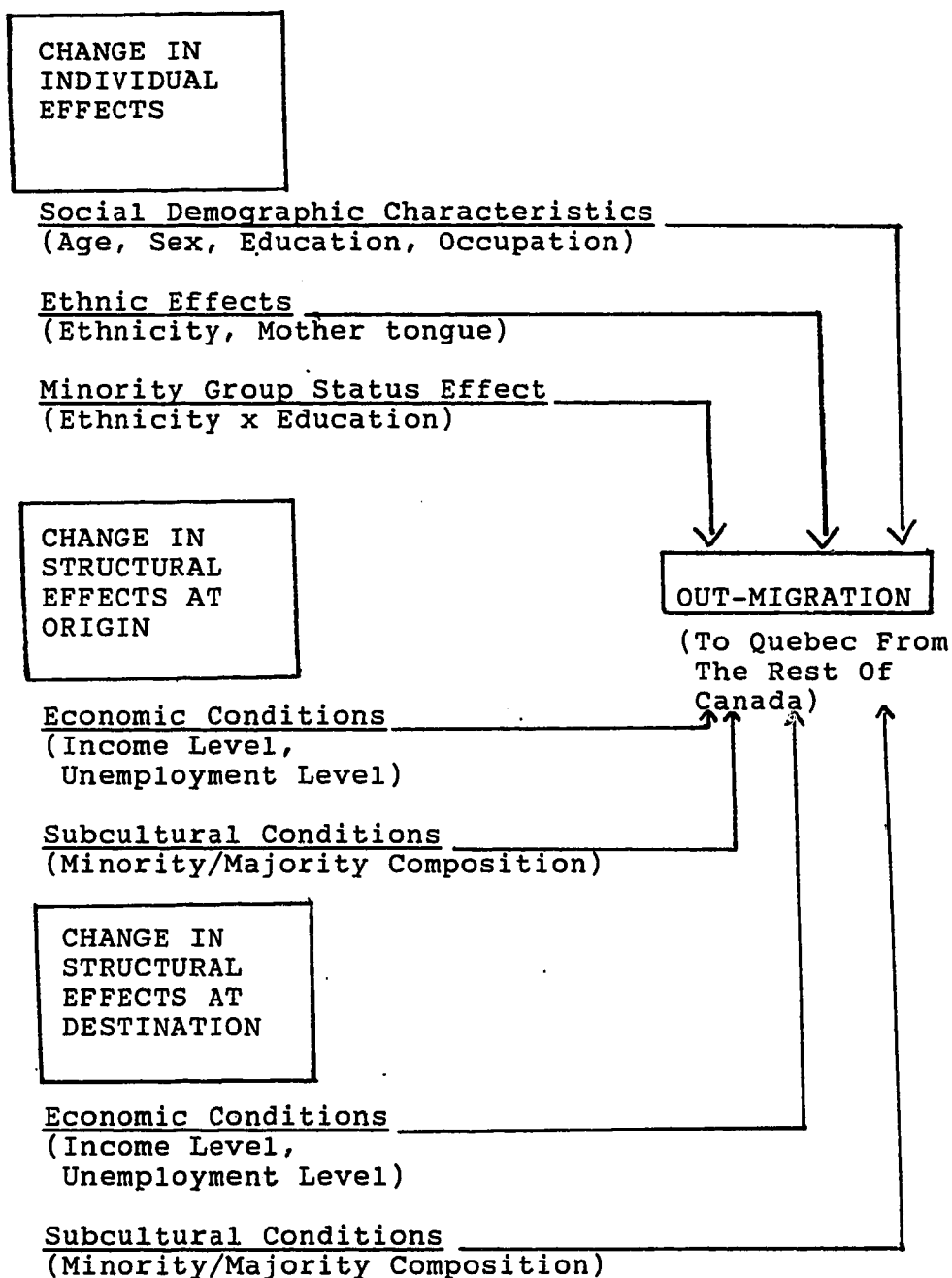


FIGURE 5: FURTHER SPECIFICATION OF THE CONCEPTUAL MODEL

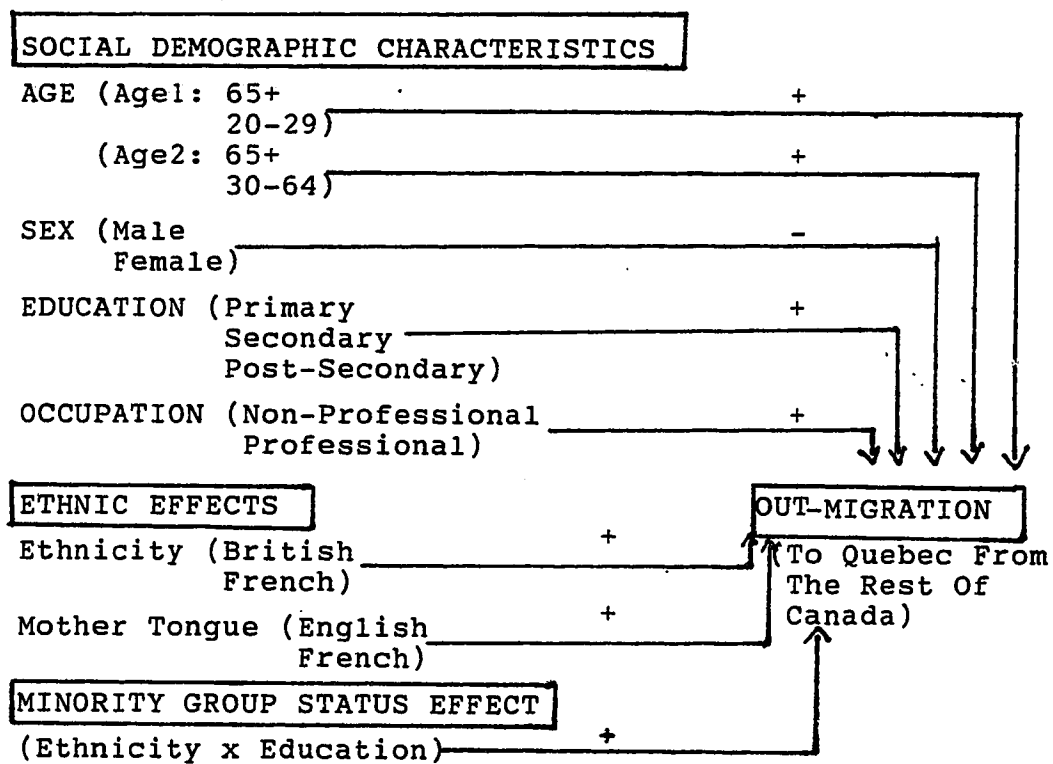


FIGURE 6: INDIVIDUAL EFFECTS



ORIGIN EFFECTS

Economic Conditions

Income Level (Family Income) -

Unemployment Level (% Unemployed) +

Subcultural Conditions

Minority/Majority

Composition (%French) -

(%British) +

(%French Mother Tongue) -

(%English Mother Tongue) +

OUT-Migration

(To Quebec From  
The Rest Of Canada)

DESTINATION EFFECTS

Economic Conditions

Income Level (Family Income) +

Unemployment Level (% Unemployed) -

Subcultural Conditions

Minority/Majority

Composition (%French) +

(%British) -

(%French Mother Tongue) +

(%English Mother Tongue) -

FIGURE 7: STRUCTURAL EFFECTS

$$\begin{array}{l}
 \text{(OUT-} \\
 \text{MIGRATION} \\
 \text{TO QUEBEC)}
 \end{array}
 =
 \alpha
 +
 \underbrace{\sum_{i=1}^I \beta_i}_{\text{Individual Effects}}
 +
 \underbrace{\sum_{j=1}^J \beta_j}_{\text{Origin Effects}}
 +
 \underbrace{\sum_{k=1}^K \beta_k}_{\text{Destination Effects}}
 +
 \epsilon$$

FIGURE 8: STRUCTURAL EQUATION

The equation was first evaluated with the Individual Characteristics variables alone and then evaluated in its complete form, i.e. with the Origin and Destination Characteristics variables included as well. This procedure was performed for both census periods.

Since the distributions of the migration rate for both 1971 and 1981 were skewed, the natural logarithm of the dependent variable was taken, resulting in more normal distributions. It was also discovered that the relationship between migration and some of the predictors were curvilinear. The log transformation helped to produce a more linear relationship.

The data for both time periods were weighted by the square root of the sum of migrants to Quebec and non-migrants in the rest of the country. The purpose of using a weighted regression procedure was to make the data satisfy one of the assumptions underlying regression analysis - i.e. homoskedasticity or constant variance of the error term.

Separate weighted equations using the natural logarithm of the dependent variable were also regressed for each ethnic group. For 1971, the equation for the British group did not require any transformations of the independent variables. For the French group, however, the independent destination variable Percentage of the Population with English Mother Tongue (QueEngMT) was transformed into its natural logarithm. For 1981, log transformations of any of the independent variables were unnecessary for both the British and French groups. It was, however, necessary to retain Age as a single linear variable coded (0 for ages 20 to 29, 1 for ages 30 to 64 and 2 for ages 65+ for the British group only in order to eliminate collinearity - i.e. the standardized Beta for Age1 in the British equation exceeded the absolute value of 1.

The Ethnic Effect variable Mother Tongue and a modified Minority Group Status variable were retained in the separate equations for the British and French ethnic groups. The Minority Group Status variable was computed with mother tongue in place of ethnic origin resulting in a multiplicative term formed from mother tongue x education. Variability in mother tongue for the two ethnic groups analyzed separately was considered as being possible as a result of intermarriage between the two groups. Within the British ethnic group, an individual with French mother tongue would be the offspring of an intermarriage between a British male and a French female whose first learned language still understood was French. Within the French ethnic group, an individual with English mother tongue would be the offspring of an intermarriage between a French male and a British (or Other) female whose first learned language still understood was English.<sup>5</sup> British ethnic origin persons with English mother tongue and French ethnic origin persons with French mother tongue would be offspring from an unmixed marriage or a mixed marriage in which the male was, respectively, British and French and in which linguistic identification was with the same group such that the offspring's first learned language still understood was, respectively, English and French. The inclusion of the Mother Tongue and Minority Group Status variables in the equations for the two ethnic groups considered separately made it possible to determine if a differential within each ethnic group between members having an objectively defined (i.e. mother tongue) identification with the other group and members having no such identification, existed.

Appendix Two provides a more detailed discussion of the procedures described in this section. The following chapter presents and discusses the results of the regression analysis.

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<sup>5</sup> It may be noted that although there was a change in the census definition of ethnic origin between 1971 and 1981 from paternal ancestry to respondent's perception of his/her own ethnic background, it was assumed that in 1981, most people probably responded to the ethnic origin question in the same way as they did in 1971. The consistent pattern of effects for the mother tongue variable over the census periods suggests that this was a valid assumption.

# Chapter III

## RESULTS AND DISCUSSION

### A. THE MIGRATION RATES

As indicated by Table 1, there was a difference in favor of the French ethnic group in the migration of the two charter groups to Quebec from the rest of the country during both periods examined in this study. Furthermore, the difference in favor of the French group widened between 1971 and 1981.

Table 1: Out-Migration Rates To Quebec<sup>1</sup>

	1971	1981	% Change 1971-1981
British and French	.0017	.0011	-35.29
British Only	.0016	.0008	-50.00
French Only	.0019	.0015	-21.05

1.  $\text{Rate} = (\text{Total Migrants}) / ((\text{Total Migrants}) + (\text{Total Non-Migrants}))$

During the period 1966 to 1971, the average migration rate for the British and the French groups combined was .0017 while that for the 1976 to 1981 time period was .0011, representing a decrease of about 35 percent. The average rate for the British group only decreased by fifty percent from .0016 during the earlier period to .0008 during the later period. For the French group considered separately, the decline in the average migration rate was considerably less. But nevertheless, there was also a decline of about 21 percent from .0019 during 1966 to 1971 to .0015 during 1976 to 1981.

Thus, while the propensity of both ethnic groups to migrate to Quebec declined over the time periods examined, the decline for the British group was relatively greater. As a result, the difference in migration rates between the two groups widened over the time periods examined.

It would appear that with the recent increased modernization of Quebec, the province has indeed held more attraction for the French ethnic group than for the British ethnic group and that this differential attraction has been growing. It may be speculated that the increasing

need (particularly after 1976) to adjust to a sociocultural milieu defined by the collective right of Quebec's French majority has presented the British group with real barriers to migration, barriers which it has been unable or unwilling to overcome. The deterioration in Quebec's economy following the 1976 victory of the Parti Quebecois may also have played a role for the British group during the later period. The data also suggest that the changes which took place in Quebec during the later period have deterred the French group as well, albeit to a lesser extent, from migrating to the province. Whether this represents a reaction by the French minorities against Quebec's position on their fate or simply a recognition of the deterioration in the province's economy caused by the outflux of business from Quebec during the later period is not possible to determine at this point in the analysis.

## **B. MULTIPLE REGRESSION**

### **Descriptive Statistics**

As suggested by the preceding discussion, the mean value of the dependent variable was quite small for both time periods but was greater for the 1966 to 1971 interval(.003) than for the 1976 to 1981 interval(.001) (see Table 2). The combined migration rate of the British and French groups to Quebec also deviated more, on average, about the mean value during the earlier period(.011) than the latter(.002). On average, 3 persons out of 1000 moved to Quebec from the rest of the country during the earlier period. During the later period, the migration rate of the two charter groups to Quebec from the rest of the country declined so that, on average, 1 out of 1000 persons made such a move.

The mean values and standard deviations of the Individual Characteristics variables reflect the coding of the variables and the structure of the data. Mother tongue, ethnicity, sex and occupation were all coded as dummy variables indexed 0 and 1. In the data structure half the "cases" (aggregated data) for each census period for these variables were categorized as 0 and the other half as 1, resulting in a mean value of .500 for each variable (the mean value of

Table 2: Descriptive Statistics<sup>1</sup> (British and French Groups)

Variable	1971 Mean	1971 Std. Dev.	1981 Mean	1981 Std. Dev.
Migrate	.003	.011	.001	.002
Age1	.353	.480	.333	.473
Age2	.353	.480	.333	.473
Sex	.471	.501	.500	.502
Educ	1.000	.807	1.000	.819
Occ	.500	.502	.500	.502
Eth	.500	.502	.500	.502
MT	.500	.502	.500	.502
MGS	.500	.760	.500	.766
CanInc	12849.709	3778.850	28650.380	5426.526
CanUnemp	4.579	3.634	6.072	4.639
CanFren	7.435	5.224	7.050	3.823
CanBrit	61.759	12.811	53.069	14.605
CanFrMT	5.029	3.850	4.997	2.666
CanEngMT	76.859	12.026	74.331	13.493
QueInc	13020.763	4368.259	29647.634	4191.798
QueUnemp	5.771	5.705	7.311	5.937
QueFren	70.918	17.776	71.633	19.859
QueBrit	17.865	16.830	10.608	8.825
QueFrMT	73.585	18.183	73.325	20.184
QueEngMT	20.718	17.776	15.128	12.381
N of Cases	136		144	

1. Migrate is the migration rate to Quebec from the rest of Canada. Age1 is age coded as a dummy variable(0 for 65+ and 1 for 20 to 29). Age2 is age coded as a dummy variable(0 for 65+ and 1 for 30 to 64). Sex is sex coded as a dummy variable( 0 for Male and 1 for Female). Educ is education coded as a linear variable(0 for Primary, 1 for Secondary and 2 for Post-Secondary). Occ is occupation coded as a dummy variable(0 for Non-Professional and 1 for Professional). Eth is ethnicity coded as a dummy variable(0 for British and 1 for French). MT is mother tongue coded as a dummy variable(0 for English and 1 for French). MGS is minority group status coded as a multiplicative variable(Eth x Educ). The variables beginning with "Can" refer to Canada excluding Quebec while those beginning with "Que" refer to Quebec only. CanInc and QueInc are average total family income. CanUnemp and QueUnemp are percentage unemployed of the total labor force. CanFren and QueFren are percentage of the population of French ethnic origin. CanBrit and QueBrit are percentage of the population of British ethnic origin. CanFrMT and QueFrMT are percentage of the population with French mother tongue. CanEngMT and QueEngMT are percentage of the population with English mother tongue.

sex in 1971 is slightly lower due to eight missing cases).<sup>6</sup> Age was initially collapsed into a linear variable taking on the three values 1, 2, 3 and subsequently transformed into two dummy variables taking on the values 0 and 1. Consequently the mean value for both Age1 and Age2 is 0.333(1971 values are slightly higher due to the missing cases). Education was also collapsed into a linear variable which was subsequently coded 0, 1 and 2, resulting in a mean value of 1. MGS was computed as the product of ethnicity and education, resulting in a mean value of .500.

The mean values and standard deviations of the Origin and Destination Characteristics variables could be more meaningfully interpreted as these were all interval level variables. Looking first at the origin and destination characteristics for 1971, the mean of CanInc was slightly lower(12,849.7) than that of QueInc(13,020.8). The origin income variable also deviated less(3778.9), on average, from its mean value than the destination income variable(4368.3) from its mean value. The mean for CanUnemp(4.6) was less than the mean for QueUnemp(5.8). The standard deviation of the origin unemployment variable(3.6) was also less than that of the destination unemployment variable(5.7). The comparative mean values of the ethnic origin and mother tongue variables for the areas of origin and destination were rather as expected, given the pattern of regional dispersion of the two charter groups within the country as a whole. The mean of CanFren was 7.4 in comparison to 70.9 for QueFren while the mean of CanBrit was 61.8 in comparison to 17.9 for QueBrit. Both of the destination ethnic origin variables had greater deviation, on average, than the origin variables. The mean of CanFrMT was 5.0 in comparison to 73.6 for QueFrMT while the mean of CanEngMT was 76.9 in comparison to 20.7 for QueEngMT. Again, both the destination mother tongue variables had a greater standard deviation than the origin variables.

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<sup>6</sup> See Appendix One. For 1971, there were no data for non-migrants in Quebec with the combination of individual characteristics Female, Age 65+, Primary Education and Professional (lines 125 to 128) and for non-migrants in Canada excluding Quebec with the combination of individual characteristics Female, Age 65+, Post-Secondary Education and Non-Professional (lines 137 to 140). Structural level variables could not be computed and these eight "cases" or lines of data were treated as missing by the SPSSX program.

The mean values and standard deviations for 1981 origin and destination characteristics variables had a similar pattern. Again, the mean of CanInc was slightly lower(28,650.4) than that of QueInc(29,647.6). However, the origin income variable had a larger standard deviation(5426.5) than the destination income variable(4191.8). CanUnemp had a mean value of 6.1 and a standard deviation of 4.6 which were both lower than the corresponding values for QueUnemp, 7.3 and 5.9, respectively. The mean of CanFren was 7.1 in comparison to 71.6 for QueFren and the mean of CanBrit was 53.1 in comparison to 10.6 for QueBrit. The standard deviation of the French origin variables was considerably smaller for the area of origin than for the area of destination while the reverse situation held for the British origin origin-destination variables. The mean of CanFrMT was 5.0 in comparison to 73.3 for QueFrMT and the mean of CanEngMT was 74.3 in comparison to 15.1 for QueEngMT. Again, the standard deviation of the French mother tongue variables was considerably smaller for the area of origin than for the area of destination while the standard deviation for the English mother tongue variables was slightly larger for the area of origin than the area of destination.

A comparison of 1971 and 1981 origin-destination characteristics variables indicates that the mean income and mean unemployment levels in both areas were higher in 1981 than in 1971. The mean values of both French and British ethnic origin and French and English mother tongue decreased in the area of origin in 1981 in comparison to their 1971 values. For Quebec, however, only the British ethnic origin and English mother tongue values showed a decrease in their mean values over the time periods measured. The mean value of French ethnic origin increased slightly while that for French mother tongue stayed about the same in 1981 in comparison to 1971.

These trends in the destination ethnic and linguistic compositional means are consistent with the evidence indicating that the migration rate of both charter groups to the province declined between census periods. They also suggest what has been indicated elsewhere, i.e. that many Anglophones chose to leave Quebec during the later period (Joy, 1978).



### Bivariate Correlations

The magnitudes of the bivariate correlations between the dependent variable, the natural logarithm of the migration rate to Quebec, and the independent variables, the individual, origin and destination characteristics, were all relatively small (see Table 3). For 1971 data, the correlations ranged between .000(for mother tongue) and .157(for age1), with remaining correlations falling within this range. For 1981 data, the correlations ranged between .022(for mother tongue) and .282(for education). Again, remaining correlations fell within this range.

Table 3: Bivariate Correlations<sup>1</sup>

Variable	1971 ln(Migrate)	1981 ln(Migrate)
Age1	.157	.254
Age2	-.049	-.170
Sex	-.022	.075
Educ	.146	.282
Occ	.100	.050
Eth	.122	.168
MT	.000	.022
MGS	.097	.190
CanInc	.150	.128
CanUnemp	-.076	.138
CanFren	-.008	-.033
CanBrit	.013	-.037
CanFrMT	-.087	-.096
CanEngMT	.103	.168
QueInc	.125	.139
QueUnemp	-.045	.150
QueFren	.058	.088
QueBrit	-.014	-.057
QueFrMT	.052	.113
ln(QueEngMT)	-.015	---
QueEngMT	----	-.062

1. See Appendix Three for complete correlation matrix.

Note: "----" means not applicable.

### Individual Level Variables

Amongst the social demographic variables, the association with age1 was positive in both 1971(.157) and 1981(.254) indicating that, as predicted, the 20 to 29 age group was more likely to migrate to Quebec than the 65+ age group. The association with age2, on the other hand, was negative in both 1971(-.049) and 1981(-.170) indicating that, in contrast to expectations, the 65+ age group was more likely to migrate to Quebec than the 30 to 64 age group. The correlation with sex was negative in 1971(-.022) indicating that, as predicted, males were more likely to migrate to Quebec than females. In 1981, however, the association with sex reversed direction(.075). During the later period, females rather than males were more likely to migrate to Quebec. The association with education was positive, as predicted, in both 1971(.146) and 1981(.282). The likelihood of migrating to Quebec was directly associated with level of educational attainment. The correlation for occupation was also positive, as predicted, in both 1971(.100) and 1981(.050) indicating that professionals were more likely to migrate to Quebec than non-professionals.

Amongst the ethnic characteristics variables, ethnicity was positively correlated with the migration rate to Quebec, as predicted, in both 1971(.122) and 1981(.168). French origin persons were more likely to migrate to Quebec than persons of British origin. While the association with mother tongue was zero in 1971, in 1981 it was of a positive magnitude(.022), as predicted, indicating that during the later period, persons with French mother tongue were more likely to migrate to Quebec than persons with English mother tongue.

The final individual level variable, minority group status, was also positively associated with the migration rate to Quebec, as predicted, in both 1971(.097) and 1981(.190). At higher levels of educational attainment, persons of French origin were more likely to migrate to Quebec than persons of British origin.

### Structural Level Variables

Among the economic variables, origin income level was positively associated with the migration rate to Quebec in both 1971(.150) and 1981(.128). This indicates that migration to Quebec increased with increasing income level in the area of origin. It was predicted that the direction of association would be negative or, that migration to Quebec would decrease with increasing origin income level. Destination income level was also positively associated with the migration rate in both 1971(.125) and 1981(.139). This was, however, in the predicted direction and indicated that migration to Quebec increased with increasing income level in Quebec. Origin unemployment level was negatively associated with the migration rate in 1971(-.076), indicating that migration to Quebec decreased with rising unemployment level in the area of origin. This was opposite to the direction predicted. In 1981, however, the direction of association was positive(.128), as predicted, indicating that during the later period, migration to Quebec increased with rising origin unemployment level. The association with destination unemployment level was also negative in 1971(-.045) and positive in 1981(.150). For the earlier period, the direction of association was as predicted indicating that migration to Quebec decreased with rising Quebec unemployment level. For the later period, however, the association indicated that migration to Quebec increased with rising Quebec unemployment level, which was opposite to that predicted.

Among the subcultural variables, the associations with the percentage of the population of French origin and with French mother tongue in the area of origin were in the directions predicted in both 1971 and 1981. Migration to Quebec decreased with increasing percentage of the population of French origin and with French mother tongue, in the origin, during both time periods. The association with the percentage of the population of British origin in the area of origin was positive in 1971, as predicted, but reversed direction in 1981 to become negative. Thus for the earlier period, migration to Quebec increased with increasing percentage of the population of British origin in the origin but for the later period, it decreased. The association with percentage of the

population with English mother tongue in the area of origin was positive in both 1971 and 1981, as predicted. Migration to Quebec increased with increasing percentage of the population with English mother tongue in the area of origin during both time periods. The associations with the destination ethnic and linguistic compositional variables were all in the predicted directions for both 1971 and 1981. Migration to Quebec increased with increasing percentage of the population of French origin and with French mother tongue in Quebec and decreased with increasing percentage of the population of British origin and with English mother tongue in Quebec in both 1971 and 1981.

#### **Individual Level Effects: 1966 to 1971**

Individual characteristics variables explained 9.20 percent of the variance in the combined migration rate of the two charter groups during the 1966 to 1971 time period. All individual level variables with the exception of mother tongue were statistically significant (see Table 4).

#### **Social Demographic Characteristics**

##### **Age**

Migration of the two charter groups to Quebec from the rest of the country was typical of migration generally in that migrants were characterized by being young. This result conformed with research findings that the young tend to be more migratory, on average, than the elderly due to greater adaptability and weaker social and economic ties in the area of origin. Age1 operated as the strongest influence in the model of individual level effects. The combined migration rate of the two charter groups increased by 1.647 percent for individuals aged 20 to 29 in comparison to those aged 65+, controlling for other variables. The effect of age2 was considerably weaker. It operated as the fourth strongest influence in the model. This is, however, consistent with migration research which indicates that persons in their late teens, twenties and early thirties are more migratory, on average, than persons in other age

Table 4: Individual Level Effects For 1971 (British and French Groups)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	R <sup>2</sup> adj.	Wtd. N
Age1	1.647	.142	.330	11.608	.0000*	9.20	8.99	3484
Age2	1.099	.134	.230	8.180	.0000*			
Sex	-.218	.079	-.045	-2.773	.0028*			
Educ	.722	.078	.219	9.255	.0000*			
Occ	.332	.087	.065	3.833	.0001*			
Eth	1.367	.129	.289	10.579	.0000*			
MT	.002	.077	4.873x10-4	.030	.4880			
MGS	-.808	.107	-.240	-7.573	.0000*			
Constant	-10.061	.152		-66.126	.0000*			

\*  $p \leq .01$

groups. The migration rate of the two charter groups increased by 1.099 percent for individuals aged 30 to 64 in comparison to those aged 65+, controlling for other effects.

#### Socioeconomic Status

The socioeconomic variables were relatively weak influences in the model. Education operated as the fifth strongest influence while occupation operated as the sixth strongest influence. The hypothesized relationships were, however, supported. The propensity of both charter groups to migrate to Quebec varied directly with level of educational attainment and professionals were more likely to migrate to Quebec than non-professionals. The combined migration rate increased by .722 percent for a unit increase in level of educational attainment, controlling for other variables, while the percentage increase for professionals in comparison to non-professionals was .332, net of other effects. Thus the migration of the two charter groups to Quebec from the rest of the country was influenced, albeit relatively weakly, by socioeconomic considerations.

#### Gender

Gender differences were significant to the migration behavior of the two charter groups. The combined migration rate decreased by .218 percent for females in comparison to males, controlling for other variables in the model. It appears that the prospect of moving to Quebec from the rest of the country during the earlier period dissuaded female members of the two charter groups more than males. The relative strength of this variable in the model, was, however, extremely weak. It operated as the weakest influence among the statistically significant variables.

#### Ethnic Effects

The significance of the ethnic factor to the migration process found in migration research was also apparent in the migration behavior of the two charter groups. Ethnic origin was the second strongest influence in the model of individual level effects and as

hypothesized, persons of French ethnic origin were more likely to migrate to Quebec from the rest of the country than persons of British ethnic origin. The combined migration rate increased by 1.367 percent for individuals of French ethnic origin in comparison to individuals of British ethnic origin, controlling for other variables. The effect of mother tongue, however, was not statistically significant. This suggests that while ethnic factors, in general, were extremely important to the migration behavior of the two charter groups, language was not a significant separate influence during the earlier period.

#### The Minority Group Status Effect

The statistical interaction of the socioeconomic variable education with ethnic origin was statistically significant in explaining the migration behavior of the two charter groups. The minority group status variable operated as the third strongest influence in the model of individual level effects. The hypothesis for this variable was not, however, supported. At higher levels of education, persons of French ethnic origin were less likely to migrate to Quebec than persons of British ethnic origin. The migration rate decreased by .808 percent, at higher levels of educational attainment, for French ethnic origin persons in comparison to those of British ethnic origin controlling for other variables.

The hypothesized minority group status effect was thus not evident in the migration behavior of the two charter groups during the 1966 to 1971 period. It appears, instead, that the statistical interaction between ethnic origin and educational attainment resulted from the two groups' relative levels of educational attainment, orientations towards education and the local shortage of educated personnel for Quebec's private sector prevalent during that time. With generally higher and more technically orientated levels of educational attainment than the French ethnic group, members of the British ethnic group were more likely to be able to fill Quebec's private sector manpower shortage and thus more likely to migrate to Quebec.

### The British Group

Individual characteristics variables explained 51.69 percent of the variance in the British rate, considerably more than in the combined rate (see Table 4a). All variables were statistically significant.

Table 4a: Individual Level Effects For 1971 (British Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	R <sup>2</sup> adj.	Wtd. N
Age1	1.060	.148	.210	7.139	.0000*	51.69	51.49	1742
Age2	.786	.141	.163	5.589	.0000*			
Sex	-.197	.082	-.040	-2.397	.0084*			
Educ	1.464	.082	.438	17.944	.0000*			
Occ	.294	.091	.057	3.243	.0006*			
MT	-1.620	.135	-.338	-11.979	.0000*			
MGS	-1.390	.112	-.408	-12.450	.0000*			
Constant	-8.916	.154		-57.883	.0000*			

\*  $p \leq .01$

Socioeconomic considerations were paramount in the migration behavior of the British group. Education operated as the strongest influence. The migration rate varied directly with level of educational attainment, increasing 1.464 percent for a unit increase in educational level, controlling for other effects in the model.

The minority group status variable operated as the second strongest influence for the British ethnic group considered separately. However, there was again no evidence for the hypothesized minority group status effect using the mother tongue variable. At higher levels of educational attainment, the migration rate of British ethnic origin persons with French mother tongue decreased by 1.390 percent in comparison to British ethnic origin persons with English mother tongue. Thus even within the British ethnic group, individuals who had an objectively defined identification (i.e. mother tongue) with the French ethnic group were, at higher levels of educational attainment, less rather than more likely to migrate to Quebec. It may be speculated that educational differences and disparities between the two groups again explained this effect or that at higher levels of educational attainment, British ethnic origin persons with French mother tongue in fact,



identified more with the British ethnic group than the French ethnic group, despite their French mother tongue, and that their subjective identification made them more likely to choose to remain outside of Quebec than British ethnic origin persons with English mother tongue who did not experience such ambivalence about their ethnic identification.

Mother tongue operated as the third strongest influence for the British ethnic group considered separately but in contrast to what would be expected, British ethnic origin persons with French mother tongue were less likely to migrate to Quebec than British ethnic origin persons with English mother tongue. The migration rate decreased by 1.620 percent for British ethnic origin persons with French mother tongue in comparison to British ethnic origin persons with English mother tongue, net of other effects. This result suggests that amongst British ethnic persons in general, individuals who were also identified with the French group, from an objective viewpoint, in fact identified more with the British group than the French group and were, as a result, more likely to choose to remain outside of Quebec than individuals who were not identified with the French group.

The social demographic characteristics age1, age2, occupation and sex, in the same order, operated as weaker influences. The hypothesized relationships between the migration rate and these variables all held. British migrants in Quebec tended to be relatively young, in professional occupations and male. Controlling for all other variables in each case, the migration rate increased 1.060 percent for the 20 to 29 age group in comparison to the 65+ age category, .786 percent for the 30 to 64 age group in comparison to the 65+ age category, .294 percent for professionals in comparison to non-professionals and decreased .197 percent for females in comparison to males.

### The French Group

Individual characteristics also explained considerably more variance in the migration rate of the French ethnic group than in the analysis of the combined migration

rate(51.00 percent). Again, all variables were statistically significant (see Table 4b).

Table 4b: Individual Level Effects For 1971 (French Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	R <sup>2</sup> adj.	Wtd. N
Age1	2.228	.143	.460	15.549	.0000*	51.00	50.81	1742
Age2	1.411	.136	.304	10.397	.0000*			
Sex	-.240	.080	-.051	-3.013	.0013*			
Educ	-.476	.079	-.148	-6.031	.0000*			
Occ	.367	.088	.074	4.194	.0000*			
MT	2.315	.131	.503	17.730	.0000*			
MGS	.683	.108	.209	6.336	.0000*			
Constant	-10.181	.149		-68.437	.0000*			

\*  $p \leq .01$

Cultural considerations were paramount in the migration behavior of the French group. Mother tongue operated as the strongest influence and as would be expected, French ethnic origin persons with French mother tongue were more likely to migrate to Quebec than French ethnic origin persons with English mother tongue. The migration rate increased by 2.315 percent for French ethnic origin persons with French mother tongue in comparison to French ethnic origin persons with English mother tongue, controlling for other variables in the model. Thus for the French ethnic group, there was also a significant migration difference between individuals having French or English mother tongue. The difference suggests that within the French ethnic group, individuals who, from an objective viewpoint, may have had some identification with the British group in fact identified more with the British group and were, as a result, less likely to migrate to Quebec than individuals who appeared to identify completely with the French group.

The social demographic characteristics age1 and age2 operated as the second and third, respectively, strongest influences. The younger age categories were more likely to migrate to Quebec than the older age category. The migration rate increased by 2.228 percent for the 20 to 29 age group in comparison to the 65+ age category, controlling for other variables while the percentage increase for the 30 to 64 age group in comparison to the 65+ age category was 1.411, controlling for other variables.

The fourth strongest influence in the separate model for the French ethnic group was exerted by the minority group status variable. There was again no evidence for the hypothesized minority group status effect despite the result that, at higher levels of educational attainment, the migration rate of persons of French ethnic origin with French mother tongue increased .683 percent in comparison to persons of French ethnic origin with English mother tongue, controlling for other variables. The result for the mother tongue variable indicated that within the French ethnic group, this difference between individuals having French or English mother tongue occurred regardless of educational attainment. This result suggests, therefore, that relatively well-educated French origin persons who had maintained cultural traditions, as measured by mother tongue, were more likely to move to Quebec where such traditions could be more fully accommodated in all spheres of activity than relatively well-educated French origin persons who identified with, and had assimilated into, the broader Canadian society, as measured by mother tongue.

Socioeconomic considerations were relatively weak influences for the French group. Education and occupation operated as the fifth and sixth, respectively, strongest influences. Furthermore, the migration rate of French ethnic origin persons was inversely, rather than directly, related to level of educational attainment. Controlling for other effects, the migration rate decreased .476 percent for a unit increase in educational level. However, the migration rate did vary directly with occupational level, as hypothesized. Controlling for other variables, the migration rate increased .367 percent for professionals in comparison to non-professionals.

Sex was also the weakest influence in the model for the French ethnic group and as hypothesized, the migration rate decreased by .240 percent for females in comparison to males, controlling for other variables. Thus the migration of the French ethnic group to Quebec from the rest of the country was also characterized by male predominance during the earlier period.

### Individual Level Effects: 1976 to 1981

Individual characteristics variables explained about two times the variance in the combined migration rate during the later period (18.62 percent) than during the earlier period. All individual level effects with the exception of occupation were statistically significant (see Table 5).

Table 5: Individual Level Effects For 1981 (British and French Groups)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	R <sup>2</sup> adj.	Wtd. N
Age1	1.746	.118	.312	14.822	.0000*	18.62	18.51	6183
Age2	.575	.112	.107	5.122	.0000*			
Sex	.284	.062	.053	4.606	.0000*			
Educ	1.407	.058	.399	24.111	.0000*			
Occ	-.023	.068	-.004	-.332	.3698			
Eth	2.201	.119	.414	18.425	.0000*			
MT	.119	.061	.022	1.950	.0256**			
MGS	-1.032	.081	-.322	-12.744	.0000*			
Constant	-11.871	.133		-89.247	.0000*			

\*  $p \leq .01$

\*\*  $p \leq .05$

### Social Demographic Characteristics

#### Age

The age-migration relationship operative during the earlier period was evident during the later period as well. The combined migration rate of the two charter groups increased 1.746 percent for the 20 to 29 age group in comparison to the 65+ age category, controlling for other variables, and .575 percent for the 30 to 64 age group in comparison to the 65+ age group, controlling for other variables. The effects of both age variables were, however, weaker in the model as a whole during the later period. The relative strength of age1 decreased considerably while that of age2 decreased slightly.

### Socioeconomic Status

To some extent, socioeconomic considerations operated as stronger influences on the migration behavior of the two charter groups during the later period. The relative strength of education in the model increased considerably and a direct association between the migration rate and level of educational attainment was again evident. Controlling for other variables, the migration rate increased 1.407 percent for a unit increase in educational level. The effect of occupation, however, ceased being statistically significant during the later period.

### Gender

The relative strength of sex in the model increased slightly in comparison to the earlier period. Furthermore, in contrast to the earlier period, the migration rate increased .284 percent for females in comparison to males, controlling for other variables. Thus gender differences prevailed and became slightly stronger during the later period. The reversal in the direction of this variable also suggests some changes in the migration of the two charter groups to Quebec during the later period.

### Ethnic Effects

The relative strength of ethnic factors, in general, increased during the later period. Ethnic origin operated as the strongest influence in the model and as during the earlier period, French ethnic origin persons were more likely to migrate to Quebec from the rest of the country than British ethnic origin persons. The migration rate increased 2.201 percent for French origin persons in comparison to British origin persons, controlling for other variables. In addition, language also became a statistically significant separate influence during the 1976 to 1981 period. Although the relative strength of this effect was weak (it operated as the weakest influence), as would be expected, the migration rate increased .119 percent for individuals with French mother tongue in comparison to individuals with English mother tongue, net of other effects in the equation.

### Minority Group Status Effect

The relative strength of the minority group status variable in the model remained the same as during the earlier period and the hypothesis for this variable was again not supported. At higher levels of educational attainment, the migration rate decreased 1.032 percent for French ethnic origin persons in comparison to British ethnic origin persons. This suggests that while a statistical interaction between education and ethnic origin remained in effect, it also continued to reflect educational differences and disparities between the two groups.

### The British Group

Explained variance for the individual characteristics was again considerably higher (66.07 percent) for the British migration rate than for the combined rate. All variables, with the exception of sex, were statistically significant (see Table 5a).

Table 5a: Individual Level Effects For 1981 (British Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	R <sup>2</sup> adj.	Wtd. N
AgeL	-.886	.046	-.206	-19.359	.0000*	66.07	66.01	3091
Sex	-.015	.055	-.003	-.273	.3926			
Educ	.943	.052	.274	18.117	.0000*			
Occ	.574	.060	.103	9.511	.0000*			
MT	-4.308	.107	-.831	-40.414	.0000*			
MGS	.791	.072	.252	10.994	.0000*			
Constant	-8.042	.089		-90.134	.0000*			

\*  $p \leq .01$

The cultural factor mother tongue became the strongest influence for the British group considered separately during the later period. However, as during the earlier period, the migration rate decreased by 4.308 percent for British ethnic origin persons with French mother tongue in comparison to British ethnic origin persons with English mother tongue, controlling for other variables. Thus the difference evident during the earlier period in which British ethnic origin persons raised in a mixed environment were less likely to migrate to Quebec than British ethnic origin persons without such identification

continued to occur during the later period and in fact, became stronger. This suggests that with the changes in Quebec, during the later period, the identification of British ethnic origin persons with French mother tongue with the British group became stronger.

The relative strength of education decreased slightly while that of occupation remained about the same. Education operated as the second strongest influence while occupation exerted the weakest influence in the model. Both effects were positive. Controlling for all other variables in each case, the migration rate increased by .943 percent for a unit increase in level of educational attainment and .574 percent for professionals in comparison to non-professionals. Thus while the strength of socioeconomic considerations waned slightly, they remained quite strong.

While the strength of the minority group status variable for the British ethnic group considered separately decreased slightly in comparison to the earlier period (it was the third strongest influence during the later period), there was evidence of a minority group status effect within the British ethnic group during the 1976 to 1981 period. At higher levels of educational attainment, the migration rate increased .791 percent for British ethnic origin persons with French mother tongue in comparison to British ethnic origin persons with English mother tongue, net of other effects. This suggests that as a result of the 1976 election of the Parti Quebecois and consequent anti-French backlash in the rest of the country, British ethnic origin individuals with French mother tongue and relatively high educational attainment began to experience social psychological insecurities about their chances of social mobility in the rest of the country due to their French mix and became more, rather than less, likely to migrate to Quebec than relatively well-educated British ethnic origin individuals with English mother tongue.

The relative strength of age in the model remained about the same as during the earlier period. As previously described, age was included as a single linear variable. In this form, age exerted a negative influence on the migration rate. Controlling for other variables, the migration rate decreased .886 percent for a unit increase in age level indicating that the younger age categories remained more likely to migrate to Quebec.

Gender differences in the migration behavior of the British ethnic group ceased being statistically significant during the later period. Males were no longer more likely to migrate to Quebec than females within the British group.

#### The French Group

About 60 percent of the variance in the French migration rate was explained by the individual characteristics variables. This was less than for the British group but considerably more than for the combined rate. All variables with the exception of the minority group status variable were statistically significant (see Table 5b).

Table 5b: Individual Level Effects For 1981 (French Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	R <sup>2</sup> adj.	Wtd N
Age1	2.231	.122	.401	18.291	.0000*	55.94	55.84	3092
Age2	1.151	.116	.216	9.892	.0000*			
Sex	.560	.064	.105	8.768	.0000*			
Educ	.477	.060	.136	7.884	.0000*			
Occ	-.646	.070	-.113	-9.212	.0000*			
MT	3.615	.124	.684	29.230	.0000*			
MGS	-.058	.084	-.018	-.695	.2437			
Constant	-11.933	.134		-88.999	.0000*			

\*  $p \leq .01$

Mother tongue continued to operate as the strongest influence for the French ethnic group. The migration rate increased 3.615 percent for French ethnic origin persons with French mother tongue in comparison to French ethnic origin persons with English mother tongue, controlling for other variables. Thus the greater propensity of French ethnic origin persons who also appeared to have linguistic identification with the French group to migrate to Quebec than French ethnic origin persons who appeared to have linguistic identification with the British group persisted. Both the strength and direction of this relationship remained unchanged from the earlier period.

The relative strengths and directions of both age1 and age2 also remained unchanged from the earlier period. Age1 exerted the second strongest influence in the



model while age2 operated as the third strongest influence in the model. Controlling for other variables in each case, the migration rate increased 2.231 percent for the 20 to 29 age group in comparison to the 65+ age category while the migration rate increased 1.151 percent for the 30 to 64 age group in comparison to the 65+ age group. Again, the hypothesized age-migration relationship was evident.

The socioeconomic variables education and occupation operated as slightly stronger influences during the later period. However, there was a reversal in the direction of both effects. The migration rate was directly related to level of educational attainment but inversely related to the occupation variable. Controlling for all other variables in each case, the migration rate increased .477 percent for a unit increase in educational level but decreased .646 percent for professionals in comparison to non-professionals. The effects of these socioeconomic variables opposed one another for the French ethnic group during both periods analyzed.

Gender differences remained significant in explaining the migration behavior of the French ethnic group and continued to operate as the weakest statistically significant influence. In contrast to the earlier period, females were more likely to migrate to Quebec than males amongst the French group. The migration rate increased .560 percent for females in comparison to males, controlling for other variables.

As previously stated, the minority group status variable ceased being statistically significant during the later period for the French ethnic group. This suggests that with the changes in Quebec during the later period, most, if not all, French ethnic origin migrants to Québec during the 1976 to 1981 period had French mother tongue.

#### **Structural Level Effects: 1966 to 1971**

With the addition of origin and destination structural variables into the regression equation, explained variance for the combined migration rate of the two charter groups increased by 10.12 to 19.32 percent (see Table 6).

Table 6: Individual and Structural Level Effects For 1971 (British and French Groups)

Variable	b	SEb	Beta	t	sig	R <sup>2</sup>	ΔR <sup>2</sup>	R <sup>2</sup> adj.	Wtd. N
Age1	1.335	.453	.268	2.946	.0016*	19.32	10.12	18.85	3484
Age2	1.111	.322	.233	3.448	.0003*				
Sex	-.464	.097	-.096	-4.770	.0000*				
Educ	1.262	.202	.382	6.246	.0000*				
Occ	-.060	.231	-.012	-.261	.3971				
Eth	1.335	.122	.289	11.191	.0000*				
MT	.002	.072	3.340x10 <sup>-4</sup>	.022	.4913				
MGS	-.807	.101	-.240	-8.011	.0000*				
CanInc	2.494x10 <sup>-4</sup>	5.473x10 <sup>-5</sup>	.336	4.557	.0000*				
CanUnemp	-.028	.043	-.035	-.651	.2575				
CanFren	.254	.051	.421	4.983	.0000*				
CanBrit	-.032	.017	-.145	-1.914	.0279**				
CanFrMT	-.540	.054	-.697	-10.031	.0000*				
CanEngMT	-.027	.018	-.136	-1.539	.0620				
QueInc	-7.238x10 <sup>-5</sup>	5.940x10 <sup>-5</sup>	-.100	-1.218	.1116				
QueUnemp	.029	.020	.051	1.467	.0713				
QueFren	.007	.032	.032	.217	.4143				
QueBrit	.105	.017	.354	6.168	.0000*				
QueFrMT	.043	.026	.203	1.654	.0491**				
ln(QueEngMT)	-1.867	.242	-.446	-7.715	.0000*				
Constant	-7.618	1.537		-4.957	.0000*				

\*p ≤ .01

\*\*p ≤ .05

### Economic Conditions

Origin income level was the only statistically significant influence among the origin and destination economic variables. It operated as a fairly strong influence in the model and exerted a positive effect suggesting that the migration of the two charter groups to Quebec from the rest of the country was not the typical response in which migrants moved from low to high income areas but possibly, a response to generally favorable income conditions in the rest of the country which allowed members of the two charter groups with the propensity to migrate to be able to finance the move. The migration rate increased  $2.494 \times 10^{-4}$  percent for a unit increase in origin income level, controlling for other variables.

### Subcultural Conditions

On the whole, subcultural conditions in both the origin and destination were significant in explaining the combined migration behavior of the two charter groups. Overall, they also operated as relatively strong influences.

Among the origin effects, all variables with the exception of Percentage of the Population with English Mother Tongue(CanEngMT) were statistically significant. Percentage of the Population with French Mother Tongue(CanFrMT) exerted the strongest influence in the full model. It operated as a negative influence indicating that the combined migration rate of the two charter groups decreased by .540 percent for a unit increase in CanFrMT, net of other variables. Origin Percentage of the Population of French Ethnic Origin(CanFren) was the third strongest influence in the full model and exerted a positive effect. The combined migration rate increased by .254 percent for a unit increase in CanFren, controlling for other variables in the model. Origin Percentage of the Population of British Ethnic Origin(CanBrit) was the second weakest influence in the full model. The combined migration rate decreased by .032 percent for a unit increase in CanBrit, net of other effects in the equation.

Among the destination effects, all variables with the exception of Percentage of the Population of French Ethnic Origin(QueFren) were statistically significant.

Percentage of the Population with English Mother Tongue (or rather, the natural logarithm of this variable,  $\ln(\text{QueEngMT})$ ) was the second strongest influence in the full model and the combined migration rate of the two charter groups decreased by 1.867 percent for a one percent change in  $\ln(\text{QueEngMT})$ , controlling for other variables. Percentage of the Population with French Mother Tongue ( $\text{QueFrMT}$ ) was the third weakest influence in the full model and had a positive effect. The combined migration rate increased by .043 percent for a unit increase in  $\text{QueFrMT}$ , net of other effects.  $\text{QueBrit}$  or Percentage of the Population of British Ethnic Origin was a fairly strong influence with a positive effect. Controlling for other variables, the combined migration rate increased by .105 percent for a unit increase in  $\text{QueBrit}$ .

#### Change in Individual Level Effects

There was little change among the individual level variables with the addition of structural variables into the regression equation for the combined migration rate of the two charter groups. The effect of  $\text{age1}$  decreased slightly in magnitude while that of  $\text{age2}$  remained about the same. The younger age groups remained more likely to migrate to Quebec than the older age category but the relative strength of both  $\text{age1}$  and  $\text{age2}$  decreased considerably in the model. The effect of education increased considerably in magnitude and slightly in relative strength. The migration rate remained directly related to level of educational attainment. The effect of occupation, however, ceased being statistically significant. Professionals were not significantly more likely to migrate to Quebec than non-professionals when structural conditions were controlled. The magnitude of the coefficient for sex increased considerably but remained the weakest influence in the model. Females remained less likely to migrate to Quebec than males.

The coefficients for ethnic origin and the minority group status variable decreased considerably in relative strength but their magnitudes and directions remained unchanged. French ethnic origin persons remained more likely to migrate to Quebec than British ethnic origin persons and at higher levels of educational attainment, French ethnic origin persons remained less likely to migrate to Quebec than British ethnic origin persons. The

coefficient for mother tongue remained statistically insignificant.

### The British Group

Explained variance for the British group's migration rate increased by 9.97 to 61.66 percent with the addition of origin and destination structural variables into the regression equation (see Table 6a).

### Economic Conditions

Economic conditions in the origin were statistically significant in explaining the migration behavior of the British ethnic group but the hypotheses for both variables were not supported. Net of all other effects in each case, the migration rate increased by  $1.697 \times 10^{-4}$  percent for a unit increase in origin income level and decreased by .132 percent for a unit increase in origin unemployment level. Both effects were relatively weak influences in the full model. Economic conditions in the destination (Quebec), on the other hand, were not statistically significant during the earlier period for the British ethnic group.

These results suggest that the migration of the British ethnic group to Quebec from the rest of the country was undertaken by the relatively well-off and employed moving possibly as a result of opportunities provided in the origin (such as a job transfer) which would further improve the quality of their life rather than by low income individuals and/or the unemployed moving to escape adverse economic conditions.

### Subcultural Conditions

All origin effects with the exception of Percentage of the Population with English Mother Tongue(CanEngMT) were statistically significant for the British ethnic group during the earlier period. Among the destination effects, only Percentage of the Population with French Mother Tongue(QueFrMT) and Percentage of the Population of British Ethnic Origin(QueBrit) were statistically significant.

Table 6a: Individual and Structural Level Effects For 1971 (British Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> adj.	Wtd. N
Age1	.176	.462	.035	.381	.3518	61.66	9.97	61.23	1742
Age2	.095	.299	.020	.318	.3752				
Sex	-.176	.097	-.036	-1.815	.0349**				
Educ	1.672	.205	.500	8.162	.0000*				
Occ	-.412	.213	-.080	-1.939	.0264**				
MT	-1.620	.121	-.338	-13.397	.0000*				
MGS	-1.391	.100	-.408	-13.934	.0000*				
CanInc	1.697x10-4	6.650x10-5	.226	2.552	.0054*				
CanUnemp	-.132	.045	-.160	-2.953	.0016*				
CanFren	.242	.053	.397	4.592	.0000*				
CanBrit	-.052	.017	-.230	-3.098	.0010*				
CanFrMT	-.509	.052	-.649	-9.766	.0000*				
CanEngMT	-.007	.020	-.035	-.367	.3569				
QueInc	-8.041x10-5	6.283x10-5	-.110	-1.280	.1004				
QueUnemp	.027	.020	.046	1.381	.0838				
QueFren	-.033	.042	-.151	-.790	.2149				
QueBrit	.075	.034	.249	2.204	.0139**				
QueFrMT	.176	.055	.812	3.215	.0007*				
QueEngMT	.056	.049	.234	1.140	.1273				
Constant	-17.236	1.707		-10.097	.0000*				

\*p ≤ .01

\*\*p ≤ .05

The hypotheses for Percentage of the Population of British Ethnic Origin in both the origin(CanBrit) and destination(QueBrit) were supported. Net of all other effects in each case, the migration rate decreased .052 percent for a unit increase in CanBrit and increased .075 percent for a unit increase in QueBrit. CanBrit was a relatively weak influence while QueBrit was a moderate influence. Migration of the British ethnic group to Quebec also increased by .242 percent for a unit increase in Origin Percentage of the Population of French Ethnic Origin(CanFren), net of other variables. This was also consistent with the two effects discussed above and a fairly strong influence in the full model.

While Origin Percentage of the Population with French Mother Tongue(CanFrMT) was the second strongest influence in the full model and Destination Percentage of the Population with French Mother Tongue(QueFrMT) was the strongest, the hypotheses for these variables were not supported by the data. The migration rate decreased by .509 percent for a unit increase in CanFrMT and increased .176 percent for a unit increase in QueFrMT, controlling for other variables in each case.

#### Change in Individual Level Effects

There were some major changes in the pattern of individual level effects with the addition of structural variables into the equation for the British ethnic group. Age was no longer statistically significant in explaining the migration behavior of the British group. This indicates that when structural variables were taken into account, British migrants were just as likely to be of the retirement ages as of the younger, labor force ages. Education remained a statistically significant influence and the migration rate remained directly related to level of educational attainment. While the magnitude of its effect increased by a small amount, the relative strength of this variable in the model decreased slightly. The coefficient for occupation increased by quite a large amount but remained the second weakest influence in the model. There was, however, a reversal in the direction of its effect with the additional control of

structural variables. Professionals were less, rather than more, likely to migrate to Quebec suggesting that British migrants were perhaps characterized by being in trades or technical occupations. Sex remained the weakest influence in the model and continued to operate as a negative influence. Females remained less likely to migrate to Quebec than males. The magnitude of this effect decreased slightly. Again, the coefficient for the ethnic effect variable mother tongue and the minority group status variable remained unchanged in terms of magnitude and direction. However, the relative strengths of both effects decreased somewhat.

#### The French Group

Explained variance for the French group's migration rate increased by 15.64 to 66.64 percent with the addition of origin and destination structural variables into the regression equation (see Table 6b).

#### Economic Conditions

Origin income level was the only statistically significant economic variable for the French ethnic group during the earlier period. The migration of the French group to Quebec also appears to have been associated with favorable origin income conditions suggesting it was a move undertaken by individuals with the ability to finance their desire to move to Quebec. The migration rate increased by  $2.563 \times 10^{-4}$  percent for a unit increase in origin income level, controlling for the other variables.

#### Subcultural Conditions

All origin variables with the exception of Percentage of the Population of British Ethnic Origin(CanBrit) were statistically significant for the French ethnic group. Among the destination variables, only Percentage of the Population with English Mother Tongue (or rather, the natural logarithm of this variable,  $\ln(\text{QueEngMT})$ ) and Percentage of the Population of British Ethnic Origin(QueBrit) were statistically significant.



Table 6b: Individual and Structural Level Effects For 1971 (French Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> adj.	Wtd. N
Age1	2.683	.401	.553	6.684	.0000*	66.64	15.64	66.27	1742
Age2	1.614	.285	.348	5.660	.0000*				
Sex	-.577	.086	-.123	-6.694	.0000*				
Educ	.104	.179	.033	.583	.2802				
Occ	-.255	.204	-.051	-1.247	.1064				
MT	2.311	.108	.503	21.380	.0000*				
MGS	.685	.089	.210	7.678	.0000*				
CanInc	2.563x10 <sup>-4</sup>	4.848x10 <sup>-5</sup>	.355	5.287	.0000*				
CanUnemp	-.027	.038	-.035	-.712	.2384				
CanFren	.213	.045	.365	4.751	.0000*				
CanBrit	-.012	.015	-.054	-.775	.2192				
CanFrMT	-.515	.048	-.685	-10.944	.0000*				
CanEngMT	-.068	.016	.346	-4.293	.0000*				
QueInc	1.919x10 <sup>-5</sup>	5.262x10 <sup>-5</sup>	.027	.365	.3577				
QueUnemp	.007	.018	.012	.391	.3480				
QueFren	-.018	.028	-.085	-.635	.2627				
QueBrit	.083	.015	.290	5.535	.0000*				
QueFrMT	.027	.023	.129	1.149	.1254				
ln(QueEngMT)	-2.615	.214	-.643	-12.198	.0000*				
Constant	-1.627	1.361		-1.196	.1160				

•  $p \leq .01$

Origin Percentage of the Population with French Mother Tongue(CanFrMT) was the strongest influence in the full model and as suggested by the literature, it exerted a negative effect. The migration rate decreased by .515 percent for a unit increase in CanFrMT, net of other variables. Ln(QueEngMT) was the second strongest influence in the full model and also consistent with what would be expected for the French ethnic group. The migration rate decreased by 2.615 percent for a one percent change in ln(QueEngMT), controlling for the other variables.

The direction of the remaining effects were not consistent with what would be expected from the French ethnic group in response to subcultural conditions. Origin Percentage of the Population with English Mother Tongue(CanEngMT) was a relatively weak influence with a negative effect. The migration rate decreased by .068 percent for a unit increase in CanEngMT, controlling for the other variables. Origin Percentage of the Population of French Ethnic Origin(CanFren) was a moderate influence with a positive effect. The migration rate increased by .213 percent for a unit increase in CanFren, net of other effects. QueBrit was the third weakest influence in the model and had a positive effect. The migration rate increased by .083 percent for a unit increase in QueBrit, controlling for other variables in the model.

#### Change in Individual Level Effects

The pattern of individual level effects also underwent some major changes for the French ethnic group with the addition of structural variables.

Both age1 and age2 remained statistically significant and the younger age categories remained more likely to migrate to Quebec than the older age category. The magnitude of both effects decreased slightly. Age1 remained the stronger influence in the model as well as a relatively strong influence, although its relative strength did decrease slightly. The relative strength of age2 decreased quite a bit and it operated as a fairly weak influence in the model. The socioeconomic variables education and occupation, however, were no longer statistically significant in explaining the French group's migration behavior when structural variables were

taken into account. The coefficient for sex remained statistically significant but also the weakest influence in the model. Females remained more likely to migrate to Quebec than males. The magnitude of this effect increased considerably. The relative strength of the ethnic effect variable mother tongue decreased somewhat but remained a fairly strong influence. The minority group status variable operated as the second weakest influence in the model which represented a considerable decline. The magnitude and direction of both effects, however, remained unchanged.

### **Structural Level Effects: 1976 to 1981**

With the addition of origin and destination structural variables into the regression equation, explained variance for the combined migration rate of the two charter groups during the later period increased by 2.94 to 21.56 percent (see Table 7).

#### **Economic Conditions**

Both income and unemployment level in the area of origin were statistically significant in explaining the combined migration rate. Unemployment level in the destination was also statistically significant. (Destination income level remained statistically insignificant).

Origin income level was a fairly strong influence in the full model and continued to operate as a positive effect during the later period. The migration rate increased by  $2.607 \times 10^{-4}$  percent for a unit increase in origin income level, net of other effects. The income-migration relationship apparent during the earlier period remained unchanged. Rather than an attempt to maximize income, the migration of the two charter groups to Quebec from the rest of the country appears to have been undertaken by individuals who were able to finance their propensity to move.

The hypotheses for the origin and destination unemployment variables were supported. Origin unemployment level exerted a positive, moderate effect. The combined migration rate increased by .195 percent for a unit increase in origin unemployment level, controlling for other variables in the model. Destination unemployment was a relatively

Table 7: Individual and Structural Level Effects For 1981 (British and French Groups)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> adj.	Wld. N
Age1	-4.090	.642	-.731	-6.373	.0000*	21.56	2.94	21.30	6183
Age2	-3.331	.397	-.621	-8.389	.0000*				
Sex	.331	.092	.062	3.596	.0002*				
Educ	1.331	.110	.377	12.094	.0000*				
Occ	-.324	.164	-.057	-1.980	.0239**				
Eth	2.201	.117	.414	18.749	.0000*				
MT	.119	.060	.022	1.984	.0237**				
MGS	-1.032	.080	-.322	-12.967	.0000*				
CanInc	2.607x10-4	3.978x10-5	.380	6.554	.0000*				
CanUnemp	.195	.030	.267	6.385	.0000*				
CanFren	.557	.093	.512	5.958	.0000*				
CanBrit	-.203	.023	-.658	-8.593	.0000*				
CanFrMT	-.395	.103	-.269	-3.860	.0001*				
CanEngMT	.118	.022	.515	5.320	.0000*				
QueInc	-2.623x10-6	3.182x10-5	-.004	-.082	.4672				
QueUnemp	-.085	.023	-.142	-3.620	.0002*				
QueFren	-.009	.028	-.033	-.317	.3756				
QueBrit	-.153	.028	-.246	-5.534	.0000*				
QueFrMT	-.008	.029	-.031	-.282	.3889				
QueEngMT	.079	.028	.190	2.849	.0022*				
Constant	-14.536	1.058		-13.739	.0000*				

\* $p \leq .01$ \*\* $p \leq .05$

weak influence in the model but did exert a negative effect. The migration rate decreased by .085 percent for a unit increase in destination unemployment level, net of other effects. In contrast to the earlier period, the availability of jobs in both the origin and destination was significant in explaining the migration behavior of the two charter groups. As indicated by the literature, low availability operated as a "push" away from both origin and destination and the origin effect was relatively stronger.

#### Subcultural Conditions

Subcultural influences remained statistically significant, overall, in explaining the combined migration behavior of the two charter groups.

All origin variables were significant. Origin Percentage of the Population with French Mother Tongue(CanFrMT) decreased considerably in relative strength to operate as a moderate influence but remained negative. The migration rate decreased .395 percent for a unit increase in CanFrMT, net of other effects. Origin Percentage of the Population with English Mother Tongue(CanEngMT) became statistically significant during the later period. It was the fourth strongest influence in the model and had a positive effect. The migration rate increased by .118 percent for a unit increase in CanEngMT, controlling for the other variables. Origin Percentage of the Population of British Ethnic Origin(CanBrit) was the second strongest influence in the model, representing a considerable increase from the earlier period. It continued to exert a negative effect. The migration rate decreased by .203 percent for a unit increase in CanBrit, controlling for other variables. Origin Percentage of the Population of French Ethnic Origin(CanFren) was also a quite strong influence, remaining about the same relative strength. It continued to exert a positive effect. The migration rate increased by .557 percent for a unit increase in CanFren, controlling for other effects.

Among the destination effects, only Percentage of the Population with English Mother Tongue(QueEngMT) and Percentage of the Population of British Ethnic Origin(QueBrit) remained statistically significant. Percentage of the Population with French Mother Tongue(QueFrMT) ceased being statistically significant.

Both significant variables decreased considerably in relative strength and reversed direction during the later period. The migration rate increased by .079 percent for a unit increase in QueEngMT and decreased .153 percent for a unit increase in QueBrit, controlling for all other variables in each case.

#### Changes in Individual Level Effects

The addition of structural variables into the regression equation resulted in some large changes among the individual level effects. Both age1 and age2 reversed direction so that the 65+ age category was more likely to migrate to Quebec than either the 20 to 29 or 30 to 64 age categories. This suggests that there may have been fewer young people interested in moving to Quebec during the later period or that there was more retirement, possibly return, migration by the two charter groups. The effects of both variables increased in magnitude as well as in relative strength. Age1 operated as the strongest influence in the model while age2 operated as the third strongest influence. Education remained statistically significant and continued to operate as a positive influence on the migration rate. The magnitude of its effect decreased slightly while its relative strength decreased considerably. Occupation became statistically significant. It operated as the second weakest influence in the model and exerted a negative effect. Professionals were less likely to migrate to Quebec than non-professionals. The magnitude of the coefficient for sex increased slightly but it remained a relatively weak influence in the model. The magnitudes and directions of the ethnic effects variables ethnic origin and mother tongue and the minority group status variable remained unchanged. Ethnic origin and minority group status remained fairly strong influences but did decline in the full model. Mother tongue remained the weakest influence in the model.

#### The British Group

The addition of origin and destination structural variables into the regression equation increased explained variance in the British group's migration rate by 6.26 to 72.33 percent (see Table 7a).

Table 7a: Individual and Structural Level Effects For 1981 (British Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> adj.	Wtd. N
AgeL	2.477	.258	.575	9.606	.0000*	72.33	6.26	72.17	3091
Sex	-.694	.069	-.133	-10.113	.0000*				
Educ	1.278	.090	.371	14.278	.0000*				
Occ	1.395	.113	.249	12.336	.0000*				
MT	-4.308	.096	-.831	-44.663	.0000*				
MGS	.791	.065	.253	12.097	.0000*				
CanInc	-1.065x10 <sup>-5</sup>	2.922x10 <sup>-5</sup>	-.016	-.364	.3578				
CanUnemp	.275	.025	.387	11.004	.0000*				
CanFren	.336	.068	.317	4.925	.0000*				
CanBrit	-.193	.019	-.640	-10.209	.0000*				
CanFrMT	-.392	.081	-.273	-4.841	.0000*				
CanEngMT	.116	.018	.520	6.474	.0000*				
QueInc	5.238x10 <sup>-5</sup>	2.557x10 <sup>-5</sup>	.079	2.048	.0203**				
QueUnemp	.056	.018	.096	3.150	.0008*				
QueFren	-.180	.023	-.668	-7.712	.0000*				
QueBrit	-.117	.022	-.193	-5.441	.0000*				
QueFrMT	.149	.024	.570	6.144	.0000*				
QueEngMT	.042	.022	.103	1.886	.0297**				
Constant	-10.931	.811		-13.471	.0000*				

\*p ≤ .01

\*\*p ≤ .05

### Economic Conditions

The migration of the British ethnic group to Quebec during the later period appears to have been more significantly influenced by origin and destination economic conditions than during the earlier period.

Origin income level was no longer statistically significant for the British ethnic group during the later period. Origin unemployment level remained significant but reversed direction to operate as a positive influence. The migration rate increased .275 percent for a unit increase in origin unemployment level, net of other effects and this was a fairly strong influence in the model. Both destination variables became statistically significant during the later period. Destination income level was the weakest influence in the model and had a positive effect. The migration rate increased  $5.238 \times 10^{-5}$  percent for a unit increase in income level, controlling for the other variables. Destination unemployment was the second weakest influence in the model and also exerted a positive effect. The migration rate increased by .056 percent for a unit increase in unemployment level, net of other effects.

Thus the migration of the British ethnic group to Quebec during the later period was more typical of labor migration generally. It occurred in response to unemployment in the origin and, albeit weakly, increasing income in the destination. While destination unemployment did not deter in-migration, this was an extremely weak influence and consistent with research indicating that destination unemployment does not operate as much as a "push" as origin unemployment.

### Subcultural Conditions

All subcultural variables in both the origin and destination were statistically significant during the later period suggesting that subcultural conditions also played a more important role in the migration of the British ethnic group.

Among the origin effects, only the ethnic variables Percentage of the Population of British Ethnic Origin(CanBrit) and of French Ethnic Origin(CanFren) were as expected. Net of all other effects in each case, the migration rate decreased



.193 percent for a unit increase in CanBrit and increased .336 percent for a unit increase in CanFren. CanBrit was the third strongest influence in the model which represented a considerable increase from the earlier period. CanFren remained a moderate influence.

The remaining two origin effects Percentage of the Population with French Mother Tongue(CanFrMT) and Percentage of the Population with English Mother Tongue(CanEngMT) were not consistent with the above effects. CanFrMT exerted a negative effect, as during the earlier period, while CanEngMT assumed significance during the later period only and had a positive effect. Controlling for the other variables in each case, the migration rate decreased .392 percent for a unit increase in CanFrMT and increased .116 percent for a unit increase in CanEngMT. CanFrMT was a moderate influence, representing a considerable decline from the earlier period, while CanEngMT was a fairly strong influence.

Among the destination variables, only Percentage of the Population with English Mother Tongue(QueEngMT) and of French Ethnic Origin(QueFren) were as expected. Both variables were not significant during the earlier period. The migration rate increased by .042 percent for a unit increase in QueEngMT and decreased .180 percent for a unit increase in QueFren, controlling for all other variables in each case. QueEngMT was an extremely weak influence while QueFren was the second strongest influence in the model.

Among the two remaining destination variables, Percentage of the Population with French Mother Tongue(QueFrMT) continued to exert a positive influence and to operate as a fairly strong influence although its relative strength did decrease somewhat. The migration rate increased .149 percent for a unit increase in QueFrMT, net of other effects. Percentage of the Population of British Ethnic Origin(QueBrit) was a fairly weak influence, representing a small decline from the earlier period, and reversed direction to operate as a negative effect. The migration rate decreased .117 percent for a unit increase in QueBrit, net of other effects.

### Change in Individual Level Effects

AgeL (age coded as a single linear variable) increased considerably in magnitude but remained the same relative strength in the model, operating as a fairly strong influence. However, there was a reversal in the direction of its effect with the addition of structural variables so that the migration rate increased with increasing age level. As previously speculated, this suggests the possibility of older migrants, perhaps retirement return migrants. Education increased by a small amount in magnitude but declined by a fair amount to operate as a moderate influence. The migration rate remained directly related to level of educational attainment. The magnitude of occupation increased by a fairly large amount but it remained a relatively weak influence in the model. Professionals remained more likely to migrate than non-professionals. The effect of sex became statistically significant. It operated as a fairly weak influence in the model. Females were less likely to migrate to Quebec than males. The effects of mother tongue and the minority group status variable remained unchanged in terms of direction and magnitude. Mother tongue remained the strongest influence in the model while minority group status operated as a moderate influence, which represented a considerable decline.

### The French Group

Explained variance increased by 2.55 to 58.49 percent with the addition of origin and destination structural variables into the regression equation (see Table 7b).

### Economic Conditions

Economic conditions also played a larger role for the French ethnic group during the later period. All variables were statistically significant.

Origin income level remained a positive influence but did increase somewhat in relative strength to operate as a fairly strong influence. The migration rate increased  $3.361 \times 10^{-4}$  percent for a unit increase in origin income level, net of other effects. The remaining variables were not significant during the earlier period.

Table 7b: Individual and Structural Level Effects For 1981 (French Group)

Variable	b	SEb	Beta	t	sig.	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> adj.	Wtd. N
Age1	-1.751	.658	-.315	-2.662	.0039*	58.49	2.55	58.23	3092
Age2	-1.514	.407	-.284	-3.722	.0001*				
Sex	.932	.094	.175	9.896	.0000*				
Educ	.151	.113	.043	1.341	.0899				
Occ	-1.072	.168	-.188	-6.394	.0000*				
MT	3.615	.120	.684	30.053	.0000*				
MGS	-.058	.082	-.018	-.714	.2376				
CanInc	3.361x10 <sup>-4</sup>	4.077x10 <sup>-5</sup>	.493	8.246	.0000*				
CanUnemp	.130	.031	.180	4.170	.0000*				
CanFren	.307	.096	.284	3.228	.0007*				
CanBrit	-.227	.024	-.738	-9.633	.0000*				
CanFrMT	-.080	.105	-.055	-.769	.2276				
CanEngMT	.160	.023	.703	7.044	.0000*				
QueInc	-1.299x10 <sup>-4</sup>	3.261x10 <sup>-5</sup>	-.192	-3.982	.0001*				
QueUnemp	-.125	.024	-.210	-5.191	.0000*				
QueFren	.133	.029	.485	4.548	.0000*				
QueBrit	-.093	.028	-.150	-3.271	.0006*				
QueFrMT	-.172	.030	-.647	-5.695	.0000*				
QueEngMT	.047	.028	.114	1.652	.0494**				
Constant	-13.298	1.084		-12.270	.0000*				

\*p ≤ .01

\*\*p ≤ .05

Origin unemployment level was a relatively weak influence with a positive effect. The migration rate increased by .130 percent for a unit increase in origin unemployment level, controlling for other variables. Both destination influences operated as negative moderate influences. The migration rate decreased by 1.299 x 10<sup>-4</sup> percent for a unit increase in destination income level and .125 percent for a unit increase in destination unemployment level, net of other variables in each case.

It appears that members of the French ethnic group continued to migrate to Quebec under conditions of relative prosperity but also that employment considerations became operative. Unemployment was a "push" in both the origin and destination. Destination unemployment was the stronger "push". Destination income, on the other hand, did not "pull" migrants, as hypothesized, but instead also operated as a "push" suggesting that migrants were willing to accept a lower income.

#### Subcultural Conditions

Subcultural conditions, particularly in the destination, also played a larger role in the migration of the French ethnic group to Quebec during the later period.

Among the origin effects, Percentage of the Population with French Mother Tongue(CanFrMT) ceased being significant during the 1976 to 1981 period. Origin Percentage of the Population of British Ethnic Origin(CanBrit) assumed statistical significance during the later period and was the strongest influence in the model. However, the migration rate decreased by .227 percent for a unit increase in CanBrit, net of other effects and the hypothesis was not supported. Origin Percentage of the Population with English Mother Tongue(CanEngMT) was the second strongest influence in the model which represented a considerable increase from the earlier period. There was also a reversal in the direction of its effect so that the migration rate increased by .160 percent for a unit increase in CanEngMT, controlling for other variables. This was the only origin variable whose effect was as expected for the French ethnic group. Origin Percentage of the Population of French Ethnic Origin(CanFren) remained a moderate influence and continued to be positive. The

migration rate increased by .307 percent for a unit increase in CanFren, controlling for other variables in the model.

Among the destination variables, only the effects of the ethnic compositional variables were as expected. Percentage of the Population of French Ethnic Origin(QueFren) (not significant during the earlier period) was a fairly strong influence and the migration rate increased by .133 percent for a unit increase in QueFren, net of other effects. Percentage of the Population of British Ethnic Origin(QueBrit) reversed direction so that the migration rate decreased by .093 percent for a unit increase in QueBrit, controlling for other variables. It continued to operate as a weak influence.

The linguistic compositional variable Percentage of the Population with French Mother Tongue(QueFrMT) (not significant during the earlier period) was quite a strong influence but the migration rate decreased by .172 percent for a unit increase in QueFrMT, net of other effects. Percentage of the Population with English Mother Tongue(QueEngMT) was the weakest influence in the model which represented a considerable decline. There was also a reversal in the direction of its effect so that the migration rate increased by .047 percent for a unit increase in QueEngMT, net of other effects.

#### Change in Individual Level Effects

The effects of both age1 and age2 also reversed direction for the French ethnic group so that the 65+ age group was more likely to migrate to Quebec than either of the younger age categories. Again, it may be speculated that fewer young people were migrating to Quebec among the French group or that more retirement, return migration was occurring. Both variables declined in relative strength to operate as moderate influences in the model. The magnitude of age1 increased by a small amount while that of age2 decreased slightly. The effect of education was no longer statistically significant. The coefficient for occupation increased in magnitude but remained a relatively weak influence in the model. Professionals remained less likely

to migrate to Quebec than non-professionals. The effect of sex also increased in magnitude but remained a relatively weak influence. Females remained more likely to migrate to Quebec than males. There were no changes in the effect of mother tongue except for a slight decrease in relative strength. The minority group status variable remained insignificant.

## **Chapter IV**

### **CONCLUSION**

The objective of this study was to examine British-French migration differences to Quebec from the rest of the country during the census migration intervals 1966 to 1971 and 1976 to 1981.

The conceptual framework for the analysis was adopted from Lee's (1966) restatement of Ravenstein's "laws of migration". In the framework, differences in migration were conceived as resulting from characteristics associated with the migrants themselves and from characteristics associated with the areas of origin and destination. It was assumed that the decision to migrate was a form of individual optimizing behavior in which migrants attempted to optimize their overall (i.e. monetary and non-monetary) quality of life and in which a long-term view was taken.

Based on this framework, two specific research questions were addressed: (1) What is the relationship between minority group status and migration to Quebec from the rest of Canada, and how has this relationship been ~~developed~~ influenced by time? and (2) What is the relationship between minority/majority migration to Quebec from the rest of Canada and the characteristics of areas of origin and destination?

For the first research question, three explanations based on migrant characteristics were evaluated. These were: the Social Demographic Characteristics; the Ethnic Effect; and the Minority Group Status hypotheses. The three explanations were evaluated over the two census periods. For the second research question, origin and destination characteristics were introduced into the equation, again for both census periods, in order to evaluate if and how they have influenced migration differences between the two groups. The economic and subcultural characteristics of the areas of origin and destination were considered.

## **A. THE MIGRATION RATES**

As a preliminary to the regression analysis, it was found that Quebec did hold more attraction for the French ethnic group than for the British ethnic group during both periods examined and that this difference increased quite a bit during the 1976 to 1981 period. A considerable decline in the average migration rate of the British ethnic group between census periods rather than an increase in the French group's migration rate was responsible for the widening difference. In fact, there was also a small decline in the average migration rate of the French ethnic group between the census periods.

It was speculated that the increasing need to adjust to a sociocultural milieu defined by Quebec's French majority and the deterioration in Quebec's economy caused by the 1976 victory of the Parti Quebecois both played a role in the decline for the British ethnic group during the later period. For the French ethnic group, it was speculated that the small decline may have been a simple recognition of the deterioration in Quebec's economy or perhaps, a reaction against Quebec's position on the fate of Francophone minorities outside the province.

## **B. MIGRANT CHARACTERISTICS**

### **Social Demographic Characteristics**

British migrants to Quebec were characterized by having relatively high levels of educational attainment, being relatively young and being predominantly in professional occupations during both census periods. However, during the earlier period, they were also characterized by being predominantly male while during the later period, the sex difference ceased being statistically significant. This suggests that as a result of factors such as changing gender roles and increasing female labor force participation, British females may have had a tendency to be just as likely as British males to migrate to Quebec for socioeconomic opportunity during more recent years. Another possibility is that unmarried British males became less interested in migrating to Quebec from the rest of the country for socioeconomic opportunity during the later period out of recognition that meeting social companions of the



same ethnic group would be more difficult in Quebec than in other parts of the country. In either case, there was also a slight decrease in the strength of educational attainment (although it remained positive) during the 1976 to 1981 period, when it was the second strongest influence among the individual level variables, in comparison to the earlier period, when it was the strongest influence.

French migrants were characterized by being relatively young during both census periods. During the earlier period, they were also characterized by being predominantly male, having relatively low levels of educational attainment and in professional occupations. In contrast, during the later period they were also characterized by being predominantly female, having relatively high educational attainment and in non-professional occupations. Thus a sex difference remained in effect for the French ethnic group during both census periods but did reverse direction so that females predominated during the 1976 to 1981 period. Since females have historically predominated in short distance migration, it may be speculated that French migrants to Quebec during the later period originated in areas of the country which are relatively close to Quebec, such as Ontario or New Brunswick, which also have large concentrations of the French group and, where French cultural traditions have survived to a greater extent than in areas more distant from Quebec. Another possibility is that many French migrants to Quebec during the later period may have been return migrants who found it difficult to adapt to other parts of Canada in an anti-Quebec climate and among whom, females predominated.

The changes in the directions of the educational and occupational variables for the French ethnic group between census periods can be explained in the context of the change in the direction of the sex difference. During the earlier period, when French migrants were characterized by being predominantly male, they were also characterized by having relatively low levels of educational attainment but in professional occupations. In contrast, during the later period, when French migrants were characterized by being predominantly female, they were characterized by having relatively high levels of educational attainment, but in non-professional occupations. As a result of gender discrimination from the larger society, it

would not be unreasonable to find males in professional occupations with relatively low levels of educational attainment and females in non-professional occupations with relatively high levels of educational attainment.

### **Ethnic Effects**

Ethnic origin was consistently a very strong influence in the migration differences between the two groups but did become a slightly stronger effect during the later period when it was the strongest influence among the individual level variables. (This was in comparison to second strongest during the earlier period). This trend was consistent with the widening differences between the two ethnic groups over the time periods examined. Mother tongue, on the other hand, was a statistically significant separate influence during the later period only but, as would be expected, individuals with French mother tongue were more likely to migrate to Quebec than individuals with English mother tongue. Again, this change was consistent with the widening difference in favor of the French ethnic group and evidence indicating that within the French ethnic group, migrants were more likely to have French than English mother tongue. However, this change also suggested the possibility that many French ethnic origin migrants to Quebec during the later period were in fact return migrants who would be more likely to have French mother tongue. It was not possible to verify this speculation with the data.

The results for the mother tongue variable for the British and French ethnic groups considered separately suggested that intermarriage between the two ethnic groups resulted in the offspring of such marriages identifying more with the British ethnic group than the French ethnic group and possibly, as a result, being more likely to remain outside of Quebec than individuals who appeared to identify completely with the British or French ethnic groups. Within the British ethnic group, mother tongue was significant during both census periods. Individuals with French mother tongue were less likely than individuals with English mother tongue to migrate to Quebec and this effect became much stronger during the later period. Within the French ethnic group, mother tongue was also significant during both

periods. As already suggested, individuals with French mother tongue were more likely than individuals with English mother tongue to migrate to Quebec. This was consistently the strongest influence for the French ethnic group.

### **Minority Group Status Effect**

During neither period was there evidence for the hypothesis that French ethnic origin persons with relatively high levels of educational attainment were more likely to migrate to Quebec than British ethnic origin persons with relatively high educational attainment as a result of social psychological insecurities about socioeconomic advancement in the face of societal discrimination. While there was a significant difference during both periods, it consistently favored the British ethnic group suggesting that disparities in educational levels and orientations between the two groups resulted in the British ethnic group being more likely to have the resources required by Quebec's private sector. There was no change in the strength of this variable between census periods.

For the British ethnic group considered separately, the modified minority group status variable was significant during both periods but reversed direction between periods so that there was evidence for the hypothesized minority group status effect during the later period. (This was the only support for the hypothesis found in this study). During the later period, at higher levels of educational attainment, British ethnic origin persons with French mother tongue were more likely to migrate to Quebec than British ethnic origin persons with English mother tongue. This suggested that as a result of the anti-Quebec backlash caused by the 1976 victory of the Parti Quebecois, British ethnic origin individuals with French mother tongue perhaps began to experience greater social psychological insecurities about their chances for socioeconomic advancement and became more likely to migrate to Quebec where their French identification would not be a social liability.

For the French ethnic group considered separately, the modified minority group status variable was significant during the earlier period only. While its effect was consistent with the hypothesized minority group status effect, i.e. at higher levels of educational attainment,

individuals with French mother tongue were more likely to migrate to Quebec than individuals with English mother tongue, the previous discussion indicates that this differential between French and English mother tongue characterized French migrants in general and not just at higher educational levels. During the later period, the minority group status variable was no longer significant probably because most French migrants had French mother tongue

### C. ORIGIN-DESTINATION CHARACTERISTICS

The inclusion of the structural level variables in the regression analysis suggested that the economic and subcultural conditions in the areas of origin and destination were also significant in explaining the migration of the two charter groups to Quebec during both census periods. The results also suggest that structural conditions in Quebec, the destination, had a tendency to play a larger role during the 1976 to 1981 period in comparison to the earlier period.

#### Economic Conditions

During the earlier period, migration was associated with favorable economic conditions in the origin but without significant influence by destination economic conditions. For the British ethnic group, migration increased with increasing origin income level and decreased with increasing origin unemployment level suggesting that the move was made to further improve the quality of life rather than an escape from adverse economic conditions. For the French ethnic group, migration increased with increasing origin income level suggesting that the move was also made to further improve the quality of life by individuals who could afford to finance their desire to move to Quebec.

The migration of the British and French ethnic groups to Quebec more fully conformed with traditional notions of economic "pushes" and "pulls" during the later period. Migration of the British ethnic group increased in response to increasing origin unemployment and, albeit weakly, increasing destination income. Increasing destination unemployment did not deter in-migration but this was an extremely weak influence and consistent with research

indicating that destination unemployment does not operate as much as a "push" as origin unemployment. Migration of the French ethnic group continued to increase with increasing origin income but employment considerations also became operative. Unemployment was a "push" in both origin and destination. An inverse relationship with destination income level suggested that migrants were willing to accept a lower income.

#### **Subcultural Conditions**

For the British ethnic group, CanFren and CanBrit were consistently the only statistically significant origin variables whose effects were as predicted. The migration rate varied directly with CanFren and inversely with CanBrit during both census periods. Among the statistically significant destination variables, only the effect of QueBrit was a predicted (i.e. positive) during the earlier period. During the later period, only the hypotheses for QueEngMT and QueFren were supported among the significant variables. The migration rate varied directly with QueEngMT and inversely with QueFren.

For the French ethnic group, only the effects of CanFrMT and QueEngMT were as predicted among the statistically significant variables during the earlier period. Migration was inversely related to both variables. Among the statistically significant influences for the later period, only the hypotheses for CanEngMT, QueFren and QueBrit were supported. The migration rate varied directly with CanEngMT and QueFren and inversely with QueBrit.

#### **D. INDIVIDUAL LEVEL - STRUCTURAL LEVEL RELATIONSHIP**

There did not appear to be a relationship between the structural level variables and the ethnic effect or minority group status variables as the coefficients for these individual level variables were consistently characterized by a complete lack of change. There did, on the other hand, appear to be a relationship between the structural level variables and the social demographic variables as the coefficients for these individual level variables did undergo some changes when the structural variables were introduced into the regression equation.

For the British ethnic group during the earlier period, the coefficient for occupation reversed direction so that non-professionals (possibly technical or trades occupations) were more likely to migrate to Quebec than professionals. In addition, the coefficient for both age variables ceased being statistically significant indicating that migrants were just as likely to be in the older, retirement age category (possibly returnees) as in the younger labor force age categories. For the French ethnic group during the earlier period, the socioeconomic variables education and occupation ceased being statistically significant altogether.

During the later period, there was a reversal in the age-migration relationship for both ethnic groups so that the 65+ age category was more likely to migrate to Quebec than the younger age categories. This indicated that either fewer young people were moving to Quebec or more retirement, possibly return, migration was taking place. In addition to this change, a sex differential in favor of males became significant for the British ethnic group and education ceased being significant for the French ethnic group.

## E. CONCLUSIONS AND FUTURE WORK

Between the census periods, 1966 to 1971 and 1976 to 1981, migration to Quebec from the rest of the country became more predominated by the French ethnic group. There was also, however, a decline in the average migration rates of both the British and French ethnic groups indicating that Quebec held less attraction for members of the two charter groups residing in other parts of Canada as a result of the changes which took place during the later period. The results of this study suggest that both migrant characteristics and origin-destination conditions, particularly conditions in Quebec, were significant in explaining the changes in the migration propensities of the two ethnic groups between census periods. Thus, overall, the theoretical framework adopted for the study was supported. However, the assumption that migrants would adopt a strictly rational cost/benefits approach to the migration decision did not hold very well.

A major limitation with this study concerned the use of the "rest of Canada" as a single origin category. While made necessary by data limitations, future work needs to be

based on, at least, regional distinctions in order to more adequately assess the influence of structural conditions. The structural variables were also measured at the date of the respective census or, at the end of each migration interval. Since this would most likely reflect conditions after the migration act, variables measured at the midpoint of a five-year interval or at the beginning of a much shorter interval would be more realistic. (This short-coming would also pertain to individual variables such as education and occupation which could have changed after the migration act). A further consideration involving the structural variables concerns the assumptions underlying their relationship to the individual variables. Since the strictly rational costs/benefits approach did not appear to hold very well, it may be more informative to ask migrants directly about the influence of origin and destination conditions rather than assume that they are aware of and purely rationally oriented to these conditions with the goal of maximizing their overall, objectively considered quality of life.

Return migrants appeared to be an important group among migrants to Quebec, particularly during the later period. This group needs to be studied separately from first-time migrants to the province. The present census question on migration does not allow this distinction to be made but it is necessary to distinguish the two groups in order to adequately understand migration to Quebec.

Almost ten years have passed since the latter period analyzed in this study. While Quebecois have not demonstrated any relinquishing of their objective to be "Maitres chez nous" during this period, they have demonstrated their desire to remain within the Canadian Confederation. The Parti Quebecois has passed from power and at the present time, the Meech Lake accord represents an attempt to bring Quebec into the constitutional fold with recognition as a "distinct society". Overall, however, the situation has not changed very much. Future work in this area needs to explore if the trends evident during the 1976 to 1981 period have continued.

A final consideration for future work in this area would be to analyze out-migration of the British and French ethnic groups from Quebec to other regions of the country. This was not possible in this study due to data limitations but would certainly contribute to an

understanding of migration exchanges between Quebec and other parts of the country during a period of profound change in Quebec.



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FREQ T H X E C  
M T H X E C  
E S A G U C C  
E D Q C C

91



Y E A R	FREQ	M T H	E S A D O T H X E C C	ID	QUEINC	QUEUNEEMP	QUEEFREN	QUEEBRIT	QUEFRMT	QUEENGMT	CANINC	CANUNEMP	CANFREN	CANBRIT	CANFRMT	CANENGMT	CANSTAY				
1	2	1	1	3	1	12131.00	14494.56	18.8	59.4	18.8	62.4	31.7	13982.84	11.5	7.6	62.1	3.9	87.9	330		
1	0	2	1	3	1	12131.00	14494.56	18.8	59.4	18.8	62.4	31.7	13982.84	11.5	7.6	62.1	3.9	87.9	330		
1	0	1	2	1	3	1	12131.00	14494.56	18.8	59.4	18.8	62.4	31.7	13982.84	11.5	7.6	62.1	3.9	87.9	330	
1	2	2	2	1	3	1	12131.00	14494.56	18.8	59.4	18.8	62.4	31.7	13982.84	11.5	7.6	62.1	3.9	87.9	330	
1	12	1	1	2	3	2	12132.00	14521.01	3.2	74.7	12.4	77.4	18.3	14244.38	5.4	7.4	56.9	5.9	82.3	390	
1	0	2	1	2	3	2	12132.00	14521.01	3.2	74.7	12.4	77.4	18.3	14244.38	5.4	7.4	56.9	5.9	82.3	390	
1	0	1	2	1	3	2	12132.00	14521.01	3.2	74.7	12.4	77.4	18.3	14244.38	5.4	7.4	56.9	5.9	82.3	390	
1	2	2	2	1	3	2	12132.00	14521.01	3.2	74.7	12.4	77.4	18.3	14244.38	5.4	7.4	56.9	5.9	82.3	390	
1	1	1	1	2	2	1	12211.00	9852.86	4.7	75.1	6.6	76.7	7.2	9683.88	4.5	10.4	35.0	8.6	48.0	1996	
1	0	2	1	2	2	1	12211.00	9852.86	4.7	75.1	6.6	76.7	7.2	9683.88	4.5	10.4	35.0	8.6	48.0	1996	
1	1	1	2	2	1	1	12211.00	9852.86	4.7	75.1	6.6	76.7	7.2	9683.88	4.5	10.4	35.0	8.6	48.0	1996	
1	6	2	2	2	1	1	12212.00	11060.74	2.0	77.6	20.4	83.7	14.3	10064.02	3.2	12.1	53.1	8.9	66.9	124	
1	0	1	1	2	2	1	12212.00	11060.74	2.0	77.6	20.4	83.7	14.3	10064.02	3.2	12.1	53.1	8.9	66.9	124	
1	0	2	1	2	2	1	12212.00	11060.74	2.0	77.6	20.4	83.7	14.3	10064.02	3.2	12.1	53.1	8.9	66.9	124	
1	0	2	2	2	1	2	12212.00	11060.74	2.0	77.6	20.4	83.7	14.3	10064.02	3.2	12.1	53.1	8.9	66.9	124	
1	9	1	1	2	2	1	12221.00	11814.50	5.3	68.0	17.9	69.2	23.6	11774.35	4.3	8.9	65.9	3.3	83.0	4699	
1	1	2	1	2	2	1	12221.00	11814.50	5.3	68.0	17.9	69.2	23.6	11774.35	4.3	8.9	65.9	3.3	83.0	4699	
1	0	1	2	2	2	1	12221.00	11814.50	5.3	68.0	17.9	69.2	23.6	11774.35	4.3	8.9	65.9	3.3	83.0	4699	
1	3	2	2	2	2	1	12222.00	15310.58	3.1	74.8	16.0	76.7	17.6	13416.51	1.9	7.7	62.1	5.2	82.8	982	
1	1	1	1	2	2	2	12222.00	15310.58	3.1	74.8	16.0	76.7	17.6	13416.51	1.9	7.7	62.1	5.2	82.8	982	
1	0	2	1	2	2	2	12222.00	15310.58	3.1	74.8	16.0	76.7	17.6	13416.51	1.9	7.7	62.1	5.2	82.8	982	
1	0	1	2	2	2	2	12222.00	15310.58	3.1	74.8	16.0	76.7	17.6	13416.51	1.9	7.7	62.1	5.2	82.8	982	
1	5	2	2	2	2	2	12231.00	16454.06	1.5	56.1	22.7	56.1	30.3	13846.90	3.2	4.0	66.3	1.6	82.3	249	
1	0	1	1	2	2	3	1	12231.00	16454.06	1.5	56.1	22.7	56.1	30.3	13846.90	3.2	4.0	66.3	1.6	82.3	249
1	1	2	1	2	2	3	1	12231.00	16454.06	1.5	56.1	22.7	56.1	30.3	13846.90	3.2	4.0	66.3	1.6	82.3	249
1	0	1	2	2	2	3	1	12231.00	16454.06	1.5	56.1	22.7	56.1	30.3	13846.90	3.2	4.0	66.3	1.6	82.3	249
1	1	2	2	2	2	3	1	12232.00	18198.73	1.6	61.7	21.9	67.2	27.3	17530.76	1.4	4.2	67.4	3.7	83.0	512
1	2	1	1	2	2	3	2	12232.00	18198.73	1.6	61.7	21.9	67.2	27.3	17530.76	1.4	4.2	67.4	3.7	83.0	512
1	0	1	2	2	2	3	2	12232.00	18198.73	1.6	61.7	21.9	67.2	27.3	17530.76	1.4	4.2	67.4	3.7	83.0	512
1	3	2	2	2	2	3	2	12232.00	18198.73	1.6	61.7	21.9	67.2	27.3	17530.76	1.4	4.2	67.4	3.7	83.0	512
1	0	1	1	2	3	1	12311.00	6035.21	7.1	71.4	14.3	78.6	7.1	10108.90	7.8	0.0	45.3	0.0	48.4	64	
1	0	2	1	2	3	1	12311.00	6035.21	7.1	71.4	14.3	78.6	7.1	10108.90	7.8	0.0	45.3	0.0	48.4	64	
1	0	1	2	2	3	1	12311.00	6035.21	7.1	71.4	14.3	78.6	7.1	10108.90	7.8	0.0	45.3	0.0	48.4	64	
1	1	2	2	2	3	1	12311.00	6035.21	7.1	71.4	14.3	78.6	7.1	10108.90	7.8	0.0	45.3	0.0	48.4	64	
1	0	1	2	2	3	1	12312.00	7856.64	14.3	57.1	28.6	85.7	14.3	12267.39	14.3	7.1	83.9	5.4	91.1	56	
1	0	2	1	2	3	1	12312.00	7856.64	14.3	57.1	28.6	85.7	14.3	12267.39	14.3	7.1	83.9	5.4	91.1	56	
1	0	1	1	2	3	2	1	12321.00	7856.64	14.3	57.1	28.6	85.7	14.3	12267.39	14.3	7.1	83.9	5.4	91.1	56
1	1	2	1	2	3	2	1	12321.00	7856.64	14.3	57.1	28.6	85.7	14.3	12267.39	14.3	7.1	83.9	5.4	91.1	56
1	0	2	2	2	3	2	1	12321.00	7856.64	14.3	57.1	28.6	85.7	14.3	12267.39	14.3	7.1	83.9	5.4	91.1	56







Y	E	A	R	FREQ	TH	X	E	C	C	ID	QUEINC	Q U E U N E M P	Q U E F R E N	Q U E B R I T	Q U E F R M T	Q U E E N G M T	CANINC	C A N U N E M P	C A N F R E N	C A N B R I T	C A N F R M T	CANENGMT	CANSTAY
2	2	2	2	0	1	2	1	1	2	22112.00	31249.58	.0	50.0	.0	50.0	.0	20649.52	10.0	10.0	45.0	5.0	60.0	20
2	2	2	2	0	2	1	1	2	22112.00	31249.58	31249.58	.0	50.0	.0	50.0	.0	20649.52	10.0	10.0	45.0	5.0	60.0	20
2	2	2	2	0	2	2	1	1	2	22112.00	31249.58	.0	50.0	.0	50.0	.0	20649	10.0	10.0	45.0	5.0	60.0	20
2	2	2	2	6	1	1	2	1	2	22121.00	27071.43	15.0	86.2	6.9	88.8	7.9	27824.61	10.5	9.7	53.0	6.0	84.7	6114
2	2	2	2	0	2	1	2	1	2	22121.00	27071.43	15.0	86.2	6.9	88.8	7.9	27824.61	10.5	9.7	53.0	6.0	84.7	6114
2	2	2	2	5	1	2	2	1	2	22121.00	27071.43	15.0	86.2	6.9	88.8	7.9	27824.61	10.5	9.7	53.0	6.0	84.7	6114
2	2	2	2	21	2	2	2	1	2	22121.00	27071.43	15.0	86.2	6.9	88.8	7.9	27824.61	10.5	9.7	53.0	6.0	84.7	6114
2	2	2	2	2	1	2	2	1	2	22122.00	28338.05	12.5	82.8	7.8	84.9	10.4	29541.04	6.5	7.5	55.7	3.4	89.1	506
2	2	2	2	0	2	1	2	2	2	22122.00	28338.05	12.5	82.8	7.8	84.9	10.4	29541.04	6.5	7.5	55.7	3.4	89.1	506
2	2	2	2	0	2	1	2	2	2	22122.00	28338.05	12.5	82.8	7.8	84.9	10.4	29541.04	6.5	7.5	55.7	3.4	89.1	506
2	2	2	2	3	2	2	2	1	2	22122.00	28338.05	12.5	82.8	7.8	84.9	10.4	29541.04	6.5	7.5	55.7	3.4	89.1	506
2	2	2	2	22	1	2	1	3	1	22131.00	29895.83	15.1	81.8	6.6	85.0	9.9	30261.06	10.7	7.2	49.6	4.6	83.3	5235
2	2	2	2	2	2	1	3	1	2	22131.00	29895.83	15.1	81.8	6.6	85.0	9.9	30261.06	10.7	7.2	49.6	4.6	83.3	5235
2	2	2	2	1	2	2	1	3	1	22131.00	29895.83	15.1	81.8	6.6	85.0	9.9	30261.06	10.7	7.2	49.6	4.6	83.3	5235
2	2	2	2	25	2	2	2	1	3	22132.00	32548.37	9.7	83.1	5.9	86.7	9.1	32938.44	7.5	6.7	52.3	4.5	86.3	2904
2	2	2	2	18	1	2	1	3	2	22132.00	32548.37	9.7	83.1	5.9	86.7	9.1	32938.44	7.5	6.7	52.3	4.5	86.3	2904
2	2	2	2	2	2	2	1	3	2	22132.00	32548.37	9.7	83.1	5.9	86.7	9.1	32938.44	7.5	6.7	52.3	4.5	86.3	2904
2	2	2	2	2	2	2	1	3	2	22132.00	32548.37	9.7	83.1	5.9	86.7	9.1	32938.44	7.5	6.7	52.3	4.5	86.3	2904
2	2	2	2	14	2	2	1	3	2	22132.00	32548.37	9.7	83.1	5.9	86.7	9.1	32938.44	7.5	6.7	52.3	4.5	86.3	2904
2	2	2	2	1	1	2	2	1	2	22211.00	27407.21	11.2	76.1	4.3	77.9	4.7	27935.19	7.8	9.1	29.8	7.5	42.2	4002
2	2	2	2	0	2	1	2	2	1	22211.00	27407.21	11.2	76.1	4.3	77.9	4.7	27935.19	7.8	9.1	29.8	7.5	42.2	4002
2	2	2	2	2	2	2	2	1	2	22211.00	27407.21	11.2	76.1	4.3	77.9	4.7	27935.19	7.8	9.1	29.8	7.5	42.2	4002
2	2	2	2	8	2	2	2	1	2	22212.00	30338.05	9.9	88.2	5.6	89.4	6.2	25460.47	6.3	12.5	37.0	9.4	56.3	192
2	2	2	2	0	1	2	2	2	1	22212.00	30338.05	9.9	88.2	5.6	89.4	6.2	25460.47	6.3	12.5	37.0	9.4	56.3	192
2	2	2	2	0	2	2	2	1	2	22212.00	30338.05	9.9	88.2	5.6	89.4	6.2	25460.47	6.3	12.5	37.0	9.4	56.3	192
2	2	2	2	0	2	2	2	1	2	22212.00	30338.05	9.9	88.2	5.6	89.4	6.2	25460.47	6.3	12.5	37.0	9.4	56.3	192
2	2	2	2	6	1	2	2	2	1	22221.00	29814.00	10.0	82.6	7.9	84.7	10.5	30789.59	5.4	7.1	59.1	4.4	80.7	11462
2	2	2	2	0	2	1	2	2	1	22221.00	29814.00	10.0	82.6	7.9	84.7	10.5	30789.59	5.4	7.1	59.1	4.4	80.7	11462
2	2	2	2	0	2	2	2	2	1	22221.00	29814.00	10.0	82.6	7.9	84.7	10.5	30789.59	5.4	7.1	59.1	4.4	80.7	11462
2	2	2	2	20	2	2	2	2	2	22221.00	29814.00	10.0	82.6	7.9	84.7	10.5	30789.59	5.4	7.1	59.1	4.4	80.7	11462
2	2	2	2	0	1	2	2	2	2	22222.00	31914.25	4.7	77.5	11.4	80.6	14.5	33063.53	4.3	5.5	60.7	4.6	81.5	1290
2	2	2	2	0	2	1	2	2	2	22222.00	31914.25	4.7	77.5	11.4	80.6	14.5	33063.53	4.3	5.5	60.7	4.6	81.5	1290
2	2	2	2	1	2	2	2	2	2	22222.00	31914.25	4.7	77.5	11.4	80.6	14.5	33063.53	4.3	5.5	60.7	4.6	81.5	1290
2	2	2	2	3	1	2	2	3	1	22231.00	30981.42	8.2	73.1	11.0	75.4	16.4	31719.94	5.2	5.9	53.0	4.1	76.5	7748
2	2	2	2	1	2	2	2	3	1	22231.00	30981.42	8.2	73.1	11.0	75.4	16.4	31719.94	5.2	5.9	53.0	4.1	76.5	7748
2	2	2	2	2	2	2	2	3	1	22231.00	30981.42	8.2	73.1	11.0	75.4	16.4	31719.94	5.2	5.9	53.0	4.1	76.5	7748
2	2	2	2	17	2	2	2	2	3	22232.00	37614.08	5.1	77.4	9.2	81.1	12.2	36264.56	3.2	6.5	56.9	5.0	80.8	6058
2	2	2	2	9	1	2	2	3	2	22232.00	37614.08	5.1	77.4	9.2	81.1	12.2	36264.56	3.2	6.5	56.9	5.0	80.8	6058
2	2	2	2	3	2	2	2	3	2	22232.00	37614.08	5.1	77.4	9.2	81.1	12.2	36264.56	3.2	6.5	56.9	5.0	80.8	6058
2	2	2	2	1	2	2	2	3	2	22232.00	37614.08	5.1	77.4	9.2	81.1	12.2	36264.56	3.2	6.5	56.9	5.0	80.8	6058
2	2	2	2	21	2	2	2	2	3	22232.00	37614.08	5.1	77.4	9.2	81.1	12.2	36264.56	3.2	6.5	56.9	5.0	80.8	6058



## APPENDIX TWO

Individual, Origin and Destination variables were first considered separately using three different methods. These were: (1) ordinary regression; (2) the natural logarithm of the dependent variable; and (3) the natural logarithm of the dependent variable and the square root of non-migrants in Canada excluding Quebec as a weight.

The magnitudes of the standard errors of the coefficients were smallest using method (1), largest using method (2) and intermediate using method (3) for the three groups of independent variables considered separately and for both time periods. Normal Probability Plots of the Standardized Residuals for the three groups of independent variables considered separately indicated that method (1) resulted in the most deviation from a normal distribution, method (2) the least, and method (3) an intermediate amount. There was no consistent pattern in explained variance using the three different methods. For 1971, explained variance was largest using method (1), intermediate using method (2) and smallest using method (3) for the Individual and Origin characteristics only. For the Destination characteristics, explained variance was also largest using method (1) but smallest using method (2) and intermediate using method (3). For 1981, the pattern of explained variance was different for each group of independent variables. For the Individual characteristics, explained variance was largest using method (3), smallest using (1) and intermediate using (2). For the Origin characteristics, explained variance was largest using method (1), smallest using (2) and intermediate using (3). For the Destination characteristics, explained variance was largest using method (3), smallest using (2) and intermediate using (1).

On the basis of these initial results, a log transformation of the dependent variable and a weighted regression procedure were employed. Four different weights were evaluated: (1) the square root of non-migrants in Canada excluding Quebec; (2) the square root of migrants in Quebec from the rest of Canada; (3) the square root of the sum of non-migrants in Canada excluding Quebec and migrants in Quebec from the rest of Canada; and (4) the square root of  $(\text{the migration rate} \times (1 - \text{the migration rate}) \times (\text{non-migrants in Canada excluding Quebec} + \text{migrants in Quebec from the rest of Canada}))$ . Using the natural

logarithm of the dependent variable, Individual characteristics were entered first followed by the Origin and Destination variables for each of the four different weights and for both time periods.

For 1971, the Destination variable Percentage of the Population with English Mother Tongue(QueEngMT) showed evidence of collinearity - i.e. Beta greater than the absolute value of 1 - using weights (1) and (3). These equations were rerun using the natural logarithm of QueEngMT (the log of  $(1 + \text{QueEngMT})$  was actually computed to avoid problems arising from attempting to compute the log of zero). This eliminated the collinearity. Using weights (2) and (4), the Destination variables Percentage of the Population with French Mother Tongue(QueFrMT) and with English Mother Tongue(QueEngMT) showed evidence of collinearity (Betas exceeding the absolute value of 1) so these equations were also rerun using the natural logarithm of QueEngMT ( $\ln(1 + \text{QueEngMT})$ ) which resolved the problem.

The standard errors of the coefficients for the equation weighted by (1) were identical to those for the equation weighted by (3) while the standard errors for the equation weighted by (2) were identical to those weighted by (4). (All equations used the log transformation of QueEngMT). The magnitudes of the standard errors for the equations weighted by (1) and (3) were smaller than those for the equations weighted by (2) and (4). The residual plots for the equations weighted by (1) and (3) were very similar to one another and showed less deviation from a normal distribution than the plots for the equations weighted by (2) and (4) which were also very similar to one another. Explained variance for the equations weighed by (1) and (3) was approximately equal as was explained variance for the equations weighed by (2) and (4). The magnitude of explained variance for the former pair of equations was considerably smaller than for the latter pair. The pattern of significant variables was identical for the equations weighted by (1) and (3) as was the pattern for the equations weighted by (2) and (4). Considerably more variables were significant using the former pair of weights than the latter.

The results for 1981 were very similar to those for 1971. The equations weighted by (1) and (3) did not show any evidence of collinearity. Collinearity was, however, evident in the equations weighted by (2) and (4). The Beta for the Origin variable Percentage of the Population of French Ethnic Origin(CanFren) exceeded the absolute value of 1 in these equations. Both equations were rerun using the natural logarithm of this variable ( $\ln(1 + \text{CanFren})$ ) which resolved the problem.

The magnitudes of the standard errors of the coefficients for the equations weighted by (1) and (3) were equal to one another as were those of the equations weighted by (2) and (4) to each other. The standard errors for the former pair of weighted equations were smaller than those of the latter pair. The residual plots for the equations weighted by (1) and (3) were very similar to one another and showed much less deviation from a normal distribution than the plots for the equations weighted by (2) and (4) which were also very similar to each other. Explained variance for the equations weighted by (1) and (3) was equal to one another as was that for the equations weighted by (2) and (4). Explained variance for the former pair of weighted equations was less than for the latter pair. The pattern of significant variables for the equations weighted by (1) and (3) was identical. The equations weighted by (2) and (4) also had an identical pattern of significant variables. Considerably more variables were significant for the former pair of weighted equations than for the latter pair.

A weighted regression procedure using (3) the square root of the sum of non-migrants in Canada excluding Quebec and migrants in Quebec from the rest of Canada was selected for the analysis. The results using this weighting procedure are provided in Chapter Three.

As a final step, separate equations for the British and French ethnic groups were obtained. The natural logarithm of the dependent variable and a weight of the square root of the sum of non-migrants in Canada excluding Quebec and migrants in Quebec from the rest of Canada were used in each case. Individual characteristics were entered first followed by the Origin and Destination variables.

For 1971, the equation for the British group did not show any evidence of collinearity. The equation for the French group, however, did manifest collinearity. The Betas for the Destination variables QueBrit, QueFren, QueEngMT and QueFrMT all exceeded the absolute value of 1. Using the natural logarithm of the variable QueEngMT ( $\ln(1 + \text{QueEngMT})$ ) brought the values of all Betas below the absolute value of 1.

For 1981, collinearity was evident in the equations for the British group. The Betas for the variable age1 exceeded the absolute value of 1. Recoding the age variables (i.e. age1 and age2) into a single linear variable ageL coded 20 to 29=0, 30 to 64=1 and 65+ =2 resolved the problem. The equations for the French group did not manifest collinearity.

The results for the British and French ethnic groups considered separately are included in Chapter Three.



**BIVARIATE CORRELATIONS FOR 1971  
(BRITISH AND FRENCH GROUPS)**

102

CANBRIT	CANFRMT	CANENGMT	QUEINC	QUEUNEMP	QUEFREN	QUEBRIT	QUEFRMT	LNQUEENGMT
.013	-.087	.103	.125	-.045	.058	-.014	.052	.015
.334	-.630	2.867	972.666	-.430	.506	-.256	.356	.020
.216	.000	.000	.000	.004	.200	.212	.001	.190
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.001	.000	-.001	-.442	.000	.001	.000	.001	.000
.497	.500	.495	.494	.497	.497	.499	.496	.495
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.001	.000	-.002	-.406	.000	.001	-.001	.001	.000
.494	.499	.493	.494	.498	.494	.496	.496	.494
-.029	-.066	-.002	.093	-.012	-.074	.105	-.050	.002
-.150	-.098	-.014	149.291	-.025	-.393	.412	-.270	.001
.044	.000	.442	.000	.231	.000	.000	.002	.499
-.063	.306	.245	-.091	.550	.481	-.365	.465	-.302
-.315	.444	.365	-141.919	.056	2.485	-1.385	2.448	-.081
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.106	-.141	-.224	.121	-.551	-.292	.147	-.313	.240
-.558	-.214	-1.304	157.121	-1.108	-1.576	.585	-1.723	.067
.000	.000	.000	.000	.000	.000	.000	.000	.000
.635	-.609	.741	.731	-.227	-.540	.460	-.552	.713
4.838	-1.336	6.228	1718.060	-.661	-4.214	2.639	-4.388	.289
.000	.000	.000	.000	.000	.000	.000	.000	.000
.394	-.198	.352	.640	.820	-.115	.268	-.099	.250
1.946	-.282	1.918	975.763	-.979	-.583	.998	-.509	.086
.000	.000	.000	.000	.000	.000	.000	.000	.000
.324	-.310	.377	.372	-.116	-.275	.234	-.281	.363
2.419	-.668	3.113	858.686	-.330	-2.107	1.319	-2.194	.144
.000	.000	.000	.000	.000	.000	.000	.000	.000
.560	-.571	.531	.942	-.469	-.553	.506	-.564	.681
18941.139	-5564.368	19825.081	9840530.719	-6055.829	-19166.258	12891.814	-19930.802	1226.086
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.176	.244	-.060	-.401	.751	.186	-.250	.251	-.241
-5.472	2.184	-2.057	-3845.251	8.901	5.924	-5.852	8.127	-.399
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.639	.939	-.494	-.527	.505	.688	-.614	.683	-.725
-26.670	11.282	-22.754	-6794.392	8.048	29.447	-19.315	29.760	-1.610
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.668	.897	.897	.556	-.224	-.389	.516	-.348	.585
-21.706	111.730	19371.238	19371.238	-9.636	-44.976	43.901	-40.962	3.573
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.602	-.517	.418	.517	.418	.610	-.581	.619	-.729
-21.580	-5184.669	5.142	5.142	5.142	20.284	-14.220	21.003	-1.260
.000	.000	.000	.000	.000	.000	.000	.000	.000
.546	-.080	-.224	.348	-.224	-.224	.348	-.208	.539
20995.641	-3.823	-28.387	32.707	-28.387	-28.387	32.707	-27.043	3.567
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.487	-.529	.535	.535	-.487	-.529	.535	-.577	.665
-6464.834	-18885.550	14039.202	14039.202	-6464.834	-18885.550	14039.202	-20986.308	1232.246
.000	.000	.000	.000	.000	.000	.000	.000	.000
.306	-.300	.347	.347	.306	-.300	.347	-.285	.285
13.513	-9.743	15.619	15.619	13.513	-9.743	15.619	-.676	.676
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.872	.967	.967	.967	-.872	.967	.967	-.897	.897
-75.910	116.732	116.732	116.732	-75.910	116.732	116.732	-5.270	5.270
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.829	.783	.783	.783	-.829	.783	.783	-.783	.783
-73.595	3.538	3.538	3.538	-73.595	3.538	3.538	-73.595	73.595
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.866	.866	.866	.866	-.866	.866	.866	-.866	.866
-5.427	.000	.000	.000	-5.427	.000	.000	.000	.000

BIVARIATE CORRELATIONS FOR 1971 CONT'D  
(BRITISH AND FRENCH GROUPS)



CANBRIT	CANFRMT	CANENGMT	QUEINC	QUEUNEMP	QUEFREN	QUEBRIT	QUEFRMT	QUEENGMT
-.037	-.096	.168	.139	.150	.088	-.057	.113	-.062
.846	.462	5.167	1446.023	1.777	2.246	-.644	2.990	-.053
.002	.000	.000	.000	.000	.000	.000	.000	.000
.191	-.313	.276	.291	-.093	-.065	.148	-.036	.153
.363	-.469	2.654	943.255	-.344	-.520	.523	-.297	.809
.000	.000	.000	.000	.000	.000	.000	.002	.000
.000	.000	.000	.000	.000	.000	.000	.000	.000
.000	.000	.000	-.069	.000	.000	.000	.000	.000
.498	.498	.498	.498	.498	.498	.498	.498	.498
.000	.000	.000	.000	.000	.000	.000	.000	.000
.000	.000	.000	-.015	.000	.000	.000	.000	.000
.499	.499	.499	.500	.499	.499	.498	.499	.499
-.032	-.070	.018	.100	.287	-.034	-.022	.000	-.018
-.136	-.063	.106	194.281	.635	-.162	-.047	.001	-.058
.006	.000	.075	.000	.000	.004	.039	.492	.075
-.116	.076	.410	-.238	.749	.404	-.354	.422	-.358
-.472	.065	2.255	-442.732	1.585	1.848	-.718	1.984	-.090
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.104	.113	-.384	.319	-.482	.020	-.018	.018	-.060
-.442	.101	-2.207	.618.131	-1.063	.093	-.037	.082	-.189
.000	.000	.000	.000	.000	.062	.083	.080	.000
.421	-.689	.608	.641	-.205	-.143	.326	-.079	.336
2.726	-.938	5.307	1886.251	-.689	-1.040	1.047	-.595	1.618
.000	.000	.000	.000	.000	.000	.000	.000	.000
.234	-.239	.225	.731	-.373	-.173	.227	-.149	.246
.933	-.200	1.208	1326.410	-.769	-.771	.448	-.685	.730
.000	.000	.000	.000	.000	.000	.000	.000	.000
.398	-.529	.407	.912	-.433	-.107	.321	-.058	.301
13270.637	-3700.933	18273.843	13806129.692	-7473.261	-4009.849	5293.594	-2226.741	7452.949
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.354	.498	-.014	-.515	.861	.396	-.400	.397	-.463
-11.099	3.279	-.585	-7341.777	13.983	13.929	-6.223	14.396	-10.815
.000	.000	.138	.000	.000	.000	.000	.000	.000
-.632	.914	-.431	-.598	.640	.586	-.643	.554	-.753
-13.289	4.036	-12.202	-5713.986	6.962	13.808	-6.706	13.455	-11.782
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.723	.781	.356	-.369	-.409	-.409	.599	-.388	.689
-11.248	77.965	11989.965	-14.137	-.33.885	-33.885	21.111	-33.219	37.991
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.689	-.512	.415	.396	-.508	.353	-.617	.714	.000
-14.431	-3621.347	3.339	6.890	-3.913	6.332	-7.143	.000	.000
.000	.000	.000	.000	.000	.000	.000	.000	.000
.352	.065	.040	.040	.040	.040	.040	.040	.040
15960.352	3.334	4.433	12.366	9.354	9.354	23.215	.000	.000
.000	.000	.001	.000	.000	.000	.000	.000	.000
-.465	-.230	.316	.316	-.178	.346	.346	.346	.346
-8108.200	-8688.446	5270.496	-6924.862	8662.520	8662.520	8662.520	8662.520	8662.520
.000	.000	.000	.000	.000	.000	.000	.000	.000
.583	-.577	.579	-.604	.579	-.604	.579	-.604	.579
25.026	-10.962	25.629	-17.247	25.629	-17.247	25.629	-17.247	25.629
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.702	.990	-.815	.927	-.815	.927	-.815	.927	-.815
-28.876	94.856	-50.407	25.333	-50.407	25.333	-50.407	25.333	-50.407
.000	.000	.000	.000	.000	.000	.000	.000	.000
.703	.703	.703	.703	.703	.703	.703	.703	.703
-211.811	-211.811	-211.811	-211.811	-211.811	-211.811	-211.811	-211.811	-211.811
.000	.000	.000	.000	.000	.000	.000	.000	.000
-.817	-.817	-.817	-.817	-.817	-.817	-.817	-.817	-.817
-52.006	-52.006	-52.006	-52.006	-52.006	-52.006	-52.006	-52.006	-52.006
.000	.000	.000	.000	.000	.000	.000	.000	.000

BIVARIATE CORRELATIONS FOR 1981 CONT'D  
(BRITISH AND FRENCH GROUPS)