

The Measurement of Acculturation

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Abstract

Acculturation, as described in the demographic, sociological and psychological literature, is defined as a process of change and adaptation that results from contact between members of different cultural groups. Therefore, it embodies the strategies of integration, assimilation, separation or segregation and marginalization. Data from the 1991 Census Public Use Microdata File are used to derive an index of acculturation based on a framework developed by John Berry of Queen's University. The index is applied in a preliminary analysis of selected characteristics of immigrants (place of birth and mother tongue) to demonstrate the potential for this indicator.

Résumé

L'acculturation, telle que décrite dans la littérature démographique, sociologique et psychologique, est définie comme le processus de changement et d'adaptation qui résulte du contact entre les membres des groupes culturels différents. Ce processus inclue donc les stratégies d'intégration, d'assimilation, de séparation ou de ségrégation et de marginalisation. On se sert des données du fichier de microdonnées à grande diffusion sur les particuliers du recensement de 1991 pour calculer un indice d'acculturation selon un modèle élaboré par John Berry de Queen's University. On utilise cet indice dans l'analyse préliminaire de certaines caractéristiques des immigrants (lieu de naissance et langue maternelle) pour montrer l'usage que l'on peut faire de cet indicateur.

Key Words: acculturation, integration, assimilation, immigration

Introduction

Immigration is an important component of population growth in Canada and, if the current demographic trends of natural population increase continue, its significance in the development of Canadian society is likely to become more pronounced. Social scientists have been, and continue to be, concerned with the impact of immigration on the migrants and on the receiving societies. Some studies focus on the economic aspects of immigration; others address issues of social mobility and immigrant adaptation; and yet others are concerned with the policy implications of immigration (for examples of these studies see Li, 1998; De Voretz, 1995; Boyd, 1994; Richard, 1991; Jasso and Rosenzweig, 1990 and 1988; Kalbach and Richard, 1990; Richmond and Kalbach, 1980; Richmond, 1974). The importance of immigration as a policy issue in Canada is reflected in the various revisions to the Immigration Act in response to migration patterns and in the evolution of multiculturalism policies.

In its most general sense, immigration encompasses two basic processes. First, the receiving society must absorb the migrants economically and socially (the process of absorption). Second, the migrants must adapt to the social and economic life of the receiving society (the process of adaptation or acculturation). Absorption and acculturation are dependent events. Whether the absorption process is proactive in design and application (such as in Israel) or reactive (such as in Canada and the United States) it has an influence on the acculturation of the immigrants who are affected. In addition, the attitudes and actions of the immigrants also have an impact on the outcome of the acculturation process. Therefore, from an analytical perspective, the definition of the concept of acculturation and its measurement are essential in order to assess the effects of the absorption process.

This study, which is one of the early phases of a larger project to analyse the impact of policies and programs on how immigrants adapt in different host environments, examines the feasibility of deriving an indicator of acculturation using census data. Acculturation, as a phenomenon, was addressed by anthropologists towards the end of the 19th century in studies that focussed on the effect of contact between people of different cultures and who were perceived to be at different levels on the Darwinian scale of development (Holmes, 1886; Boas, 1966; McGee, 1960;). The underlying theme in these works is that acculturation is a uni-directional process resulting in improved cultural development in less developed societies as a result of contact with more highly developed societies. In the mid-1930s, recognising that acculturation is a two way process, a team of anthropologists defined acculturation as ".... those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups" (Redfield, et al., 1936: 149).

In societies in which immigration was a major component of population growth, such as Canada and the United States, research into acculturation focussed on the transitions that individuals or groups of individuals underwent as a result of contact with members of the dominant group (or groups). It was presumed by

American sociologists in the first half of the 20th century that continued contact inevitably led to assimilation (Park, 1930; Park and Burgess, 1921). In other words, they viewed assimilation as the end-result of the process of acculturation. However, alternative theories were advanced in the mid to late 1960s. Milton Gordon advanced the idea that there were degrees of assimilation, including cultural and structural, and that acculturation was cultural assimilation (Gordon 1978: 65). Glazer and Moynihan (1963) proposed cultural pluralism as an alternative to assimilation. Although Gordon and Glazer and Moynihan introduced the possibility of results other than complete assimilation, acculturation was still considered a form of assimilation. Current research in the United States continues in this tradition by classifying acculturation as a form of assimilation and by recognising that different ethnic groups will adapt in different ways (Alba, 1990; Jasso and Rosenzweig, 1990; Lieberman and Waters, 1988; Jasso and Rosenzweig, 1988).

Cultural pluralism in the form of multiculturalism is an integral feature of Canadian society. Therefore, Canadian social scientists studying acculturation and absorption of immigrants were mainly concerned with inter-group comparisons, relations between minority and majority groups, factors that contributed to the process of adaptation and the retention of cultural distinctiveness. Richmond suggested that factors such as age at the time of immigration, the level of education, knowledge of either English or French, place of birth and personal and community networks affected the process of adaptation and influenced the degree of acculturation and social integration (1974: 20-26). This was a significant diversion from previous research conducted in the US since it allowed for degrees of acculturation that were tied to the characteristics of the individuals undergoing the process. Under Richmond's model assimilation was a degree of acculturation rather than the inverse proposed by American sociologists. Analysis of Canadian census data performed by Kalbach and Richard (1990) added religious affiliation to the list of factors that determined the degree of acculturation. They showed that individuals affiliated with an ethnic church were less likely to assimilate. In an analysis of marriage patterns among ethnic groups Richard opened the possibility of scale for acculturation by characterising it as a process that incorporates both cultural or behavioural assimilation and integration (Richard, 1991: 17).

Up to this point, acculturation was viewed as a process that embodied change in relations, both among groups and among individuals. It was established that the results of the process were generally observable in the attitude of individuals towards each other and through changes in their behaviour and characteristics. In previous research census data showing changes in the characteristics of groups in the population were used to support the notion that acculturation occurred. The hypothesis advanced in this paper is that it is possible to take these ideas one step further by developing a measure of acculturation using data from the Canadian censuses of population. A conceptual framework for deriving an indicator of acculturation is outlined in the next section. The definitions of some of the basic terms and concepts that are central to this study precede the discussion on the census measures that will be used to develop an indicator of

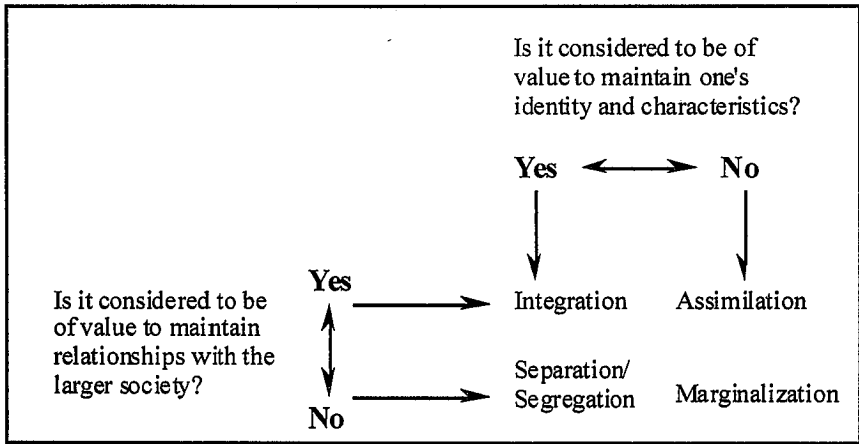
acculturation. The empirical portion of this paper includes a discussion of the robustness of the indicator and a sample of the type of analysis that is made possible through the derivation of such a measure. An agenda and direction for future research on this topic is outlined in the concluding section.

Conceptual Framework

Two factors, cultural maintenance and contact and participation, shape the strategies that define how people and groups acculturate (Berry, 1997: 9). The first deals with the importance that the individual places on maintaining his or her own cultural distinctiveness and identity. The second is concerned with the extent to which individuals desire or strive to become involved in other cultural groups, including the larger society. It is important to note that these factors can be influenced to a significant extent by collective values. For example, members of the East Indian groups (both Hindu and Moslem) hold very strong views against intermarriage (exogamy) and towards the retention of their language and customs. These are group values that are held on to and promulgated by the individuals that form the group.

Berry proposes the following framework to characterise the four basic strategies of acculturation. The dimensions of this framework are based on the two factors described above; maintenance of cultural distinctiveness and contact with and participation in other groups. In his implementation of the framework Berry asked respondents to express their preferences along these two dimensions.

Figure 1. Strategies of Acculturation



Source: Adapted from Berry (1997), page 10.

According to this framework, if an individual places importance on both maintaining cultural identity and relationships with other groups he or she is **integrated**. **Assimilation** occurs when people place less value on their cultural identity and continue to place importance on their relationship with others. **Separation or segregation** occurs when relationships with other groups are not very important but maintaining cultural identity is important. Finally, someone who neither maintains his or her own cultural identity nor places importance on relationships with other groups is considered to be **marginalized**. It can be seen that this framework refines the scale or degrees of acculturation proposed in previous research to include outcomes other than assimilation and integration.

Intuitively it is possible to attribute one of these four strategies of acculturation to the members of most ethnic groups in Canada with varying degrees of accuracy. Is it possible to empirically classify the population according to their acculturation strategy? The answer to this question requires measures for each of the dimensions of the model. Although sources such as the census do not include attitudinal data which deal with issues such as the value an individual places on cultural identity, they provide empirical measures that may be used as proxies for the dimensions of the model since they give some indication of the behaviour of individuals. For instance, factors such as religion, the nature of response to the question on ethnic origin and the knowledge and use of languages other than the two official languages provide a very useful indication of the importance an individual places on maintaining his or her cultural identity. Similarly, relationships with other groups require a common means of communication. In this instance the knowledge of one of the two official languages may be considered a proxy for the second dimension of the model.

A number of terms and expressions that may be subject to different interpretations are used in the subsequent discussion on the proxy measures from the census. They are briefly defined in the following paragraphs in order to avoid confusion and misunderstanding. In the context of this study **immigrants** are defined as individuals who are landed immigrants. To be classified as a landed immigrant a person must be granted the right to live permanently in Canada by Canadian immigration authorities. Data on **non-permanent residents**, defined as people who reside in Canada on a student authorisation, employment authorisation, a Minister's permit or who are refugee claimants, were collected for the first time in the 1991 Census. It should be noted that while they share many of the same characteristics as immigrants, the temporary nature of their residency status precludes them from being part of the study population. A **non-immigrant** is defined as someone who is a Canadian citizen by birth, regardless his or her residency status.

People living in a given society are routinely classified by various demographic, social, economic and cultural characteristics. For example, one often sees references to gender and racial differences with respect to economic mobility. In the context of this study, the classification of people by social and cultural characteristics, such as ethnic origin, religion, mother tongue and home language is considered germane to defining the mosaic that is Canadian society. **Ethnic origin**, as defined by Herberg (1989), focuses on the similarities of

individuals based on ancestry, cultural and religious values and practices and, to some extent, the ethnic group(s) with which they identify. With increasing exogamy in Canadian society the reporting of more than one ethnic origin is becoming more common¹. The primary source of data for this study, the 1991 Census, includes information on ethnic origin based on the ancestral heritage of the respondents². It should be noted that a number of studies have cast some doubt on whether respondents are actually reporting their ancestry (see Boyd and Norris, 1998; Goldmann, 1994; Boyd et al., 1993; de Vries, 1985; Pryor et al., 1991).

Religion is defined as the religious denomination that the respondent declares in the census. This is in no way a measure of degree of observance or adherence. For instance, because someone declares that they are Catholic on the census does not suggest that they attend mass on a regular basis. Furthermore, the census data do not allow for distinctions to be made with respect to specific sects within a religious denomination, such as orthodox or reform Jews.

The language variables focus on the respondent's ability to communicate and to function in a given language. The particular characteristics that are germane to this study are the respondent's **knowledge of one of the two official languages**, his or her **knowledge of a non-official language** (or heritage language), his or her **mother tongue** and what **language is spoken most often in the home**.

Proxy Measures from the Census

The unique properties of a census of population have both a positive and negative impact on the suitability of these data for this particular application. The fact that censuses are conducted at regular intervals (every 5 years in Canada), that the coverage of the population is extremely high (over 97% of the population) and that Canadian censuses collect detailed characteristics from 20% of private households³ means that these data provide a very complete profile of the population for small geographic areas. It also makes possible the cross-classification of many related characteristics such as education, income and occupation. The omnibus nature of the instrument is both a positive and a negative factor. Many topics are covered. However, few are covered in extensive detail since the amount of space that can be devoted to one topic is limited on the questionnaire. Furthermore, the census does not include questions that are attitudinal in nature such as the importance an individual places on his or her ethnic origin. Nevertheless, through judicious selection of variables it is possible to derive both axes of the Berry model.

Acculturation, as described by Berry, may be derived for all members of Canadian society regardless of their ancestry, place of birth or immigration status. The indicator for strategy of acculturation that is described in the next section takes into consideration those who are born in Canada, the Aboriginal

population and those for whom the concept is not applicable (i.e. people living in institutions and collective dwellings).

The horizontal axis of the model focuses on the value an individual places on his or her cultural identity and characteristics. Although the census does not include any variables that directly measure the values individuals place on their cultural identity, it is possible to derive such a measure by examining the responses to selected cultural characteristics. For instance, the nature of the responses to the question on ethnic origin provides an indication of the importance an individual places on his or her cultural heritage. In a recent study on the assimilation process in white neighbourhoods in New York, Alba, Logan and Crowder use the type of ancestry as a measure of ethnic intensity (Alba et al., 1995: 9). When people report a single ethnic origin this is an indicator of the importance they place on their cultural identity or characteristics. Multiple origins are usually an indication of a weaker association with a given ancestry. However, it may be argued that in some instances the reporting of multiple origins provides additional detail about the specific cultural identity and characteristic of the individual. For instance, the multiple origins of Jewish and Polish define a very specific and distinct subset of the population of Polish ancestry. However, these conditions tend to apply only to selected groups. This forms part of the rationale for the inclusion of religion in the algorithm (described below).

For people born in Canada, especially if they can trace their origins in Canada through many generations, it is possible and perhaps likely that they would declare Canadian as their ethnic origin. For immigrants, a response of Canadian, either singly or as one of a number of declared origins, suggests that they may be prepared to abandon the non-Canadian dimension of their cultural background, at least with respect to a public declaration of their heritage. The following table shows the distribution of respondents reporting single or multiple origins including Canadian.

Table 1
Number of Persons Declaring Canadian Origins (in '000),
Canada: 1971 - 1996

	1971	1981	1986	1991	1996
Single Response	71	76	69	765	5,326
Multiple Responses	n/a	—	44	268	3,479
Total	71	76	113	1,033	8,806

These data, which include the censuses from 1971 to 1996, illustrate the increasing tendency of respondents to report their origins as Canadian, either as the sole origin or as part of a multiple response. The corresponding figures for the population not born in Canada, as reported in the 1991 Census, show that slightly more than 20,000 immigrants declared a single ethnic origin of

Canadian and more than 250,000 reported Canadian as part of their origins. To a certain extent this trend is due to changes in the wording of the census questions over time. For a more detailed discussion on the changes in question wording up to the 1991 Census please see White et al (1993) or the Statistics Canada Publication "Canadian Census Ethno-Cultural Questions: 1871 to 1991"⁴.

In their discussion on the significance of the concept of race in the Canadian Census, Boyd, et al. (1993) suggest that part of the motivation for the development of Canada's Multiculturalism Policy was to "forge a pan-Canadian identity out of vast regions and diverse groups." The growing trend of respondents to report multiple origins that include Canadian as one of the responses provides empirical evidence of the pan-Canadian identity referred to by Boyd and her colleagues. Pryor, et al. (1992) stress the importance of ethnicity in understanding Canadian society, especially given the important role that immigration has played in its evolution and growth. Like Boyd, et al., they attribute the trend of respondents to report Canadian as one of their origins to a growing sense of Canadian identity among the members of the diverse ethnic groups that make up Canadian society. It is reasonable to conclude from this that multiple origins that include Canadian are a valid response to a question on ethnic origin and that they are a strong indicator of assimilation.

As suggested earlier, the respondents' declared religions provides additional indication of the value they place on their cultural characteristics. Some religions, referred to as ethnic religions, promote the retention of cultural values more than others thereby shifting the potential result of acculturation from assimilation to integration (Kalbach and Richard, 1990). For instance, the Eastern Orthodox, Jewish, Hindu, Islam, Buddhist, Mennonite, Sikh and Hutterites go to great lengths to educate their members on the values of their religious and cultural heritage⁵. Therefore, it is more likely that someone who declares one of these religions in the census places a stronger value on his or her cultural characteristics. In discussing factors which may be used to show the cultural differences between Canada and the United States, Reitz and Breton (1994: 19-22) include religion as one of the measures which shows either distinctiveness or assimilation. Although their study focuses on comparing ethnicity between Canada and the U.S., the importance they place on religion as an indicator of assimilation supports its inclusion in the derivation of acculturation strategy.

It has also been shown in previous research that a relationship exists between marital patterns and religious denomination (Richard, 1991). In her analysis of the marital patterns of ethnic groups Richard also demonstrated that a definite link exists between intermarriage (exogamy) and assimilation (Richard, 1991: 38). The ethnic religions referred to above tend to stress the importance of endogamy. In fact, family and members of the community generally frown upon marriages outside the religion. The link between exogamy and religious denominations adds further weight to including type of religion as a factor in deriving acculturation strategy.

Language is an important component of culture, both as a symbol and as a mechanism for the transmission of values and the promulgation of identity. In his seminal work on ethno-cultural maintenance in Canada, Herberg stresses that "language is part and parcel of group ethnoculture" (Herberg, 1989: 102). Therefore, if the language spoken in the home is in the group classified as a heritage language (i.e. other than one of the two official languages), it may be an indication that the respondent is making an active attempt to retain some aspect of his or her cultural heritage. Similarly, if the respondent indicates that he or she knows a heritage language that is associated with his or her particular ancestry, this is also an indicator of cultural retention.

Just as the knowledge of a non-official language is an important indicator of the value an individual places on maintaining his or her cultural identity, the knowledge of one or both of the two official languages is an indicator of an individual's ability to function and to maintain relations with the other members of Canadian society. Only one variable in the census is suitable as a measure of the value an individual places on being able to communicate with others. If the respondent declares knowledge of one or both of the two official languages, this suggests that he or she is able to communicate effectively with the larger community. Hence this variable serves as a reasonable proxy for the vertical axis of the model.

An Algorithm to Derive Acculturation Strategy

The general characteristics that are used to derive acculturation strategy (SOA) are citizenship, type of ethnic origin, type of religion, home language, knowledge of non-official languages and knowledge of official languages. The rationale for including these characteristics was discussed earlier in this paper. This section focuses on how these variables are used to derive SOA.

Three additional categories were added to the four described in the model to ensure completeness. Separate categories were created for those people who are Canadian citizens by birth who also declare a single origin of Canadian (SOA=1), people of Aboriginal origins (SOA=6) and those to whom the classification does not apply (SOA=7). Since the primary subject for this study is the immigrant population, people who declare Canadian single origin and people of Aboriginal origins are excluded from the analysis.

The first step in deriving SOA is to establish the character of the ethnic origin declared by the respondent and whether or not he or she belongs to one of the designated religious groups, as discussed in the previous section. The origins are classified as follows:

- single response, not Canadian
- single response, Canadian
- multiple response, excluding Canadian
- multiple response, including Canadian

Similarly, all respondents are classified as either belonging to, or not belonging to, one of the designated religious groups (ethnic religions).

The decision tables in Appendix A outline the logic that was applied to derive the acculturation strategy. Since this study focuses on the acculturation of immigrants, most of the analytical tables shown below include data for the four main categories of the model ($2 \leq \text{SOA} \leq 5$).

Validation of the Approach

In order to test the robustness of the algorithm to derive SOA it is necessary to assess the impact of the variables that contribute to the formula. Due to limitations in the census data, only one variable is used to determine the position along the vertical axis. Therefore, no attempt is made to test the robustness of this portion of the algorithm. However, the assignment of position along the horizontal dimension is somewhat more complex. The rationale for the sequence in which the variables are applied in the algorithm is based on the relative importance of each in determining whether or not an individual places value on maintaining his or her culture. The type of religion and the nature of the response to ethnic origin are very strong indicators of the value the respondent places on his or her ethnic identity. Hence they are promoted to the top of the algorithm. If the home language is other than one of the official languages, this is considered to be a strong indicator of the value an individual places on his or her ethnic identity. Therefore, this constitutes the next level in the algorithm. The knowledge of non-official language(s) is the final part of the algorithm and it is invoked only when the tests for the other variables yield inconclusive results.

There is sufficient evidence in the literature and from the studies referred to earlier to support the inclusion and the prominent positioning in the algorithm of type of religion and nature of response to the question on ethnic origin. However, additional verification is required to establish the validity of including knowledge of non-official language(s) in the algorithm.

The strength of the association between a respondent's ethnic origin and the knowledge that he or she may have of the corresponding non-official language provides an indication of the degree to which the variable NOLP (knowledge of non-official language) contributes to the placement along the horizontal axis in the model to derive SOA. If there is a strong association between the two it is reasonable to view this variable as making a positive contribution, especially in its current position in the algorithm.

To examine the association between ethnic origin and the corresponding non-official language a number of specific origins were selected on the basis of the following criteria:

- a) the usual language associated with the origin should not be either English or French;
- b) there must be a clearly identifiable and reported (on the census) language associated with the particular origin; and
- c) there must be a sufficient number of cases on 1991 Census Public Use Microdata File (PUMF) to render the statistics significant.

The origins selected based on these criteria are listed in the following table.

Table 2
Counts of Selected Single Origins and Heritage Languages
for Canada, 1991 Census

Origin	Ethnic Origin		Knowledge of Heritage Language	
	Count	Percent	Count	Percent
German	27,264	3.4	20,161	2.5
Italian	22,223	2.7	20,713	2.6
Chinese	17,061	2.1	16,204	2.0
Ukrainian	12,141	1.5	7,522	0.9
Dutch	10,329	1.3	5,337	0.7
Polish	7,979	1.0	7,106	0.9
Total Population (unweighted)	809,654	100.0	809,654	100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals

The two columns under the label "ethnic origin" show the incidence of the selected origins and their relative proportions in the sample population on the PUMF. The columns under the heading "knowledge of heritage language" provide counts and proportions of the number of respondents in the PUMF who declared a knowledge of the specific non-official language that corresponds to one of the selected origins. It can be seen that the number of occurrences of each response is sufficiently high to ensure that the subsequent statistical measures are significant.

A series of dummy variables were created in order to test the association between an ethnic origin and the knowledge of the corresponding heritage language. The following table shows the correlation between the dummy variables representing each of the six origins and the dummy variables representing the heritage languages.

Table 3**Correlations between Ethnic Origin and the Corresponding Heritage Language for Canada, 1991 Census**

Ethnic Origin	Response Category	Pearson's Correlation
German	Single Origin	0.474
	Multiple Origins	0.304
Italian	Single Origin	0.814
	Multiple Origins	0.687
Chinese	Single Origin	0.915
	Multiple Origins	0.888
Ukrainian	Single Origin	0.609
	Multiple Origins	0.433
Dutch	Single Origin	0.591
	Multiple Origins	0.388
Polish	Single Origin	0.713
	Multiple Origins	0.471

Source: 1991 Census Public Use Microdata File (CD-ROM) – Individuals
All correlations are significant at the 0.01 level (2-tailed).

Predictably, the results in table 3 show that the knowledge of the corresponding heritage language is more highly correlated with single origins than with multiple origins. They also show that the origins are split into two categories. For the Chinese, Italian and Polish there is a high correlation indicating a strong likelihood that the members of these groups are able to speak the corresponding heritage language. In the case of the other three origins the correlation is moderate. This is may be due to their immigration history or to their higher tendency towards intermarriage (Dumas, 1988). Nevertheless, these measures indicate that a relationship exists between specific origins and the knowledge of the corresponding non-official language. It can be concluded from this that the variable, knowledge of non-official language, contributes positively to the algorithm used to derive SOA.

A Preliminary Analysis of Acculturation

The analysis presented in this paper focuses on the distribution of selected population characteristics by strategy of acculturation. The selection of characteristics is critical since it is important to avoid using variables that are included in the derivation of acculturation strategy. For the purposes of this study the investigation is limited to mother tongue and place of birth. The distribution of these characteristics by the four principal strategies of acculturation (assimilation, integration, separation/segregation and marginalization) is examined initially for the total population represented on the PUMF. Next, these characteristics are examined for the immigrant population and, as a final step, the population under study is further narrowed to the immigrants who declared Canadian origins in the 1991 Census.

The sole source of data for this analysis is the 1991 Census Public Use Microdata File on Individuals (CD-ROM version)⁶. Therefore, in the discussion of the tables and graphic representations of the results reference is made only to the percentage distributions. In those instances where counts are presented they are unweighted. Generally cells with a population of less than 50 are not shown in tables, although they are included in the calculations. The exceptions are noted in the tables where they occur. It should be noted that the totals shown in the tables, although accurate, are not necessarily the sum of the parts since they include cells that were suppressed. Furthermore, in some tables it is possible that the percentages do not add up to 100 due to the effects of rounding.

The category "Canadian by birth and ethnic origin" includes all the respondents who declared Canadian citizenship by birth *and* who reported Canadian as their ethnic origin. This excludes all people born in Canada who report origins other than Canadian. The category "Aboriginal" includes all people on the file who declared at least one Aboriginal origin. These two groups along with the category labelled "not applicable" are excluded from the analysis since they apply only to very special subsets of the population. Also, no specific reference will be made to population classified as *marginal* since there are too few cases. Language is an important factor in acculturation. The ability to function in either English or French⁷ (or both) plays an important role in determining whether a person is classified in the integrated/assimilated or in the separated/marginalized row of the model. The following contingency table examines the relationship between language and acculturation strategy from a slightly different dimension. It shows the distribution of the study population by acculturation strategy for the four main groups in the model and by mother tongue⁸.

The distribution of the total population by acculturation strategy is shown in the following table.

Table 4
Strategy of Acculturation, Total Population, Canada, 1991
(Unweighted Data)

Strategy of Acculturation (SOA)	Count	Percent
Canadian by birth & ethnic origin	22,140	2.7
Integrated	136,479	16.9
Assimilated	610,085	75.3
Separated/Segregated	10,502	1.3
Marginalized	—	
Aboriginal	30,058	3.7
Not applicable	383	0.1
TOTAL	809,654	100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) – Individuals
— signifies that the cell count is less than 50

It can be seen from these data that over 98% of the people classified as assimilated declared a mother tongue of either English or French. This result is not surprising since this table includes immigrants and non-immigrants. The proportion of people whose mother tongue is neither English nor French increases significantly for those classified as integrated (over 75%) or separated (98%). This trend is explained, in part, by the fact that over 60% of the people classified as integrated and over 85% of those classified as separated are immigrants.

The trends in this table confirm the relationship between language, specifically mother tongue, and acculturation strategy. They show that the opportunity to either assimilate or integrate into Canadian society is tied directly to the degree of familiarity with either English or French. When the declared mother tongue is one of the official languages there is a greater tendency to assimilate whereas in instances when the declared mother tongue is neither English nor French the tendency is to either integrate or, in the extreme case when the respondent has no knowledge of an official language, he or she is most likely to be classified in the separated category.

Table 5
Acculturation Strategy by Mother Tongue, Full Study Population, Canada, 1991 Unweighted Data

SOA		English	French	Bilingual	Non-Official Language	Total
Integrated	Count	28,434	4,813	168	103,053	136,468
	within Integrated	20.8	3.5	0.1	75.5	100.0
Assimilated	Count	414,431	186,087	2,443	7,124	610,085
	within Assimilated	67.9	30.5	0.4	1.2	100.0
Separated/ Segregated	Count	170	—	—	10,292	10,500
	within Sep./Seg.	1.6	—	—	98.0	100.0
Marginalized	Count	—	—	—	—	—
	within Marginal	—	—	—	—	—
Total	Count	443,035	190,938	2,611	120,476	757,060
	within Total	58.5	25.2	0.3	15.9	100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals

— signifies that the cell count is less than 50.

Looking at the distributions of acculturation strategy by place of birth provides additional insight into the characteristics of the people in each of the four main groups. As can be seen in the following table, over 90% of the people classified as assimilated were born in Canada. Although age has not been factored into the analysis, it is reasonable to assume that most of these people received a significant part of their formative education in Canada. In contrast, over 60% of those classified as integrated were born outside of Canada, mostly in Europe and Asia. Given the previous data on mother tongue, it is likely that most were born in non-English or non-French speaking countries. This will be confirmed once immigration is controlled for in the analysis.

As stated earlier, place of birth is most meaningful in an analysis of the acculturation of immigrants. Nevertheless, it is noteworthy that almost 17% of the people classified as separated were born in Canada. Although it is purely speculative at this stage, it is likely that these are people who either live in a communal setting or who are the pre-school age children of immigrant families. This phenomenon warrants further exploration but it is beyond the scope of the present study.

The next stage in the analysis is to focus specifically on the immigrant population. As expected, the distribution of this subset of the population by acculturation strategy shifts decidedly towards integrated. This may be due to a variety of factors such as the influence of ancestry and place of birth on acculturation, the effects of multiculturalism policies and programs with respect to language and cultural retention or some combination of the two. An analysis of the distributions by mother tongue and place of birth will shed some light on this.

The relationship that was observed for the total population between the knowledge of either English or French and the acculturation strategy is reinforced when focusing more narrowly on immigrants. The distribution by acculturation strategy is directly proportional to the declared mother tongue. Those who are classified as assimilated are more likely to declare their mother tongue to be one of the official languages (over 93%). Of the people whose acculturation strategy is classified as integrated, most have a mother tongue other than English or French. In fact, almost half of them speak one of the European languages and slightly over 10% speak Chinese. Among those classified as separated, almost all declared a mother tongue other than English or French. Again, specific concentrations appear among speakers of some of the European languages such as Italian (16%) and Portuguese (12%) and some Asiatic languages such as Chinese (28%). For this last category, it is likely that age at immigration will be a factor. It is probable that most of the non-English and non-French speakers in the separated category migrated to Canada late in their lives thereby not benefiting from opportunities to learn one of the official languages. In some instances they may not have experienced the need because of limited contact with people outside their specific ethnic communities. This will be the subject of future research.

Table 6
Acculturation Strategy by Place of Birth, Full Study Population, Canada, 1991 Unweighted Data

SOA		Canada	USA	Europe	Asia & Middle East	Africa	Other	Total
Integrated	Count	52,354	1,172	42,555	28,451	4,375	7,560	136,467
	within Integrated	38.4	0.9	31.2	20.8	3.2	5.5	100.0
Assimilated	Count	564,551	7,106	27,227	1,778	1,128	8,290	610,080
	within Assimilated	92.5	1.2	4.5	0.3	0.2	1.4	100.0
Separated/ Segregated	Count	1,732	—	3,624	4,301	129	687	10,500
	within Sep./Seg.	16.5	—	34.5	41.0	1.2	6.5	100.0
Marginalized	Count	—	—	—	—	—	—	—
	within Marginal	—	—	—	—	—	—	—
Total	Count	618,638	8,305	73,411	34,531	5,632	16,537	757,054
	within Total	81.7	1.1	9.7	4.6	0.7	2.2	100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals

— signifies that the cell count is less than 50.

Table 7
Acculturation Strategy by Mother Tongue, Immigrant Population, Canada, 1991 Unweighted Data

SOA		English	French	Bilingual	Non-Official Language	Total
Integrated	Count within Integrated	6,879 8.7	1,516 1.9	51 0.1	70,716 89.3	79,162 100.0
Assimilated	Count within Assimilated	37,109 87.2	2,538 6.0	64 0.2	2,850 6.7	42,561 100.0
Separated/ Segregated	Count within Sep./Seg.	71 0.9	—	—	7,966 98.8	8,060 100.0
Marginalized	Count within Marginal	—	—	—	—	—
Total	Count within Total	44,059 33.9	4,077 3.1	115 0.1	81,537 62.8	129,788 100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals

— signifies that the cell count is less than 50.

What remains to be seen is whether place of birth has some effect on acculturation strategy for the immigrant population. It would be reasonable to assume that people who are born in countries with societies that bear some similarity to Canada's are more likely to assimilate. The following data confirm this assumption.

Almost three-fourths of the immigrants and non-permanent residents classified as assimilated were born in either the United States or Europe (mostly the United Kingdom). Those in the integrated and separated categories tend to originate from regions with more distinct cultures such as Southern Europe and South and South East Asia. In most of these cases the preservation and promulgation of the culture is a function of and the result of the institutional completeness of the ethnic community. For instance, in ethnic communities with active schools, local media and cultural activities (music, theatre, dance, etc.) there is a greater probability that its members will place value on maintaining their cultural heritage. This is certainly the case for the ethnic groups from the regions listed above. The primary factors that will influence whether someone from one of these ethnic groups is classified as integrated or separated are the age at which he or she came to Canada and the degree of enclavity for that community.

What is the pattern of acculturation for immigrants who also declare Canadian origins in the census? One would expect a shift in the proportions from integrated to assimilated. The data in the following table confirm this assumption.

Whereas most of the immigrants and non-permanent residents are classified as integrated, when one examines the subset who declared Canadian origins, over 85% are classified as assimilated (838 out of a total of 984). An analysis of the data by mother tongue and by place of birth helps to explain this phenomenon. Slightly more than 75% of the people classified as assimilated also declared that their mother tongue was one or both of the official languages. Furthermore, as shown in the following table, roughly the same proportion declared that they were born in either the United States or in Europe.

The American component is self explanatory. The European component either came from French or English speaking countries or came from families in which English or French was considered the mother tongue. Again, it is beyond the scope of the current study to explore this phenomenon further. However, this will form part of a future research agenda on this topic.

Table 8
Acculturation Strategy by Place of Birth, Immigrant Population, Canada, 1991 Unweighted Data

SOA		Canada	USA	Europe	Asia & Middle East	Africa	Other	Total
Integrated	Count	68	1,044	41,606	25,838	3,912	6,693	79,161
	% within Integrated	0.1	1.3	52.6	32.6	4.9	8.5	100.0
Assimilated	Count	138	6,155	25,899	1,649	982	7,737	42,560
	% within Assimilated	0.3	14.5	60.9	3.9	2.3	18.2	100.0
Separated/ Segregated	Count	—	—	3,450	3,947	97	540	8,060
	% within Sep./Seg.	—	—	42.8	49.0	1.2	6.7	100.0
Marginalized	Count	—	—	—	—	—	—	—
	% within Marginal	—	—	—	—	—	—	—
Total	Count	210	7,221	70,959	31,435	4,991	14,970	129,786
	% within Total	0.2	5.6	54.7	24.2	3.8	11.5	100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals

— signifies that the cell count is less than 50.

Table 9
Acculturation Strategy by Mother Tongue, Immigrants and Canadian Origins, Canada, 1991 Unweighted Data

SOA		English	French	Bilingual	Non-Official Language	Total
Integrated	Count	31	—	—	97	129
	within Integrated	24.0	—	—	75.2	100.0
Assimilated	Count	610	—	—	208	838
	within Assimilated	72.8	—	—	24.8	100.0
Separated/	Count	—	—	—	—	—
Segregated	within Sep./Seg.	—	—	—	—	—
Marginalized	Count	—	—	—	—	—
	within Marginal	—	—	—	—	—
Total	Count	643	—	—	320	984
	within Total	65.4	—	—	32.5	100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals

— signifies that the cell count is less than 50.

Table 10
Acculturation Strategy by Place of Birth, Immigrants and Canadian Origins, Canada, 1991 Unweighted Data

SOA	Canada	USA	Europe	Asia & Middle East	Africa	Other	Total
Integrated							
Count	—	—	60	34	—	26	129
% within Integrated			46.5	26.4		20.2	100.0
Assimilated							
Count	—	127	506	58	26	115	838
% within Assimilated		15.2	60.4	6.9	3.1	13.7	100.0
Separated/ Segregated							
Count	—	—	—	—	—	—	—
% within Sep./Seg.							
Marginalized							
Count	—	—	—	—	—	—	—
% within Marginal							
Total							
Count	—	128	572	102	35	141	984
% within Total	0.6	13.0	58.1	10.4	3.6	14.3	100.0

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals

— signifies that the cell count is less than 50.

Where Do We Go From Here?

The primary objective of this study was to examine the feasibility of deriving an indicator that classifies people by strategy of acculturation, as defined by the Berry model. A secondary objective was to test the derivation of the indicator using data from the 1991 Census PUMF. The final objective was to demonstrate the analytical potential of this indicator by conducting some preliminary descriptive analysis on the 1991 Census data.

In outlining the conceptual framework for acculturation it was shown that the process results in four strategies – assimilation, integration, separation / segregation and marginalization. To meet the first objective it is necessary for the indicator to be able to classify people according to the strategies of acculturation. It is also necessary for the derivation to be robust and conceptually sound. The feasibility of deriving an indicator of acculturation has been demonstrated. It has been shown that the distribution of the population by strategy of acculturation appears reasonable and that it behaves as predicted in the theoretical discussion for different subgroups of the population. For instance, Richmond proposed that knowledge of one or both of the official languages influences the degree of acculturation (1974, 20-26). The analysis of the population by mother tongue shows clearly that people who declare a mother tongue of either English or French tend to assimilate whereas those whose mother tongue is a heritage language tend to integrate.

It was also proposed in previous theoretical discussions on acculturation that religious affiliation and attitudes towards intermarriage affect the strategy that individuals adopt (Richard, 1991: 38; Alba, 1990: 125; Kalbach and Richard, 1990; Lieberman and Waters, 1988: 162-163). The data in the following table confirm the relationship between intermarriage and strategy of acculturation.

Multiple origins are often the result of exogamy. The offspring of intermarried couples are more likely to declare more than one origin. Furthermore, it is reasonable to assume that someone declaring multiple origins has a greater tendency to assimilate. These data show that the relationship between multiple origins and assimilation holds true, which reinforces the significance of religious affiliation in determining strategy of acculturation.

The three objectives outlined above were clearly met in the process of deriving the indicator and in testing its robustness and conceptual validity. An important feature of the method applied in this study is its adaptability to other contexts such as other national censuses. The key criterion is that appropriate variables can be found to derive each of the dimensions of the model. Another important feature of this method is that it can be applied to the total population or to a particular subset of the population such as selected immigrant cohorts (defined by period of immigration) or the Aboriginal population.

Table 11
Ethnic Origins by SOA, 1991 Unweighted Data, Canada

Ethnic Origin	Response Type	Strategy of Acculturation								Total	
		Integrated		Assimilated		Separated/Segregated					
		count	%	count	%	count	%	count	%	count	%
German	single	12,712	46.6	14,359	52.7	193	0.7	27,264	100.0		
	multiple	1,798	3.4	51,388	96.6	—	.	53,223	100.0		
Italian	single	16,234	73.1	4,526	20.4	1,463	6.6	22,223	100.0		
	multiple	441	4.1	10,359	95.7	—	.	10,820	100.0		
Chinese	single	12,711	74.5	1,434	8.4	2,916	17.1	17,061	100.0		
	multiple	406	22.9	1,317	74.2	52	2.9	1,775	100.0		
Ukrainian	single	6,730	55.4	5,306	43.7	105	0.9	12,141	100.0		
	multiple	967	5.3	17,213	94.5	—	.	18,213	100.0		
Dutch (Netherlands)	single	5,293	51.2	5,007	48.5	—	.	10,329	100.0		
	multiple	733	4.8	14,521	95.1	—	.	15,269	100.0		
Polish	single	5,249	65.8	2,302	28.9	428	5.4	7,979	100.0		
	multiple	1,075	8.1	12,128	91.6	—	.	13,235	100.0		

Source: 1991 Census Public Use Microdata File (CD-ROM) - Individuals
 — signifies that the cell count is less than 50.

A number of important research questions were raised during the process of providing empirical evidence of the application of the index. They form a realistic and relevant agenda for future work on the acculturation of immigrants. The following abbreviated list summarises the key elements of this agenda.

- Analyse the effect of characteristics such as enclavity, education, occupation, family status and composition and age at immigration on acculturation strategy.
 - Determine the impact of multiculturalism policies in Canada on the acculturation of immigrant groups by taking year of immigration (pre- or post-1972) and age at immigration into account in the analysis.
 - Learn more about the 17% of the population classified as separated who are born in Canada.
 - Learn more about the acculturation patterns of the Aboriginal peoples of Canada.
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Endnotes:

1. The observed increase in the incidence of multiple responses to the census question on ethnic origin since 1986 is evidence of the impact of exogamy. In 1986 28% of respondents reported more than one ethnic origin. This proportion grew to 29% in 1991 and to 36% in 1996.
2. The terms "respondent" and "respondents" are used throughout this paper to indicate the individuals to whom the responses apply. It is recognized that in some instances the responses are provided by a reference person on behalf of the members of a family or household.
3. Residents of collective dwellings and institutions are administered the abbreviated questionnaire (form 2A).
4. In 1996 Statistics Canada adopted an open question for ethnic origin. The respondents were instructed to write in their origins. Although the actual wording of the question did not change between 1991 and 1996, Canadian was added to the list of examples.
5. Some religious denominations not included in this list also devote resources to promulgating their religious and cultural heritage. For example, the Christian Reformed Church, a Calvinist conservative movement of Dutch origin, operates separate schools for its membership. An attempt will be made to account for these special cases in subsequent refinements of the model.
6. The 1991 Census Public Use Microdata File on Individuals (PUMF) contains data based on a 3% sample of the population enumerated in the

census. It provides information on the demographic, social and economic characteristics of the Canadian population.

7. The terms "official language" and "official languages" will be used to refer to English and/or French.
8. The four main SOA groups include people who are born in Canada and declare at least one origin other than Canadian, people who are naturalized Canadians and landed immigrants. They exclude the Aboriginal people, non-permanent residents and those who are born in Canada and declared a single origin of Canadian.
9. Enclavity is defined as the relative concentration of a particular ethnic group in a defined and bounded geographic area. Examples are self-sufficient ethnic neighbourhoods whose residents are predominantly from one ethnic group such as Chinese or Italian. One would typically find a full range of services such as retail establishments, social and community services, health providing facilities and educational facilities that are geared to that particular ethnic group.

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Appendices:

Appendix A.1

Logic to Derive the Value in Maintaining Identity and Characteristics

Ethnic Origin = Single, Not Canadian	yes	yes	yes	yes	no	no	no	no	no	no	no	no	no
Ethnic Origin = Canadian					yes	yes	no	no	no	no	no	no	no
Ethnic Origin = Multiple, Not Canadian							yes	yes	yes	no	no	no	no
Ethnic Origin = Multiple, with Canadian										yes	yes	yes	no
Ethnic Origin = Aboriginal													yes
Designated Religion	yes	no	no	no	yes	no	yes	no	no	yes	no	no	
Home Language = Non-Official		yes	no	no				yes	no		yes	no	
Know a Non-Official Language			yes	no									
Value in maintaining identity	√	√	√		√		√	√		√	√		
No value in maintaining identity				√		√			√			√	
SOA = 6 (Aboriginal)													√

Appendices:

Table A.2
Logic to Derive the Value to Maintain Relationships with Society

KNOW ONE OR BOTH OFFICIAL LANGUAGES	yes	no
Value in maintaining relationship with larger society	√	
No value in maintaining relationship with larger society		√

Table A.3
Logic to Derive Acculturation Strategy (SOA)

Value in maintaining identity	yes	yes				E L S E
No value in maintaining identity			yes	yes		
Value in maintaining relationship with larger society	yes		yes			
No value in maintaining relationship with larger society		yes		yes		
ORIGIN = CANADIAN					yes	
CITIZEN BY BIRTH					yes	
SOA = 1 (Canadian citizen by birth and origin)					√	
SOA = 2 (Integrated)	√					
SOA = 3 (Assimilated)			√			
SOA = 4 (Separated)		√				
SOA = 5 (Marginalized)				√		
SOA = 7 (Not Applicable)						√