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A new residential order?: The Social Geography of Visible Minority and Religious Groups in Montreal, Toronto, and Vancouver in 2031

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Executive summary

This report presents the third phase of a study of the changing ethnocultural landscapes of Montreal, Toronto, and Vancouver.

The first phase¹ set the conceptual foundations and analyzed changes occurring between 1996 and 2006. It developed a neighbourhood typology taking into account both the concentration and composition – single or mixed -- of Visible Minorities (see Appendix B for definitions of neighbourhood types, the Index of Dissimilarity and the Index of Segregation). It identified simultaneous processes of concentration of the Visible Minority population in enclaves, and dispersion (increasingly diverse composition in both enclave and white neighbourhoods) taking place especially in Toronto and Vancouver. It also analyzed the socio-economic characteristics of enclaves, highlighting that patterns of socio-economic marginalization are complex, and not univocally associated with high ethnocultural concentration.

The second phase² shifted attention to the issue of residential trajectories, especially whether the Canadian-born children of immigrants live in the same neighbourhoods as their parents' generation. Three Visible Minority groups (people self-identified as Black, Chinese, and South Asian) and four European origin groups (those self-identified as Italian, Jewish, Polish, and Portuguese) were selected in a case study design. The study shows that, in Toronto, across nearly all of the groups, the Canadian-born generations are more dispersed and, if Visible Minority, less likely to live in enclaves than first-generation immigrants. Patterns are much less clear and differ across groups in Montreal and Vancouver. In terms of dispersion, no straightforward distinction was found between European origin and Visible Minority groups.

The third phase adapts the ethno-demographic projections made by Statistics Canada for 2031 at the metropolitan scale to the intra-urban scale, allocating the number for any particular group provided at the CMA scale to the Census Tract scale. This phase included consideration of populations with various religious affiliations, in addition to Visible Minority populations. Brian Klinkenberg developed the method to accomplish the allocation of the CMA projections to the Census Tract scale (a separate report details the methodology and maps developed for this exercise³). The development of the projection algorithm required several assumptions, achieving a necessarily simplified picture of the complex processes that will in fact forge the ethnocultural and religious landscape of the three CMAs. More specifically, it was assumed that the same socio-economic, policy, and urban planning conditions will be in place between 2006 (2001 for religious groups) and 2031 as in the previous twenty years, so that residential decisions would maintain a similar pattern as they did between 1996 and 2006 (2001 for religious groups). In addition, the algorithm may have an inherent bias to overestimate high concentrations, especially in extreme cases. It is therefore important to keep in mind these assumptions and limitations when interpreting the results.

According to the projections, while Montreal is likely to undergo changes that mirror the general Canadian situation, Toronto and Vancouver are likely to have a social geography that is entirely new to Canada. Overall, Montreal will still have a smaller proportion of Visible Minorities (projected at

¹ Hiebert, Daniel, 2009. *Exploring minority enclave areas in Montréal, Toronto, and Vancouver*, available at www.cic.gc.ca/english/resources/research/minority-enclave.asp

² Hiebert, Daniel, 2009. *Inter-generational dynamics of ethno-cultural residential concentration in Canadian metropolitan areas*. Unpublished study completed under contract to PCH.

³ Klinkenberg, Brian, 2012. *Demographics and population trends in Montreal Toronto, and Vancouver: 2006 to 2031*. Unpublished methodological study completed under contract to CIC.

31 percent) than that in Toronto or Vancouver in 2006. In Montreal, about nine out of ten Whites will live in White-dominated areas, while the Visible Minority population will be spread across neighbourhoods of all types (i.e. characterized by the full range of Visible Minority or White concentration), indicating a fairly high degree of ethnocultural mixing. By contrast, Toronto and Vancouver are projected to become 'majority-minority' cities, with an overall Visible Minority population at 63 and 59 percent respectively. In Toronto and Vancouver, the degree of separation between Whites and Visible Minorities is projected to rise considerably, beginning to approach that in the average US city in 2010 between Whites and African Americans.

These changes will also be reflected in inter-generational dynamics. In Montreal, the propensity for members of Visible Minority groups to reside in enclaves will likely tend to dissipate across generations to an extent greater than that already observed in the past. By contrast, in Toronto and Vancouver, the propensity for second-generation immigrants to live in enclaves is projected to be only moderately lower than that of the first-generation immigrant cohort.

Considering religious affiliations, all three cities will see a growth in the population with non-Christian religious affiliations, while Vancouver will maintain its distinctly larger population with no religious affiliation. Considering the major non-Christian categories, in Montreal the Sikh community and, to a slightly lesser extent, the Jewish community, are projected to have a high degree of isolation. By contrast, Muslims are projected to have the least degree of isolation among non-Christian categories. In Toronto, the Jewish community is projected to be the most residentially distinct non-Christian group, and to be quite isolated from others. Sikhs are also projected to be highly isolated. The other three groups (Buddhist, Hindu and Muslims) in Toronto have much more dispersed socio-spatial profiles, particularly Muslims. The residential concentration of non-Christian groups in Vancouver is projected to be similar to that in Toronto, but with much higher dispersion of the (much smaller) Jewish community.

In parallel, non-Christian religious communities in both Toronto and Vancouver will be mostly found in enclave neighbourhoods (i.e. where Visible Minorities are over 70 percent). Non-Christian groups that are composite, such as Buddhists and Muslims, will reside in neighbourhoods that vary in term of their ethnic composition and Visible Minority concentration. Religious groups that are more closely associated with a specific Visible Minority category (such as Hindus and Sikhs, which are overwhelmingly identified as South Asians), will be much more geographically concentrated and situated within single-group enclaves.

To conclude, it is important to emphasize that there is no empirically verified relationship between ethnocultural mixing vs. isolation and residential strife or pathology. Social policy and programming have a salient role to play that will ameliorate or intensify any of the impacts that ethnocultural concentration may have. For example, if programs for integrating immigrants are accessible and well utilized, newcomers believe that the labour market is open to them, and Visible Minority children succeed in school, it is hard to think that ethnocultural enclaves would have a negative impact on society.

The story so far: Key findings in Phases 1 and 2 of this study

Phase 1

The **first phase** of this study involved setting conceptual foundations and analyzing changes that occurred in the ethnocultural landscapes of Montreal, Toronto, and Vancouver between 1996 and 2006, based on census data. The conceptual part of the report began with a definition of key terms in urban social geography: concentration, dispersion, segregation, enclave, and ghettoization.⁴ The term ghettoization should be reserved for those instances when spatial isolation of a group is associated with economic exclusion. The complexity of the factors leading to concentration/segregation was emphasized. In some cases, these patterns emerge through coercion, while in others they arise out of the choice by members of a group to co-locate. In most real instances, both of these causal factors are involved, and the balance between them can change over time. Just as causes for these patterns vary, so do their consequences. In some cases concentration/segregation facilitates the development of in-group institutions that support economic and cultural integration, while in other cases the development of enclaves leads to ‘parallel lives’ and may even intensify relative disadvantage. The outcomes of residential concentration/segregation cannot be predicted in advance and are an empirical question that needs to be investigated using contextual sensitivity. In order to pursue this type of research, important methodological questions must be considered.

The most widely used traditional measure of concentration/dispersion—the Index of Segregation—was outlined along with an emerging method of defining neighbourhood types and, using this, of identifying two types of enclaves, those with mixed minority populations vs. those dominated by a single minority group. The second of these approaches was used for this phase of the project and each Census Tract in MTV was classified into one of five neighbourhood types, which range from areas that are mainly White to ethno-specific Visible Minority enclaves.⁵

This method was used to explore the extent to which the social geography of MTV changed between 1996 and 2006. The residential geography of Montréal changed little over this period, but there has been a great deal of change in Toronto and Vancouver, so much so that we are beginning to see what I have called a new residential order in these metropolitan areas. One of the core elements of this new order is the growth of ethnocultural enclaves. At present, well over one-quarter of the Visible Minority population of both Toronto and Vancouver live in these settings. But the other key element in this new order is ethnocultural dispersion, with all parts of the city (including enclaves) becoming highly diverse. We do not have adequate urban models, yet, to help us understand the apparently contradictory simultaneous processes of concentration and dispersion.

Who lives in enclaves? Across the three metropolitan areas, recent immigrants are more likely to live in enclaves, as well as individuals who are dedicated to the preservation of their culture (i.e., speak a non-official language in their home). In general, enclaves are associated with a higher level of unemployment than the rest of the city, and their residents are slightly more dependent on government transfers as a source of income; the incidence of low income is also higher in enclaves.

⁴ See Appendix B for definition of concepts also used in this report.

⁵ In most of this study I simply use two ethnocultural categories: Visible Minority vs. the remainder of the population. The latter group includes individuals of European descent (Whites) and persons of Aboriginal ancestry. According to the 2006 census, 0.5 percent of Montreal’s population identified themselves as Aboriginal, and the corresponding figures for Toronto and Vancouver were 0.1 and 1.9 percent. Given these relatively small fractions, I frequently refer to the non-Visible Minority populations of these cities as White, or persons of European ancestry. This is not strictly correct but saves me from what would be an extremely repetitive use of the inelegant phrase ‘non-Visible Minorities’.

However, there are important nuances to this rather negative list of characteristics. The level of education (university completion) is approximately the same in enclaves as in other neighbourhoods, as is the proportion of residents able to purchase a home. In other words, there are some systematic differences between residents of enclaves and other areas of the city, but these are not consistent and in many cases the differences are quite small. Surprisingly, enclaves are also highly ethnoculturally diverse neighbourhoods, even those areas that are dominated by single groups. Barring a few exceptions, therefore, enclaves are not mono-cultural social settings. Enclaves are also highly diverse in terms of the religious affiliation of their residents.

Are enclaves places of socio-economic marginalization and deprivation? In Montréal, enclaves are part of a much larger landscape of marginalization, one that affects the dominant White population as well as Visible Minority groups. All of the Census Tracts defined as enclaves in Montréal are places of extreme poverty. On the positive side, relatively few members of Visible Minority groups live in enclaves in Montréal, and most reside in areas dominated by Whites. But on the negative side, those who do live in these neighbourhoods face significant socio-economic challenges. The socio-economic profile of enclaves in Toronto and Vancouver is far more complex. There are certainly areas in both cities that are associated with both Visible Minority populations and extreme poverty. At the same time, in both cities, a far larger number of poor members of Visible Minority groups live outside enclaves than inside them. In fact, the propensity for Visible Minority residents of enclaves to be poor in Vancouver is only marginally higher than for the Visible Minority population in the metropolitan area as a whole. It is also worth noting that different groups tend to be located in the relatively small number of economically deprived enclaves in MTV: in Montréal, South Asian-Canadians are most likely to be found in these areas; this is the case for Black-Canadians in Toronto, and Chinese-Canadians in Vancouver. These place-specific patterns demonstrate that there is not a single Visible Minority group that faces the greatest degree of socio-economic exclusion across all parts of Canada.

Phase 2

In the **second phase** of the study, which was based on a custom tabulation of the 2006 census provided by Canadian Heritage, attention shifted to the issue of residential trajectories.⁶ Initially this involved using traditional methods for detecting the degree of concentration and geographical distinctiveness of ethnocultural groups (employing the Index of Segregation), and then a related measure (the Index of dissimilarity) to investigate differences in residential patterns across generational cohorts (both within and between groups)⁷. The goal of this part of the project was to discern residential dynamics that are unfolding over time through a careful examination of cross-sectional data. The key question motivating this research is whether the Canadian-born children of immigrants live in the same neighbourhoods as their parents' generation. Three Visible Minority groups (people self-identified as Black, Chinese, and South Asian) and four European origin groups (those identified as Italian, Jewish, Polish, and Portuguese) were selected in a case study design.

The economic characteristics and ethnocultural profiles of the populations of the three cities differ quite strongly. There are also important differences in the social geography of ethnocultural groups in the cities. Levels of residential distinctiveness (i.e., separation between groups) are highest in Montreal, then Toronto, and lowest in Vancouver.

⁶ Hiebert, Daniel, 2009. *Inter-generational dynamics of ethno-cultural residential concentration in Canadian metropolitan areas*. Unpublished study completed under contract to PCH.

⁷ See Appendix B for definitions.

A basic set of cross-tabulations reveals that the Visible Minority groups have systematically lower personal income levels than the European origin groups and, theoretically, have less money to spend on housing. This would suggest the potential for a higher level of Visible Minority residential concentration, other things being equal, in more affordable neighbourhoods. Nevertheless, there is no obvious difference in the general residential patterns between the two types of groups. That is, certain Visible Minority groups are more likely to be concentrated in certain parts of the city but, in general, their level of residential isolation is no higher than that of European origin groups. In fact, the Jewish populations were the most residentially distinct in all three cities. It is also interesting to note that specific groups tend to be drawn to different parts of the city, with a large number of fairly high Indices of Dissimilarity statistics (measuring the degree of separation between groups, one pair at a time).

Analysis of the intergenerational residential patterns of groups yielded few easy generalizations. In Toronto, across nearly all of the groups, the Canadian-born generations are more dispersed than first-generation immigrants. Index of Dissimilarity statistics are also lower between second-generation cohorts than for immigrants, indicating that they mingle more in residential settings. But the patterns were much less clear in Montreal and Vancouver. In those cities, for some groups the second generation is more dispersed, while this is not true for other groups. Significantly, there is no straightforward distinction between European origin and Visible Minority groups in this respect.

This phase of the project also included an investigation of the tendency for different cohorts of Visible Minority groups to live in enclaves, as defined in the neighbourhood typology system noted earlier. Results for sub-study closely resembled those just discussed. That is, in Toronto, the children and grandchildren of Visible Minority immigrants were less prone to live in Census Tracts classified as enclaves, compared with the immigrant generation. The situation in both Montreal and Vancouver, however, was more varied, with this trajectory of dispersal occurring for some groups but not for others.

Introduction to the Third Phase of the project

The first part of this overall project is best seen as an exercise in recent history, tracing the development of ethnocultural landscapes in Montreal, Toronto, and Vancouver over the 1996-2006 period, a time of steady, high-volume immigrant settlement in these metropolitan areas. In the second part, an important comparative dimension was added by examining the residential trajectories of selected White and Visible Minority groups. A quasi-longitudinal method was also introduced by contrasting the residential profile of the immigrant generation with that of Canadian-born Visible Minorities. In this, the final, third section of the larger project, we look toward the future by adapting the ethno-demographic projections made by Statistics Canada for 2031 at the metropolitan scale to the intra-urban scale. Using the Toronto example, this means that an algorithm has been developed (by Brian Klinkenberg), enabling us to allocate the single number for any particular group provided at the CMA scale to the 1000 or so Census Tracts that make up the larger area. As I make clear in the following section, this is by no means a straightforward exercise, but the results of this research are both inherently fascinating and highly relevant to public policy. Another dimension was added to this part of the larger analysis: in addition to Visible Minority groups, projections were also made for a number of religious groups as well.

For this report I begin by outlining the major methodological challenges involved in this kind of predictive exercise, which are legion, since the main goal of the algorithm is to project the social geography of each of the three cities 25 years beyond the last known data point (2006) using just 10-15 years of historical information—for each Census Tract. This had to be done twice, once for Visible Minority groups, using data for 1996, 2001, and 2006, and again for religious groups, using data from 1991 and 2001.

Given the complexity and ‘fragility’ of this exercise, the analysis had to be limited to a relatively small number of ethnocultural and religious categories and was especially focused on the largest of both types of groups. Readers of this report should also consult the large, detailed set of maps provided by Klinkenberg, which depict the social geography of every variable considered in this analysis. My goal in the report is not to speak to specific patterns (e.g., a concentrated area of settlement of a particular group in any one of the three cities) but to several larger questions, namely:

- Are ethnocultural groups likely to ‘grow apart’ in the three major cities of Canada between 2006 and 2031?
- Is this true for both Visible Minorities and religious groups?
- Do the data suggest that the residential patterns of the immigrant generation will be maintained by their children (and grandchildren)?
- Which groups (of those selected for analysis) are likely to be the most isolated in the residential environments of Canadian cities?

All of these questions will be examined from a broad statistical point of view for the metropolitan regions as a whole, rather than in detail. Following the methodological section, the report is structured into three broad sections: the landscapes of Visible Minority groups in 2031; the landscapes of religious groups in 2031; and a general discussion of the significance of the findings generated through this study.

Note that the academic literature on segregation was summarized in the first of the three studies, especially the emerging body of work dealing with neighbourhood typologies. In that report I made an effort to situate the results of the MTV study in the international context by comparing the degree of enclave development in Canadian metropolitan areas by that found elsewhere. I will not

retrace these steps in this report. In fact, to my knowledge there have been no similar predictive models developed for future ethnocultural residential patterns in the literature in social geography or urban sociology, so results found here cannot readily be compared with any obtained elsewhere.

Methodological challenges

It is worth reflecting on the nature of urban housing markets when considering likely scenarios for the transformation of residential spaces in the wake of ethnocultural change. In Toronto and Vancouver, we know that the ratio of Visible Minorities in the population will rise substantially, with the 2031 projections suggesting that in both cases the increase may be as high as 20 percent. The Vancouver statistics provide a helpful context for this discussion. Between 2006 and 2031, according to the scenario used for this project, the population of the metropolitan area will rise by 1.3 million. If we simply take the largest two components of this change, the Visible Minority population will increase by 1.15 million while those not in that category (a combination of White and Aboriginal people) will increase from 1.27 to 1.42 million, a change of 150,000. If these projections are accurate, the scale of ethnocultural change over this 25-year period will be larger and more rapid than anything we have seen previously.

There are no precise statistics on the Visible Minority Population of Vancouver, or any other Canadian city, prior to 1996, since the category was only created at that time. But it is possible to provide a coarse approximation of changes in the previous 25-year period. In 1981, there were approximately 150,000 individuals who would now be classified as Visible Minorities in the metropolitan area in a total population of 1.25 million.⁸ From 1981 to 2006, the Visible Minority component of Vancouver's population rose to just over 900,000, a net increase of about 750,000—compared with 1,150,000 projected for the following quarter-century.

If we review the changes in the socio-cultural landscapes of Vancouver associated with the net increase in the Visible Minority population of 750,000 between 1981 and 2006, it is clear that this was an utterly transformative process. A map of non-European ethnic groups in 1981 would show them almost completely concentrated in the City of Vancouver and, moreover, clustered in eastside neighbourhoods. By 2006 we have seen a spectacular suburbanization of Visible Minorities in Vancouver. The City of Richmond is now closely associated with the Chinese-Canadian population in the public imagination, for example, as is the City of Surrey with the Indo-Canadian population. In fact there is a standing local joke that speaks to these perceptions:

Question: what river separates China and India?

Answer: the Fraser River (which separates Richmond and Surrey)

A comprehensive portrait of the ethnocultural landscape that evolved in Vancouver is provided in the first two parts of this report and underwritten by the set of maps produced by Klinkenberg, which show the concentration of particular groups across the metropolitan residential space.

The question for this part of the report is: what might happen with the addition of 1.15 million more people with a Visible Minority background in Vancouver (and if there were corresponding increases of 900,000 Visible Minority residents in Montreal and 3.3 million in Toronto)? Would the changes to the social fabric of the city be as wholesale as those seen during the period 1981-2006? To some

⁸ This number included 84,000 who identified as Chinese ancestry, 35,000 as Indo-Pakistani, 15,100 as Pacific Islanders, and 11,800 as Japanese. See David Ley, Daniel Hiebert and Geraldine Pratt, "Time to grow up? From urban village to world city," In *Vancouver and its region*, ed. G. Wynn and T.R. Oke. Vancouver: University of British Columbia Press, 1992, pp. 234-266.

degree the answer lies in the mechanics of the housing market. The greater the degree of ‘churn’ in the market, the more we can expect to see a transformation in the ethnocultural character of existing neighbourhoods. Consider two ideal typical situations, both extremes that are essentially impossible outcomes. First, if everyone stayed in their place of residence over this long period, the existing social geography of the city would be frozen in space, and all of the net population growth would have to occur in new housing, which would be added to the periphery of the city or in densification processes (e.g., high-rise condominiums) that are typically located either in the inner city or along transportation corridors. All of the social change registered in the city would therefore take place in a highly constrained set of spaces.

Conversely, if everyone changed their place of residence several times in a 25-year period the existing residential fabric of the city could be completely changed. If this process happened, say, every five years (i.e., a consistent turnover rate that included everyone, of 20 percent annually), the ethnocultural character of neighbourhoods could change very quickly.

The real dynamic of the housing market is, of course, somewhere between these extremes. Some households stay in place for exceptionally long periods of time, ensuring stability of their neighbourhoods. Others move frequently, generating the possibility for transformation. The relative balance of these behaviours sets limits to the degree of residential ‘shift’ we might find over any given period of time.

It is exceedingly difficult to build predictive models that take human behaviour into consideration, especially at the fine-grained level of city neighbourhoods or Census Tracts. To construct a highly credible projection at this scale one would need a great deal of data, including the classic ingredients of natural increase calculations (births, deaths, age-specific fertility rates) plus those of net migration. Furthermore, it would be necessary to anticipate changes to land use planning bylaws. Are greater densities allowed in the inner city, or is the housing stock fixed? Are there protected areas on the periphery that would limit expansion? Will new transportation corridors emerge to attract housing of higher density? What is the rate of redevelopment in older neighbourhoods? Given the complexity of these issues, the most sophisticated predictive models at the intra-urban scale incorporate ‘expert knowledge’ and parameters are adjusted accordingly, typically in an iterative process (i.e., a first-stage projection is followed by consultations with experts, and their reactions are used to make adjustments to the model for a second stage, etc.). This is a time consuming and expensive proposition that is usually only done by large planning bureaucracies.

The methodology used for this project is far simpler than such elaborate approaches. While the methodology is explained in detail by Brian Klinkenberg (See Klinkenberg report⁹), I summarize the basic assumptions of the exercise briefly. In the first place the projections of Statistics Canada are taken at face value for the metropolitan area as a whole. That is, Klinkenberg sought to predict the distribution of a fixed number of people—classified into relevant categories—across an urban area with predetermined boundaries.

He used the period between 1991 and 2006 to provide a baseline for projecting the total population and its various components between 2006 and 2031.¹⁰ In other words, change over a 10- or 15-year

⁹ Klinkenberg, Brian. 2012. *Demographics and population trends in Montreal, Toronto, and Vancouver: 2006 to 2031*. Unpublished methodological study completed under contract to CIC

¹⁰ Given that religious identification was only recorded in 1991 and 2001 there were the base dates used for projections of religious groups (i.e., projections for the future were made on the basis of changes registered between 1991 and 2001). The Visible Minority variable was only created in 1996, and therefore projections for VM groups are based on the 1996-2006 period.

period is used to project what will happen in the next 25 years. The methodology did not take into account basic demographic trends such as birth or death rates, or any changes in planning rules that might arise. Moreover, it is based on the assumption that people are mobile and that the ethnocultural composition of neighbourhoods can change relatively rapidly and completely.

There are few constraints built into the model. For example, the algorithm could have imposed an assumption that a certain proportion of people would stay in their dwelling over the entire 25 years, which we know sometimes does happen. But this was not done (although see below for a discussion of one important constraint added after an initial set of projections were made).

Given these assumptions, if there was a very large increase in the population of a particular group in a particular area between 1991 and 2006, and if the population of those belonging to other groups declined in the same period, the model could project that the group would come to take over the entire area between 2006 and 2031. This is entirely 'logical' given the 1991-2006 dynamic but unlikely to happen in the real world, or at least unlikely to happen in more than a few cases. It is instructive to note that there is not a single Census Tract, in any of the three cities under examination for this project, in 2006 that is ethnoculturally homogeneous. In fact, there is not a single CT that is entirely populated by members of Visible Minority groups, though there are a few in Toronto close to this figure and we find several that are 'mirror-images' of this ratio in Montreal, where there are no Visible Minorities present (out of about 860 CTs).

Why not? Market forces mitigate against such an outcome. Despite all of the factors that might promote the residential concentration of ethnocultural groups (discussed in earlier phases of this project), the fact that residential sales, for example, are widely available through real estate agents and MLS Internet sites, and rental listings are similarly accessible on platforms such as Craigslist, renders exclusivity rare. Furthermore, as noted earlier, some residents of neighbourhoods stay in place for very long periods of time, leading to a degree of ethnocultural stability.

I conclude that the methodology used for this study, therefore, has an inbuilt bias towards projecting greater ethnocultural concentration than will actually occur. Again using Vancouver as an example, in projecting the 1996-2006 change in two components of the population forward—those who did vs. did not identify as members of Visible Minority groups—the first-order results indicate that Visible Minorities will account for more than 100 percent of the population in over 40 of 409 Census Tracts! Similar results would surely have been generated in Toronto. Meanwhile, the model predicts that there will be no other people living in these Census Tracts. The model used for this project 'tames' these impossible results in second-order calculations that force the projected number of Visible Minorities down to the total population of the Tracts and then reallocates the 'surplus' Visible Minority population across the remainder of the city using an intelligent design. However, in this reallocation process, another 8 Census Tracts with very high proportions of Visible Minorities become 'saturated' and, at the end of this iteration, 51 out of 409 Census Tracts are projected to be populated entirely by members of Visible Minority groups.

While this result is mathematically logical, it is doubtful that it could actually occur. Klinkenberg subsequently devised a more refined methodology that created new constraints which led to less extreme results. This much more complex, iterative algorithm is explained in his technical report. Applying the new method, the results for Vancouver are far more plausible though likely continue to overestimate the degree of ethnocultural concentration that will occur. The number of Census Tracts projected to contain 100 percent Visible Minorities fell from 51 using the simpler method to 10 with the revised one. All together (including these 10 CTs), the new projection indicated 23 Census Tracts where Visible Minorities will account for more than 95 percent of the population.

This contrasts with the situation in 2006, when the highest proportion of Visible Minorities in any Tract in Vancouver was 90 percent.

The degree of Visible Minority concentration was higher in Toronto in 2006 than Vancouver, with the maximum value for any Census Tract recorded as 98 percent Visible Minority. It should not be surprising, therefore, that the projections indicate more ‘saturation’ of Census Tracts in Toronto, with Visible Minorities estimated to account for at least 99 percent of the population in 45 CTs.

Given the actual operation of the Vancouver and, especially, Toronto housing markets, I believe these results cannot be achieved. What, then, should be done? There are three options: we could abandon the analysis of projected results given this bias; devise a new methodology; or proceed with the analysis making appropriate qualifications where relevant. I believe there are two valid reasons to proceed with the analysis. First, while the method may be biased toward overstating future levels of concentration, I see no reason to believe that the direction of change projected by the model is compromised. That is, the magnitude of change may be biased, especially at the extreme, but the broad patterns associated with the projections appear sound. Second, I believe that the issue of residential concentration is sufficiently important for public policy to warrant continuing this experiment, despite its flaws.

Klinkenberg considered the idea of experimenting with different projection methods that might more closely approximate the actual housing market, but any new algorithm would have to introduce an additional constraint (e.g., force the model to use 95 percent as a ceiling for the proportion of Visible Minority residents for any Census Tract in Vancouver). The definition of such a constraint would be inherently arbitrary (why 95 percent and not 98 percent, as seen in Toronto in 2006?) and he therefore decided against such a measure. Instead, I emphasize the fact that the results of this analysis cannot be perfected and add qualifications to my interpretation of them when I believe that possible bias in the methodology may be affecting them unduly.

The best way to interpret the approach used in this project is to understand that future ethnographic landscapes are projected assuming the geographical and socio-economic dynamics that took place between 1991 and 2006 will continue into the near future, and assuming a stable public policy environment in the field of urban planning. In addition, attempts have been made to reduce (but not eliminate) the bias toward overestimating the degree of ethnocultural concentration that is likely to occur over the next 25 years.

The classification of Census Tracts by neighbourhood type is far more forgiving than the calculation of segregation indices. In this case, enclaves are identified when the ratio of Visible Minority groups, collectively, is greater than 70 percent. The projection model is sufficiently robust for such a conservative cut-off point, and the adjustments explained above should have no impact on these results.

The method for projecting the changing balance between Visible Minority populations and others has been expanded to project the residential distribution of individual ethnocultural groups. The algorithm takes the following steps:

- A projection of the total population of each Census Tract has been generated
- The estimated population of each Census Tract is allocated between Visible Minorities and others; the population of all Visible Minority groups summed across all CTs is made to equal the original projection made by Statistics Canada
- The Visible Minority population of each Census Tract is allocated to each of the individual Visible Minority groups (i.e., Black; Chinese; etc.); for each group, the sum across all CTs is

made to equal the original projection made by Statistics Canada; also, the sum of all Visible Minority groups is made to equal the total Visible Minority population in the CT.

The projection algorithm devised by Klinkenberg satisfies all these criteria, after a series of iterations. His model progressively seeks a ‘best fit’ between the metropolitan-wide projections of Statistics Canada and the estimated total population of each Census Tract in 2031. By projecting all Visible Minority groups collectively, this algorithm should mitigate against the tendency for overestimating the concentration of any particular group (as seen in the projection of the Visible Minority population as a whole). Hopefully, this process should approximate the real housing market, wherein individuals compete for housing and the forces of demand and supply are (more or less) balanced to enable everyone to find residential space.

Nevertheless, data on individual Visible Minority groups should be treated with caution in this study. As seen in the discussion of the Visible Minority population as a whole, figures for the residential distribution of individual groups will generate indices of segregation that amplify the dynamics registered in the 1996 and 2006 period (i.e., changes over these three census cross-sections will be projected outward).

The relative proportions of specific Visible Minority groups are also used in the classification of Census Tracts into neighbourhood types. The general balance between Visible Minorities and others in each CT is used to define the first three neighbourhood types, and also enables us to distinguish between the first three types and the two that are designated as enclaves. The data generated for this project are sufficient for this purpose.¹¹

However, the two types of enclaves—those that are ethnoculturally mixed vs. dominated by a particular group—are classified according to the percentage of each Visible Minority group in the CT. In this case there is a minor problem. Klinkenberg did not project every Visible Minority group, only the largest ones (plus an omnibus ‘other’ category for all of the smaller Visible Minority groups). In essence, the degree of ‘superdiversity’ (diversity on a fine-grained scale) in neighbourhoods will be under-estimated by his algorithm.

The situation with respect to the generational data is also favourable for this analysis. Once again, the algorithm used to project data included a constraint that the sum of each generational cohort of the Visible Minority category, for each Census Tract, is equivalent to the total Visible Minority population for the CT. Furthermore, the sum of each cohort across all CTs is equivalent to the general figure projected by Statistics Canada for the entire metropolitan area. Therefore we can interpret the inter-generational dynamics of residential concentration with some confidence, at least for the Visible Minority population as a whole.¹²

All of the main points made in this discussion of the projections of Visible Minority populations also apply to projections of religious groups. That is:

- We can be relatively confident in the projected population of Census Tracts in 2031.
- The projection of the three broad categories, Christian religions, non-Christian religions, and those with no religious affiliation, appears to be logically sound.
- The projection of individual religious groups is based on the same methodology as the projection for specific Visible Minority groups and therefore provides a system of ‘checks and balances’ to inhibit the over-concentration of any particular group. Again, the highly

¹¹ With the proviso that there is probably a bias toward the over-estimation of enclaves.

¹² I have been reluctant to analyze the generational cohorts for individual ethnocultural groups, since this requires an extra stage of projection that is likely to introduce error.

generalized maps of individual groups are relevant in the qualitative interpretation of broad changes that we can anticipate in the social geography of cities.

General discussion of 2031 projections

A sense of the sweeping change in population that we can expect to see in the three metropolitan areas between 2006 and 2031 is provided in Table 1. Projections indicate a substantial increase in the population of each city, of 33 percent for Montreal, 67 percent for Toronto, and 60 percent for Vancouver. This growth will be generated by a combination of immigration and the fertility of immigrants settling in these cities. The share of Montreal's population with a family history in Canada that stretches back to their grandparents' generation will fall from 64 to 50 percent between 2006 and 2031, while the figures for Toronto and Vancouver in the latter year (respectively) will be just 20 and 27 percent.¹³ In Europe, the phrase 'persons with an immigrant background' is used for individuals who either immigrated themselves to the destination country or who had at least one immigrant parent. By 2031, half of Montreal's and 80 percent of Toronto's population would fit this category. There is no significant European city with anything like this demographic structure, nor will there be by 2031.

Given that immigration will drive population growth in MTV, we can expect the ratio of Visible Minorities in the population of the three cities to rise sharply. According to the Reference Projection, 30 percent of Canada's population will identify with a Visible Minority group by 2031. The corresponding figure for Montreal will be just slightly higher, at 31 percent, but we can expect it to be much higher in Toronto (63 percent) and Vancouver (59 percent). We can expect that the ethnocultural profile of the three cities, already quite distinct (see earlier phases of the study), will be unique in each case. The top five Visible Minority groups in Montreal, in declining order of significance, will be: Black, Arab, Chinese, Latin American, and South Asian. In contrast the same list for Toronto will be: South Asian, Chinese, Black, Filipino, and West Asian. The profile of these groups in Vancouver will be similar to that of Toronto, but with important differences as well: Chinese, South Asian, Filipino, Korean, and West Asian.

This pattern is repeated when we examine the projections for religious groups. In Montreal, Muslims will be the largest non-Christian group by a very large margin, and none of the other non-Christian faith groups will account for as much as two percent of the total population. Muslims will also constitute the largest non-Christian religious group in Toronto, but the proportion of Hindus and Sikhs will also be significant (this is associated with the dominance of the South Asian group within the Visible Minority population). Finally, in Vancouver, the largest non-Christian faith group will be Sikh, followed by Muslims and Buddhists.

The crucial question for this study is: how will the very rapid growth of Visible Minority and non-Christian religious groups between 2006 and 2031 affect the social geography of Canada's largest metropolitan areas. Table 1 provides a sense of the possible scale of change. As the ratio of Visible Minorities approximately doubles in Montreal we can expect substantial change although, in 2031, the proportion of Visible Minorities in that city will still be less than it was in Toronto or Vancouver in 2006. It is well worth remembering, however, that in Montreal in 2006, areas of high Visible Minority concentration also tended to be economically marginalized. Given that we can expect to

¹³ The classification "third-plus generation" means that both of the parents of a person were born in Canada, and therefore the family history in Canada begins with the grandparents (or even further back), who may have either immigrated to Canada or been born in the country. Statistics on generation used in this study are based on the population universe of individuals 15 years or older.

see some 750,000 Blacks and Arabs in Montreal, and that both are disadvantaged groups at the present time, this worrying trend could continue.

Both Toronto and Vancouver will become 'majority-minority' cities by 2031, with Visible Minority groups approaching two-thirds of the population in the former case. If all groups were evenly spread across these metropolitan areas, the average neighbourhood would be Type 3 according to the typology used in the first phases of this project. The grand story of the 1996-2006 period was a shift towards greater separation of White and Visible Minority populations, most clearly represented in the rapid growth of single-group and mixed enclaves (particularly the former category). As the proportion of the Visible Minority population increases by 20 percent in Toronto and 17.5 percent in Vancouver, if this trajectory of change is maintained, we are likely to see the development of unprecedented socio-spatial patterns in the two cities. I will now turn to describe and analyze the types of change this might entail.

Results of the analysis 1: Visible Minority groups

Montreal

The first two columns of Table 2 closely approximate those of Table 2 in the report of the first phase of this project (Hiebert, 2010), with some minor differences. The earlier phase of the project was conducted with data from the original release of the 2006 census. The new table is based on the population projections for 2006-2031 provided by Statistics Canada. These projections are based on new, adjusted¹⁴ 2006 census data that differ slightly from the data that were originally released. Furthermore, the method for distinguishing between mixed vs. single group enclaves had to be modified. In the general neighbourhood typology system a Census Tract is classified as a single group enclave when one particular Visible Minority group is twice the size of any other Visible Minority group in the area. Typically, this means that the dominant group represents something close to half, or more, of the total CT population. This method had to be altered because the CT-level projection was not conducted for every Visible Minority group. Instead, the five particular VM groups were specified (Arab, Black, Chinese, South Asian, and Southeast Asian), plus an omnibus category for all other VM groups. In this case, a single-group enclave is defined as CT where one of these specific groups is at least twice as large as any of the other four groups, and also twice as large as the remaining Visible Minority population. The impact of this shift in method is likely minor, given that the groups that make up the omnibus category tend to be small, but the number of CTs classified as single group enclaves will tend to be smaller.

As seen in Table 1, the proportion of Visible Minorities in Montreal's population was 16.4 percent in 2006 and if that group had been totally dispersed in the metropolitan area every Census Tract would have been classified as the first neighbourhood type, areas highly dominated (80 percent or more) by the majority. In fact, nearly three-quarters of the non-Visible Minority population lived in these kinds (Type 1) of residential settings and most of the remaining quarter lived in areas where a majority of the residents traced their ancestry to Europe (Table 2). The number living in minority-dominated Census Tracts was very small, at three percent.

The overall Index of Segregation between Visible Minorities and others, which was 42.9 in 2006, suggests a modest degree of separation between these groups. This point is corroborated by the distribution of Visible Minorities across the neighbourhood types of Montreal in that year (Table 2).¹⁵ Approximately one-third of the non-Visible Minority population lived in White-dominated areas and almost half found homes in areas where Whites were the majority (areas classified as Type 2 neighbourhoods). Despite the low ratio of Visible Minorities in the population as a whole, close to

¹⁴ According to Statistics Canada, "This database, which includes close to seven million persons with their characteristics, has been adjusted to take into account the net undercoverage in the census according to age, sex, and place of residence. These adjustments were made by recomputing the sampling weights associated with each individual in the database. Also, some variables of interest needed for projection but absent or incomplete in the census were imputed into the database. These included individuals' graduation dates, the generation status of the population under 15 years of age, and the province or territory of birth for a small portion of the respondents to the 2006 Census. Projections of the Diversity of the Canadian Population 2006 to 2031, (March 2010) Statistics Canada 91-551-x, p. 4.

¹⁵ The five neighbourhood types were introduced in an earlier report. To summarize:

- Type 1: more than 80 percent non-Visible Minority (White citadels)
- Type 2: between 20 and 50 percent Visible Minority (White dominated areas)
- Type 3: between 50 and 70 percent Visible Minority (mixed areas)
- Type 4: 70 percent or more Visible Minorities with no dominant group (mixed minority enclaves)
- Type 5: 70 percent or more Visible Minorities with a dominant group that is at least twice as large as any other (single-group minority enclaves).

18 percent lived in the small number of Census Tracts where Visible Minorities constituted a majority of the population (neighbourhood Types 3, 4 and 5), while just a few lived in enclaves (Types 4 and 5); of those in enclaves, nearly all resided in areas with mixed Visible Minority populations. In essence, the residential fabric of Montreal in 2006 was highly mixed, though with a noticeable tendency for many Whites and Visible Minorities to gravitate to areas where they were in the majority. As noted in the earlier report, this outcome reflected a combination of economic and other factors.

The ratio of Visible Minorities in Montreal's population will double between 2006 and 2031, essentially tracking the pace of change for Canada as a whole. It is worth noting that in 2031 Montreal will still be a much "Whiter" city than either Toronto or Vancouver were in 2006. According to the algorithm used to project this population increase across the Census Tracts of Montreal, we can expect to see significant change in the ethnocultural composition of neighbourhoods in that city. If every group was evenly spread across all Census Tracts in Montreal, all of the CTs would be classified as Type 2 in 2031 (as opposed to Type 1 in 2006).

Interestingly, the overall Index of Segregation between Visible Minorities and the non-Visible Minority population is not projected to rise over the 2006-2031 period (there could in fact be a slight decline, from 42.9 to 41.3) (Table 3). That is, the tendency for these groups to gravitate to different areas of the city is predicted to be about as strong in 2031 as it was in 2006. Over half of the non-Visible Minority population is expected to live in White-dominated areas, with more than one-third in Type 2 neighbourhoods. A relatively small proportion will reside in areas most closely associated with Visible Minority groups (Table 2).

The degree of change will be more pronounced for Montreal's Visible Minority population. By 2031 relatively few in this category will reside in White-dominated areas, down from one-third in 2006. Projections also suggest a modest decline in the ratio living in the second neighbourhood type, where Visible Minorities constitute between 20 and 50 percent of the population. Between 2006 and 2031 we can expect to see the proportion of Visible Minorities residing in areas where they are the majority population to rise from about 18 to 42 percent, representing a substantial shift in the nature of Montreal's residential structure. The number living in enclaves will remain relatively modest, however, at around 17 percent, far below the equivalent figures for Toronto and Vancouver in 2006 (although a considerable increase from the corresponding figure in 2006). In Montreal, the population in single-group enclaves will be particularly small compared with the other two cities (though also higher than the 2006 value for Montreal): 6.4 percent. Twenty of the 865 Census Tracts fall into this category in the 2031 projection, and according to the algorithm used for this study these neighbourhoods would house some 37,000 individuals who identify as South Asian, 24,000 as Chinese, and 10,000 as Black.

The CT-level projection also suggests that South Asians will be the most geographically concentrated group in Montreal in 2031 (Table 3); in fact the IS figure of 62.7 for this group in Montreal is marginally higher than that for any of the large Visible Minority populations in any of the three metropolitan areas. Also note that an earlier analysis revealed that Montreal's South Asian population—particularly that in enclave settings—was economically marginalized in 2006. However, the scale of the South Asian community in Montreal is not expected to be particularly large. The two largest groups in 2031, by a considerable margin, will be comprised of individuals identifying as Arabs or Blacks. The projection would lead us to expect that neither of these groups will be particularly concentrated in residential areas (though, as noted, there will likely be a modest number of Blacks in single-group enclaves at that time). This stands to reason given the highly complex nature of both of these groups. Arabs and, especially, Blacks originate in a number of countries and

practice a variety of religious affiliations. With a relatively low degree of in-group solidarity in these populations, the forces encouraging residential congregation are muted. That is, concentration will result from market forces in the search for affordable housing, but less so from internal centripetal forces. It is interesting to note that these two groups already compete for affordable housing in Montreal and the algorithm used by Klinkenberg suggests that they will be co-located in residential space in 2031, with an Index of Dissimilarity of just 20.6 (the lowest figure for any pair of groups in the three metropolitan areas).

In the second phase of this study we saw that, according to the 2006 census, the propensity for members of Visible Minority groups to reside in enclaves tends to dissipate across generations. That is, the children and grandchildren of first-generation immigrants who identify as non-White are less prone to locate in proximity, a finding that conforms to traditional theory in urban social geography. Projected results for 2031 indicate that this tendency is likely to intensify in Montreal. The relatively modest degree of enclave development in that city will be primarily associated with first-generation immigrants, with a reduction seen in the ratio of second-generation immigrants in this situation and a far lower rate for the third generation.

Toronto

Toronto's social geography was markedly different from that of Montreal in 2006. Already, Visible Minorities represented well over 40 percent of the total metropolitan population and the aggregate degree of separation between Visible Minorities as a whole and the rest of the population was a little higher (45.7 vs. 42.9; Table 3). But the real difference between the two cities can be seen by comparing the distribution of groups across neighbourhood types (Table 2). Eighty percent of the non-Visible Minority population lived in areas where they constituted a majority (Types 1 and 2), while almost 65 percent of Visible Minorities found housing in areas where they formed a majority (Types 3-5). This is hardly a complete form of segregation but nevertheless indicates substantially different centres of gravity for the two composite groups. Further, more than one-third of Visible Minorities were located in enclaves, and most of the Census Tracts classified in this way were dominated by a single group (i.e., there were many more Type 5 CTs than Type 4). As seen in an earlier part of this project, while most of these enclaves were characterized by socio-economic complexity, a relatively small number were places of extreme economic marginalization.

The extent of population change in Toronto will be far greater than that of Montreal. If the general projection made by Statistics Canada holds true, Toronto will become one of North America's largest metropolitan areas, with close to 9 million people, of which some 63 percent will identify with a Visible Minority group (from 43 percent in 2006). If every ethnocultural group would be evenly distributed across the Toronto metropolitan area (i.e., if every census tract held 63 percent Visible Minority and 37 percent other groups), all areas of the city would be classified as Type 3 neighbourhoods. However, given the algorithm used for this project, the residential character of the city appears to be evolving into a very different pattern; only 17 percent of the non-Visible Minority and 14 percent of the Visible Minority populations are likely to reside in these relatively mixed, 'average' areas.

Approximately two-thirds of the non-Visible Minority (mainly White) population are expected to reside in areas where they form a majority, with nearly 30 percent in areas where they make up 80 percent of the population.¹⁶ Given the ethnocultural composition of the city as a whole, in 2031

¹⁶ While this figure is lower than it was in 2006, it is important to remember that the proportion of the population that is not in the Visible Minority category fell a great deal, from approximately 57 to 37 percent. It is remarkable that 30

these areas could legitimately be considered as White enclaves. As noted, we can expect to see about 17 percent of this complex group of people living in ‘minority-majority areas’ (i.e., Type 3 areas), and the remaining 18 percent are projected to reside in non-White enclaves.

In the greater Toronto area, the Index of Segregation between Visible Minorities and the remainder of the population is projected to rise from 45.7 to 53.9, a very significant increase.¹⁷ To put this into perspective, urban geographers generally consider the United States to be the most segregated society within the countries of the global north, the product of a history of slavery and longstanding racist exclusion against African Americans. According to John Logan and Brian Stults, in a highly reputable study commissioned by the Russell Sage foundation that uses the latest statistics available, the Index of Dissimilarity between Whites and Blacks, averaged across all American cities, declined from 79 in 1970 to 59 in 2010 (the average in cities where Blacks account for more than 20 percent of the overall population is also 59). The corresponding figure for Hispanic-White segregation in 2010 is 48, and it is 41 for Asian-White segregation. The Index of Segregation for Toronto in 2010 is a composite statistic for all Visible Minority groups together, which is a different measure than all of the values just provided for the United States. Nevertheless, the Index of Segregation for Toronto is in the same ‘ballpark’ as the three more precise figures for American urban areas as a whole. Of course Toronto is just one city, while the American statistics are averages. A comparison between Toronto and the greater New York region (including parts of New Jersey) is instructive in this respect. In that region, the Index of Dissimilarity between Blacks and Whites is 79.1, and it is 63.1 between Hispanics and Whites, and 49.5 between Asians and Whites. In this case the Toronto statistics appear less extreme, but certainly not insignificant.

The aggregate Index of Segregation figure helps us anticipate the distribution of Visible Minorities across Toronto’s Census Tracts. Virtually none in this large set of groups are expected to be living in what I have called White enclaves, and a relatively small proportion would be found in majority White neighbourhoods classified as Type 2. As noted previously, while the ‘average’ Census Tract in Toronto in 2031 would be Type 3, only 14 percent of the Visible Minority population is projected to live in these areas in 2031. Instead, a large majority of this population is expected to reside in enclaves (71 percent in neighbourhood Types 4 and 5), and the figure of 53 percent for those residing in single-group enclaves is quite a surprise. In other words, over half of all Visible Minorities in the Toronto metropolitan area will live in areas where Visible Minorities constitute at least 70 percent of the population and where one group is dominant. In fact, with Visible Minorities comprising 63 percent of the metropolitan population, the figure of 70 percent as the threshold for the definition of an enclave becomes rather questionable. If we raise the threshold to 80 percent, providing a convenient mirror image to the criterion for White enclaves, the proportion of Visible Minorities in these areas would still be almost 60 percent. In fact, the projection indicates that 33 percent of those who will identify as members of Visible Minority groups in 2031 will find housing in Census Tracts where that category accounts for at least 90 percent of the population. There are few precedents for such a pattern in a Canadian city. The only examples that come to mind are the enforced segregation of Aboriginals (i.e., outside cities in reserves) and the situation of the Asian population before the turn of the 20th century (i.e., when Chinese immigrants and their children were channelled by state policy to Chinatowns). There are certainly no precedents for such an outcome arising from largely voluntary, market-based behaviour in Canada.

percent of the mainly White population of Toronto is expected to live in areas where they constitute 80 percent of the population.

¹⁷ The caption in the table “non-Visible Minority” refers to the Index of Segregation between Visible Minorities and all other groups.

To complete this picture of minority enclave concentration, note that the projection indicates that close to three million individuals with a Visible Minority background will live in single-group enclaves. Further, 123 of the roughly 1000 CTs in Toronto in 2031 will be single-group enclaves where South Asian-Canadians constitute the dominant population; altogether, approximately 1.4 million South Asians will live in Type 5 neighbourhoods,¹⁸ out of a total group population of about 2.1 million. Another 70 CTs will be Chinese Canadian enclaves, and there will 650,000 people of Chinese origin in Type 5 neighbourhoods. Some 270,000 Canadians identifying as Black will live in Census Tracts classified in this group, though Blacks will be the dominant population in only 5 of these CTs. Finally, just over 200,000 Arab-Canadians will live in single-group enclaves but they will not dominate the population in any of these CTs.

In Montreal, we have seen that the largest Visible Minority groups tend to be widely dispersed through the metropolitan area. The projected pattern for Toronto in 2031 is the reverse, with the highest IS values associated with the largest groups: those identifying as Chinese or South Asian (Table 3). As these groups become larger, their residential patterns are expected to become more unique, relative to the population as a whole and each of the other individual Visible Minority groups (i.e., in nearly all cases, Index of Dissimilarity figures between those of Chinese and South Asian origin and other groups are larger in 2031 than 2006). The one exception to this pattern is the projection of a continued degree of co-location between those of Black and South Asian origin.

The projection for Toronto holds one more surprising element. In the second report I found that, for the Visible Minority groups selected for analysis, the degree of residential concentration registered for the immigrant generation was considerably higher than that of the Canadian-born generation. That result does not hold for the 2031 projection. In this case, the propensity for second-generation immigrants to live in enclaves is not much lower than that of the first-generation immigrant cohort (roughly 67 vs. 73 percent, respectively, in CTs classified as Type 4 or 5). In fact, nearly half of the third-generation Visible Minority cohort is expected to reside in enclave areas; though, again, it is worth noting that the cut-off point of 70 percent for these areas is perhaps unrealistic when Visible Minorities account for 63 percent of the total population.

Vancouver

Vancouver's Index of Segregation between Visible Minorities and the rest of the population was slightly lower than the corresponding figure for Montreal and, therefore, was the lowest of the three in 2006 (Table 3). Yet the distribution of the main population groups in Vancouver was not so different from that of Toronto, with the bulk of the non-Visible Minority population residing in Census Tracts where they constituted a majority. Conversely, most members of Visible Minority groups gravitated to areas with relatively few Whites.¹⁹ In 2006, then, Montreal and Toronto represent the most different cases, with the former associated with a greater degree of ethnocultural mixing and the latter with more ethnocultural concentration. Vancouver occupied a kind of intermediary position between these types.

¹⁸ To put this number into perspective, as of 2006 only three metropolitan areas in Canada have more than 1.4 million people. In 2031 Edmonton, Canada's fifth largest CMA, will house just over 1.4 million people.

¹⁹ The fact that Vancouver IS statistic approximated Montreal while the distribution of groups across neighbourhood types is similar to Toronto demonstrates that these two methods detect different things. The IS value provides a generalized sense of the difference between a particular group (Visible Minorities) and the rest of the population across all Census Tracts. Therefore, the IS figure can vary considerably between two cities even if the distribution of groups across neighbourhood types is the same. The IS will be relatively lower if Visible Minorities and others are similarly located *within* each neighbourhood type, and higher if the opposite is true.

If the algorithm used in this project is valid, the social geography of Vancouver in 2031 will evolve to become more similar to that of Toronto. This convergence is best seen in the overall Index of Segregation between Visible Minorities and others in Vancouver, which is projected to increase by over 10 points, to 52.2, just fractionally below the corresponding figure for Toronto. Index of Segregation values for individual Visible Minority groups in Vancouver are actually a little higher than those seen for Toronto; this is particularly true for the large South Asian-Canadian group and those of Arab descent. The paired Index of Dissimilarity values also tend to be larger in Vancouver, indicating a greater degree of residential separation between groups. South Asian-Canadians are expected to have the most distinctive residential pattern relative to other Visible Minority groups. The maps produced by Klinkenberg provide a visual illustration of the social geography of Vancouver in 2031, and demonstrate the high level of concentration of the South Asian group.

Turning to the neighbourhood typology, as we have seen for Toronto, if all groups were to be evenly spread across the neighbourhoods of the Vancouver CMA, everyone would live in a CT classified as Type 3—but this will actually be the case for relatively few people. The broad balance of individuals across neighbourhood types in Vancouver is expected to be remarkably similar to that of Toronto in 2031. In Vancouver 72 percent of the non-Visible Minority population are projected to reside in ‘White’ neighbourhoods (Types 1 and 2), while 66 percent of the Visible Minority population will live in enclaves (Types 4 and 5).²⁰ The main difference between Toronto and Vancouver is that the projection suggests that the ratio of people living in single-group enclaves will be much smaller in Vancouver.

According to the algorithm used here, the number of Census Tracts classified as Type 5 (single-group enclaves) will more than double in Vancouver between 2006 and 2031, from 45 to 103 (out of 410). Seventy of these 103 CTs will be dominated by Chinese-Canadians and the remaining 33 by individuals associated with South Asian origins. These areas will include just over 800,000 of the former group and nearly half a million of the latter. The population of other Visible Minority groups in single-group enclaves in Vancouver will be quite small.

As we have seen for in the Toronto case, the 2031 projection suggests that the children of Visible Minority immigrants in Vancouver will be almost as likely to live in enclaves as their parent’s generation (66 percent for first-generation immigrants vs. 57 percent for second-generation; Table 4). It is only with the third generation that we see a majority of Visible Minority residents living in highly mixed neighbourhoods (Types 2 and 3).

²⁰ The corresponding figures for 2006, respectively, were 78 and 27 percent.

Results of the analysis 2: Social geographies of religious affiliation

In Tables 5-7 the same statistics and logic are used to evaluate the likely changes we can expect to see in the distribution of religious groups in the three metropolitan areas. While it was reasonable to begin by dividing the population into two main types (Visible Minorities and all others) in the preceding discussion, it is necessary to consider three general sub-types of religious affiliation: Christian religions; non-Christian religions; and a group for those who do not identify with any religious tradition ('no religion'). Each of the first two categories is comprised of a spectrum of beliefs, institutional memberships, and of course degrees of belief. The Non-Christian religion category will be further sub-divided into relevant sub-groups in the more detailed analysis that follows. As in the previous section, I employ the use of the neighbourhood typology and indices of segregation and dissimilarity.

The demographic changes that are expected to take place in Canada over the next 20 years will profoundly alter the religious landscapes of Montreal, Toronto, and Vancouver. It is well worth remembering, however, that the composition of immigrants is highly variegated and that newcomers identify with a wide assortment of religious beliefs and practices. The contrast with Europe is helpful on this point; the European public largely associates immigrants with Islamic faith and many who are critical of public policy believe that immigration leads irrevocably to the 'Islamification' of European culture. In most countries there are populist political movements dedicated to spreading this message and intensifying public resentment toward newcomers as agents of undesirable change. In Canada it would be impossible to employ such a stereotypical view of immigrants. Canada receives permanent residents from around 170 countries each year, which are associated with virtually every religious tradition that exists. There is considerable religious diversity even among newcomers from individual countries. People admitted from Iran, for example, may well be Muslims, but they can also be Baha'i, Zoroastrian, atheist, Christian, or even Jewish. The broad patterns of religious identification will shift in MTM by 2031, but perhaps less than many people might imagine.

Of the three cities Montreal retains the strongest Christian heritage, with four out of five residents claiming this affiliation in 2006 (based upon a projection made using 1991 and 2001 census statistics).²¹ This will also be the case in the near future, with the corresponding figure dropping to seven in ten by 2031. During the intervening period the ratio of those classified as having no religious beliefs will grow by about 5 percent and the proportion practicing non-Christian religions will rise by just over 7 percent. The latter increase will mainly be generated by the arrival of immigrants from a Muslim background (from many countries), and that group will see an increase in absolute numbers from around 150,000 to 550,000.

The projection for 2006 indicates that just over 60 percent of Toronto's residents would have identified themselves with Christianity at that time, and this ratio will drop to half of the population

²¹ According to Statistics Canada, "The question on religion was not asked in the 2006 Census. Therefore, unlike all the other variables, Religion was projected starting from data coming from the 2001 Census and then aligned to the results of the main series, which starts from 2006. The alignment was done by age, place of residence, visible minority group and generation status. The model used to project religion starting from 2001 is similar to the main model, although it underwent a few adaptations to take into account the composition of immigration by religion and the differences between religious groups as to their propensity to enter into unions, to form common-law unions, to have children and, to some extent, to migrate. It also includes a module that simulates changes of religion over the person's lifetime." Statistics Canada, 91-551-x20, page 5.

by 2031. We can expect to see a modest increase in the proportion with no religious beliefs and a much larger one in the scale of Toronto's non-Christian population. As we have seen for Montreal, this change will mainly be the result of immigration from countries of the world that are associated with Islamic belief, with the absolute number of Muslims in Toronto rising from 400,000 in 2006 to 1.36 million by 2031. In contrast to Montreal, there will also be a noteworthy growth in Toronto's Hindu population.

The religious composition of Vancouver's population is quite distinct from the other two cases examined here. The scale of the non-religious population is far larger in Vancouver than Montreal or Toronto, for two important reasons. On the one hand the West Coast culture of Vancouver has long been associated with less traditional, more hedonistic lifestyles; on the other hand, the large flow of immigrants from China and a few other countries has included many atheists. The distinctiveness of Vancouver's religious composition will largely remain; there will be much less change in the proportions of the aggregate categories used in this study in Vancouver than the other metropolitan areas. By 2031 there is projected to be a small decline in the ratio of Christians in Vancouver, from around 50 to 47 percent. The ratio of those with no religious affiliation will also fall by 1.6 percent. Meanwhile we can expect a 5 percent rise in the relative number of those practicing non-Christian religions. In contrast with the other two cases, where the increase in the non-Christian religious population is primarily related to the growth in the number of Muslims, in Vancouver it will be the product of modest growth in several religious traditions associated with immigration from eastern and southern Asia (e.g., Sikhs from the latter region).

Given the complex relationship between religion and culture mentioned earlier, there is no reason to expect that statistics on residential concentration and neighbourhood distribution for the three broad religious categories will be similar to those seen in the case of Visible Minority groups. In fact, the IS values in Table 5 tend to be lower—in some cases substantially so—than those in Table 3. With one exception (the non-Christian population of Montreal) all IS values of the three major religious groups are relatively low in all of the metropolitan areas. Significantly, as the ethnocultural social geography of Toronto and Vancouver shifts rapidly between 2006 and 2031, the residential distinctiveness of the three main religious groups does not change very much. In both cities, the Index of Segregation between Visible Minorities and others rises, particularly in Vancouver. But the IS values for the three religious groups in Toronto barely change at all, while the corresponding statistics for Vancouver are almost as stable.

However, the story is very different when we disaggregate the non-Christian category into relevant sub-groups. In this case, Klinkenberg has provided statistics for those of Buddhist, Hindu, Jewish, Muslim, and Sikh faith groups. In contrast to the broad categories just discussed, some of these religions groups are relatively homogeneous from an ethnocultural point of view (e.g., Hindus and Sikhs), although others are not (e.g., Buddhists and Muslims).

In Montreal in 2006, all of these groups had relatively distinct residential locations, with IS values ranging from 54 to well over 80. The two religious affiliations with the most diverse followers, understandably, are those with lower IS values. Looking forward, the projection suggests that all IS and ID values in Montreal will rise between 2006 and 2031, some to very high levels. Montreal's Sikh community is expected to be the most isolated, with an IS value of 88, an extraordinarily high figure. Recall the meaning of the IS statistic: 88 percent of Sikhs would have to relocate to match the distribution of the larger Montreal population in 2031. This is also true, to a slightly less extent, of the projection for Jewish people in Montreal; in fact Jews will be not only relatively isolated from the population at large but also from the other faith groups included in the table. In 2031, Muslims are

projected to have the least degree of isolation of the major non-Christian religions, which is probably a reflection of the variegated ethnocultural composition of the group.

The IS figures for the individual religions groups were less extreme in Toronto in 2006 and are not expected to grow between that point in time and 2031; with one exception the values are actually lower in 2031 than in 2006. In Toronto, the Jewish community is the most residentially distinct non-Christian group, and it is quite isolated from the others examined here. The ID values between Jews and Sikhs for 2006, as well as the one projected for 2031, are the highest I've ever calculated and show that these two groups already occupy virtually completely different parts of the metropolitan area and this is likely to continue. Sikhs represent the only other religious group that is expected to have a highly distinct residential pattern in 2031, but note that its IS value is actually expected to decline a little from that registered in the 2006 data. The other three groups in Toronto have much more dispersed socio-spatial profiles, particularly Muslims.

The average degree of residential concentration of these five non-Christian faith groups is approximately the same in Vancouver as Toronto, with one distinct difference; Vancouver's Jewish community is much more widely distributed across the Vancouver metropolitan area compared with the Toronto case. Again, though, the highest individual ID value for Vancouver is between Jews and Sikhs. As in the other two cities, the degree of concentration of Muslims is the least of the five groups examined here.

Table 7 depicts the distribution of the major religious categories across neighbourhood types for the three cities. Note that, as before, neighbourhood types are defined not by religious identity but by the ratio of Visible Minority residents in particular Census Tracts. The question for this Table is: is there a greater tendency for individuals with specific religious practices to reside in enclave neighbourhoods, and is this tendency likely to increase in the near future?

As we have seen, a large majority of Montreal's population identifies with Christianity and in 2006 this group, along with those without any religious affiliation, was overwhelmingly located in White-dominated areas. The only group with an appreciable tendency to be associated with areas dominated by Visible Minorities (Type 3) or enclaves was the relatively small non-Christian minority. Generally, this basic pattern is expected to continue, though the much larger immigrant and Visible Minority population means that by 2031 there is likely to be a higher ratio of people from each of the main religious groups living in ethnoculturally mixed areas (Types 2 and 3) or enclaves. By that time, the projection suggests, about 20 percent of those identifying with a non-Christian religion will live in enclave areas. Interestingly this figure is higher than that seen in Table 2: the projection specifies that just under 17 percent of Montreal's Visible Minority population will live in enclaves in 2031.

In Toronto, the non-Christian group tends to have a similar distribution across neighbourhood types as the Visible Minority population. Therefore as the ratio of Visible Minority residents increases, and there is a greater tendency for this group to reside in enclaves, we see the same trajectory for those who practice non-Christian religions. In 2031 two-thirds of this population will reside in enclaves (Types 4 and 5) and more generally over 80 percent will live in areas where Visible Minorities are the dominant population (Types 3-5). In contrast, the Christian and non-religious populations were fairly evenly distributed across neighbourhood types in 2006, meaning that for both of these large groups some members are situated in 'White enclaves', some in mixed settings, and some in Visible Minority enclaves. The projection suggests that this pattern will continue into the future.

We can see the same dynamic for the non-Christian population of Vancouver; in 2031 the likelihood of a person identifying with a non-Christian religion locating in a single-group enclave is expected to be over 50 percent, at least twice as high as the corresponding figures for Christians and those without a religious affiliation. In Vancouver at that time the modal category for Christians and the non-religious is likely to be the second type of neighbourhood, where Whites predominate but with a substantial Visible Minority presence.

In general, these patterns become much sharper when we examine specific non-Christian religions. Table 8 provides a more detailed portrait of the social geography of religion in Canada and shows the distribution across neighbourhood the types of people who identify with one of the five selected non-Christian religions. Given that individuals practicing four of these religions (Buddhists, Hindus, Muslims, and Sikhs) are mainly from a non-European background, it is interesting to compare the residential characteristics of each of them with the Visible Minority population in general. Those practicing Judaism are much more likely to identify themselves as White, so the obvious comparator for that group is the non-Visible Minority population.

In Montreal the geographical profile of the Jewish community approximates that of the non-Visible Minority population but not completely; Jewish individuals are less likely to live in 'White enclaves' and more likely to be found in Type 3 areas, which tend to be highly mixed from an ethnocultural standpoint. Compared with the other non-Christian groups, the propensity for individuals who identify as Jewish to live in Visible Minority enclaves is very small. In contrast, the distribution of the Buddhist and Muslim groups across neighbourhood types is similar to that of the aggregated Visible Minority population. This stands to reason, since both of these groups include individuals from many ethnocultural origins (as seen previously). In general, the ratio of Buddhists in White-dominated areas is higher and there are more Muslims in single-group enclaves, but these are relatively weak tendencies. The remaining two non-Christian religious groups share a much more distinct residential trajectory. By 2031 the ratio of Hindus and Sikhs in Montreal who live in Visible Minority enclaves is likely to be around 40 percent, more than double that of the Visible Minority population as a whole.

Similar patterns are evident in Toronto, though the much larger scale of the Visible Minority population in that city makes a difference. As in Montreal, Toronto's Jewish community mostly resides in White-dominated areas, particularly Type 2 neighbourhoods. A relatively small number can be found in Type 3 areas, and hardly any in Visible Minority enclaves. The distribution of Buddhists and Muslims across neighbourhood types loosely matches that of the Visible Minority population as a whole. Again, as in Montreal, a large majority of Hindus and Sikhs live in Visible Minority enclaves. The latter case is unique, with just under 90 percent of Sikhs (roughly 320,000 out of 352,000) living in Visible Minority enclaves and, of these, nearly all in single-group enclaves. This would be seen as an extreme case in the international literature on urban social geography that was discussed in my earlier report.

For all the many differences between the three cities seen throughout this report (and the ones preceding it), it is interesting to see that the residential patterns of the selected non-Christian groups are also similar in Vancouver. The exception in the Vancouver situation is the much stronger projected tendency for individuals identifying as Jews to live in single-group Visible Minority enclaves; however, note that the Jewish population in Vancouver is small. Otherwise, we see the same dynamics at play in Vancouver as the other two metropolitan areas: Buddhists and Muslims are found across neighbourhood types in roughly the same proportions as the Visible Minority population generally, and Hindus and Sikhs have the greatest tendency to reside in enclaves, particularly those dominated by a specific group (Type 5 areas).

Discussion and conclusion

In the conceptual starting point for this overall project, I emphasized the importance of gathering empirical information before making conclusions about the nature and significance of enclaves in Canadian cities. There is a widespread tendency, in Canada and around the world, to assume that a larger share of the minority population lives in enclaves than is actually the case, and also to assume that enclaves are associated with poverty, poor educational attainment, and cultural values that undermine secular, democratic society. These assumptions are based on thin evidence at best, and sometimes no evidence at all. The two earlier phases of this project sought to assemble evidence from the Canadian census to see whether these assumptions hold and, for the most part, they were found to exaggerate and misrepresent the emerging social geography of Canadian cities, as seen in 2006.

The scale of enclave development in Canadian cities was quite modest until the start of the 21st century. But by the time the 2006 census was enumerated this had changed, at least in Toronto and Vancouver. With 40 percent or more of the population identifying as Visible Minorities, the social geographies of these two metropolitan areas fundamentally changed, and I employ the term new residential order to signify the significance of this shift. By 2006, we could see a clear trajectory of growing separation between Whites and Visible Minorities in Toronto and Vancouver, with the majority of Whites living in areas where they formed a majority, and the majority of Visible Minorities in areas where they represented more than half of the population.

Such a shift in the socio-spatial fabric of these two cities could raise alarm, but the first two studies provided several reasons why such a response is unjustified, or at the very least premature. First, the tendency for the ethnocultural separation just described was occurring only in the cities with the largest Visible Minority populations and not in Montreal or, presumably, other Canadian cities (given the scale of the Visible Minority population within them). Second, the nature of enclaves is far more complex than stereotypical views about them would suggest. With some important exceptions, most enclaves include a wide array of ethnocultural groups and are characterized by substantial homeownership and levels of educational attainment. That is, the degree of overlap between economic marginalization and residential concentration is highly variable. Finally, as of 2006, for the groups selected for analysis, Canadian-born members of Visible Minority groups tended to be a little more dispersed through the residential environments of the city than their parents of the immigrant generation (more so in Toronto than Montreal or Vancouver).

The algorithm employed in this study takes the processes that shaped Montreal, Toronto, and Vancouver between 1991 and 2006 and projects them forward to 2031. Since that period saw the emergence of the new residential order that I have just summarized, the algorithm predicts that this trajectory of change will continue and the degree of enclave development will intensify. Despite making a series of adjustments to the algorithm to modify the rate of 'saturation' of Visible Minority groups in areas of the city where they were already congregating, the projected landscapes of Toronto and Vancouver are predicted to become more segregated, with a greater tendency for Whites and Visible Minorities to gravitate to different parts of each metropolitan region, and with a high ratio of Visible Minorities living in enclaves dominated by a particular group.

This type of change will be far less dramatic in Montreal. In fact the ethnocultural landscapes of Montreal provide a kind of reference point for what we might see in Canada as a whole, since the ethnocultural composition (in terms of the ratio of Visible Minorities in the CMA) will mirror that of the country. There, over half of the White population will live in parts of the city that can be legitimately seen as White enclaves or, using the term prevalent in the literature, White citadels. Nine

out of ten Whites will live in White-dominated areas. That said, the Visible Minority population of Montreal will be spread across all of the neighbourhood types of the city, indicating a fairly high degree of ethnocultural mixing despite the dominance of Whites in many parts of the city.

Toronto and Vancouver, on the other hand, are likely to have a social geography that is entirely new to Canadian society. If the changes registered around the turn of the present century are extrapolated into the near future—which is essentially exactly what the algorithm does—the degree of separation between Whites and Visible Minorities in Toronto and Vancouver will begin to approach that between Whites and African Americans in the average US city in 2010 (and, significantly, the degree of segregation between these groups has been falling in the US while it has been rising, and is forecast to rise further, in Toronto and Vancouver). The numbers presented earlier bear repeating: if the model is correct, by 2031, in Toronto, 1.4 million South Asian-Canadians, 650,000 Chinese-Canadians, 270,000 Canadians of African ancestry, and 200,000 Arab-Canadians will live in enclaves dominated by specific ethnocultural groups. The scale of settlement in single-group enclaves will be less extensive in Vancouver, but the overall patterns in the social geography of ethnocultural groups in that city will be similar to those seen in Toronto.

These landscapes of ethnocultural difference will intersect with the social geography of religious groups. Non-Christian religious communities in both Toronto and Vancouver will be mostly found in enclave neighbourhoods. Non-Christian groups that are composite, such as Buddhists and Muslims, will reside across many neighbourhoods, in enclaves and outside them. Religious groups that are more closely associated with a specific Visible Minority category (such as Hindus and Sikhs, which are overwhelmingly identified as South Asians), will be much more geographically concentrated and situated within single-group enclaves.

If the two studies based on 2006 data do not give cause for alarm, what about these projections? Unfortunately, the data analyzed in this project are insufficient to conclude one way or the other. First, the many caveats that accompany the data need to be reiterated. The projection used here assumes a high degree of turnover in the housing market and a stable urban planning regime and, most importantly, assumes that people will continue to make the same choices in selecting their place of residence in 2006-2031 as they did in 1991-2001 (for religious groups) or 1996-2006 (for Visible Minority groups). We simply do not know if these are realistic assumptions.²²

Second, it is likely that the algorithm used overestimates the degree of enclave development.

Third, the 2006 analysis revealed a high degree of ethnocultural and socioeconomic variegation within enclave areas. This may be the case in 2031 though the data explored here cannot be used to assess this question.

Fourth, there is no empirically verified relationship between ethnocultural mixing vs. isolation in residential settings and social strife or pathology. As I wrote in an earlier report, Canadians should be concerned about situations where economic deprivation and ethnocultural concentration occur simultaneously. The data in this report are insufficient to enable us to project whether this will arise more frequently in 2031 than today.

Fifth, I write these concluding remarks in the immediate aftermath of the wrenching riots in London, which have dominated the news for several days. The most compelling commentary I have

²² Most unfortunately, the National Household Survey (NHS) that replaced the census in 2011 will not enable us to make an interim assessment of the projections, since no-one can say what the degree of error will be in the NHS at the scale of Census Tracts. Until we know the true value of data collected in that survey, Canadians will ‘fly blind’ in terms of the microgeographic patterns analyzed in this study.

seen on the riots (and other similar events) concludes that they are a product of a widespread sense of hopelessness among youth, who see around them a mix of economic contraction and a reduction in the capacity (or willingness) of the state to intervene on their behalf. In my opinion the policy issues behind this crisis of confidence in the future are of more primary concern than the ethnocultural composition of neighbourhoods. That is, social policy and programming have a salient role to play that will ameliorate or intensify any of the impacts that ethnocultural concentration might have. For example, if programs for integrating immigrants are accessible and well utilized, and newcomers believe that the labour market is open to them, and Visible Minority children succeed in schools, it is hard to think that ethnocultural enclaves would have a negative impact on society. On the other hand, if integration fails, newcomers are unemployed, and the children of immigrants fail in the education system, we could expect the strained social relations seen, for example, in the banlieue neighbourhoods of Paris.

In other words, the social geography of Toronto and Vancouver is unlikely to be the determining factor in future social relations. I believe this exercise in forecasting the future suggests that, other things being equal, we should expect a greater tendency for ethnocultural concentration in Canada's major immigrant receiving centres. The impact of this change, however, will be highly contingent on a variety of factors.

Appendix A: Tables

Table 1: General demographic profile of the MTV population, 2006, 2031

	Montreal				Toronto				Vancouver			
	N	%	N	%	N	%	N	%	N	%	N	%
Total population	3,680		4,900		5,320		8,868		2,181		3,483	
Change 2006-31				33.2				66.7				59.7
Generations (15+)												
Immigrants	760	20.6	1,483	30.3	2,432	45.7	4,476	50.5	863	39.6	1,544	44.3
Second	516	14.0	849	17.3	1,454	27.3	2,455	27.7	559	25.6	911	26.2
Third+	2,361	64.1	2,465	50.3	1,353	25.4	1,744	19.7	717	32.9	929	26.7
NPR	44	1.2	103	2.1	82	1.5	193	2.2	42	1.9	98	2.8
Ethno-cultural (all ages)												
Non-Visible Minorities	3,076	83.6	3,380	69.0	3,039	57.1	3,296	37.2	1,271	58.3	1,422	40.8
Visible Minorities	604	16.4	1,521	31.0	2,281	42.9	5,572	62.8	910	41.7	2,061	59.2
<i>Chinese</i>	74	2	198	4	510	10	1,102	12	396	18	809	23
<i>South Asian</i>	72	2	170	3	718	13	2,115	24	215	10	478	14
<i>Black</i>	173	5	381	8	369	7	708	8	22	1	69	2
<i>Filipino</i>	24	1	56	1	180	3	404	5	82	4	204	6
<i>Latin American</i>	77	2	179	4	105	2	235	3	24	1	62	2
<i>Southeast Asian</i>	46	1	70	1	74	1	143	2	35	2	65	2
<i>Arab</i>	101	3	367	7	56	1	202	2	8	0	35	1
<i>West Asian</i>	15	0	44	1	79	1	254	3	29	1	89	3
<i>Korean</i>	5	0	16	0	58	1	138	2	47	2	136	4
<i>Japanese</i>	3	0	7	0	20	0	33	0	26	1	47	1
<i>Other VM</i>	14	0	34	1	112	2	238	3	26	1	68	2
Religious affiliation (all ages)												
Christian	3,024	82.2	3,450	70.4	3,286	61.8	4,384	49.4	1,085	49.7	1,623	46.6
Non-Christian	333	9.0	797	16.3	1,098	20.6	2,709	30.5	349	16.0	724	20.8
<i>Muslim</i>	156	4	547	11	393	7	1,264	14	72	3	205	6
<i>Jewish</i>	90	2	93	2	170	3	195	2	18	1	23	1
<i>Buddhist</i>	43	1	62	1	119	2	210	2	84	4	146	4
<i>Hindu</i>	27	1	55	1	261	5	647	7	36	2	84	2
<i>Sikh</i>	11	0	32	1	134	3	352	4	126	6	246	7
<i>Other</i>	5	0	9	0	21	0	41	0	13	1	20	1
No religious denom.	323	8.8	654	13.3	937	17.6	1,774	20.0	746	34.2	1,136	32.6

Note: all numbers are in thousands

Source: Statistics Canada

Table 2: Projected redistribution of population groups across neighbourhood types

	2006		2031	
	Non-Visible Minorities	Visible Minorities	Non-Visible Minorities	Visible Minorities
Montreal				
Type 1	75.4	33.5	52.0	14.7
Type 2	22.4	48.7	37.5	43.3
Type 3	2.0	14.0	8.2	25.3
Type 4	0.2	3.6	1.4	10.4
Type 5	0.0	0.3	0.9	6.4
Toronto				
Type 1	37.7	6.0	27.3	2.0
Type 2	42.3	29.2	38.2	13.0
Type 3	13.8	28.1	16.7	14.0
Type 4	2.2	11.5	6.5	17.9
Type 5	4.0	25.2	11.3	53.1
Vancouver				
Type 1	35.4	7.0	23.8	2.7
Type 2	42.2	30.1	48.2	18.5
Type 3	17.3	35.8	13.1	12.9
Type 4	0.9	5.0	6.8	26.3
Type 5	4.1	22.0	8.1	39.5

NOTE: the values in this table represent the percentage of the relevant population expected to live in the relevant neighbourhood type. For example, in 2031, 52 percent of those self-identifying as White in Montreal are expected to live in a Type 1 neighbourhood.

Table 3: Segregation indices for Visible Minority groups

	Non-Visible Minority	Arab	Black	Chinese	South Asian	Southeast Asian
Montreal						
2006						
Index of Segregation	42.9	45.5	41.9	52.2	61.1	47.4
Indices of Dissimilarity						
<i>Non-VM</i>		49.9	45.5	56.0	65.1	51.3
<i>Arab</i>			41.2	47.8	51.3	43.3
<i>Black</i>				52.8	52.8	43.2
<i>Chinese</i>					50.3	51.7
<i>South Asian</i>						56.3
2031						
Index of Segregation	41.3	38.3	35.9	55.0	62.7	51.4
Indices of Dissimilarity						
<i>Non-VM</i>		45.3	42.8	59.4	68.6	57.5
<i>Arab</i>			20.6	59.3	57.2	50.5
<i>Black</i>				59.8	59.4	51.5
<i>Chinese</i>					58.6	60.0
<i>South Asian</i>						64.2
Toronto						
2006						
Index of Segregation	45.7	41.1	39.7	53.7	46.9	43.8
Indices of Dissimilarity						
<i>Non-VM</i>		50.8	50.1	59.3	56.9	53.5
<i>Arab</i>			50.2	46.4	45.5	53.8
<i>Black</i>				61.5	34.9	43.2
<i>Chinese</i>					56.9	60.9
<i>South Asian</i>						46.2
2031						
Index of Segregation	53.9	38.9	39.7	53.7	48.3	40.8
Indices of Dissimilarity						
<i>Non-VM</i>		56.6	56.6	62.9	64.7	58.2
<i>Arab</i>			53.6	48.4	43.1	46.0
<i>Black</i>				66.0	36.0	48.9
<i>Chinese</i>					60.6	62.4
<i>South Asian</i>						42.7
Vancouver						
2006						
Index of Segregation	42.1	46.4	33.6	49.8	54.9	45.6
Indices of Dissimilarity						
<i>Non-VM</i>		48.5	39.3	53.9	59.0	55.3
<i>Arab</i>			51.3	57.7	66.5	63.8
<i>Black</i>				53.0	53.2	48.9
<i>Chinese</i>					61.7	46.0
<i>South Asian</i>						50.2
2031						
Index of Segregation	52.2	53.7	42.2	50.3	62.3	50.4
Indices of Dissimilarity						
<i>Non-VM</i>		59.3	50.7	58.5	70.8	65.3
<i>Arab</i>			64.3	60.5	74.4	72.4
<i>Black</i>				57.0	58.2	56.0
<i>Chinese</i>					69.1	59.0
<i>South Asian</i>						49.4

Table 4: Neighbourhood type by generational status

	2006 - Visible Minorities			2031 - Visible Minorities		
	First generation	Second generation	Third generation	First generation	Second generation	Third generation
Montreal						
Type 1	32.0	39.2	54.9	12.6	17.9	36.4
Type 2	48.9	48.5	37.8	43.5	43.1	42.6
Type 3	14.9	9.9	5.9	25.7	24.9	15.8
Type 4	4.0	2.0	0.7	11.2	8.7	4.0
Type 5	0.2	0.5	0.7	7.0	5.4	1.1
Toronto						
Type 1	5.3	9.4	19.2	1.5	2.8	9.4
Type 2	28.3	34.0	43.8	11.8	15.4	25.3
Type 3	28.4	26.7	21.7	13.5	15.1	19.4
Type 4	11.9	9.7	5.6	18.4	16.6	15.6
Type 5	26.1	20.3	9.8	54.8	50.0	30.2
Vancouver						
Type 1	6.4	9.1	19.9	2.1	3.7	8.1
Type 2	29.6	30.9	44.3	18.3	22.0	34.4
Type 3	36.1	35.3	27.3	13.8	15.8	17.4
Type 4	5.2	4.5	1.6	21.6	20.1	14.2
Type 5	22.7	20.1	6.9	44.2	38.6	25.9

NOTE: As in Table 2, these are percentage values.

Table 5: Segregation indices for major religious groups

	Christian	Non-Christian	No religion
Montreal			
2006			
Index of Segregation	40.2	55.4	28.8
Indices of Dissimilarity			
<i>Christian</i>		56.8	31.0
<i>Non-Christian</i>			49.1
2031			
Index of Segregation	43.4	58.1	30.5
Indices of Dissimilarity			
<i>Christian</i>		60.1	33.3
<i>Non-Christian</i>			54.4
Toronto			
2006			
Index of Segregation	28.2	38.2	25.5
Indices of Dissimilarity			
<i>Christian</i>		39.7	25.6
<i>Non-Christian</i>			41.3
2031			
Index of Segregation	28.1	37.7	31.6
Indices of Dissimilarity			
<i>Christian</i>		38.1	29.9
<i>Non-Christian</i>			44.4
Vancouver			
2006			
Index of Segregation	24.7	38.3	19.3
Indices of Dissimilarity			
<i>Christian</i>		42.6	20.5
<i>Non-Christian</i>			35.8
2031			
Index of Segregation	31.0	41.5	25.5
Indices of Dissimilarity			
<i>Christian</i>		46.9	27.1
<i>Non-Christian</i>			40.4

Table 6: Segregation indices for selected non-Christian religious groups

	Buddhist	Hindu	Jewish	Muslim	Sikh
Montreal					
2006					
Index of Segregation	57.1	74.0	79.8	53.8	84.4
Indices of Dissimilarity					
<i>Buddhist</i>		67.7	79.4	50.1	79.1
<i>Hindu</i>			77.9	57.9	60.8
<i>Jewish</i>				76.9	85.2
<i>Muslim</i>					71.1
2031					
Index of Segregation	64.3	76.6	81.6	58.9	88.0
Indices of Dissimilarity					
<i>Buddhist</i>		74.3	81.0	56.4	84.6
<i>Hindu</i>			79.6	63.4	68.1
<i>Jewish</i>				81.3	84.6
<i>Muslim</i>					75.4
Toronto					
2006					
Index of Segregation	42.0	45.6	74.4	39.6	67.6
Indices of Dissimilarity					
<i>Buddhist</i>		50.2	78.1	45.8	73.1
<i>Hindu</i>			86.7	37.5	57.3
<i>Jewish</i>				79.3	93.1
<i>Muslim</i>					67.5
2031					
Index of Segregation	39.7	41.5	76.1	34.8	63.9
Indices of Dissimilarity					
<i>Buddhist</i>		50.0	78.9	44.0	71.0
<i>Hindu</i>			87.0	34.9	47.9
<i>Jewish</i>				79.6	93.7
<i>Muslim</i>					60.4
Vancouver					
2006					
Index of Segregation	42.7	52.1	53.0	38.1	66.8
Indices of Dissimilarity					
<i>Buddhist</i>		53.2	55.3	52.3	71.0
<i>Hindu</i>			75.3	47.3	35.5
<i>Jewish</i>				63.7	84.4
<i>Muslim</i>					58.2
2031					
Index of Segregation	42.6	55.6	57.2	39.7	67.3
Indices of Dissimilarity					
<i>Buddhist</i>		60.7	59.2	53.9	73.0
<i>Hindu</i>			77.6	45.5	33.7
<i>Jewish</i>				67.4	86.5
<i>Muslim</i>					53.8

Table 7: Neighbourhood type by major religious group

	2006			2031		
	Christian	Non-Christian	No religion	Christian	Non-Christian	No religion
Montreal						
Type 1	72.3	35.9	62.2	46.5	13.1	36.0
Type 2	24.6	43.6	32.6	39.4	40.6	41.8
Type 3	2.6	16.5	4.2	10.6	26.0	14.2
Type 4	0.4	3.7	0.9	2.5	12.2	3.9
Type 5	0.0	0.2	0.1	1.1	8.2	4.0
Toronto						
Type 1	27.3	11.0	25.9	14.6	3.8	15.2
Type 2	39.9	29.7	34.3	25.9	15.2	24.2
Type 3	18.6	25.0	18.7	17.7	13.5	12.8
Type 4	4.9	10.8	6.7	12.2	15.8	12.9
Type 5	9.2	23.4	14.5	29.6	51.6	35.0
Vancouver						
Type 1	30.0	7.2	23.0	14.7	3.3	13.2
Type 2	39.2	28.2	38.2	35.6	17.4	33.5
Type 3	22.5	35.0	24.9	12.4	10.2	14.7
Type 4	1.5	4.1	2.2	21.3	17.1	13.4
Type 5	6.8	25.5	11.8	16.0	52.0	25.1

NOTE: As in Table 2, these are percentage values.

Table 8: Neighbourhood type by non-Christian religious group, 2031

	Buddhist	Hindu	Jewish	Muslim	Sikh
Montreal					
Type 1	18.8	5.1	33.4	9.5	6.0
Type 2	41.8	27.8	36.3	43.6	22.0
Type 3	23.2	27.9	27.8	25.3	37.8
Type 4	13.3	23.8	1.6	12.7	14.3
Type 5	2.6	15.0	0.8	8.7	19.9
Toronto					
Type 1	3.6	1.4	27.5	2.0	0.7
Type 2	20.1	8.8	54.3	14.5	3.9
Type 3	17.4	11.4	11.2	16.5	6.1
Type 4	15.3	19.4	1.6	18.6	8.1
Type 5	43.5	58.9	5.4	48.4	81.1
Vancouver					
Type 1	3.9	2.4	11.8	2.9	2.1
Type 2	20.9	9.7	51.7	24.0	6.9
Type 3	14.3	10.1	12.0	10.9	6.8
Type 4	18.9	14.0	3.5	20.4	16.4
Type 5	42.0	63.9	21.1	41.9	67.8

NOTE: As in Table 2, these are percentage values.

Appendix B: Definitions

Neighbourhood typology:

- Type I: White areas, or —Isolated host communities (where Visible Minorities constitute less than 20 percent of the population)
- Type II: White-dominant areas, or —Non-isolated host communities (where Visible Minorities constitute between 20 and 50 percent of the population)
- Type III: Mixed, Visible Minority-dominant areas. Or —Assimilation-pluralism areas (where Visible Minorities constitute 50 to 70 percent of the population)
- Type IV: Mixed Minority Enclaves (where Visible Minorities constitute 70 percent or more of the population without a dominant group)
- Type V: Minority Group Enclaves, or —Polarized enclaves (same as the above, but with a single group that is at least twice the size of any other)
- Type VI: Ghettos²³ (where a single Visible Minority group constitutes at least 60 percent of the population; at least 30 percent of the group lives in these types of areas; and the incidence of low income is double that of the larger metropolitan population)

The **Index of Segregation (IS)** is a helpful statistic that ranges between zero to 100, with zero indicating that a group is distributed through the city in exactly the same way as the population as a whole; that is, there is the same percentage of the group in every sub-area of the city as the larger population. The value of the IS becomes 100 when all members of a group are located in an exclusive part of the city, where they constitute the entire population; in this case there is total separation between the group and the larger population of the city. IS values between 0 and 100 indicate the proportion of the group that would have to relocate in order to match the distribution of the wider population. Generally, IS values between 0 and 30 are said to indicate a low level of concentration or segregation. Those from 30 to 60 indicate a modest amount of concentration, and between 60 and 90 a high level of concentration. The term segregation is appropriate for higher values within this band. Finally, IS values over 90 are associated with extreme segregation and, if the group in question is also economically marginalized, indicate ghettoization.

The **Index of Dissimilarity (ID)** is used to measure the degree of overlap/difference between any two groups. It is interpreted in the same way as the IS, with 0 meaning that the groups are exactly co-located in residential space, and 100 meaning that they reside in different parts of the city. Again, values between 0 and 100 tell us the proportion of either group that would have to move if the two were to become fully co-located.

²³ This category is defined in the literature but not used in this analysis.