



Citizenship and  
Immigration Canada

Citoyenneté et  
Immigration Canada

***A Description of the  
Ethnic Segregation/Mixing Within  
Major Canadian Metropolitan Areas Project***

***March 2008***

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The “Ethnic Segregation/Mixing within Major Canadian Metropolitan Areas Project” investigates through maps the residential and workplace geographic distributions of foreign-born and visible minority<sup>1</sup> groups living in Canada’s largest cities. A principal objective is to use maps to identify neighbourhoods or districts in a city where specific immigrant and visible minority groups are geographic concentrated, as well as those areas where these same groups are absent or relatively under-represented. Research has typically focused on the distribution and concentration patterns of immigrant and visible minority groups in terms of *residential space*, in part owing to the economic, social and cultural significance of housing and neighbourhoods in our society. Differences in residential location are also believed to reflect the processes that create social stratification between groups, as well as indicate the magnitude of differentiation between groups.

The project devotes considerable attention to residential location, but extends conventional approaches by also examining the geographies of employment for a range of immigrant and visible minority groups in each city. Implicitly the project emphasizes the ways in which immigrant and visible minority geographies in a city shift as people move from home to work (and back again), and as such encourages investigation of potential social encounters between different ethnocultural groups in contexts beyond residential neighbourhoods.

A second objective of this project is to identify those areas within cities that can be characterized by ethnocultural diversity or homogeneity. The majority of the project focuses on the distribution and relative concentration of individual groups across cities, which in itself does not reveal a great deal about the degree of group mixing in residential spaces. As a consequence, the second component of the project shifts to

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<sup>1</sup> The visible minority variable comprises 13 categories, including that portion of the population that does not self-identify as a visible minority. The categories are: Chinese, South Asian, Black, Filipino, Latin American, Southeast Asian, Arab, West Asian, Korean, Japanese, Visible Minority not included elsewhere, Multiple Visible Minorities and Other (i.e., European-origin or ‘white’ group). The visible minority variable essentially classifies the non-Aboriginal population based on ‘race’ or phenotypic differences, and was originally developed to measure progress toward employment equity. As specified in the Employment Equity Act, members of Visible Minorities are non-Aboriginal individuals who are non-Caucasian in race or non-white in skin colour.

deliberately consider diversity and utilizes a diversity index measure to identify neighbourhoods and districts that are at least demographically diverse.

This document outlines the basic structure and composition of the project, as well as key concepts used in the development of the maps. The intent is to provide an information baseline that can be used to interpret and analyze the maps. The document does not describe each individual map or provide an overview of the geographies of immigrants and visible minority groups in each city. The intent is that the maps be used as an information resource by policy makers, researchers, service providers, and community groups that work with immigrant and visible minority groups or on service and policy questions.

**City Selection**

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The project examines immigrant and visible minority distributions in eight Canadian cities: Toronto, Vancouver, Montréal, Ottawa-Gatineau, Calgary, Edmonton, Winnipeg, and Hamilton. These cities were selected because a relatively large number of immigrants, including recent arrivals, has settled in these cities. In addition, in each of these cities the foreign-born and visible minority populations constitute a significant portion of the total population. In 2001, the composition of the immigrant and visible minority population in each metropolitan area was:

**Table 1: Population Components in Major Canadian Cities, 2001**

	<b>Total Population</b>	<b>Percent Canadian Born</b>	<b>Percent Foreign Born</b>	<b>Recent Immigrants (1996-2001) as Proportion of Total Foreign- born Population</b>	<b>Percent Visible Minority</b>
Toronto	4,647,960	55.0	43.7	20.4	36.8
Montréal	3,380,645	80.6	18.4	18.4	13.6
Vancouver	1,967,475	61.0	37.5	23.0	36.9
Ottawa - Gatineau	1,050,755	81.6	17.6	20.6	14.1
Calgary	943,310	78.3	20.9	18.4	17.5
Edmonton	927,020	81.5	17.8	12.7	14.6
Winnipeg	661,730	83.0	16.5	12.3	12.5
Hamilton	655,060	75.5	23.6	12.1	9.8

The selection of cities reflects both the size of the total and immigrant populations in each metropolitan area, and the relative significance of the foreign-born and visible minority populations. These cities are both some of the largest in Canada and also the most ethnoculturally heterogeneous. Cities, such as Québec City which has a large population (673,000), are not included in this project because they generally do not have a large foreign-born population and are not characterized by a strong degree of ethnocultural diversity.

The cities that have been retained in the project differ from each other in important ways. For example, cities in the first-tier of the Canadian urban system attract large numbers of foreign-born individuals overall and especially recent immigrants (e.g., Toronto and Vancouver). Other cities, such as Winnipeg and Hamilton, historically were important destinations for immigrants but today attract a relatively small proportion of recent arrivals. There are also cities such as Ottawa-Gatineau, in which the share that recent immigrants constitute of the total foreign-born population (20.6 percent) exceeds the relative size of the foreign-born population overall (17.6 percent). In addition, Toronto and Vancouver clearly lead the rest of the country in the relative size of the visible minority population (just less than 37 percent of the population in both places). Cities such as Calgary, Edmonton, Ottawa-Gatineau and Montréal lag far behind these two cities in terms of the relative size of the visible minority population.

The numerical and relative size of the foreign-born and visible minority groups in each city has an impact on the degree to which the geographies of individual groups can be adequately and accurately represented. For each city it was possible to map residential distributions of the five largest foreign-born and visible minority groups.<sup>2</sup> In contrast, in some cities such as Winnipeg and Hamilton the small numerical size of many of the foreign-born and visible minority groups employed in the labour force precluded producing meaningful maps of workplace geographies. As a general rule of thumb, the larger the numerical size of individual groups, the more accurate will be the representation of their geographical distribution and relative concentration.

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<sup>2</sup> Given sufficient numerical size.

## **The Construction of the Maps**

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The geographic unit that data are mapped across can strongly influence both the patterns represented and the degree of detail depicted. The project relies on geographic boundary files produced by Statistics Canada and the ways that Statistics Canada makes data available. It is often desirable to have as much geographic detail as possible but creating maps at the dissemination area scale – the smallest geographic area that is readily available (population size approximately 800) – was rejected out of fear of losing too many respondents due to data suppression. Statistics Canada utilizes numerical thresholds to determine whether data can be made available for groups within a specified geographic area. The intent of the thresholds is to protect the anonymity of respondents and the confidentiality of responses. In general, the smaller the groups and/or geographic area, the greater is the likelihood that data could be suppressed. Although the threshold for data suppression depends on the variable under consideration, in general fewer than 10 respondents with a particular characteristic (e.g., a non-Canadian birthplace) results in suppression of results and a zero value being given to the group in a particular geographic area.

With these data dissemination restrictions in mind, and the small numerical size of many immigrant and visible minority groups in some cities, the basic geographic unit used to build maps for this project is the census *tract*. Census tracts are relatively small geographic areas that normally have a total population of between 2,500 and 8,000, with the average being 4,000. As such, they are often thought of as constituting a “neighbourhood” scale in terms of geographic coverage. Census tracts can be used for analysis purposes in census metropolitan areas and census agglomerations in which the population exceeds 50,000.

To assist map readers in interpretation of the maps, key features are indicated on each map: water bodies, expressways/major roadways, airport, and the boundary outlines and names of constitutive municipalities (census subdivisions) within each metropolitan area. In addition, census tracts that either have no population or a very tiny population are designated as “no population”. In some cases, data for particular tracts have been suppressed because the number of census respondents has been

deemed insufficient by Statistics Canada. In building the maps, a great deal of attention has been given to the problem of small numbers exaggerating an individual group's representation or degree of concentration, and every attempt has been made to minimize these problems. Consequently, when the total population (all groups) is less than 100, the census tract was treated as having 'no population'.

The maps for individual groups also provide key information about numerical and relative size of the groups in order to facilitate a more meaningful interpretation of distributions and relative concentrations. Fundamentally, the 'spatial concentration' of a group of 5,000 people is a different social phenomenon relative to that for a group of 70,000 individuals. As an illustration, on each map for individual immigrant groups, the group's numerical size and proportion of the total immigrant population in the city is indicated. The maps for each visible minority group also indicate the group's numerical size, as well as the group's proportion of the total population and total visible minority population. In short, each map provides key information that should assist readers in making meaningful interpretations or patterns.

### **Organization of Maps by City**

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The project is divided between maps that depict the distribution and concentration of groups in terms of place of residence, and those that focus on individuals in the *employed* labour force for each group with regard to their places of work and residence. Given that the proportion of any ethnocultural group which is active in the employed labour force is substantially smaller than the total size of the group, small number problems preclude making reliable maps for birthplace or visible minority groups in terms of workplaces in smaller cities. The cities retained for the two parts of the project are:

Place of Residence:

- Toronto
- Vancouver
- Montréal
- Ottawa-Gatineau
- Calgary
- Edmonton
- Winnipeg
- Hamilton

Employed Labour Force:

- Toronto
- Vancouver
- Montréal
- Ottawa-Gatineau
- Calgary<sup>3</sup>

**a) Place of Residence**

The series of maps that examine *place of residence* are structured in the following manner for each city:

- **Period of immigration (all ages):** A series of four maps that depict the distribution of the foreign-born population in terms of period of arrival in Canada:
  - 1981-1990
  - 1991-2001
  - 1991-1995
  - 1996-2001

The immigrants who arrived in the most recent decade (1991-2001) are further subdivided into five-year cohorts to enable comparison of groups in terms of changes in settlement during the critical first decade of settlement.

- **Significant locations or enclaves of recent immigrant settlement:** Many researchers and policy makers have a strong interest in being able to identify those areas of the city that might be considered to be new immigrant enclaves – those neighbourhoods where newly arrived immigrants are a significant component of an already large foreign-born population. To highlight these areas, one map is produced for each city showing just those census tracts in which: a)

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<sup>3</sup> Place of residence maps for the *employed* labour force by period of immigration and visible minority status for a limited number of groups (the largest) are provided for Edmonton, Winnipeg and Hamilton.

the foreign-born population constitutes a large proportion of the total population in the tract, **and** b) new arrivals (1996-2001 *and* 1991-1995) constitute a large proportion of the *total immigrant population* in the tract. The benchmarks used vary from city to city as a consequence of differences in the absolute and relative size of the foreign-born population, and especially the recent immigrant cohort.

- **Largest Immigrant Groups – all ages:** These maps depict the geographic distribution and areas of spatial concentration for the five largest immigrant groups in each city without any controls for age.
- **Largest Recent Immigrant Groups – all ages:** These maps depict the geographic distribution and areas of spatial concentration for the five largest *recent* (1996-2001) immigrant groups in each city without any controls for age.
- **Largest Visible Minority Groups – all ages:** These maps depict the geographic distribution and areas of spatial concentration for the five largest visible minority groups in each city, as well as for the visible minority population overall, without any controls for age.

Following this group of maps, a series of maps depict *only* the adult population between the ages of 15 and 64 by a small number of socio-economic or immigration status indicators. Given that there are important age structure differences between immigrant and visible minority groups<sup>4</sup>, and that children and seniors often have the least amount of ‘choice’ in residential decision making, the maps focus only on the adult population that normally participates in the employed workforce. These maps enable examination of some of the social diversity that exists within particular immigrant and visible minority populations and enables investigation of whether people who share the same ethnocultural background, but have different social characteristics, locate in the same areas of a city. The immigrant status and socio-economic variables examined are: a) period of immigration (for immigrant groups); b) Canadian-born or foreign-born status (for visible minority groups); and household income (all groups). Although the maps pertain to the population that is *most likely* to participate in the labour force, they *are not* restricted just to individuals who are

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<sup>4</sup> For example, there may be a large proportion of children in one group or more seniors in another due to the age of the population in Canada.

active in the labour force. The maps in this series are organized in the following blocks:

- **Immigrant Groups by Period of Immigration:** The following immigration periods are depicted: a) before 1981; b) 1981-1990 and c) 1991-2001. For each map, a graph is also provided depicting the number of individuals in each time period group.
- **Recent Immigrant Groups by Period of Immigration:** The following immigration periods are depicted: a) 1991-1995 and b) 1996-2001. For each group, the number of recent immigrants who comprise the 1991-2001 category is indicated, as well as the proportion of individuals that fall into each of the two five-year time intervals.
- **Visible Minority Groups by Birthplace:** The maps in this series enable a comparison of the degree of difference between the distributions of individuals belonging to a visible minority group based on place of birth. Specifically, for each group the following maps are available: a) Foreign-born; b) Canadian-born and c) Total group (foreign- and Canadian-born combined). The total number of people who belong to each individual visible minority group is indicated, as well as the proportional breakdown of the group by foreign- or Canadian-born status.
- **Immigrants (Total and Recent) and Visible Minority Groups by Household Income:** Socio-economic status can play a major role in influencing where people live in Canadian cities. To investigate the degree to which socio-economic status structures the residential geographies of immigrant and visible minority groups, maps were created for the following *household* income categories: a) less than \$35,000; b) \$35,000 – 69,999; c) over \$70,000. The categories are meant to approximate low-, middle- and high-income statuses, but they must be interpreted with care. There are important differences in employment income earning levels between metropolitan areas due to cost of living differences, and this means that for some cities these categories under- or over-estimate the degree of relative affluence experienced by households. For each map, a graph is provided that indicates the number of individuals in each immigrant and visible minority group belonging to a household income category.

- **Diversity Index:** The final map in the residential series depicts the degree of ethnocultural diversity at the census tract level for each city. The map utilizes all of the visible minority categories provided by Statistics Canada (including the non-visible or European-origin group) and depicts the degree to which all of these groups are equally present as components of the total tract-level population. The map is based on Diversity or Entropy Index scores;<sup>5</sup> the higher the score, the more ethnoculturally diverse is the census tract.

#### **b) Employed Labour Force: Residence and workplace**

The series of maps that investigate the distribution and relative concentration of immigrant and visible minority groups across places of work are structured in a slightly different manner, owing in part to the fact that the people in the employed labour force constitute the base population. Given that the focus is on where people work, it demands that only those people in the employed labour force are mapped (i.e., those who receive an income from paid employment in the formal wage economy).

To this point in the project, the place of residence maps have not focused exclusively on people in the employed labour force. For most of the place of residence maps, the base population is much larger and for some maps includes everyone regardless of age. In order to facilitate meaningful comparisons of place of work and place of residence maps for individual groups, another set of place of residence maps was created that only include individuals in the employed labour force. As a consequence, for each city a set of residence and work maps is produced for each immigrant and visible minority group based on individuals in the employed labour force who have a geographically fixed work location (i.e., people whose job location changes are excluded from the analysis as are people who are unemployed but who are actively looking for employment).

Finally, a distinction is made only for the place of work maps in terms of where women and men find employment. Given that there is such overwhelming evidence that women and men work in different kinds of occupations, industries and locations

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<sup>5</sup> The calculation and interpretation of the Diversity Index is discussed below.

in a metropolitan area, the maps reflect data controls for sex. While women and men occupy the same households, they often work in very different industries and occupations that take them to different parts of a city. Consequently, separate place of work maps are produced from women and men in each immigrant period of arrival, birthplace and visible minority grouping.

The employed labour force series of maps are organized as follows:

- **Place of Residence *and* Place of Work:**
  - Period of Immigration:
    - Prior to 1981
    - 1981-1990
    - 1991-2001
  - Immigrant Groups:
    - Five largest individual foreign-born groups in each city<sup>6</sup>
  - Visible Minority Groups:
    - Five largest individual visible minority groups in each city<sup>7</sup>
    - **NOTE:** For the Place of Work series, separate maps are produced for each ethnocultural group depicting the distribution and relative concentration of: a) the total population; b) women and c) men
  - **Diversity Index:** The final map in the employed labour force series depicts the degree of ethnocultural diversity in terms of who works in each census tract of the city. The first set of diversity maps in the place of residence section of the project are based on the *resident* population, but the maps in this section depict only the population that *works* in the tract. As was the case for the first set of diversity maps, here again the index is

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<sup>6</sup> The five largest groups is the target goal, but in small cities the number of groups is reduced due to small number of people in some immigrant groups who participate in the employed labour force.

<sup>7</sup> The five largest groups is the target goal, but in small cities the number of groups is reduced due to small number of people in some visible minority groups who participate in the employed labour force.

based on the relative presence of some or all visible minority groups, including the 'non-visible' European origin groups, in census tracts. The more equal is the representation of *all* groups in a tract, the higher will be the diversity score for the tract.

It must be emphasized, however, a smaller number of individual visible minority groups are examined in terms of places of work due to small number of individuals belonging to some groups that are demographically small in Canada. As a consequence, the smallest groups have been aggregated into an "Other Visible Minority" category. Caution should be exercised when directly comparing the Place of Residence and Place of Work diversity maps because the individual groups used in the calculation are not the same. The groups used to calculate the Diversity Index for the place of work map are:

- East Asian (Chinese, Korean, Japanese)
- South Asian
- Black
- Southeast Asian (Southeast Asian & Filipino)
- Arab
- Others (Latin American, West Asian, Visible Minority not identified elsewhere., multiple visible minority)
- European-origin (non-visible) population

### **Uneven Geographies of Settlement and Mapping Individual Immigrant and Visible Minority Groups**

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One of the challenges associated with undertaking a mapping exercise for immigrant and visible minority groups across a range of cities is that in many cases some groups are far more present in some cities than others. For example, Haitian immigrants are a large and important community in Montréal but in every other city their numbers are tiny. The project has endeavored to examine the groups that are

the most numerically significant in each city rather than simply depict a limited number of groups in each city regardless of their numerical size or relative importance. This means, however, that the groups mapped often change dramatically from city to city, and this poses some challenges when making inter-urban comparisons. Table 2 lists the immigrant, recent immigrant and visible minority groups that are mapped for each city.

**Table 2: Immigrant (Total and Recent) and Visible Minority Groups Mapped by City**

***Top Five Immigrant Groups***

Toronto	Indian	British	Italian	Chinese	Hong Kong
Montréal	Italian	Haitian	French	Lebanese	Greek
Vancouver	Chinese	Hong Kong	British	Indian	Filipino
Ottawa - Gatineau	British	Chinese	Lebanese	American	Italian
Calgary	British	Chinese	Indian	Filipino	Vietnamese
Edmonton	British	Chinese	Indian	Filipino	Polish
Winnipeg	Filipino	British	Polish	German	Indian
Hamilton	British	Italian	Polish	Portuguese	Dutch

***Top Five Recent Immigrant Groups***

Toronto	Chinese	Indian	Pakistani	Filipino	Sri Lankan
Montréal	Algerian	Chinese	French	Haitian	Moroccan
Vancouver	Chinese	Taiwan	Hong Kong	Indian	Filipino
Ottawa - Gatineau	Chinese	Indian	Iranian	Somali	Yugoslav
Calgary	Chinese	Indian	Filipino	Pakistani	British
Edmonton	Indian	Filipino	Chinese	◆	◆
Winnipeg	Filipino	Indian	◆	◆	◆
Hamilton	Yugoslav	Chinese	Indian	Bosnian	Iraqi

◆ Insufficient population size

***Visible Minority Groups***

Toronto	S. Asian	Chinese	Black	Filipino	Latin American
Montréal	Black	Arab	S. Asian	Latin American	Chinese
Vancouver	Chinese	S. Asian	Filipino	Korean	Southeast Asian
Ottawa - Gatineau	Black	Chinese	Arab	S. Asian	Southeast Asian
Calgary	Chinese	S. Asian	Filipino	Black	Southeast Asian
Edmonton	Chinese	S. Asian	Filipino	Black	Southeast Asian
Winnipeg	Filipino	S. Asian	Black	Chinese	Southeast Asian
Hamilton	S. Asian	Black	Chinese	Filipino	Latin American

**Note:** For every city, "Total Visible Minority" and "Non-Visible Minority" Population maps are also included.

## **Representing the Numbers: Interpretation of Indices**

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### **a) Location Quotients:**

Meaningful comparisons of the relative spatial concentration and dispersion of many different immigrant and visible minority groups within the same city, as well as between cities, is a major challenge for this type of mapping project. One option is to map a specific immigrant or visible minority group as a proportion of the total population within a census tract *or* as a proportion of that particular group's total metropolitan population found in each census tract. Such maps have the great advantage of being relatively easy to interpret as the mapped values are simple percentages. Often it is difficult, however, to compare maps based on percentage values for different groups because usually there are significant differences in the degree of concentration of groups across a metropolitan area, hence different class intervals are required to represent adequately the distribution. As a consequence, maps for different groups can be made to look quite similar because the same colour scheme and number of classes is used. Such maps suggest comparability, but in fact they can be based on very different class intervals and are not directly comparable.

To facilitate meaningful comparisons, the maps for this project are based on location quotient values for each individual immigrant and visible minority group. Location quotients compare the relative concentration of an immigrant or visible minority group in a small geographic area (i.e., a census tract) to the relative concentration of that same group in a much larger area (i.e., the entire metropolitan area). The quotient is a ratio of the group's representation as a percentage of a tract's total population relative to its percentage of the metropolitan area population. Location quotient values indicate the degree to which a tract departs from the overall proportion that a group constitutes of the metropolitan area. For example, if British immigrants constituted 6 percent of the total population of census tract "004.00", but only 3 percent of the total population in the metropolitan area, the location quotient for census tract "004.00 is 2.

In terms of interpretation, if the location quotient for a census tract is 1, this means that the tract has exactly the same relative frequency for the immigrant or visible minority group being considered as is found in the entire metropolitan area. A location quotient of greater than 1 indicates that the group is over-represented in the census tract and that there is a relative concentration of the group in the tract. For example, a location quotient value of 2 indicates that the group's share of the population in that tract is double its share of the population at the metropolitan area. By the same token, a location quotient of less than 1 indicates an under-representation or a low concentration in the census tract relative to the metropolitan average.<sup>8</sup>

For this project, the following class categories for mapping location quotients will be used:

- 0 – 0.49
- 0.5 – 1.49
- 1.5 – 2.99
- 3.0 – 7.99
- 8.0 and greater

These classes were selected because they are relatively easy to interpret, especially in terms of identifying locations of significant under- and over-representation. The intent is not to over exaggerate the degree of concentration experienced by some groups; consequently range of values less than and greater than 'one' indicate geographic areas that fairly closely match a group's representation in the metropolitan area. It is important to bear in mind that the absolute size of the group must be remembered in interpreting any map representing areas of under- or over-representation. Simply put, a map showing a few areas of significant over-representation for a group that is small in number (e.g., a couple of thousand

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<sup>8</sup> One of the conceptual limitations of location quotient is that values of "under-representation" are constrained to values between 0 and 1, whereas those of "over-representation" are measured on an unlimited scale. As a consequence, it is somewhat problematic to evaluate the degree of under- or over-representation using a location quotient simply because of scale differences in relation to unity.

people) points to a different social phenomenon and set of considerations relative to a map representing tens of thousands of people.

**b) Diversity (Entropy) Index:**

As explained above, maps are produced for each city that indicate the degree of ethnocultural diversity that exists in each city at the census tract level. These maps draw on visible minority data and are based on *Diversity* or *Entropy* values for individual census tracts in the metropolitan area (Allen, 2005; Sandoval et al., 2002; White 1986). Instead of measuring the degree to which a particular group is concentrated in a small area, the diversity index assesses how diverse an area is with respect to the total number of ethnocultural groups found in the metropolitan area overall. The diversity scores range from 0 to 100, where 0 is complete homogeneity (i.e., the area is dominated exclusively by one group) and 100 is complete heterogeneity (i.e., all the groups are equally represented in the area). In short, the higher the number, the more equal the representation of all of the groups, and the lower the number, the more one immigrant or ethnocultural group dominates. A low value does not necessarily mean that an area is completely homogeneous, just that the proportional distribution among the groups is not equal and that only a couple of groups occupy the area in any substantial way. The calculation of the index is:

$$H_i = \left| \sum_{i=1}^K \frac{(\log(P(i)) * P(I))}{(\log k)} \right| * 100$$

Where

$H_i$  = Diversity index for tract  $i$

$P(i)$  = Proportion of the tract population in visible minority group  $k$

$K$  = The total number of visible minority group categories

There is little agreement in the literature about the breakpoints for diversity versus homogeneity using this index. Allen (2005) considers scores over 84 to be indicative of high diversity, whereas Sandoval et al. (2002) suggest that a score of over 75

indicates strong diversity. The maps created for this project are based on the following class intervals for:

- 71 – 100 (*high*)
- 56 – 70
- 41 – 55 (*modest*)
- 21 – 40
- 0 – 20 (*low*)

The threshold value for the highest class was set at '71 and over' for this project to facilitate comparison between cities. In Toronto, Vancouver, and Montréal, a fairly large number of census tracts would fall into the highest class even if the threshold value were 75 or 84. In other Canadian cities that are significantly less diverse, only few tracts, if any, would make it into the highest class interval if the threshold were set higher than 71.

Diversity maps are presented for both places of residence and work. For place of residence, the maps are based on the 13 categories that comprise the visible minority variable as defined by the Canadian government for employment equity purposes. For place of work maps, however, the number of categories has been reduced through the amalgamation of some groups into larger regional groupings to minimize the problem of data suppression due to small numbers (Table 3). Given that the place of work data are based only on the population that is active in the labour force and that has a fixed place of employment, and that many immigrant and visible minority groups have a relatively small proportion of their population active in the labour force, it was necessary to amalgamate some groups in order to conduct analyses that do not suffer from excessive data suppression problems.

**Table 3: Visible Minority Groups Used in Calculation of Diversity Index Scores for Place of Residence and Work**

<i>Place of Residence</i>	<i>Place of Work</i>
<ul style="list-style-type: none"> <li>• Chinese</li> <li>• South Asian</li> <li>• Black</li> <li>• Filipino</li> <li>• Latin American</li> <li>• Southeast Asian</li> </ul>	<ul style="list-style-type: none"> <li>• East Asian (Chinese, Korean, Japanese)</li> <li>• South Asian</li> <li>• Black</li> <li>• Southeast Asian (Southeast Asian, Filipino)</li> <li>• Arab</li> <li>• Others (Latin American, West Asian, Visible Minority n.i.e., Multiple Visible Minority)</li> <li>• All others (European-origin or 'white' population)</li> </ul>
<ul style="list-style-type: none"> <li>• Arab</li> <li>• West Asian</li> <li>• Korean</li> <li>• Japanese</li> <li>• Visible Minority, n.i.e. (not identified elsewhere)</li> <li>• Multiple visible minorities</li> <li>• All others (European-origin or 'white' population)</li> </ul>	

### **Summary**

This brief description is intended to provide a roadmap to be used in the analysis and utilization of the maps that were produced for the “Ethnic Segregation/Mixing within Major Canadian Metropolitan Areas Project.” To a significant degree, the utilization of the maps would be considerably easier if all immigrant and visible minority groups were distributed in the same way across the cities of Canada. Of course, this is not the case and any mapping exercise must accommodate the reality of an uneven distribution of groups within cities and the fact that some groups are much larger in particular cities than in others. This project has attempted to respect the unequal size and uneven geographies of immigrant and visible minority groups across urban Canada by striking a series of compromises between group and geographic specificity. Ultimately the maps furnish a portrait of the geographies of immigrants and visible minority groups, and how these geographies change when analyses move from places of residence to those of work. By producing maps of ethnocultural diversity in terms of residential and workplace geographies, the project

also encourages researchers to consider the processes that shape districts of diversity and homogeneity in an era of significant international migration.

## References

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- Allen, J.P. 2005. Ethnic geography dynamics: clues from Los Angeles. *Association of Pacific Coast Geographers Yearbook*, 67, 97-116.
- Sandovol, J.O., H.P. Johnson, and S.M. Tafoya 2002. Who's your neighbor? Residential segregation and diversity in California. In H.P. Johnson (ed) *California Counts Population Trends and Profiles*. Los Angeles: Public Policy Institute of California.
- White, M.J. 1986. Segregation and diversity measures in population distribution. *Population Index*, 52, 198-221.