THE SPATIAL AND SOCIOECONOMIC ANALYSIS OF FIRST NATION PEOPLE IN TORONTO CMA

Joe T. Darden
Urban Affairs Programs and Geography Department
Michigan State University
East Lansing, Michigan
USA, 48824
jtdarden@msu.edu

Sameh M. Kamel
Department of Economics, International Studies & Public Administration
American University of Sharjah
P.O. Box 26666
Sharjah, United Arab Emirates
skamel@aus.ac.ae

Abstract / Résumé

This article is based on data from Statistics Canada's 1996 Profile Series. An index of dissimilarity and a composite socioeconomic index revealed that First Nation People and Whites are not highly segregated. Yet, there is socioeconomic unequality between Whites and First Nation People by neighborhoods. Whites are disproportionately occupying the highest quality neighborhoods while the First Nation People are disproportionately residing in poorer quality neighborhoods. The difference may be due to several factors including discrimination.

Cet article est basé sur les actualités des séries de Statistiques Canada de l'année 1996. La base de données des composites socio-économiques et de l'indicateur de dissemblances démontrent que les Premières Nations et les Blancs n'étaient pas convenablement soumis à la ségrégation. L'inégalité socio-économique basée sur le voisinage existait entre les Blancs et les Premières Nations. Les Blancs occupaient d'une façon disproportionnée un voisinage relativement pauvre. Les différences peuvent être causées par plusieurs facteurs parmi lesquelles la discrimination.

Introduction

Toronto’s population has increased by 9.4 percent in only five years (1991 to 1996). The increase is second only to Vancouver and Oshawa (Bone, 2000:166). Such a fast-growing rate is not the only unique characteristic of Toronto. Toronto is the number one place for immigrants with 32 percent visible minorities and more than 60 different ethnocultural communities (Bone, 2000; Breton, 1998; Dion and Kawakami, 1996). Despite their non-immigrant status, First Nation People remain a non-White minority group in a predominantly White society and is viewed as a group with “low ethnic status” (Driedger, 1996:278).

Since Statistics Canada uses “Aboriginal” instead of First Nation, the two words are used interchangeably in this analysis. The term Aboriginal is used in this paper to identify the descendants of the original inhabitants of Canada before contact with Europeans (Saku, 1999; Anderson, 1997). In the context of policy implications of our findings, the term First Nation (Aboriginal) will be politicized to reflect the relationship between Indigenous peoples and the state. At the core of this relationship is whether Aboriginals as the original inhabitants of the land have social and economic equality (Fleras and Elliot, 1992; 313).

The 1996 census enumerated Aboriginals as persons who identified themselves with at least one of the native groups, i.e., North American Indian, Métis or Inuit and/or those who reported being a Treaty Indian or a Registered Indian as defined by the Indian Act of Canada and/or who were members of an Indian Band or First Nation. Previously, Statistics Canada enumerated Aboriginals based on their background and ancestors rather than the recent method of perception about identity (Statistics Canada, 1997).

The shift in the census enumerating methods of Aboriginals should not be seen as distortion to the data. The fact remains that the distinction between Aboriginal groups is not based on ethnic differences but on the relationship between each Aboriginal sub-group and early European settlers and non-Native Canadians (Saku, 1999; Bone, 1992). More importantly, the census of Canada remains the most comprehensive, systematic, consistent, and important source of information on Aboriginal Canadians (Saku, 1999; Chartrand, 1993; Wright, 1993). According to the census, Aboriginals in Canada rose from about half a million in 1981 to 799,010 in 1996. Rapid growth of Aboriginals is more clear when we consider that their population in the 1941 census was only 118,000 (Patterson, 1993). This seven fold increase of Aboriginals population in a half-century is due to a high fertility rate which is above the Canadian average and census definitional changes along ancestry and identity.
In 1996, there were 16,100 Aboriginals in the Toronto CMA representing 0.38 percent of the total CMA population compared to 2.8 percent of the total Canadian population. Aboriginals' socioeconomic status in Toronto is a reflection of Canada as a whole in 1996. Despite their 100 percent Canadian birth status, only 6 percent of Aboriginals had a university degree compared with 19 percent for Whites. Aboriginals' unemployment rate was 8.4 percent which was almost twice the rate for Whites, i.e., 4.9 percent. Moreover, Aboriginals are twice as likely as Whites to hold menial jobs, i.e., 20 percent compared with 11 percent. Twenty percent of Aboriginals have professional or managerial jobs compared with 30 percent of the White population. Only 21 percent of Aboriginals fall in the $75,000 household income bracket compared to 39 percent of White households. Finally, 38.5 percent of Aboriginals were below Statistics Canada's low-income cut-off compared with 15 percent for Whites (Statistics Canada, 1998).

At this point a distinction must be made between rural Aboriginals on reserves and urban Aboriginals who are the focus of this paper. Previous researchers have found that urban "Aboriginals in Canadian cities are forced to live in the inner cities because of unemployment, low incomes, and often discrimination" with the highest concentration in Winnipeg (Driedger, 1996:278). In Toronto, only 0.04 percent of the Aboriginal population live on reserves (Statistics Canada, 1996). This segment will not be treated separately in this paper due to its small percentage of the urban Aboriginal population.

Conceptual or Theoretical Framework

The conceptual or theoretical framework originates from two related models. These describe the relationship of the White majority population towards visible or racial minorities.

Differential Incorporation Model

The first model is referred to as "differential incorporation." It means that the White majority differentially incorporates some groups into mainstream society to a greater extent than others. The groups least incorporated into the mainstream in White society are First Nation People and other people of color, i.e., visible minorities (Henry, 1994:13). However, some people of color are more incorporated into mainstream White society than others. Incorporation is conceptualized on the basis of equal access to the rewards that the economic and political systems generate and distribute (Breton, et al., 1990). In investigating differential access
to rewards and resources in the long run, one must control for differences in socioeconomic variables such as educational attainment and differences in labor market experience in order to isolate the effect of race in the differential treatment of people of color by the White majority (Henry, 1994:14).

Differential incorporation has been conceptualized as a two-way process. One process relates to the internal characteristics of people of color in terms of their strengths and weaknesses both economically and politically, and their cultural values. The other process involves external forces imposed on the minority group by the White majority despite the socioeconomic status of the visible minority (Gordon, 1964:8; Lieberson, 1980). Racial discrimination is a major form of these external forces. It is assumed that differential incorporation has been applied to people of color in Canada because historically they did not readily fit into the White society (Henry, 1994).

Place Stratification Model

A second model which describes the relationship of the White majority towards people of color is referred to as place stratification. Place stratification for people of color implies that racial inequality is an integral part of the social structure reflected by the unequal spatial distribution of minority groups and their residential segregation from the White majority (Logan, Alba and Leung, 1996). The place stratification model further suggests that differential characteristics of neighborhoods are associated with the uneven distribution of minority groups. Since neighborhoods' qualities significantly affect the life chances of groups, the White majority group is likely to restrict the opportunities of people of color from obtaining neighborhoods' qualities similar to theirs (Alba and Logan, 1991, 1993). The mechanisms used to carry out such restrictions include institutional actions in the housing market. For example, real estate brokers may show prospective White, Aboriginal or visible minority home buyers houses in different neighborhoods. Similarly, lending institutions may grant or deny mortgages to visible minorities, Aboriginals and Whites differentially regardless of creditworthiness criteria. These actions make it difficult for minorities to have access to better quality neighborhoods (Massey and Denton, 1993). Thus, the White majority group keeps its social and spatial distance from the visible minority groups including Aboriginals and secures its dominant and superior position over minorities by accessing a disproportionate share of the high quality neighborhoods' resources and rewards including housing and jobs.
In the process of gatekeeping neighborhoods along racial lines, the place stratification model also suggests that many Whites seek to avoid those neighborhoods with a certain percentage of minorities. However, the avoidance is less pronounced when a certain minority group represents only a small number of residents. In other words, the smaller the number of the minority group in the neighborhood, the less likely will strong social and institutional barriers be erected. The reason behind this social phenomenon is that the size of the minority group matters in creating a threatening situation for Whites (Blalock, 1967; Massey, 1985; Sterns and Logan, 1986; Logan, Alba, and Leung, 1996). We do not know at this point, however, whether the small size of Aboriginals in Toronto (less than 1 percent) has mattered in terms of the barriers to equal access.

Objectives

The objectives of this paper are three fold: (1) to determine whether the degree of residential segregation between Aboriginals and Whites in Toronto CMA is higher than the residential segregation between Whites and other non-White groups; (2) to determine the spatial distribution of Aboriginals and Whites across the neighborhoods, i.e., census tract level; and (3) to determine the distribution of Aboriginals and Whites over census tracts of different levels of socioeconomic status. Findings from this exercise should reveal the quality of neighborhood life for both Aboriginals and Whites in Toronto CMA and will identify the degree of assimilation, or separation, in their residential, social and economic patterns. The importance of these findings stems from the lack of empirical assessment focusing on the residential and socioeconomic characteristics of urban Aboriginals in Canada.

This study proceeds as follows. First, there is a review of the literature addressing the situation of Aboriginals in Canada. This is followed by an analysis of 1996 census data on the percentage distribution of Whites, Aboriginals and other visible minorities in the Toronto CMA. Finally, analyses of residential segregation and socioeconomic status of neighborhoods where Aboriginals and Whites reside will be done with a discussion of the implications of the findings.

Past Research

Socioeconomic Status of Aboriginals in the Canadian Society

Aboriginals have been marginalized in ethnic studies. Breton (1998:61) notes:

...[S] sociologists, as other Canadians, saw Native peoples as marginal to the mainstream social and political structure.
Studies of social inequality...did not pay much attention to the place of Native peoples in the class structure. This was deemed to be the domain of anthropologists. Thus, Aboriginals were left out of Vertical Mosaic debate initiated by Porter and dominated the theoretical arena in Canadian ethnic studies for three decades. Aboriginals were often overlooked in the academic focus on distribution of power among ethnic groups.

Historically, Aboriginals have been always classified as Status, non-Status and Treaty Indians (Saku, 1999; Bone, 2000). The Indian Act, introduced in 1876, put the fate of Aboriginals' socioeconomic status in the hands of the government by giving it the authority to decide who falls in each of the categories, who is entitled to government benefits, who could own land, and who could leave the reserve (Isajiw, 1999). The revised Act of 1951 and the 1985 amendment, known as Bill C-31, is very similar to the Act of 1876 because “the federal government retained total control over Aboriginals...through subtle and more direct legal processes” (Frideres, 1988:76). Once off the reserves, many Aboriginals attempt to suppress their ethnic identity “feeling that it places them at a disadvantage in White society” (Krauter and Davis, 1978:8).

Frideres (2000, 1993, 1988) found a high dependency ratio for Aboriginals on the White population. Socioeconomic dependency means that the working-age population supports a very large nonproductive Aboriginal population and, at the same time, Aboriginals' “economy is controlled by the development and expansion of another economy to which Aboriginals must adjust” (Frideres, 2000:216). Aboriginals’ socioeconomic dependency is due in part to their isolation and marginality to “all means of access to a source of income of reasonable level and stability” (Sunkel, 1973:141). Wanner (1998:30) states that Aboriginals’ “extremely high unemployment rates and low labor force participation rates compared to other Canadians,” including immigrants, are worsened by their cut off from the mainstream economy. Aboriginals have been “separated from their traditional life and simultaneously rejected from the mainstream society...[Their] marginalized existence has been exploited by the forces of capitalism and ignored by political leaders” (Frideres, 1999: 139).

In addition to their socioeconomic dependency, Aboriginals suffer depressing conditions in many areas including employment, housing, medical and social welfare, substance abuse, arbitrary search and seizure, family violence, and suicide (Frank, 1996:19-22; Krauter and Davis, 1978:115). Franks (2000:103-104) summarizes these disappointing conditions:

The economic and health statistics for Aboriginal people are
consistently worse than those for the general population. Aboriginal people are more likely to be unemployed, have low education, suffer from disabilities, die as infants, be subjected to violence, be incarcerated in penal or other institutions, have a low level of educational achievement, live in substandard housing, or have a below-subsistence income. Their life expectancy is ten years less than the Canadian average (Franks, 2000:103-104).

More specifically, Aboriginals make only 80 cents on the dollar in full-time jobs compared to White males in the same job (Statistics Canada, 1986; Native Council of Canada and Native Employment Division, 1977, 1981). Their employment is the major source of income for only 30 percent and about 25 percent of their population received no income at all (Satzewich and Wotherspoon, 1993). Aboriginals make up about 10 percent of the inmate population in federal penitentiaries, while they are only about 3 percent of the total population (Isajiw, 1999). Moreover, Aboriginals are involved with the justice system at a younger age and are apprehended in much higher rates by both the child welfare authorities and by the youth justice system (Royal Commission on Aboriginal Peoples, 1993a; 93b). Put together, these socioeconomic indicators are combined to structurally develop the current unequal status of Aboriginals which resembles the “profiles appropriately of newly developing nations” and Third World countries (Krauter and Davis, 1978:6).

The trend has been that inequalities between Aboriginals and non-Aboriginals are becoming larger. The distance separating the standard of living between Aboriginals and Whites in the mid-nineteenth century was smaller than the socioeconomic distance that separates them today (Frideres, 2000:216).

Migration to Urban Areas

Residential patterns of Aboriginals over time reveal a steady influx into urban areas. This is often due to a subsistence level of life and socioeconomic structure and government policies based on the assumption that the population's way of life is at a primitive level and of an evolutionary development (Isajiw, 1999; Royal Commission on Aboriginal Peoples, 1996a, 1996b). Unfortunately, urbanization of Aboriginals is not an assurance of socioeconomic equality. Housing standards, employment opportunities, and general socioeconomic conditions experienced by Aboriginals in urban areas is not better than the reserve conditions they left behind (Frideres, 1988, 1993; Krauter and Davis, 1978. Isajiw (1999:9) explains:
For Aboriginal persons, leaving the reserve...to move into urban areas has often meant a loss of self-esteem and a loss of identity. In urban areas, often living in a condition of poverty and barred by prejudice and discrimination from acceptance into the society around them, young Aboriginal persons have tended to feel trapped between their Native identity and the identity of the larger society, neither of which they fully possess. Unlike a number of other minority groups, the Aboriginal groups in urban areas generally have not formed effective social service agencies of their own that could extend assistance and counseling to their own people, particularly to their own young people. The publicly available services have rarely included appropriately trained personnel who understood the background and the identity problems of persons caught between two cultures. The work of public service agencies has been based on a non-Aboriginal value system.

The proportion of the Aboriginal population residing in urban areas has been increasing (Frideres, 1988, 1993; Herberg, 1989; Driedger, 1996; Pomeroy, 1995). Both the federal and provincial governments agree that Aboriginals “must move off the reserve in order to fully participate in the social, political, and economic structures of modern society. Jobs exist in the urban areas and cannot be cost-effective if they are forced to move into the rural countryside (Frideres, 1990: 114). In addition to the persistence of these conditions over the last decade, “lack of transportation infrastructure (e.g., roads, bridges) and lack of capital; most Aboriginal communities can ill-afford to develop sustainable economic enterprises. Lack of technical, managerial, and administrative skills on the reserves also result in businesses that are marginal enterprises” (Frideres, 1999: 141).

The federal, provincial, and municipal governments and many Aboriginals agree, for different reasons, that urbanization is a desirable goal required for development. Therefore, as Aboriginals are becoming a part of the Canadian socioeconomic structure through urbanization and integration with the predominantly White society, the state must make equality an ultimate goal with equal importance to economic development.

Data and Methodology

Data for this study were obtained from Statistics Canada. The Census of Canada provides the most comprehensive information on Aboriginal people in Canada (Saku, 1999:367). Although problems have
occurred over the years related to the definition of Aboriginal people, the 1996 Census asked directly if the person is an Aboriginal person, that is, North American, Indian Metis, or Inuit. Moreover, Chartrand (1993) has noted that no other sources of data, except the Census, have a higher standard of consistency in the collection and reporting of data over time. Yet, Saku (1999:375) points out that a major census data problem among Aboriginal communities is the suppression of data because of the small population numbers. Aboriginal populations may also have a higher non-respondent rate. Nevertheless, we believe we have used the best data available for the purpose of this research.

The Canadian 1996 Census Profile Series (Statistics Canada, 1998) were utilized to attain the posited objectives. The profile series CD-ROM is part of the Census of Population and Housing conducted on May 14, 1996. It provides most of the census socioeconomic variables for low levels of geography including census tracts. These social and economic variables from the Census Profile Series were used to construct a Composite Socioeconomic Index for Toronto CMA's census tracts. The geographical coding of the census tracts was also used to map Toronto CMA's neighborhoods and to spatially analyze the residential, social, and economic patterns of both Aboriginals and Whites.

Drawing conclusions about the socioeconomic status of the neighborhoods where Aboriginals and Whites reside was based on the fact that results are census tract-specific. Operationalizing the concept of a neighborhood by census tract is a conventional endeavor. Fong (1996:6) explains:

The concept of neighborhood is operationalized by census tract ... Although the census tract is not the smallest geographic unit available to provide racial and ethnic data, it provides the most information possible under confidentiality requirements. The confidentiality requirements of the Canadian census demand the suppression of any category of tabulation for an ethnic group containing fewer than five persons. Therefore, if a smaller geographic unit were used, such as an enumeration area, Aboriginal data would likely be suppressed.

Table 1 illustrates the population and percentage of Aboriginals, Whites, and other visible minorities in Toronto CMA. The figures indicate the percentage of each group to the total population. One can infer from Table 1 that Aboriginals represent less than one percent of Toronto CMA's total population. This population size secures them the last place among people of color in Toronto CMA. Chinese, South Asians, Blacks, Filipino, Arabs and West Asians, Latin Americans, Southeast Asians, Koreans,
and Japanese are all people of color with larger populations than Aboriginals. Finally, the White group represents 68.28 percent of the total population. This is about eight times the size of the largest minority group in Toronto CMA, i.e., Chinese, and more than one hundred and seventy times the size of the Aboriginal population.

**Residential Segregation**

Table 2 presents the level of residential segregation between Aboriginals and Whites in Toronto CMA. Fleras and Elliot (1992:318) differentiate between two types of segregation:

A societal arrangement is one in which racially or ethnically different groups are separated from each other. This separation can be imposed and coercively maintained (as has been the case in South Africa) or it may be voluntarily accepted by a minority (Mennonites in Ontario’s Waterloo region) for reasons of cultural survival.

In this study we are concerned with segregation, whether socially and economically imposed or voluntary segregation.
Table 2
Residential Segregation Between Whites, Aboriginals, and Other Visible Minority Groups in Toronto CMA, 1996.

<table>
<thead>
<tr>
<th>Group</th>
<th>Segregation Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeast Asian</td>
<td>57.00</td>
</tr>
<tr>
<td>Chinese</td>
<td>56.37</td>
</tr>
<tr>
<td>Korean</td>
<td>52.94</td>
</tr>
<tr>
<td>South Asian</td>
<td>50.65</td>
</tr>
<tr>
<td>Latin American</td>
<td>49.85</td>
</tr>
<tr>
<td>Arab/West Asian</td>
<td>49.03</td>
</tr>
<tr>
<td>Filipino</td>
<td>47.19</td>
</tr>
<tr>
<td>Black</td>
<td>46.69</td>
</tr>
<tr>
<td>Japanese</td>
<td>44.35</td>
</tr>
<tr>
<td>Aboriginals</td>
<td>41.57</td>
</tr>
</tbody>
</table>


Segregation, as used here, refers to a spatial pattern and the extent to which the pattern of distribution of two population groups is even or uneven. It also refers to the extent to which two groups share residential neighborhoods. For the purpose of analysis, neighborhoods are equivalent to census tracts. Any quantitative measure of segregation must begin with the numbers of people from each group residing in sub-areas (census tracts). The most common quantitative method for measuring residential segregation is the index of dissimilarity. It is also among the most simple index to interpret. It is used here to measure the overall unevenness in the spatial distribution of Aboriginals and Whites. The index of dissimilarity “\( D \)” will be employed at the census tract level to measure the spatial unevenness that is translated into residential segregation. Mathematically, the index of dissimilarity “\( D \)” is stated as:

\[
D = 100 \left( \frac{1}{2} \sum_{i=1}^{k} |x_i - y_i| \right)
\]

Where

- \( x_i \) = the percentage of the Toronto CMA white population living in a given census tract \( i \);
- \( y_i \) = the percentage of the Toronto CMA Aboriginal population, or other visible minority population, living in the same census tract \( i \);
- \( D \) = the index of dissimilarity. It is equal to one/half the sum of the absolute differences (positive and negative) between the percentage distribution of the white population and the Aboriginal or specified visible minority group population in Toronto CMA (Darden and Tabachneck 1980; Duncan and Duncan, 1955).
The value for the index of dissimilarity may range from "0" indicating no segregation too "100" indicating total segregation, i.e., the higher the index, the higher is the residential segregation. This value of the index resulting from this endeavor in Table 2 stands for the minimum percentage of the population from either group that would have to move from one tract to another in order to achieve an even spatial distribution throughout the Toronto CMA.

Despite its widespread use in residential segregation research, however, the index of dissimilarity "D" has a certain limitation. The limitation is related to the fact that the index is sensitive to the size of the spatial units used (Darden and Haney, 1978:124). Since census tracts were chosen as the spatial units for this study, the degree and magnitude of segregation by block or enumeration area could not be determined. The segregation indices in this study take into account only differences in the spatial distribution of groups between census tracts and reveal nothing about the distribution of the same groups between blocks or enumeration areas.

Table 2 presents the results of this endeavor by identifying the level of residential segregation between Aboriginals and Whites and comparing that level to the Whites’ residential segregation level from other visible minority groups in Toronto CMA. The index of dissimilarity for residential segregation between Whites and Aboriginals was found to be 41.57 percent. This is a little improvement over the early 1980s. Dansereau (1993) found a segregation level of 45 percent for Aboriginals in Toronto using 1981 census data. Furthermore, the comparison with other visible minority groups in Table 2 reveals that Aboriginals are the least segregated population from Whites in Toronto CMA. At the other end of the continuum is Southeast Asians with the highest index of dissimilarity from Whites in Toronto CMA.

To further assess the Aboriginals' residential segregation pattern in Toronto CMA, Table 3 identifies the level of residential segregation between Aboriginals and Whites and other visible minority groups. Results reveal that Koreans, Chinese, and South Asians are the highest residentially segregated population from Aboriginals. It is worth reminding that Chinese and South Asians are the largest minority groups in Toronto CMA. On the other end of the continuum, blacks are second to Whites as the least segregated visible minority group from Aboriginals. Overall, the pattern in Table 3 reveals that all visible minority groups are highly segregated from Aboriginals, i.e., above 50 percent. Whites are the only group that maintained a low residential segregation level from Aboriginals (i.e., less than 50 percent).
Spatial Distribution

Finally, the spatial distribution of Aboriginals was determined by mapping out where they live in Toronto CMA. The map in Figure 1 was divided into three segments. The first segment of the map is shaded gray and represents census tracts where Aboriginals are less than their average population in the CMA as a whole, i.e., 0.38 (see Table 1). The second segment of the map is shaded black and contains census tracts where Aboriginals are equal to or more than their average percentage population in the CMA as a whole. The third segment of the map is not shaded and represents census tracts with no Aboriginals. Aboriginals were found to be relatively dispersed in the Southern part of the CMA and more concentrated on the North and Northeast side. The most concentrated census tract contains 9.7 percent Aboriginals and is located in Georgina Island.

Overall, the map in Figure 1 and segregation levels in Tables 2 and 3 fall short of telling us anything about the socioeconomic quality of the neighborhoods where urban Aboriginals reside and are concentrated. It is clearly revealed that Aboriginals had a low level of residential segregation from Whites. In other words, the two groups share residential space to a great extent. However, one cannot conclude that the quality of the neighborhoods where Whites and Aboriginals reside are equal. For that answer we move to the second objective to examine the socioeconomic characteristics of neighborhoods and measure the extent of inequality quantitatively.

Table 3
Residential Segregation Between Aboriginals and Whites and Other Visible Minority Groups in Toronto CMA, 1996.

<table>
<thead>
<tr>
<th>Group</th>
<th>Segregation Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean</td>
<td>65.63</td>
</tr>
<tr>
<td>Chinese</td>
<td>65.19</td>
</tr>
<tr>
<td>South Asian</td>
<td>61.27</td>
</tr>
<tr>
<td>Arab/West Asian</td>
<td>61.16</td>
</tr>
<tr>
<td>Southeast Asian</td>
<td>59.67</td>
</tr>
<tr>
<td>Japanese</td>
<td>57.74</td>
</tr>
<tr>
<td>Filipino</td>
<td>57.30</td>
</tr>
<tr>
<td>Latin American</td>
<td>55.53</td>
</tr>
<tr>
<td>Black</td>
<td>53.24</td>
</tr>
<tr>
<td>White</td>
<td>41.57</td>
</tr>
</tbody>
</table>

Figure 1
Distribution of Aboriginal Population Across Toronto CMA's Census Tracts, 1996.

Distribution Levels of Aboriginals in Toronto CMA

- Census Tracts with Zero Aboriginals
- Census Tracts with Less than Average Aboriginals (<0.38%)
- Census Tracts with More Than Average Aboriginals (>0.38%)
The Distribution of Aboriginals Across Socioeconomic Classes of Neighborhoods in Toronto CMA

The Canadian 1996 Census Profile Series (Statistics Canada, 1998) were utilized to identify the distribution of Aboriginals across the socioeconomic classes of neighborhoods in Toronto CMA. Social and economic variables from the Census Profile Series were used to construct a Composite Socioeconomic Index for Toronto CMA's census tracts which are surrogates for neighborhoods. Findings will reveal whether there are residential, social, and economic quality of life consequences associated with maintaining group segregation instead of spatial assimilation. The difference in neighborhood quality of life will be measured here in terms of socioeconomic characteristics of the neighborhoods where Aboriginals live. For the sake of comparison, the same endeavor will be done also for Whites.

A Composite Socioeconomic Index for Toronto CMA's Census Tracts

A Composite Socioeconomic Index (CSI) was developed to assess the socioeconomic quality of neighborhoods where Aboriginals reside. Eight socioeconomic status variables were used to calculate the CSI: (1) the percent of university degrees; (2) median family income; (3) percent of managerial and professional status positions; (4) average value of dwelling; (5) average gross rent of dwelling; (6) percent of homeownership; (7) incidence of low income; and (8) unemployment rate. Variables representing “incidence of low income” and “unemployment rates” were given a negative sign when calculating the index. This allowed the CSI to capture the depreciating effect of these variables on the quality of life in neighborhoods and to provide an adequate coverage of each groups’ social and economic conditions. Overall, the eight socioeconomic variables allowed the study to capture all aspects of neighborhoods’ characteristics.

The Composite Socioeconomic Index is stated mathematically as:

$$CSI_i = \left( \sum_{i=1}^{k} \frac{V_1}{V_{1 \text{ CMA}}} + \frac{V_2}{V_{2 \text{ CMA}}} + \ldots + \frac{V_{n+1}}{V_{n+1 \text{ CMA}}} \right)$$

Where $V$ = socioeconomic status variable for a given census tract $i$; $V_{i \text{ CMA}}$ = socioeconomic status variable for Toronto CMA; $CSI_i$ = the composite socioeconomic index for census tract $i$, is the sum of socioeconomic status variables’ relative weight to Toronto CMA's socioeconomic status.
Figure 2
Distribution of Toronto CMA's Census Tracts by Socioeconomic Indicators, 1996.

Composite Socioeconomic Index

Lower Class | Lower Middle Class | Upper Middle Class | Upper Class

Number of Tracts

Composite Socioeconomic Index
Based on the formula, the index represents the sum of socioeconomic scores given to each of the census tracts in Toronto CMA. These scores were obtained through adding up the weight of each socioeconomic variable for each tract. Weighting is equal to the ratio for each social and economic variable per tract to the average value for Toronto CMA as a whole. In other words, each weight was calculated by the simple ratio method of dividing each social or economic characteristic for each tract by the average value of that socioeconomic characteristic for Toronto CMA. For example, a tract with a family median income equal to $100,000 would have a weight of 2.0 if the average family median income for Toronto CMA is $50,000.

The CSI was then sorted to rank the CMA’s neighborhoods according to their quality of life. Thus, Toronto CMA can be divided into four equal socioeconomic ranges with boundaries at the 25th, 50th, and 75th percentiles of the CSI frequency distribution. Grouping based on four equal socioeconomic ranges allowed the division of neighborhoods into four types with equal variation in each socioeconomic status, i.e., upper class, upper middle, lower middle, and lower class.

The composite socioeconomic index for Toronto CMA revealed a pattern that is very close to a normal distribution. It is not difficult to identify the orthodox pattern obtained from distributing the CMA’s census tracts according to their socioeconomic indicators (see Figure 2). The actual normal curve was also drawn in the graph to illustrate the small degree of skewness. This assessment is backed up by the descriptive statistics obtained for Toronto CMA’s CSI. The overall skewness of the CSI from a normal curve is positive 0.32, i.e., towards higher socioeconomic classes. In other words, there are more census tracts above the average socioeconomic level for the CMA.

The four different socioeconomic classes are illustrated in Figure 2 by vertical lines. The Upper Class is on the extreme right and the Lower Class is on the extreme left. It appears that the largest number of tracts lies in the Upper and Lower Middle classes. The total number of Middle classes’ census tracts is 744. That is about 93 percent of the city’s 802 census tracts. The lower class neighborhoods have negative CSI values and dominate only 26 census tracts. At the other extreme are the upper class elite neighborhoods with the highest CSI values and 32 census tracts. Finally, the socioeconomic indicators for each class are averaged in Table 4. All socioeconomic indicators for the Upper and Upper Middle classes are above the average indicators for Toronto CMA. Inversely, all socioeconomic indicators for the Lower Middle and Lower classes are below average. The opposite is true for incidences of low income and unemployment rate variables due to their negative impact.
### Table 4

**Socioeconomic Indicators for Quality of Neighborhoods in Toronto CMA, 1996**

<table>
<thead>
<tr>
<th>Neighborhoods</th>
<th>Percent Univ.</th>
<th>Median Income</th>
<th>Percent Manager</th>
<th>Average Dwelling Value</th>
<th>Average Dwelling Rent</th>
<th>Percent Ownership of Low Income Rent</th>
<th>Incidence of Low Income Rate</th>
<th>Unemp. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Class</td>
<td>65.06</td>
<td>$115,508</td>
<td>34.91</td>
<td>$522,418</td>
<td>$1,194</td>
<td>71.77</td>
<td>5.29</td>
<td>4.73</td>
</tr>
<tr>
<td>Upper Middle Class</td>
<td>36.06</td>
<td>$66,685</td>
<td>16.55</td>
<td>$268,671</td>
<td>$934</td>
<td>74.36</td>
<td>10.55</td>
<td>6.58</td>
</tr>
<tr>
<td>Lower Middle Class</td>
<td>22.85</td>
<td>$43,313</td>
<td>9.00</td>
<td>$191,873</td>
<td>$735</td>
<td>52.42</td>
<td>24.31</td>
<td>11.23</td>
</tr>
<tr>
<td>Lower Class</td>
<td>18.87</td>
<td>$25,157</td>
<td>6.25</td>
<td>$151,774</td>
<td>$591</td>
<td>19.76</td>
<td>51.23</td>
<td>20.30</td>
</tr>
<tr>
<td>Toronto CMA</td>
<td>30.37</td>
<td>$56,155</td>
<td>13.35</td>
<td>$238,426</td>
<td>$838</td>
<td>62.04</td>
<td>18.21</td>
<td>9.17</td>
</tr>
</tbody>
</table>

Table 5
Percentage, Distribution, and Share of Aboriginals and Whites in Toronto CMA by Socioeconomic Quality of Neighbourhoods, 1996

<table>
<thead>
<tr>
<th>Neighborhoods</th>
<th>Aboriginals</th>
<th>Whites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Share</td>
</tr>
<tr>
<td>Upper Class</td>
<td>0.25</td>
<td>1.64</td>
</tr>
<tr>
<td>Upper Middle Class</td>
<td>0.28</td>
<td>33.61</td>
</tr>
<tr>
<td>Lower Middle Class</td>
<td>0.48</td>
<td>60.04</td>
</tr>
<tr>
<td>Lower Class</td>
<td>0.47</td>
<td>4.71</td>
</tr>
</tbody>
</table>


on the quality of life. Thus, the Upper and Upper Middle classes have below average values for both incidence of low income and unemployment rate variables.

Distribution of Aboriginals vs. Whites Across Socioeconomic Classes of Neighborhoods

One of the key questions in this study is how Aboriginals are distributed over the different socioeconomic classes of neighborhoods? Table 5 presents the percentage of Aboriginals within each class, i.e., it indicates the ratio of Aboriginals to the total population, including other groups, for each socioeconomic class. The same statistics were calculated for Whites to illustrate the level of socioeconomic inequality facing Aboriginals. Thus, looking at the population of the Upper Class, for example, the percentage of Whites is 88.04 percent versus 0.25 percent for Aboriginals. These figures represent the percent of each group in the upper class neighborhoods with the highest socioeconomic characteristics. At the other end of the spectrum, the Lower Class houses only 34.08 percent of all Whites and 0.47 percent of Aboriginals.

Table 5 also presents the share of Whites and Aboriginals over the socioeconomic classes, i.e., it adds up to 100 percent of each group's population. For example, 3.16 percent of all Whites in Toronto CMA reside in Upper Class neighborhoods with the highest socioeconomic index scores versus only 1.64 percent of all Aboriginals. The rest of Whites and Aboriginals are distributed over the other three lower socioeconomic Classes. In the Lower Class neighborhoods, only 1.86 percent of all the Whites in Toronto CMA reside versus 4.71 percent of all the Aboriginals.
As stated previously, where a group lives significantly affects the group’s quality of life. It is clear that Aboriginals are disproportionally represented in the lower socioeconomic classes of Toronto’s society. Such socioeconomic inequality becomes more clear when compared with the White’s share of the population in Upper socioeconomic classes of neighborhoods. Table 5 demonstrates that compared with Aboriginals, a higher percentage of Whites in Toronto CMA is concentrated in neighborhoods with the highest socioeconomic characteristics.

More than 3 percent of all Whites in Toronto CMA are part of the super elite, living in the Upper Class neighborhoods. They live in neighborhoods where 65 percent of the population (15 years and over) have university degrees and the median income of residents is over $100,000. Moreover, more than a third of the residents hold managerial and professional positions and the average value of their homes is more than $500,000 and 72 percent own their homes. What is more, these are neighborhoods where the renters pay more than $1,000 per month which explains why the incidence of low-income is only 5 percent and the unemployment rate 4.7 percent. Furthermore, more than half of all Whites in Toronto CMA live the Upper and Upper Middle class neighborhoods which are both above average neighborhoods for the Toronto CMA.

On the other hand, less than 2 percent of all Aboriginals in Toronto CMA live in the super elite Upper Class neighborhoods. Unlike Whites, the majority (64.75 percent) of all Aboriginals live in the Lower and Lower Middle classes, i.e., below average neighborhoods in the Toronto CMA. Only 45 percent of Whites live in such neighborhoods. What is more, about 5 percent of all Aboriginals live in the poorest neighborhoods in the Toronto CMA. These are neighborhoods where only 19 percent of the population (15 years and over has university degrees. The median income is only $25,000 and the percent of population in professional and managerial positions is only 6 percent. Most of the residents (81 percent) do not own their homes. Those who do own their homes reside in neighborhoods where the average value is $151,000. Most of the residents (51 percent) have low incomes and the unemployment rate is 20 percent.

The overall picture of Aboriginals and Whites’ representation in each socioeconomic class is presented in Figure 3. The graph shows the uneven residential distribution of the two groups across the CMA’s socioeconomic classes, i.e., it indicates how each of the Whites and Aboriginals are divided over the socioeconomic classes. The figure clearly shows inequality in the distribution of Aboriginals and Whites residing in high quality and poor quality neighborhoods.
Conclusions

This study has examined the extent to which two groups - Aboriginals (First Nation People) and Whites - share residential space in Canada's most racial and ethnically diverse and largest metropolis. Given the differences among the experiences between the groups, this study determined (1) whether the degree of residential segregation between Aboriginals and Whites in Toronto was higher than that of members of other visible minority groups, and (2) whether large differences existed in the quality of neighborhoods where the Aboriginals and Whites reside. Based on the Canadian 1996 Census Profile Series data by census tract, residential segregation was measured using the index of dissimilarity. This was followed by the construction of socioeconomic classes based on 8 socioeconomic variables by census tracts.

The analyses led to the following conclusions. (1) Aboriginals in Toronto CMA are the least segregated non-White group from Whites; (2) Aboriginals are highly segregated from all other non-White minority groups.

Figure 3
Distribution of Aboriginals and Whites in Toronto CMA by Socioeconomic Quality of Neighborhoods, 1996.
groups; and (3) despite the relatively low level of residential segregation from Whites, the two groups reside disproportionately in neighborhoods with different socioeconomic quality. Indeed, the majority of Whites in the Toronto CMA area live in neighborhoods that are above average while the majority of Aboriginals live in neighborhoods that are below average.

These differential outcomes may reflect in part the extent of discrimination by the larger White society. These results are consistent with our theoretical model of place stratification. This model suggests that since neighborhood qualities significantly affect the life chances of groups, the White majority group is likely to restrict the opportunities of Aboriginals (First Nation People) from obtaining neighborhood qualities similar to theirs.

We recognize, however, that there are those who argue that it is not discrimination that explains the residential segregation and differential neighborhood qualities between Whites and First Nation People, but personal choice or preferences (Schelling, 1971). It is conceivable that some Aboriginal people may choose to live only among other Aboriginals and not in integrated neighborhoods even if it results in a lack of improvement in neighborhood characteristics. However, we found no study of First Nation People in Toronto to specifically support that thesis.

What our investigation did reveal is that Aboriginals' low level of residential segregation from Whites do not readily translate into more equal neighborhood characteristics.

Policy Implications

Issues related to Aboriginal socioeconomic inequality extends beyond reserves and into urban areas. Thus, policies to address these issues must focus on structural and institutional discrimination facing Aboriginals not only on reserves, but in urban areas also. Although beyond the scope of this study, other recent related studies have given the issue of discrimination in housing some attention. Such discrimination is best measured through housing audits.

In general, though limited in scope, audits suggest that black and First Nation (i.e., Aboriginal People), suffer the most discrimination in seeking housing in Canada (Dion, 2001:528). Logistic regression models and controlling for socioeconomic and demographic characteristics of the Aboriginal and White population of the Toronto CMA revealed that race matters in explaining inequality in homeownership rates. Data obtained from the Public Use Microdata Files of the 1996 Census revealed that race is a barrier to Aboriginal homeownership even when Aboriginals
have the same socioeconomic and demographic characteristics as Whites (Darden & Kamel, 2001). It appears that current policies are not sufficient to assure greater access of Aboriginals to better quality neighborhoods. The goal of socioeconomic equality of neighborhoods does not mean equality of treatment by applying the same policy or designing the same government programs for all groups. Public policies and government programs should be designed differently according to the historical, political, demographic, and socioeconomic needs of the target group (Breton, 1998). Thus, government policies to address the situation of Aboriginals in Toronto should be structured within the context of the unique legal and cultural circumstances that differentiate Aboriginals from other Canadians. A more detailed study is needed before the policy is designed to determine why Aboriginals have a low level of residential segregation from White Canadians, but are not able to translate their lack of isolation into better (higher quality) or more equal neighborhood characteristics.

Notes

1. Comparatively speaking, the proportion of the total population born outside Canada is about 16 percent, which is about twice the proportion in the United States.

2. See Saku (1999) for more historical details on changes in enumeration of Aboriginals in Canada since the 1871 census to deal with various problems such as population size and language.

3. In general, rural Aboriginal reserves were also found to be demonstrating ethnic territorial segregation. Many Aboriginals live in the Canadian northlands and are isolated from other Canadians. In terms of socioeconomic conditions, many of them are still in a food-gathering economy. They differ from urban Aboriginals also in terms of self-segregation. Reserve Aboriginals chose “to retain their distinct ethnic identity by staying close to the land” (Saku, 1999; Driedger, 1996:42).

4. Along with Toronto CMA, only Winnipeg and Vancouver contain Indian enclaves within the boundaries of urban centers of 1,000 or more (Krauter and Davis, 1978).

5. Census tracts are small urban neighborhood-like communities in Canada's census metropolitan areas and census agglomerations, having an urban core population of 50,000 or more in the previous census. The population of census tracts ranges from 2,500 to 8,000 averaging 4,000 in size, except for census tracts in business districts. When census tracts are first delineated, Statistics Canada
makes every effort to ensure that social/economic status of their populations are as homogeneous as possible. See Statistics Canada. 1996 Census Dictionary, Ottawa: Industry Canada, 1997:195-197.

6. Statistics Canada defines the concept of a census metropolitan area (CMA) as “a very large urban area, together with adjacent urban and rural areas which have a high degree of economic and social integration with that urban area. A CMA is delineated around an urban area (called the urban core and having a population of at least 100,000 based on the previous census” (Statistics Canada, 1997a:2-3).

7. This variable represents the population with a university degree as a percent of total population 15 years and over by highest level of schooling, i.e., adults with at least some level of schooling rather than the population as a whole.

8. Categories chosen to include as managerial and professional status positions are senior management occupations, professional occupations in business and finance, professional occupations in natural and applied sciences, professional occupations in health, professional occupations in art and culture, judges, lawyers, psychologists, social workers, ministers of religion, and policy and program officers. The variable is calculated as percent of experienced labor force. The experienced labor force refers to persons 15 years of age and over, excluding institutional residents, who were employed or unemployed during the week prior to census day, and who had last worked for pay or in self-employed activities in either 1995 or in 1996. The experienced labor force can be derived by excluding from the total labor force those unemployed persons 15 years of age and over who have never worked or who had last worked prior to January 1, 1995 only (Statistics Canada, 1998).

9. The incidence of low income is the percentage of families or unattached individuals in a given tract below the low income cut-offs. Low income cut-offs are established based on national family expenditure data from 1969, 1978, 1986, and 1992. These data indicate that Canadian families spent, on average, 42% in 1969, 38.5% in 1978, 36.2% in 1986, and 34.7% in 1992 of their income on basic necessities. The 1996 low income cut-offs are updated by changes in the consumer price index and differentiated by family size and degree of urbanization (Statistics Canada, 1998).

10. The original total number of census tracts within Toronto CMA is 808 tracts. However, six census tracts were excluded from the analysis due to missing data. This is an acceptable ratio of only 0.7 percent of the census tracts excluded and will probably have a minimal effect.
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