



Ghettos in Canada's cities? Racial segregation, ethnic enclaves and poverty concentration in Canadian urban areas

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Recent literature suggests a growing relationship between the clustering of certain visible minority groups in urban neighbourhoods and the spatial concentration of poverty in Canadian cities, raising the spectre of ghettoization. This paper examines whether urban ghettos along the U.S. model are forming in Canadian cities, using census data for 1991 and 2001 and borrowing a neighbourhood classification system specifically designed for comparing neighbourhoods in other countries to the U.S. situation. Ecological analysis is then performed in order to compare the importance of minority concentration, neighbourhood classification and housing stock attributes in improving our understanding of the spatial patterning of low-income populations in Canadian cities in 2001. The findings suggest that ghettoization along U.S. lines is not a factor in Canadian cities and that a high degree of racial concentration is not necessarily associated with greater neighbourhood poverty. On the other hand, the concentration of apartment housing, of visible minorities in general, and of a high level of racial diversity in particular, do help in accounting for the neighbourhood patterning of low income. We suggest that these findings result as much from growing

Il ressort de la littérature la plus récente qu'il existerait une association de plus en plus étroite entre la forte concentration en milieu urbain de personnes appartenant à des groupes de minorités visibles et la concentration spatiale de la pauvreté dans les villes canadiennes, phénomène qui n'est pas sans soulever le spectre de la ghettoisation. C'est dans cette optique que ce papier examine si les ghettos urbains à l'américaine ont vu le jour dans les villes canadiennes, à partir des données des recensements de 1991 et de 2001 et à l'aide d'un système de classification des quartiers conçu spécifiquement pour établir des comparaisons entre les quartiers de différents pays et ceux des États-Unis. Une analyse écologique est ensuite menée afin de comparer l'importance de la concentration des minorités, la classification par quartier, et les caractéristiques du parc de logements et ainsi mieux comprendre la configuration spatiale des populations à faible revenu dans les villes canadiennes en 2001. Les résultats laissent entendre que la ghettoisation à l'américaine n'est pas un facteur à prendre en compte en ce qui concerne les villes canadiennes, et que la tendance vers une concentration de groupes ethniques n'est pas nécessairement associée au niveau de pauvreté

income inequality within as between each visible minority group. This increases the odds of poor visible minorities of each group ending up in the lowest-cost, least-desirable neighbourhoods from which they cannot afford to escape (including social housing in the inner suburbs). By contrast, wealthier members of minority groups are more mobile and able to self-select into higher-status 'ethnic communities'. This research thus reinforces pleas for a more nuanced interpretation of segregation, ghettoization and neighbourhood dynamics.

dans le voisinage. En revanche, la concentration d'immeubles à logements multiples, de minorités visibles en général et d'un niveau élevé de diversité raciale en particulier, expliquent, en partie, la distribution des personnes à faible revenu dans le voisinage. Ces résultats laissent entendre que la croissance de l'inégalité des revenus au sein des groupes de minorités visibles est aussi importante que l'inégalité qui existe entre eux. Ceci augmente les chances que les membres les plus défavorisés de tous les groupes de minorités visibles échouent dans un quartier précaire et moins que désirable duquel ils n'ont pas les moyens de s'échapper (y compris les logements sociaux dans les quartiers centraux). Par contre, les membres les plus aisés des groupes minoritaires peuvent choisir de vivre dans une «communauté ethnique» dont le statut socio-économique est plus élevé. Cette recherche peut servir dans les plaidoyers en faveur d'une interprétation plus nuancée de la ségrégation, la ghettoïsation et les dynamiques de quartier.

Introduction

Are there urban ghettos in Canada? There has been increasing interest in analyzing the impacts of growing visible minority populations in Canadian cities, particularly in terms of their links to levels of concentrated poverty and neighbourhood distress. Recent reports commissioned by municipal governments and service agencies (Federation of Canadian Municipalities 2003; United Way of Greater Toronto 2004) as well as by Statistics Canada (Heisz and McLeod 2004) suggest that poverty (or more accurately, low income) is not only growing in Canadian cities but is becoming increasingly concentrated in poor neighbourhoods. Not unsurprisingly, the spatial concentration of visible minorities, Aboriginals and recent immigrants is cited as one of a number of potential factors underpinning the growth of concentrated urban poverty. Information contained in the United Way report, 'Poverty by Postal Code' (United Way of Greater Toronto 2004, 49–50), for instance, suggests that the growth in visible minority families may explain all of the growth in family poverty within the City of Toronto between 1981 and 2001, since the level of low income rose both in the city at large and among

visible minority families, but declined for non-visible minority families. According to this report, visible minority families made up 77.5 percent of the poor families residing in high poverty neighbourhoods in 2001, double the level in 1981.

This raises the spectre of ghettoization emerging within Canadian cities along the lines witnessed in the United States, a spectre fuelled by media reporting of violent crimes potentially linked to minorities and to gangs, particularly in Toronto.¹ The relationship between visible minority concentration and high-poverty neighbourhoods in Canada, however, remains under-examined, with most studies concerned with segregation conducted by a small number of devoted sociologists and geographers (for example, Darroch and Marston 1971; Balakrishnan 1976, 1982; Clarke *et al.* 1984; Ray and Moore 1991; Murdie 1994a; Fong 1996; Bauder and Sharpe 2002; Fong and Wilkes 2003; White *et al.* 2003, 2005; see also Walks 2001). Much of the literature, and the dominant discourse, concerning urban ghetto formation has emanated from the

¹ The Toronto media has labeled 2005 'the year of the gun', due to the high proportion of murders committed using firearms (see Huffman 2006; Toronto Star 2006).



United States where racial segregation, particularly of the black population, has been an overriding concern. Studies undertaken in the United States have found not only very high levels of spatial segregation for blacks and Hispanics, but strong neighbourhood effects that grow with the level of racial concentration. In the United States living in a highly segregated neighbourhood not only increases the chance that one is already poor, but also limits the ability of residents to escape poverty due to, among other things, a lack of social networks, locally based resources, and access to employment (Wilson 1987; Massey and Denton 1993; Jargowsky 1997; Ihlanfeldt 1999). Although the most recent U.S. census shows a decline in both residential segregation and neighbourhood poverty, this change has mostly occurred in cities with few blacks or Hispanics to begin with: in cities with larger black populations there has been much less change (Jargowsky 2003; Kingsley and Pettit 2003).

Hajnal (1995) was one of the first to raise the alarm about the growth of neighbourhood poverty in Canada. He showed that a higher proportion of Canadians lived in high-poverty neighbourhoods in 1986 than did residents of the United States in 1981, although he rightly pointed out that the low proportion of visible minorities in such neighbourhoods at the time meant that the main source of this difference lay elsewhere. Fong and Shibuya's (2000, 2003) research using the 1986 and 1991 census data continued to uncover a relationship between visible minority concentration and neighbourhood poverty. Yet, it is Kazemipur and Halli's (2000) work that has perhaps been most influential in bringing the discourse of ghettoization to Canada: their provocative use of the subtitle 'Ethnic Groups and Ghetto Neighbourhoods' implied that Canada was witnessing the birth of urban underclass ghettos directly linked to growing ethnic communities. Analyzing census data to 1991 for Census Metropolitan Areas (CMAs) they suggest that Aborigines and recent immigrants from Africa, Asia, Latin America and the Caribbean in particular are increasingly likely to live in 'ghetto' or 'underclass' neighbourhoods. This result stands in sharp contrast to other studies of ethnic and racial segregation trends that suggest that they do not mimic the pattern of ghettoization found in the United States (Fong 1996; Balakrishnan

2001; Bauder and Sharpe 2002; Balakrishnan and Gyimah 2003; Myles and Hou 2004; Peters 2005).

Each of these studies, however, uses different definitions (of ghettos, concentrated poverty, etc.) and a different methodology to arrive at their conclusions, and the methods used often do not permit direct comparison with existing U.S. and international studies. Furthermore, the effect of changes witnessed in the most recent census period is not yet known. While a positive turn in the business cycle has led to a decline in concentrated low income in most CMAs in Canada between 1996 and 2001, the benefits are shared unequally with some cities worse off than a decade earlier (Heisz and McLeod 2004). It remains unclear whether the growth of the visible minority population (that mainly results from changes in the source countries of immigrants to Canada as well as higher birth rates among certain minority groups), has led to their spatial integration or segregation, and whether such spatial changes are linked to the patterning of high-poverty neighbourhoods.

This paper seeks to answer these questions. It explores the relationship between the spatial concentration of visible minorities and the growth of neighbourhood poverty, using information from the 1991 and 2001 censuses at the level of census tracts. In so doing it simultaneously updates and expands upon the existing Canadian literature on the subject in two directions (see also Hiebert 2000; Bauder and Sharpe 2002). First, to examine the question of ghetto formation, a neighbourhood classification system is adopted that has been recently developed precisely for the task of comparing levels of neighbourhood isolation, ghettoization and integration across national contexts (Poulsen *et al.* 2001; Johnston *et al.* 2003). This classification scheme allows for a comparative test of whether ghetto formation is also occurring in Canada, and whether neighbourhood poverty rises as visible minority concentration increases. The relative importance of minority concentrations for predicting the spatial patterning of high-poverty neighbourhoods in comparison with other factors is then ascertained using regression analysis undertaken for the most highly segregated metropolitan areas.

We are aware that this analysis sits at the intersection of parallel research interests in the study of immigrants, ethnic communities and racialized

groups. These groups are not the same, although there is considerable overlap as most recent immigrants also qualify as members of distinct ethnic and racial communities. It should be noted, however, that the concept and meaning, and the formal categorization, of visible minorities are themselves problematic, and such labels tend to obscure a considerable diversity in the character and living conditions of the population involved. Despite these misgivings, our focus is on the visible minority population since it is the increasingly widely used currency in the census data and in social science research.²

The Geography of Assimilation and Exclusion? Enclaves, Communities and Ghettos

A situation of increasing neighbourhood concentration of visible minority groups violates traditional ecological models that see immigrants and ethnic groups integrating geographically as they assimilate culturally (Park *et al.* 1925). While congregation in a particular district may have temporary benefits for a particular group, continued or increasing concentration implies a breakdown of the assimilation process and/or social exclusion on the part of the 'host' society (Philpott 1978). However, a more nuanced approach characterizes recent thinking, particularly concerning the growth of 'EthniCities' and multiculturalist/pluralist policy (Clarke *et al.* 1984; Roseman *et al.* 1996). Long-term ethnic concentration may help promote cultural goals and group identity (Peach 1996; Boal 2005), and may be strategic in light of increasing transnationalism and/or the global marketing of ethnic spaces (Lin 1998; Ong 1999; Walton-Roberts 2003), and thus should not be viewed as necessarily negative (Qadeer 2005). It is important to differentiate between induced, involuntary and strategic forms of spatial

² The concept and practice of identifying visible minority populations in the census derives primarily from an interest in equity issues, concerns regarding discrimination, and the need for information on social change and diversity that is not provided by standard ethno-cultural classifications. The concept generally refers to all populations of non-European and non-Aboriginal origin, and is an implicit marker of racialization. Since 1996, respondents to the Census of Canada have been able to self-identify as a member of a visible minority group.

concentration—between ghettoization, which the literature invariably views negatively, and other forms including the growth of traditional enclaves dominated by a single ethnic group, which is now often looked upon as potentially beneficial.

The traditional definition of the ghetto in the U.S. context is of a residential district that both concentrates a particular racial or ethnic group and at the same time contains it, in that a majority of its members are forced to live there due to discrimination on behalf of the host community (Philpott 1978; Massey and Denton 1993; Peach 1996; Jargowsky 1997; Marcuse 1997; Logan *et al.* 2002; Johnston *et al.* 2003; Pattillo 2003). Such ghettos are produced through race-based discrimination in the housing and labour markets. This is a different definition of the ghetto than that employed by Wilson (1987) who examines the increase in high poverty levels among black and Hispanic neighbourhoods, with residents often referred to as the 'ghetto poor'. Bridging the two, Marcuse (1997) suggests that as a result of industrial decentralization and globalization, a new form of 'outcast ghetto' (distinguished from the ghetto of old) may be emerging in U.S. cities, composed only of the poorest segments of subjugated racialized groups (mostly blacks and Hispanics) who are marginal to current production needs.

A number of authors contrast the ghetto with the ethnic enclave in which residency appears voluntary and members have the option of leaving. Enclaves, therefore, crystallize because they conform at least partly to the needs of a minority group, while ghettos are formed through exclusion on behalf of the host society against the interests of its residents and from which they cannot easily escape (Marcuse 1997). Logan *et al.* (2002) distinguish further between the immigrant enclave of old, typically seen as a temporary neighbourhood of convenience containing ethnic resources to be drawn upon until immigrants assimilate into the host society and relocate, and an emerging new ideal type, the 'ethnic community'. Unlike the immigrant enclave, many (but certainly not all) ethnic and cultural groups view the ethnic community as the desired residential endpoint, typically a neighbourhood with a single group dominant and at the same time relatively prosperous (Logan *et al.* 2002).



Finally, there are the citadels, the isolated exclusive neighbourhoods formed by the elite class of the host community for their own benefit (Marcuse 1997).

Confusion over these definitions is one reason for the lack of comparability among Canadian research on the topic. For example, many studies that conclude that there is little evidence of ghetto formation in Canadian cities are based on an examination of indices of dissimilarity or exposure to own-group members, a method that cannot distinguish between ghettos and enclaves (Balakrishnan 2001; Bauder and Sharpe 2002; Balakrishnan and Gyimah 2003; Myles and Hou 2004). On the other hand, Kazemipur and Halli (2000) parrot Wilson (1987) in employing the terms 'ghetto', 'underclass' and 'high poverty neighbourhood' interchangeably, defining them as any census tract with an incidence of low income above 40 percent. Such a practice, however, impedes clarity when it is the relationship *between* ethnic segregation and concentrated poverty that is in question. As yet, few Canadian studies have employed strict criteria that would allow one to distinguish between the growth of ethnic enclaves and contained ghettos.

Recently, Johnston *et al.* (2002) have presented explicit criteria for classifying urban neighbourhoods. They employ an approach of absolute floors and ceilings, rather than relative measures and indices, in order to compare situations across time and space. According to the authors, this classification is 'a robust approach to comparative study' across international contexts, which in turn is 'directly linked to the homogeneity-heterogeneity continuum which underpins all studies of segregation' because it simultaneously identifies three different types of spatial segregation proposed by Massey and Denton (1993): isolation, clustering and concentration (Poulsen *et al.* 2001, 2071). Such a classification allows for the examination of a number of interesting questions, including the proposition that 'outcast' ghettos or 'ethnic communities' could be forming among particular minorities regardless of the direction of movement in overall segregation indices. This approach facilitates a more complex investigation into the importance of visible minority concentration for our understanding of the growth of concentrated neighbourhood poverty.

This classification has so far been used to compare British cities, and cities in Australia and New Zealand, to the U.S. case (Poulsen *et al.* 2001; Johnston *et al.* 2002), and to analyze differences between U.S. cities over time (Johnston *et al.* 2003). Under this definition, ghettos such as those in New York, Los Angeles, Chicago and Miami, were found only to exist in a few smaller British cities, namely Leicester, Oldham and Bradford, with South Asians being the most concentrated in such areas. There is no evidence of ghettoization in larger British cities such as London, nor in Australia or New Zealand, countries that are said to have adopted a similar policy of multiculturalism to the Canadian model (Smolicz 1995, 592; Johnston *et al.* 2002). It is not yet known how Canadian cities compare to these others.

Immigration, Visible Minority Neighbourhoods and Concentrated Poverty in Canada

It is clear that changes in immigration policy implemented in the late 1960s have had an increasingly disproportionate impact on the face of urban Canada. Between 1971 and 2001, the proportion of Canada's population that had been born in Asia, Africa, the West Indies, or Latin America rose from 1.7 to 10.4 percent, while visible minorities grew from 4.7 to 13.4 percent of the population between 1981 and 2001 (Statistics Canada 2003, 10). Changes in the source countries of immigrants have been accompanied by their increased concentration within Canada's census metropolitan areas (CMAs) (Hou 2004; Simmons and Bourne 2003).³ Recent immigrants, in particular, have increasingly preferred to move to the largest urban regions since 1971, when 50.3 percent of foreign-born residents lived in one of the five largest cities. By 2001, this proportion had risen to 80.4 percent, with a full 43 percent of immigrants arriving in the preceding

³ In 1971 approximately 68.4 percent of all foreign-born residents lived in urban areas with populations over 100,000. This level increased to 77.8 percent in 1981, 84.2 percent in 1991 and 89.2 percent by 2001. This is a much faster rate of increase than experienced by the total population (calculated by the authors from Census of Canada, various years).

10 years moving to the Toronto CMA (Statistics Canada 2003, 7). Accordingly, visible minorities have become highly concentrated in the largest cities and their suburbs. Both the Toronto and Vancouver CMAs went from having just under 14 percent to just under 37 percent of their population classified as visible minorities between 1981 and 2001 (Statistics Canada 2003, 44).⁴ Meanwhile, the Aboriginal population, which is treated as a distinct group in the census, is becoming more concentrated in a number of Prairie cities, particularly Saskatoon, Regina and Winnipeg.

While the Canadian media may have constructed immigrant settlement patterns as a national policy issue (mostly in relation to regional development and the distribution of services) (Abu-Laban and Garber 2005), there is no consensus in the literature concerning whether the growth and concentration of visible minorities in Canadian cities is leading to their increased isolation from mainstream society. Studies of ethnic and racial segregation have found that while certain groups are highly concentrated in certain neighbourhoods (Jewish, then South Asian groups were the most segregated), the levels of concentration for such groups were not as high as for either blacks or Asians in U.S. cities (Fong 1996; Balakrishnan and Hou 1999; White *et al.* 2003) and they changed little or declined between 1986 to 1996 (Balakrishnan 2001; Bauder and Sharpe 2002; Balakrishnan and Gyimah 2003).

Such trends have led some researchers to conclude that mobility and assimilation, rather than entrapment, exclusion or cultural separation, more commonly characterize the residential geography of immigrant groups in Canada (Ley and Smith 2000; Hiebert and Ley 2003). However, the results are decidedly uneven (Bauder and Sharpe 2002; Hou and Milan 2003), and recent findings concerning the relationship between low income, immigration and visible minority status raise some new concerns. While the earnings gap between both whites and visible minorities,

and whites and Aboriginals, decreased during the 1970s and stabilized during the 1980s, it grew rapidly during the first half of the 1990s (Pendakur and Pendakur 2002). Morissette and Drolet (2000) found that members of visible minorities and immigrants who arrived after 1977 suffered disproportionately from low income during the early 1990s. Picot and Fou (2003) show that both low-income levels and gaps grew among recent immigrants between 1980 and 2000, particularly during the 1990s among immigrants from Asia and Africa.

Deterioration in earnings levels for recent immigrants occurred despite demographic shifts among recent immigrant cohorts (toward higher education and skill levels) that should have left them significantly better off, rather than worse, than earlier cohorts (Aydemir and Skuterud 2004). Part of the blame lies with declining returns to foreign work experience and the devaluation and non-recognition of foreign credentials (Bauder 2003). It is argued that this trend stems not only from an inability to transfer skills, but also from institutionalized forms of occupational exclusion as well as racial discrimination within the labour market (Bloom *et al.* 1995; Bauder 2003).⁵ While recent immigrants arriving in the 1990s were found to be able to catch up to the Canadian-born faster than was the case in the past (Li 2003), this outcome is least true for visible minority immigrants, particularly refugees from Africa, Latin America and the Middle East who rarely ever attain occupational levels they enjoyed in their countries of origin (Krahn *et al.* 2000).

As a result of such shifts, Moore and Pacey (2003) found that much of the increase in income inequality experienced across Canada during the early 1990s may be accounted for by the growth of inequality and low income within recent immigration cohorts. Furthermore, as a result of the restructuring of Canada's set of taxes and transfers during the 1990s, welfare-state programs and benefits did not offset either the growth of low-income intensity (Picot *et al.* 2003) or income inequality (Frenette *et al.* 2004) that followed the severe recession of the early 1990s. This

4 Change over time in the proportion of the population made up of visible minorities would be even steeper if the same method for classifying visible minorities had been used in each census year. The method used in the 1996 and 2001 censuses, respondent self-identification, leads to counts that are roughly six percent lower than would be the case using ethnic origin, the method used until 1996 (Hou and Picot 2003, 1).

5 Ironically, the relative lack of competition between native-born Canadians and recent immigrants for privileged jobs may help explain the disproportionately higher support for immigration in Canada (Hiebert 2006).



contrasts with the situation during the 1980s when the transfer and tax system largely negated the growth in market-driven wage inequality and low-income employment.

What is yet unclear is how the rising incidence of low income and inequality among visible minorities is related to concentrated poverty in Canadian cities, and in turn, how neighbourhood concentration might reduce or enhance opportunities and access to resources. A lack of labour market ties between ethnic groups and the rest of Canadian society might be expected to impede improvement in their incomes, job qualifications and language skills (Hou and Picot 2003, 3), though Teixeira (2001) suggests that the local community can be an important resource for ethnic business. Examining trends between 1981 and 1996 for the three largest CMAs, Hou and Picot (2003) find that living in neighbourhoods with high concentrations of members from one's own minority group has only insignificant effects on both labour market segregation and employment earnings. These general results, however, mask important intra-group differences. While residence in Chinese enclaves had little effect on the earnings or occupations of their inhabitants, the association between living among own-group members and negative labour market outcomes was strong and significant for blacks, even though blacks were the least segregated of the groups studied (Hou and Picot 2003, 24).

These latter findings are echoed in Myles and Hou's (2004) in-depth study of 'locational attainment' among visible minority groups in Toronto in 1996. They argue that the Chinese have been better able to move into their desired residential environments (highly concentrated but wealthy Chinese neighbourhoods resembling Logan *et al.*'s 'ethnic communities') because they were able to take greater advantage of family credit in the pursuit of homeownership. This then gave them a substantial asset advantage over other groups. Blacks, on the other hand, have largely remained tenants. Such trends are all the more worrying considering that the income gap has grown wider between renters and homeowners (Hulchanski 2001; Moore and Skaburskis 2004), and that homeownership rates have been unexplainably falling among certain immigrant groups (Haan, 2005). In particular, Hou and Milan (2003) demonstrate that blacks are both more likely

to live in, and to move into, neighbourhoods with lower socio-economic status, while Murdie's (1994a) research showed that blacks were also disproportionately concentrated within Toronto's social housing stock, typically the residence of last resort. Schellenberg (2004) reveals that recent immigrants are now disproportionately concentrated in rental housing and dependent on public transit and public schooling.

A recent longitudinal study of neighbourhood exit opportunities found that low-income neighbourhoods in Toronto and Vancouver, but not Montréal, exhibited 'negative duration dependence', meaning that their residents become increasingly less likely to leave such neighbourhoods the longer they reside in them, even after controlling for various demographic variables (Frenette *et al.* 2004). Approximately one-third of low-income residents lived for at least 6 years in tracts with levels of low income over 30 percent, and just over one-third of those who left moved into another tract with a high level of low income. There would thus appear to be a tendency for some low-income residents to become trapped in low-income neighbourhoods. It is not clear, however, that this trend presents an extra impediment for the poor. Another longitudinal study by Oreopoulos (2002) found no significant independent neighbourhood impacts of living in the poorest neighbourhoods on education, earnings, income and/or unemployment among residents of social housing projects in Toronto, after controlling for individual-level socio-demographic variables, including immigrant status.

It thus may not be residential location per se, but factors such as tenancy, poverty, family situation and racial discrimination in housing and labour markets that are most important for determining the life chances of Canada's urban poor. A number of researchers (Ray and Moore 1991; Ray 1994; Fong, 1996; Bauder and Sharpe 2002; White *et al.* 2003) suggest that housing affordability is also a serious problem among significant segments of new immigrant groups, and that this is one cause of the concentration of visible minorities within cheap rental accommodation. Further research on racial discrimination and its relationship with spatial entrapment of poor visible minorities in low-income neighbourhoods is clearly warranted.

The research discussed above presents a complex picture of the relationship between growing visible minority populations, segregation and concentrated poverty. It is still unclear what geographic effects growing inequality and low-income may have, what their relationship to minority-majority neighbourhoods might be, and whether Canada may be witnessing the growth of urban ghettos. This paper seeks to shed light on these questions.

Data and Method

Data for this research come from the census tract files for the 1991 and 2001 census of Canada. We initially examine all CMAs in order to provide a context for the detailed analysis of changes in the most highly segregated cities. Visible minority status was chosen over ethnicity as the critical classification variable for this research as the discourse on ghettoization, whether coming from the United States or elsewhere, is clearly constructed in relation to the history of racialization and racial discrimination (Philpott 1978; Massey and Denton 1993; Peach 1996; Marcuse 1997; Bauder and Sharpe 2002; Pattillo 2003).

Admittedly, there are problems with this approach, particularly in relation to debates concerning the social construction of different racial categories in contrast to the actual fluidity of identity, and their statistical aggregation in census data (Bauder and Sharpe 2002, 208-209). However, the data on ethnicity are even more complex and unclear, particularly in light of the growing proclivity of respondents to self-identify as 'Canadian' (Boyd and Norris 2001), and such data do not allow for the aggregation of the non-white population. As Canadian research suggests a possible relationship between growing Aboriginal populations, marginality and poverty in Prairie cities (Kazemipur and Halli 2000; Peters 2001, 2005), the spatial concentration of Aboriginals is also examined here. Ideally, we would have wanted to examine the different characteristics of each visible minority group, including the time of arrival, but this is beyond the scope of the present study.

Changes in the way census data are collected present one further limitation. Until 1996 data on visible minority status was imputed by Statis-

tics Canada from ethnicity and ancestry. From 1996 onwards the classification of visible minorities has been based on self-identification. While this difference impedes easy comparability across time, the evidence is that this shift biases downwards the estimate of the visible minority population in 2001, thus presenting a more conservative picture of change than would be the case using the method from 1991 (Hou and Picot 2003, 1). Similarly, the identification of Aboriginals changed, from measures of ancestry and ethnicity, to Aboriginal identity and Aboriginal origins that are acquired through respondent self-identification. Because of changes in the way visible minorities and Aboriginals are recorded, it is possible that there was an overlap between these two categories in 2001, but not in 1991, and this point should be taken into account when interpreting the results.

This analysis first employs a traditional measure of segregation, the index of dissimilarity (DIS), to examine segregation trends over the period 1991 to 2001. Research by Townshend and Walker (2002, 48) found that this measure alone was sufficient to account for a significant majority of the geographical variation in income across Canadian CMAs (though see Ross *et al.* 2004). After examining changes in segregation levels using this index, this paper adopts the taxonomy proposed by Johnston *et al.* (2003) for classifying urban neighbourhoods in order to examine whether ghettos, according to their definition, exist in Canada and whether levels of visible minority concentration are related to the concentration of low income. Out of convenience, and in line with other studies of residential segregation, neighbourhoods are operationalized here as census tracts.⁶

Johnston *et al.* (2003) present absolute criteria for classifying urban neighbourhoods along a continuum from isolated host communities to ghettos (Table 1). The former are defined as neighbourhoods with fewer than 20 percent visible minorities, while the latter are neighbourhoods containing at least 70 percent visible

⁶ Census tracts are geographic units, containing on average 4,000 people, created by Statistics Canada for aggregating census data to boundaries that approximate those of distinct neighbourhoods with similar social and economic characteristics.

Table 1

The neighbourhood classification scheme employed in this research

Isolated host communities	<20% visible minorities in a neighbourhood (Census Tract)
Non-isolated host communities	Between 20% and 50% visible minorities
Pluralism/assimilation enclaves	From 50% to 70% visible minorities
Mixed-minority neighbourhoods	>70% visible minorities, but no minority group dominates
Polarized enclaves	>70% visible minorities, with one single group that is dominant (>66.6% of all minorities come from one group)
Ghettos	Similar to polarized enclaves but with the additional criteria that at least 60% of the population in a tract be from one single minority group, and at least 30% of all members of that group in the entire urban area must live in such neighbourhoods

SOURCE: Adapted from Johnston *et al.* (2002, 2003).

minorities that are constrained in accordance with the traditional definition by two criteria: more than 60 percent of the population must hail from one single race or ethnic group, and 30 percent or more of all members of the group in a city must reside in such neighbourhoods. In between these poles lie neighbourhood types of varying degrees of diversity and integration, from non-isolated host communities, 'assimilation-pluralism' enclaves, 'mixed-minority' neighbourhoods and 'polarized enclaves'.⁷

This taxonomy is used for classifying census tracts in all CMAs with an emphasis on comparing changes in the most segregated CMAs over the decade 1991 to 2001. The resulting distri-

bution of neighbourhood types is then examined for what it tells us about neighbourhood poverty, measured by low-income levels.⁸ The incidence of low income is analyzed here because it is the variable most commonly employed in the literature both in Canada and the United States as a proxy for poverty level, with an incidence of low income of 40 percent or above representing a high level of concentrated poverty (Wilson 1987; Jargowsky 1997; Kazempur and Halli 2000; Frenette *et al.* 2004; Heisz and McLeod 2004).

In order to test whether poverty is increasing disproportionately in neighbourhoods with the highest concentrations of visible minorities, changes in four key indicators of poverty are examined over the decade preceding 2001. Then, ordinary least squares (OLS) regression models are estimated using the ecological census tract data for the most segregated metropolises, with the incidence of low income as the dependent variable. The independent variables selected for analysis are the proportion of each minority group, the proportion that immigrated in the 1991 to 2001 period ('recent' immigrants), the neighbourhood type according to the classification employed here, and the proportions of semi/row, low-rise and high-rise apartment housing in the housing stock. The visible minority variables are examined in order to detect any effects of concentrations of single groups (potentially revealing racial biases or between-group dynamics), while the variable for recent immigrants captures the effects of the spatial settlement of newcomers to Canada, who are known to have lower incomes upon arrival (Morissette and Drolet 2000;

7 As with all classification schemes, the categories in this taxonomy are by necessity somewhat arbitrary. Nonetheless, they are constructed in accordance with previously published peer-reviewed research (Philpott 1978; Peach 1996). The advantages involve the ability to compare the absolute measures of spatial concentration over time and across space, and the fact that these measures are not sensitive to population size (though they are sensitive to the size of the geographic units under study). The disadvantages involve the lack of flexibility in adapting to local context (there may be reasons for suspecting that the criteria for detecting ghettos in one location may not be the best in another location with a different history of inter-group conflict), and its sensitivity to the size of geographic unit under study (comparison across places and over time requires similarly-sized neighbourhoods, which is largely met through the use of census tracts here).

8 The incidence of low income used in this research refers to the proportion of the population in private households living in a given place (a census tract, for instance) with incomes below Statistics Canada's low-income cut-off (LICO). Statistics Canada is careful not to equate their low-income cut-off (LICO) or low-income measure (LIM) with rates of poverty. However, the LICO or LIM are commonly used as surrogates, since few other measures have been produced for comparing levels of poverty in Canada (one exception is the recent 'market-basket measure', see Heisz and McLeod 2004, 12). Papers produced by Statistics Canada (Frenette *et al.* 2004; Heisz and McLeod 2004) for instance, follow the U.S. literature (Wilson 1987; Jargowsky and Bane 1991; Jargowsky 1997) when assigning a threshold of 40 percent beyond which a neighbourhood can be characterized as having a high degree of 'low income' (high poverty in the U.S. discourse). While such a threshold is somewhat arbitrary, we decided to follow convention in retaining it for this paper.

Table 2
Visible minorities and Aboriginals as a proportion of the population, all CMA's 2001

CMA	Visible Mins.	Chinese	Other E. Asian*	South Asian	Black	Filipino	Latin Amer.	Arab/W. Asian	Aboriginal identity
Toronto	36.8	8.8	2.4	10.2	6.7	2.9	1.6	2.0	0.4
Vancouver	36.8	17.4	4.0	8.4	0.9	2.9	1.0	1.4	1.9
Abbotsford	17.8	1.1	1.7	12.9	0.4	0.4	0.7	0.1	2.9
Calgary	17.5	5.5	2.1	3.9	1.4	1.7	0.9	1.2	2.3
Edmonton	14.6	4.5	1.5	3.1	1.5	1.5	0.8	1.2	4.4
Ottawa-Gatineau	14.1	2.7	1.2	2.1	3.6	0.5	0.7	2.7	1.3
Montréal	13.6	1.5	1.4	1.7	4.1	0.5	1.6	2.3	0.3
Windsor	12.9	1.9	1.0	2.1	2.7	1.0	0.7	2.9	1.3
Winnipeg	12.5	1.7	1.2	1.9	1.7	4.5	0.7	0.3	8.4
Kitchener-Waterloo	10.7	1.4	1.7	2.7	1.8	0.3	1.2	0.9	0.8
Hamilton	9.8	1.4	1.2	2.2	2.0	0.8	0.8	1.0	1.1
London	9.0	1.1	1.2	1.2	1.8	0.4	1.0	1.7	1.3
Victoria	8.9	3.7	1.2	1.9	0.7	0.6	0.4	0.2	2.8
Halifax	7.0	0.7	0.4	0.7	3.7	0.1	0.1	0.9	1.0
Oshawa	7.0	0.8	0.6	1.6	2.4	0.3	0.3	0.3	1.0
Saskatoon	5.6	1.8	0.6	0.8	0.7	0.7	0.4	0.4	9.1
Regina	5.1	1.2	0.9	0.9	0.8	0.5	0.4	0.3	8.3
Kingston	4.6	1.1	0.6	1.1	0.6	0.3	0.4	0.4	1.5
St. Catharines-Niagara	4.5	0.7	0.8	0.7	1.0	0.3	0.4	0.4	1.3
Kelowna	3.9	0.8	1.0	1.0	0.3	0.2	0.3	0.1	2.7
Saint John	2.6	0.4	0.1	0.3	1.2	0.1	0.2	0.2	0.8
Sherbrooke	2.5	0.2	0.2	0.1	0.7	0.1	0.7	0.4	0.2
Thunder Bay	2.2	0.3	0.5	0.3	0.4	0.2	0.2	0.2	6.8
Greater Sudbury	2.0	0.5	0.1	0.3	0.7	0.1	0.1	0.1	4.8
Québec	1.6	0.2	0.3	0.1	0.5	0	0.3	0.2	0.6
St. John's	1.3	0.3	0.1	0.4	0.2	0.1	0	0.2	0.7
Trois-Rivières	0.9	0.1	0.2	0	0.4	0	0.1	0.1	0.5
Chicoutimi-Jonquière	0.6	0.2	0	0	0.2	0	0.1	0	0.7
All CMA's	19.7	5.2	1.8	4.6	3.2	1.5	1.1	1.5	1.6
All of Canada	13.4	3.5	1.3	3.1	2.2	1.0	0.7	1.0	3.3

SOURCE: Census of Canada, 2001.

NOTE: Proportions greater than the Canadian average are in bold. (*) Other East Asian aggregates the Southeast Asian (Vietnamese, Thai, Laotian), Korean, and Japanese categories. Aboriginal identity is recorded separately from visible minority status in the 2001 census.

Pendakur and Pendakur 2002; Picot and Hou 2003). The neighbourhood types derived from the classification scheme are included in order to test for the impact of relative levels of minority concentration, while the housing variables control for the geography of the existing stock, which has been shown to have effects on the spatial articulation of inequality and neighbourhood poverty (Murdie 1994b; Ley and Smith 2000; Walks 2001).

Ghettos in Canadian Cities?

Table 2 ranks all 27 CMA's by their proportions of the different visible minority and Aboriginal populations in 2001, as classified by

Statistics Canada. Visible minorities are clearly concentrated in a small number of urban regions. Only seven CMA's have visible minority populations greater than the Canadian average of 13.4 percent in 2001. Toronto and Vancouver stand out as having approximately twice the level of visible minorities as the next CMA's, Abbotsford and Calgary. In only 19 CMA's do minorities make up more than 4 percent of the population. Meanwhile, in Saskatoon, Winnipeg and Regina, Aboriginals comprise close to 10 percent of the total population.

Table 3 provides, for the 22 CMA's containing a significant visible minority population, indices of dissimilarity measures for the largest visible minority groups in 1991 and 2001 (measured

Table 3

Indices of segregation for the largest visible minority Groups, Selected CMAs, 1991 and 2001

	All visible minorities		Chinese		South Asians		Blacks		Latin Americans		Lebanese/Arabs/ West Asians		Aboriginals	
	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001	1991	2001
	Montréal	0.386	0.464	0.662	0.570	0.513	0.675	0.737	0.494	0.587	0.504	0.603	0.538	0.439*
Toronto	0.395	0.435	0.435	0.577	0.433	0.535	0.423	0.487	0.600	0.479	0.633*	0.501	0.363*	0.392
Vancouver	0.367	0.409	0.448	0.534	0.434	0.563	0.391*	0.367	0.675	0.435	0.726*	0.487	0.342	0.320
Winnipeg	0.406	0.407	0.517	0.452	0.410	0.500	0.591	0.343	0.841	0.440	0.890*	0.594*	0.409	0.351
Edmonton	0.329	0.396	0.491	0.429	0.422	0.524	0.486	0.402	0.632	0.493	0.661	0.534	0.416	0.324
Abbotsford	0.296	0.395	0.427	0.303	0.827	0.506	~	~	0.777	0.426	~	~	0.355	0.219
Ottawa-Gatineau	0.291	0.395	0.481	0.471	0.444	0.468	0.573	0.455	0.450	0.472	0.461	0.456	0.432	0.273
Windsor	0.298	0.385	0.524	0.493	0.403	0.470	0.440	0.389	0.420	0.502	0.431	0.483	0.537*	0.277
Québec	0.326	0.381	0.945*	0.586*	0.712*	0.828*	0.836*	0.446	0.786*	0.538*	0.790*	0.662*	0.579*	0.476
Sudbury	0.299	0.366	0.692	0.533	0.553	0.646	0.875	0.417	0.773	0.686	~	~	0.636	0.180
Calgary	0.306	0.365	0.445	0.421	0.428	0.506	0.417	0.373	0.547	0.430	0.571	0.488	0.385	0.314
Halifax	0.356	0.351	0.544*	0.482*	0.524	0.479	0.753	0.434	0.503*	0.729*	0.511	0.562	0.738*	0.276
London	0.281	0.327	0.493	0.452	0.407	0.413	0.583	0.344	0.508	0.518	0.516	0.490	0.420	0.330
Hamilton	0.296	0.319	0.453	0.465	0.467	0.422	0.552	0.385	0.831	0.501	0.848*	0.521	0.454*	0.380
St. Catharines	0.256	0.291	0.561*	0.425	0.540*	0.441	0.607*	0.354	0.798*	0.522*	0.805*	0.609*	0.434*	0.321
Victoria	0.283	0.285	0.481	0.414	0.675	0.405	0.499*	0.301	0.804*	0.389*	0.827*	0.542*	0.413	0.300
Oshawa	0.239	0.268	0.449	0.427	0.397	0.365	0.606	0.302	0.826	0.474	0.836*	0.567*	0.327*	0.262
Kingston	0.289	0.266	0.431	0.410	0.557	0.373	0.516*	0.334*	0.900*	0.477*	~	~	0.492*	0.297
Thunder Bay	0.287	0.266	0.693*	0.455*	0.772*	0.634*	0.793*	0.343*	0.733*	0.572*	0.742*	0.639*	0.622	0.279
Saskatoon	0.331	0.261	0.568	0.383	0.527*	0.446	0.557*	0.424	0.724*	0.483*	0.752*	0.569*	0.462	0.334
Kitchener-Waterloo	0.252	0.255	0.388	0.395	0.468	0.382	0.660	0.302	0.746	0.399	0.761*	0.459	0.344*	0.300
Regina	0.263	0.233	0.457	0.356	0.497	0.462	0.555*	0.288	0.865*	0.430*	0.893*	0.650*	0.472	0.355

SOURCE: Calculated by the authors from Census of Canada, 1991 and 2001.

NOTES: Coefficients are indices of dissimilarity, calculated in relation to the distribution of whites (non-visible minorities and non-Aboriginals). Increases in segregation over time are in bold. CMAs are sorted in order of 2001 index of segregation for all visible minorities. (~) = numbers too low for credible estimates. (*) = low numbers impede meaningful estimates (an 'even' distribution would result in between 1 and 20 minority group persons per tract).

against the distribution of whites). One finding to note is the contrast between the tendency of declining segregation levels for the largest minority groups when measured separately, and the overall increase in the segregation measure when the segregation of all visible minority groups is analyzed. Segregation indices increased for South Asians in half of the CMAs studied, whereas for Latin Americans and Chinese segregation declined in all but four CMAs, and for Arabs and West Asians, in all but two CMAs. Declines in segregation levels occurred most rapidly for blacks and Aboriginals—for these two groups segregation levels only increased in one CMA, Toronto (Toronto also saw increasing segregation for Chinese and South Asians). On the other hand, when all visible minorities are examined together, only five CMAs register declining levels. It is possible that this discrepancy results from the de-

centralization of visible minorities from more concentrated enclaves into areas with already high proportions of other visible minority groups, such as districts of rental apartment housing in another part of the city. While each group would then become less segregated, segregation levels for all minorities together could approach that for the rental housing stock as a whole. In 2001 four CMAs, Toronto, Vancouver, Montréal and Winnipeg, had levels of visible minority segregation above 0.400. Although higher than in 1991, these levels are far lower than the levels of segregation measured in U.S. cities, which routinely surpass 0.700 (Jargowsky 1997).

Table 4 classifies census tracts, for all CMAs, using the neighbourhood taxonomy developed by Johnston *et al.* (2003), for both visible minority and Aboriginal concentration levels. Such a classification procedure results in four different

Table 4
Proportion of CMA population (and number of census tracts) in neighbourhoods of each type, 2001

CMA	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghettos
<i>Segregated/segmented</i>						
Toronto	29.6 (298)	40.3 (378)	18.5 (155)	8.0 (65)	3.3 (29)	0
Vancouver	27.6 (110)	40.7 (161)	21.5 (78)	2.7 (9)	7.4 (28)	0
Winnipeg	66.0 (107)	26.8 (43)	5.9 (11)	1.2 (2)	0	0
Montréal	76.2 (651)	19.8 (167)	3.1 (24)	0.6 (4)	0	0
<i>Relatively integrated</i>						
Calgary	68.8 (136)	27.3 (50)	3.5 (6)	0	0	0
Ottawa-Gatineau	70.7 (175)	27.0 (55)	1.8 (4)	0	0	0
Abbotsford	62.2 (23)	32.5 (10)	5.2 (1)	0	0	0
Saskatoon	78.8 (38)	20.5 (12)	0.8 (1)	0	0	0
Edmonton	48.8 (106)	50.6 (95)	0.5 (1)	0	0	0
Windsor	72.4 (47)	27.6 (20)	0	0	0	0
<i>Relatively homogenous</i>						
Hamilton	89.1 (152)	10.9 (19)	0	0	0	0
Regina	89.8 (44)	10.2 (6)	0	0	0	0
London	89.9 (91)	10.1 (9)	0	0	0	0
Victoria	90.0 (61)	10.0 (7)	0	0	0	0
Kitchener-Waterloo	92.4 (82)	7.6 (8)	0	0	0	0
Halifax	95.9 (82)	4.1 (3)	0	0	0	0
Oshawa	96.4 (64)	3.6 (4)	0	0	0	0
Thunder Bay	97.8 (31)	2.2 (1)	0	0	0	0
Québec	99.1 (164)	0.9 (1)	0	0	0	0
Kingston	99.1 (38)	0.9 (1)	0	0	0	0
St. Catharines	99.5 (90)	0.5 (1)	0	0	0	0
<i>Homogenous</i>						
Chicoutimi-Jonquière	100 (46)	0	0	0	0	0
Kelowna	100 (35)	0	0	0	0	0
Saint John	100 (45)	0	0	0	0	0
Sherbrooke	100 (39)	0	0	0	0	0
St. Johns	100 (45)	0	0	0	0	0
Sudbury	100 (41)	0	0	0	0	0
Trois-Rivières	100 (36)	0	0	0	0	0

SOURCE: Calculated by the authors from Census of Canada, 2001.

NOTE: Figures are percentage of the population, followed by (in parenthesis) the number of census tracts, in each neighbourhood type.

types of CMAs, according to how segmented their neighbourhood structure is. Seven urban areas only have neighbourhoods of an 'isolated host society' that is more than 80 percent non-visible minority (white). These are mostly smaller CMAs with very small minority populations, and thus are here termed 'homogenous'. Another 11 only have tracts of the isolated or non-isolated host-community variety, with the latter containing less than 11 percent of the total population in each of these urban regions. Most of these CMAs are mid-sized urban regions, and are called here 'relatively homogenous'. There are only 10 CMAs in which more than 11 percent of the population lives outside of 'isolated host community' (white) neighbourhoods. Six of these contain no highly

concentrated tracts (with visible minorities making up over 70 percent of the population), though most of them do contain 'pluralism/assimilation' neighbourhoods. These six are here labelled 'relatively integrated'.

The remaining four CMAs, Toronto, Vancouver, Montréal and Winnipeg, are revealed as the most segregated (mirroring the higher levels of segregation registered for these four CMAs by the indices of dissimilarity in Table 3). The first three of these CMAs are Canada's 'gateway' cities for new immigrants (Bauder and Sharpe 2002), while Winnipeg has a history of concentrated poverty among its Aboriginal population (Peters 2001, 2005). Toronto and Vancouver have the full gamut of neighbourhood types

except for ghettos. Montréal and Winnipeg have mixed-minority tracts but no ghettos or polarized neighbourhoods. The Chinese dominate approximately three-quarters of all polarized tracts in both Toronto and Vancouver and South Asians are; dominant in the rest (eight tracts in each CMA). There are no black (or Hispanic) polarized tracts in any Canadian CMA.

This classification reveals an absence of urban ghettos anywhere in Canada. On the surface, this exercise would seem to place Canadian cities in general in a relatively positive light in comparison with both its U.S. neighbours (Johnston *et al.* 2003) and some British cities (Johnston *et al.* 2002). However, all four of the most segregated Canadian cities (Vancouver, Toronto, Winnipeg, Montréal) appear more segregated than either London or Sydney. Thus, at least for some Canadian CMAs, there could be grounds for concern that previous processes of spatial assimilation (Hiebert and Ley 2003) might be breaking down, particularly if such neighbourhoods show declining incomes. Of course, it is also possible that the growth of concentrated visible minority neighbourhoods is the end result of a cultural strategy of ethnic community formation (Logan *et al.* 2002). If so, they might be expected to be wealthier than average, and thus less problematic, at least from the perspectives of ghettoization or social exclusion. In Canadian cities, it is South Asians and Chinese that are most segregated, again revealing greater similarities to the British rather than U.S. context.

Table 5 lists, for each CMA that has more than one neighbourhood type, the aggregate ratio of household income for each type in comparison with both the CMA average and the Canadian average (the latter is the figure in brackets). While there is a general trend towards declining income as the total visible minority/Aboriginal population increases, the results are highly uneven. Edmonton, Saskatoon, Winnipeg and Montréal all show a significant drop in income levels as one moves rightward towards a higher concentration of minorities, while the decline is very gradual in Vancouver, and even reverses itself in the most concentrated neighbourhoods in Toronto, Calgary and Abbotsford. In Toronto, for instance, the 'polarized' tracts had income levels that are approximately 20 percent higher than the Canadian average (and only 8 percent lower than the

Toronto CMA average), much closer to those of the 'non-isolated' tracts than to the 'mixed' or 'pluralism' tracts with lower minority concentration levels. This evidence may reveal the presence of concentrated yet relatively well-off 'ethnic communities'. On the other hand, in all four of the most segregated CMAs it is the 'mixed' tracts that exhibit the lowest incomes. Across the Canadian urban system the most worrying income levels (below 60 percent of the Canadian average) are found in the 'mixed' and 'pluralism' tracts in Winnipeg and Montréal, the single 'pluralism' tracts in Saskatoon and Edmonton and the six 'non-isolated' tracts in Regina.

A similar pattern is revealed by the incidence of low-income and of concentrated poverty across neighbourhood types (Table 6). The worst cases, where a majority of the population was living with low income in 2001, are in the same six 'mixed' tracts in Winnipeg and Montréal and the 'pluralism' tracts in Saskatoon and Edmonton noted above. These CMAs also have the largest proportion of their tracts with low-income levels above 40 percent, with Ottawa-Gatineau, Regina and Hamilton also containing disproportionate numbers of such places. On the other hand, the 'polarized' neighbourhoods in Toronto and Vancouver have relatively *lower* incidences of low income and disproportionately low numbers of high-poverty tracts, despite the fact that they are the closest thing to 'ghettos' under the definition employed here. Thus, while in some cities' levels of low income appear related to differences in the neighbourhood concentration of minorities, in others they appears to have little relevance.

Towards Integration or Ghettoization? A Decade of Change, 1991 to 2001

It is yet unclear what effect the rapid growth of visible minority and Aboriginal populations has had on residential concentration levels over time, or how such concentrations are related to changes in the level of low income. This section examines in more detail the relationship between the neighbourhood concentration of visible minorities and Aboriginals over the decade, and changes in poverty and deprivation for the four most segregated CMAs: Toronto, Vancouver, Winnipeg and Montréal. These are the only CMAs

Table 5
Average household income ratios by neighbourhood type, 2001

CMA	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghettos
<i>Segregated/segmented</i>						
Toronto	125 (164)	95 (124)	83 (108)	68 (89)	92 (120)	-
Vancouver	116 (125)	98 (105)	90 (97)	85 (91)	87 (93)	-
Winnipeg	111 (103)	85 (79)	59 (55)	48 (45)	-	-
Montréal	105 (97)	87 (80)	62 (57)	52 (48)	-	-
<i>Relatively integrated</i>						
Calgary	103 (131)	92 (118)	93 (119)	-	-	-
Ottawa-Gatineau	104 (127)	91 (111)	69 (84)	-	-	-
Abbotsford	99 (96)	100 (97)	112 (108)	-	-	-
Saskatoon	107 (97)	74 (68)	53 (48)	-	-	-
Edmonton	107 (114)	93 (99)	42 (45)	-	-	-
Windsor	113 (128)	70 (79)	-	-	-	-
<i>Relatively homogenous</i>						
Hamilton	105 (115)	64 (71)	-	-	-	-
Regina	106 (103)	54 (52)	-	-	-	-
London	101 (102)	88 (89)	-	-	-	-
Victoria	100 (96)	95 (91)	-	-	-	-
Kitchener-Waterloo	100 (113)	94 (106)	-	-	-	-
Halifax	101 (98)	73 (70)	-	-	-	-
Oshawa	100 (119)	112 (134)	-	-	-	-
Thunder Bay	100 (96)	102 (98)	-	-	-	-
Québec	100 (86)	98 (84)	-	-	-	-
Kingston	100 (99)	66 (66)	-	-	-	-
St. Catharines	100 (95)	65 (62)	-	-	-	-

SOURCE: Calculated by the authors from Census of Canada, 2001.

NOTES: Figures are the ratio of average household income relative to each CMA mean, followed by (in parenthesis) the ratio of average household income relative to the national mean.

with a diversity of neighbourhood types and thus the only CMAs that lend themselves to analysis of changes in their neighbourhood type structure over time.

Toronto stands out as the CMA with both the largest visible minority population and the greatest proportion of its population in highly concentrated tracts (mixed-minority and polarized). The roughly 7 percent growth in population share for visible minorities has translated into a sharp increase in the number of pluralism, mixed, and polarized tracts since 1991 (Table 7). In the same period, the proportion of the population living in 'isolated' neighbourhoods declined by half. While there were no 'polarized' tracts in 1991, by 2001 there were 29 such tracts. Table 7 shows that it is Southeast Asians (mostly Vietnamese), followed by South Asians and blacks, who were most likely to be segregated in 'polarized' and 'mixed' tracts by 2001. Aboriginals, on the other hand, were more likely than all groups except whites to live in 'isolated' or 'non-isolated' host communities.

Visible minorities make up roughly the same proportion of the population in the Vancouver CMA as in the Toronto CMA. Yet, Vancouver is slightly less segmented than Toronto, by virtue of having a smaller proportion of its population living in both isolated and mixed/polarized tracts in 2001 (Table 8). The growth of visible minority populations has also translated into increasing minority concentration in Vancouver, except that the trend is towards polarized rather than mixed tracts. As in Toronto, it is South Asians that are more likely to live in both polarized and mixed neighbourhoods, followed by all East Asians and then Filipinos. Other visible minority groups, including blacks, Arabs/West Asians and Aboriginals, were disproportionately likely to live in isolated and non-isolated neighbourhoods.

The context is different in Winnipeg, where Canada's First Nations peoples are the dominant 'minority' group (Table 9). Slow growth in Winnipeg over the 1990s has meant that its

Table 6

Incidence of low income (% under the LICO) for all neighbourhoods in each neighbourhood type, and number of concentrated low-income tracts in each category, 2001

CMA	Total	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto
<i>Segregated</i>							
Toronto	16.8 (38)	9.1 (0)	16.3 (5)	22.2 (10)	31.7 (21)	21.2 (2)	-
Vancouver	21.3 (13)	12.2 (0)	21.8 (7)	26.7 (5)	27.9 (0)	27.6 (1)	-
Winnipeg	19.4 (18)	13.6 (1)	26.5 (9)	43.9 (6)	55.5 (2)	-	-
Montréal	22.3 (128)	18.6 (56)	31.3 (48)	47.8 (20)	58.2 (4)	-	-
<i>Relatively integrated</i>							
Calgary	14.0 (0)	12.6 (0)	17.3 (0)	13.5 (0)	-	-	-
Ottawa-Gatineau	14.9 (14)	11.6 (4)	21.8 (7)	39.1 (3)	-	-	-
Abbotsford	13.5 (0)	13.3 (0)	14.0 (0)	12.3 (0)	-	-	-
Saskatoon	18.0 (3)	14.5 (0)	30.3 (2)	55.5 (1)	-	-	-
Edmonton	16.1 (4)	11.8 (0)	20.1 (3)	54.4 (1)	-	-	-
Windsor	13.3 (3)	8.5 (0)	26.1 (3)	-	-	-	-
<i>Relatively homogenous</i>							
Hamilton	16.8 (15)	14.4 (5)	36.5 (10)	-	-	-	-
Regina	15.5 (5)	12.3 (1)	43.7 (4)	-	-	-	-
London	15.1 (2)	14.2 (1)	23.1 (1)	-	-	-	-
Victoria	14.4 (1)	14.0 (0)	18.7 (1)	-	-	-	-
Kitchener-Waterloo	11.3 (0)	11.1 (0)	13.8 (0)	-	-	-	-
Halifax	15.6 (3)	14.9 (2)	31.7 (1)	-	-	-	-
Oshawa	9.4 (0)	9.5 (0)	6.0 (0)	-	-	-	-
Thunder Bay	14.2 (1)	14.3 (1)	5.5 (0)	-	-	-	-
Québec	18.9 (23)	18.9 (23)	25.8 (0)	-	-	-	-
Kingston	15.1 (4)	14.8 (3)	47.0 (1)	-	-	-	-
St. Catharines	13.2 (0)	13.1 (0)	31.2 (0)	-	-	-	-

SOURCE: Calculated by the authors from Census of Canada, 2001.

NOTES: Figures show the incidence of low income (% of the population living in private households with incomes below the low income cutoff [LICO] for each neighbourhood type), followed by (in parenthesis) the number of census tracts with an incidence of low income greater or equal to 40%, indicating high levels of poverty.

social structure has been far less affected by new immigration than the other three CMAs, with non-Aboriginal minority groups expanding more slowly. Aboriginals would seem to have significantly increased their share, though the change in measurement makes comparisons difficult (3.3 percent of the population are categorized as single-origin Aboriginal ethnicity in 1991, while 8.3 percent cited Aboriginal identity and 9.5 percent cited Aboriginal origin in 2001). The Aboriginal-identity population in 2001 was twice that of Filipinos, the second largest minority group and approximately five times more numerous than either blacks or Chinese (third and fourth largest, respectively). However, while there was a moderate shift out of isolated tracts into other neighbourhood types, there were still only two mixed and no polarized tracts in 2001 and Aboriginals remained less segregated than ei-

ther the Chinese or Filipinos. These results support similar conclusions from other researchers (Peters 2005) that there is little evidence of increasing isolation or ghetto formation among Aboriginals as a whole in Winnipeg. Montréal saw visible minorities' share of the CMA population grow from about 9.4 percent to 13.4 percent over the decade. This accompanied a decline in isolated neighbourhoods and the birth of 'pluralism' and 'mixed-minority' neighbourhoods. Filipinos and South Asians were the most segregated groups by 2001, followed by the Chinese. Again, Aboriginals are far less segregated than most other groups, but their numbers are smaller (Table 10).

There is a clear spatial clustering of tracts of each type in each CMA, although the patterns differ significantly by CMA due to local history, the geography of immigrant settlement

Table 7

Change in the percentage distribution of minorities across neighbourhood types—Toronto, 1991 and 2001

1991 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	70.4	27.1	2.3	0.1	0	0	100
All visible minorities	33.1	49.4	15.5	1.8	0	0	100
East Asian*	30.0	48.9	18.9	1.7	0	0	100
Chinese	37.7	54.6	6.8	0.1	0	0	100
SE Asian	25.8	49.7	22.1	2.1	0	0	100
South Asian	30.4	55.9	11.4	2.0	0	0	100
Black	32.2	56.5	9.6	1.2	0	0	100
Filipino	39.4	48.8	9.8	1.5	0	0	100
Latin American	41.0	48.8	8.9	0.9	0	0	100
Arab/W. Asian	44.8	48.4	4.0	0	0	0	100
Aboriginal	58.9	34.4	1.7	0.2	0	0	100
Total	63.3	31.7	4.4	0.4	0	0	100
2001 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	42.2	42.4	11.9	2.5	1.1	0	100
All visible minorities	8.1	36.8	30.1	17.7	7.2	0	100
East Asian*	8.7	33.7	30.1	14.4	13.0	0	100
Chinese	10.3	39.8	31.4	15.6	2.6	0	100
SE Asian	6.8	31.0	30.8	15.4	15.9	0	100
South Asian	6.0	31.7	32.7	22.6	7.1	0	100
Black	7.5	40.8	29.0	19.3	3.2	0	100
Filipino	9.3	44.7	27.1	15.7	3.0	0	100
Latin American	11.4	50.9	24.7	11.3	1.5	0	100
Arab/W. Asian	11.2	39.9	31.7	13.9	3.1	0	100
Aboriginal	34.2	47.2	12.7	3.9	1.4	0	100
Total	29.6	40.3	18.5	8.0	3.3	0	100

SOURCE: Calculated by the authors from Census of Canada, 1991, 2001.

NOTES: (*) East Asians refer here to Chinese, Southeast Asian (Vietnamese, Laotian, Thai, Burmese, Malaysian, Indonesian), Korean, Japanese. Row totals may not add to 100% due to rounding.

and development in each locality and the effects of public policies. In Toronto and Vancouver, visible minorities show strong concentrations in the suburbs, in accordance with previously noted trends showing increasing settlement of immigrants in these areas (Ray *et al.* 1997; Walks 2001). In contrast, in Winnipeg, Aboriginals and visible minorities are still clustered in central neighbourhoods. Montréal shows a pattern of decentralized clusters both within the city and in inner-suburban areas, but virtually all on the Island of Montréal.

The distribution of polarized tracts in Vancouver reveals two distinct clusters, with the Chinese found in Richmond and southeast Vancouver city, while South Asians are clustered in central Surrey. Mixed-minority tracts fill up much of the space between them. The geography of these two groups is different in Toronto owing in part to their very different times of arrival.

Polarized tracts in which the Chinese are dominant are clustered in northern Scarborough and west Markham, areas with a high proportion of owner-occupied housing, whereas polarized tracts dominated by South Asians are decentralized, peppered across the inner and outer suburbs in vastly different types of neighbourhoods. Mixed-minority tracts, it should be noted, are mostly found in districts with the highest concentrations of social housing and high-rise rental apartment housing. In most cases, isolated host communities also have their own distinct geography, following closely sectors of high income (see Bourne 1993; Walks 2001).

Minority neighbourhoods and concentrated poverty

Is the concentration of visible minorities in minority-majority neighbourhoods associated with an increase in poverty? To answer this

Table 8

Change in the percentage distribution of minorities across neighbourhood types—Vancouver, 1991 and 2001

1991 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	69.5	26.6	3.7	0	0.2	0	100
All visible minorities	29.2	49.1	19.5	0	1.9	0	100
East Asian*	23.8	52.1	21.2	0	2.8	0	100
Chinese	18.3	49.5	26.7	0	5.2	0	100
SE Asian	20.6	53.5	22.8	0	3.1	0	100
South Asian	34.7	45.3	19.8	0	0	0	100
Black	53.7	35.8	7.3	0	0.4	0	100
Filipino	37.0	43.7	18.7	0	0.3	0	100
Latin American	45.2	40.6	13.1	0	0.2	0	100
Arab/W. Asian	47.7	47.7	0	0	0	0	100
Aboriginal	45.0	45.4	6.7	0	1.7	0	100
Total	61.5	31.1	6.9	0	0.5	0	100
2001 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	39.2	43.0	14.2	0.9	2.8	0	100
All visible minorities	8.2	36.5	34.0	5.8	15.4	0	100
East Asian*	7.6	33.4	38.5	5.3	15.2	0	100
Chinese	7.4	33.2	35.5	7.6	16.6	0	100
SE Asian	6.0	30.3	41.0	5.7	16.9	0	100
South Asian	6.7	37.1	26.9	8.1	21.1	0	100
Black	16.7	49.2	24.6	2.1	7.7	0	100
Filipino	7.4	40.9	32.0	7.4	12.2	0	100
Latin American	14.1	43.9	30.3	4.3	7.6	0	100
Arab/W. Asian	14.9	59.4	21.1	1.1	3.2	0	100
Aboriginal	25.7	48.5	19.9	1.1	4.6	0	100
Total	27.6	40.7	21.5	2.7	7.4	0	100

SOURCE: Calculated by the authors from Census of Canada, 1991, 2001.

NOTES: (*) East Asians refer here to Chinese, Southeast Asian (Vietnamese, Laotian, Thai, Burmese, Malaysian, Indonesian), Korean, Japanese. Row totals may not add to 100% due to rounding.

question, changes in four basic indicators—average household income, incidence of low income (proportion below the LICO), unemployment level and the proportion paying more than 30 percent of their income on rent—are examined for each neighbourhood type, using the neighbourhood typology for 2001. Differences between polarized tracts composed mainly of Chinese and South Asians are further highlighted in order to show the potentially divergent trajectories of these groups in light of their very different settlement patterns. Table 11 summarizes these changes.

The results do not all point in the same direction. On the one hand, there is a positive relationship between growth in low income, declining income levels and the concentration of minorities. In each of the four CMAs examined, average household incomes tended to rise in the isolated host communities, but fall in most

other neighbourhood types, a trend mirrored by shifts in low-income levels (with the exception of Winnipeg). However, there are distinct differences between Chinese-dominant polarized tracts and polarized tracts composed mainly of South Asians. In Vancouver, the latter witnessed the largest decline in average income and the fastest growth in low-income rates, whereas in Toronto it was the former that saw the greatest income declines (but to a level still above the CMA average). On the whole, the polarized tracts suffered less than did mixed-minority tracts over the decade.

Shifts in unemployment and housing affordability show a less clear relationship with neighbourhood type. With the exception of Montréal, the jobs rebound during the late 1990s seems to have benefited isolated tracts to a lesser extent than non-isolated, pluralism and mixed-minority neighbourhoods, although the former

Table 9

Change in the percentage distribution of minorities across neighbourhood types—Winnipeg, 1991 and 2001

1991 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	87.1	11.6	1.3	0	0	0	100
All visible minorities	49.3	38.6	11.6	0	0	0	100
East Asian*	63.5	22.1	13.5	0	0	0	100
Chinese	25.1	37.9	35.4	0	0	0	100
SE Asian	70.4	19.6	9.3	0	0	0	100
South Asian	63.8	33.3	1.7	0	0	0	100
Black	71.6	22.9	3.7	0	0	0	100
Filipino	30.7	57.5	11.8	0	0	0	100
Latin American	76.6	18.2	4.7	0	0	0	100
Arab/W. Asian	52.6	42.1	0	0	0	0	100
Aboriginal	41.1	42.1	16.6	0	0	0	100
Total	81.7	16.1	2.5	0	0	0	100
2001 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	74.0	22.5	3.1	0.4	0	0	100
All visible minorities	32.5	46.2	17.0	4.2	0	0	100
East Asian*	36.9	41.7	14.9	6.7	0	0	100
Chinese	21.5	36.9	29.2	12.8	0	0	100
SE Asian	37.0	46.9	10.8	5.3	0	0	100
South Asian	38.3	48.9	10.9	1.7	0	0	100
Black	47.4	39.0	11.3	1.7	0	0	100
Filipino	16.5	53.6	25.0	4.9	0	0	100
Latin American	53.3	36.6	7.8	2.3	0	0	100
Arab/W. Asian	48.6	36.5	10.3	4.6	0	0	100
Aboriginal	40.1	38.7	16.8	4.3	0	0	100
Total	66.0	26.8	5.9	1.2	0	0	100

SOURCE: Calculated by the authors from Census of Canada, 1991, 2001.

NOTES: (*) East Asians refer here to Chinese, Southeast Asian (Vietnamese, Laotian, Thai, Burmese, Malaysian, Indonesian), Korean, Japanese. Row totals may not add to 100% due to rounding.

still enjoyed lower unemployment levels in 2001 than the others. While polarized neighbourhoods in Vancouver saw their unemployment rates fall more slowly and ended up with higher rates overall, Chinese polarized tracts in Toronto saw little change in unemployment. Meanwhile, the proportion of residents who pay more than 30 percent of their income in rent more than doubled in each of the four most segregated CMAs, with affordability problems growing most slowly in the 'isolated' neighbourhoods and affordability stress rising most quickly in 'mixed' neighbourhoods. Again, wide differences are found between polarized tracts in Toronto and Vancouver, with high levels of housing inaffordability found in South Asian-dominant areas in the former and in Chinese tracts (and non-isolated neighbourhoods) in the latter. Such differences partly reflect the relative degrees of suburbanization and home

ownership among these groups in the two CMAs. In Toronto, the Chinese population is far more suburbanized and resides in areas with higher levels of home ownership, while in Vancouver these trends are more prevalent among South Asians.

Such findings suggest that it is the increasingly concentrated visible minority neighbourhoods that suffer disproportionately from factors related to poverty; yet the relationships are uneven across and within CMAs. The 'pluralism' and 'mixed' neighbourhoods would seem to be worst off, but they also bounced back quicker in terms of employment over the decade. The lack of a clear relationship between the most polarized tracts and the poverty indicators suggests that high levels of racial concentration do not automatically imply greater neighbourhood poverty, at least at this scale of analysis.

Table 10

Change in the percentage distribution of minorities across neighbourhood types—Montréal, 1991 and 2001

1991							
Montréal 1991 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	96.5	3.5	0	0	0	0	100
All visible minorities	81.0	18.0	0	0	0	0	100
East Asian*	76.3	22.2	0	0	0	0	100
Chinese	72.8	25.9	0	0	0	0	100
SE Asian	76.9	21.5	0	0	0	0	100
South Asian	74.5	24.5	0	0	0	0	100
Black	83.4	15.8	0	0	0	0	100
Filipino	63.3	35.4	0	0	0	0	100
Latin American	87.4	12.0	0	0	0	0	100
Arab/W. Asian	82.5	17.0	0	0	0	0	100
Aboriginal	96.7	2.0	0	0	0	0	100
Total	95.6	4.4	0	0	0	0	100
2001							
Montréal 2001 (%)	Isolated	Non-isolated	Pluralism	Mixed	Polarized	Ghetto	Total
White	82.2	16.1	1.6	0.1	0	0	100
All visible minorities	39.1	44.0	13.4	3.2	0	0	100
East Asian*	41.1	42.3	12.1	3.6	0	0	100
Chinese	42.7	35.9	14.8	6.6	0	0	100
SE Asian	38.2	47.7	10.9	1.7	0	0	100
South Asian	22.1	40.3	32.0	5.4	0	0	100
Black	42.0	44.7	10.5	2.7	0	0	100
Filipino	19.3	41.6	27.2	12.1	0	0	100
Latin American	47.6	41.9	8.7	1.6	0	0	100
Arab/W. Asian	42.4	48.8	7.3	1.3	0	0	100
Aboriginal	80.6	16.2	1.8	0.2	0	0	100
Total	76.2	19.8	3.1	0.6	0	0	100

SOURCE: Calculated by the authors from Census of Canada, 1991, 2001.

NOTES: (*) East Asians refer here to Chinese, Southeast Asian (Vietnamese, Laotian, Thai, Burmese, Malaysian, Indonesian), Korean, Japanese. Row totals may not add to 100% due to rounding.

The new social ecology of poverty?

Our analysis further addresses the ecological relationship between visible minority concentration and levels of neighbourhood poverty when compared to other pertinent factors identified in the literature, such as the experience of recent immigration, housing market conditions and tenure stratification (Ray and Moore 1991; Fong 1996; Hulchanski 2001; Fong and Wilkes 2003; White *et al.* 2003; Myles and Hou 2004). The OLS regression coefficients in Table 12 show the predicted percentage increase in the incidence of low income associated with each percentage point increase in the neighbourhood proportion of each visible minority group, the proportion of recent immigrants (arriving since 1991), the type of housing stock, and the percentage increment associated with each neighbourhood type

(Table 12). The importance of each set of variables in separately accounting for the spatial patterning of low income is identified by the increment in the R^2 statistic attained when the set of variables is added to the model (while holding the others constant).

Across the four CMAs, levels of low income are clearly associated with concentrations of both recent immigrants and concentrations of Aboriginals and certain other minority groups, namely blacks, Latin Americans, and in Vancouver and Toronto, Southeast Asians. The relationship is particularly strong and consistent for Aboriginals. There is a far weaker relationship between the level of low income and the five types of concentrated neighbourhood. A strong and statistically significant relationship with low income in the expected direction is only found for the

Table 11
Change in poverty and deprivation measures, by neighbourhood type, 1991-2001

			Isolated	Non-Isolated	Pluralism	Mixed	Polarized- Chinese	Polarized- South Asian	Total
TORONTO	Income ratio (CMA=100)	1991	115.6	96.6	91.3	75.6	117.2	86.1	100
		2001	125.3	94.7	82.8	67.7	100.5	79.4	100
		<i>Change</i>	9.7	-1.9	-8.5	-7.9	-16.7	-6.7	0
	Low income (%)	1991	8.8	14.3	17.1	24.6	13.6	14.3	14.1
		2001	9.1	16.3	22.2	31.7	19.3	22.2	16.8
		<i>Change</i>	0.3	2.0	5.1	7.1	5.7	7.9	2.7
	Unemployment (%)	1991	6.2	8.5	9.6	12.1	7.8	9.8	8.5
		2001	4.4	5.9	7.4	9.2	7.4	7.8	5.9
		<i>Change</i>	-1.8	-2.6	-2.2	-2.9	-0.4	-2	-2.6
	Rent > 30% (%)	1991	3.7	5.6	7.4	10.3	4.8	7.1	5.7
		2001	8.9	13.0	14.5	18.9	5.6	14.0	12.2
		<i>Change</i>	5.2	7.4	7.1	8.6	0.8	6.9	6.5
VANCOUVER	Income ratio (CMA=100)	1991	109.4	97.1	93.9	96.5	91.7	106.8	100
		2001	116.5	97.7	90.1	84.8	85.8	89.4	100
		<i>Change</i>	7.1	0.6	-3.8	-11.7	-5.9	-17.4	0
	Low income (%)	1991	11.6	18.4	21.6	20.6	23.6	15.9	17.6
		2001	12.2	21.8	26.7	27.9	28.7	23.8	21.3
		<i>Change</i>	0.6	3.4	5.1	7.3	5.1	7.9	3.7
	Unemployment (%)	1991	7.2	9.8	10.2	12.7	10.4	11.5	9.1
		2001	5.4	7.5	8.5	9.5	9.4	10.0	7.2
		<i>Change</i>	-1.8	-2.3	-1.7	-3.2	-1	-1.5	-1.9
	Rent > 30% (%)	1991	4.4	6.2	7.1	6.7	6.6	5.5	5.9
		2001	10.0	15.1	13.6	13.0	12.9	11.6	13.1
		<i>Change</i>	5.6	8.9	6.5	6.3	6.3	6.1	7.2
WINNIPEG	Income ratio (CMA=100)	1991	110.1	86.4	59.9	48.9	-	-	100
		2001	110.8	84.5	59.3	48.1	-	-	100
		<i>Change</i>	0.7	-1.9	-0.6	-0.8	-	-	0
	Low income (%)	1991	13.4	26.7	45.3	58.3	-	-	19.5
		2001	13.6	26.5	43.9	55.5	-	-	19.4
		<i>Change</i>	0.2	-0.2	-1.4	-2.8	-	-	-0.1
	Unemployment (%)	1991	6.9	10.7	17.6	21.9	-	-	8.5
		2001	4.7	7.4	11.7	13.6	-	-	5.6
		<i>Change</i>	-2.2	-3.3	-5.9	-8.3	-	-	-2.9
	Rent > 30% (%)	1991	3.2	6.7	10.7	16.4	-	-	4.7
		2001	8.2	14.0	22.9	25.9	-	-	10.8
		<i>Change</i>	5	7.3	12.2	9.5	-	-	6.1
MONTRÉAL	Income ratio (CMA=100)	1991	103.6	92.6	63.4	50.9	-	-	100
		2001	105.4	86.5	62.1	51.8	-	-	100
		<i>Change</i>	1.8	-6.1	-1.3	0.9	-	-	0
	Low Income (%)	1991	17.2	25.8	44.6	57.6	-	-	19.8
		2001	18.6	31.3	47.8	58.2	-	-	22.3
		<i>Change</i>	1.4	5.5	3.2	0.6	-	-	2.5
	Unemployment (%)	1991	10.9	13.9	20.5	22.6	-	-	11.6
		2001	6.9	10.5	16.6	19.9	-	-	7.5
		<i>Change</i>	-4.0	-3.4	-3.9	-2.7	-	-	-4.1
	Rent > 30% (%)	1991	5.3	8.0	12.7	16.5	-	-	6.1
		2001	12.6	19.8	24.0	27.9	-	-	14.5
		<i>Change</i>	7.3	11.8	11.3	11.4	-	-	8.4

SOURCE: Calculated by the authors from Census of Canada, 1991, 2001.

NOTES: Neighbourhood types are those as classified in 2001.

Table 12

Effect of minority concentration, neighbourhood type, and housing mix on low income level, by census tract, 2001

	Toronto	Vancouver	Winnipeg	Montréal
<i>Concentration of minorities</i>				
All visible minorities (%)	-0.355 (0.101)***	-0.175 (0.216)	-0.512 (0.338)	-0.120 (0.131)
Chinese (%)	0.453 (0.104)***	0.330 (0.224)	0.224 (0.455)	0.625 (0.261)*
Southeast Asian (%)	0.989 (0.162)***	1.038 (0.277)***	0.407 (0.500)	0.059 (0.224)
South Asian (%)	0.327 (0.111)**	0.208 (0.216)	-0.190 (0.397)	0.378 (0.149)*
Black (%)	0.852 (0.113)***	1.496 (0.456)***	0.796 (0.363)*	0.559 (0.139)***
Filipino (%)	0.209 (0.125)	-0.140 (0.259)	0.628 (0.345)	0.070 (0.191)
Latin American (%)	0.649 (0.145)***	0.776 (0.380)*	2.365 (0.569)***	0.948 (0.209)***
Arab/West Asian (%)	0.423 (0.138)**	0.313 (0.246)	2.049 (1.184)	0.190 (0.340)
Aboriginal identity (%)	1.753 (0.269)***	1.587 (0.159)***	0.996 (0.055)***	3.245 (0.542)***
<i>Recent immigrant status</i>				
Immigrated 1991–2001 (%)	0.432 (0.038)***	0.340 (0.066)***	0.528 (0.233)*	0.230 (0.108)*
<i>Neighbourhood types</i>				
Non-isolated	-0.818 (0.679)	0.298 (0.988)	1.999 (1.932)	-1.315 (1.218)
Pluralism	-1.893 (1.247)	-0.370 (1.670)	-2.860 (5.424)	0.979 (3.036)
Mixed	0.125 (1.770)	0.468 (2.897)	na	10.337 (5.127)*
Polarized — Chinese dominant	-6.945 (2.257)**	1.605 (2.521)	na	na
Polarized — S. Asian dominant	-3.802 (2.599)	-2.576 (3.309)	na	na
<i>Housing types</i>				
Semi-detached/row houses (%)	0.017 (0.011)	0.022 (0.027)	0.032 (0.040)	-0.124 (0.030)***
Apts. < 5 stories (%)	0.192 (0.015)***	0.147 (0.015)***	0.223 (0.031)***	0.224 (0.011)***
Apts. > 5 stories (%)	0.123 (0.009)***	0.166 (0.018)***	0.222 (0.029)***	0.206 (0.020)***
<i>Model statistics</i>				
(Constant)	0.863 (0.425)*	1.131 (0.837)	2.436 (0.757)**	5.514 (0.687)***
R ² , full model	0.745	0.777	0.919	0.717
R ² , % minority and Aboriginals only	0.108	0.110	0.377	0.035
R ² , % recent immigrants only	0.025	0.048	0.007	0.004
R ² , neighbourhood type only	0.007	0.006	0.003	0.012
R ² , housing type only	0.123	0.127	0.066	0.207
R ² , overlap (interaction)	0.482	0.486	0.466	0.459

SOURCE: Calculated by the authors from Census of Canada, 2001.

NOTES: Coefficients are the results of OLS regression, with incidence of low income (% population in private households) as the dependant variable. Coefficients show the percentage increase in the incidence of low income associated with each of the independent variables (either a 1 percent increase, or in the case of neighbourhood type, the difference in the low income level associated with the presence of each neighbourhood type in relation to the low income level in isolated host communities). Standard errors are shown in parenthesis. Significance = * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

mixed tracts in Montréal. There is also a statistically significant relationship with polarized tracts composed mostly of Chinese in Toronto, but the relationship is *negative* (polarized Chinese tracts in Toronto are associated with an approximately 7 percent *lower* incidence of low income). This supports Myles and Hou's (2004) argument that wealthy Chinese have been successful in their 'locational attainment' goals and may be in the process of creating 'ethnic communities' in suburban locales in Toronto. However, the same relationship is not replicated in Vancouver or elsewhere, suggesting that Toronto might be an anomaly in this regard. A negative relationship

was also found between living in a polarized tract dominated by South Asians and low income in both CMAs, which goes some way toward refuting the hypothesized association between a high level of racial concentration and poverty, but the relationship in this case is not statistically significant.

Finally, and importantly, a strong and consistent relationship is found between concentrations of apartment housing and higher levels of low income. Examination of the proportion of the variance accounted for by each set of variables independent of the others (the R² coefficients) reveals that the spatial concentration of apartments

is the most important single factor predicting the spatial patterning of neighbourhood low income, followed by the individual minority group proportions, the proportion recent immigrants, and lastly, neighbourhood type. The latter only accounts for, at most, 4.8 percent of the variation in low income levels (in Vancouver), suggesting that this method of identifying visible minority concentrations is relatively marginal to understanding the neighbourhood distribution and concentration of poverty in Canadian urban areas.

This analysis suggests that it is the distribution of low-rent apartment housing (particularly the concentration of high-rise private rental apartments and social housing)⁹ and increasing affordability problems among new immigrants, rather than the concentration of visible minority populations per se, that are most responsible for shaping the patterning of neighbourhood poverty, at least in the three largest CMAs.¹⁰ This observation is supported by the relatively strong correlation between the proportion of visible minorities and the proportion of apartments greater than five stories in 2001. With increasing inequality among visible minorities and recent immigrants, it is likely that the poorest among each minority group are filling up the lowest cost and least desirable rental housing. While such a hypothesis cannot be examined directly here due to data limitations, it is supported by recent evidence of both growing income polarization and the concentration of recent immigrants in rental housing (Schellenberg 2004).

The increasing concentration of low-income minorities in such apartment districts further illustrates how segregation levels can decline for each minority group separately, while growing for visible minorities as a whole (Table 3). As the level of inequality within minority groups increases, the

odds that the poorest end up becoming more segregated in the lowest-cost areas also increases, whereas wealthier members of each group are able to afford to own their own home and with it potentially a more desirable location for the formation of more homogenous 'ethnic communities'.

Conclusion

This study has found that while visible minorities and Aboriginals are becoming more numerous in Canadian urban areas, there is little evidence that these trends are leading towards the formation of ghettos. Using a neighbourhood classification developed for systematically comparing segregation and concentration levels in cities of the world, it is found that the majority of Canadian urban areas reveal degrees of segregation lower than many cities in the United States and Britain, although the four most segregated CMAs, Toronto, Vancouver, Winnipeg and Montréal, have levels of spatial polarization higher than the largest cities in either Britain or Australia. This observation does not suggest an end to processes of spatial assimilation or the growth of social exclusion, although it may reveal for certain groups (particularly the Chinese) a new patterning of cultural pluralism marked by the emergence of 'ethnic communities'. It is still somewhat early to draw this conclusion, and the situation is of course still evolving.

Examination of low income levels across different neighbourhoods suggests that the association of low income with high levels of minority concentration only holds for some urban areas and only for certain minority groups. The association between low-income and minority concentration is strongest for Aboriginals, blacks and Latin Americans. Yet, these groups were not the most segregated, nor were they the most concentrated in minority-majority neighbourhoods. The most polarized census tracts had incomes higher than those neighbourhoods with more mixed populations and lower levels of concentration. Examination of various poverty indicators over time suggests that although neighbourhoods with higher visible minority concentrations became worse off in general, the direction of changes is not consistent across indicators, or across space.

9 Social housing is of critical importance in this discussion, though the number of dwelling units involved is relatively small compared to the market rental sector. In the Toronto CMA, social housing (allowing for definitional problems) totals only seven percent of the total housing stock and roughly 20 percent of all rental housing units. Likewise, in the City of Montréal it makes up roughly eight percent of the total stock (Germain and Rose 2000, 178).

10 The exception is Winnipeg, where the concentration of visible minorities and Aboriginals is a stronger predictor of the geography of low income than is the concentration of apartments, as indicated by the R square coefficients for each set of variables.

The system of classifying neighbourhoods by degree of visible minority concentration was not found to account for much of the variation in low income levels. Instead, as Frisken *et al.* (1997) suggested earlier, it would appear that increasing inequality within individual minority group populations coupled with the general growth in such populations has meant that the poorest segments are becoming concentrated in low-cost rental districts containing high-rise apartments, including the social housing stock. The implications for policy thus point to the need for countering growing income inequality and addressing the lack of affordable rental housing.

This research thus questions the applicability of the common discourse on ghettoization to the Canadian context. Not only is there little evidence of ghetto formation along U.S. lines, the neighbourhoods closest to this concept—clusters of Chinese majority census tracts in suburban Toronto—have above-average incomes and rates of home ownership. Levels of segregation for most minority groups have declined, particularly for the two minority groups (blacks and Aborigines) that were found to have some of the strongest associations with elevated low income levels and for which the discourse of ghettoization in Canada has most commonly been applied. The one exception is the Toronto CMA, where segregation levels for these two groups as well as others have increased. The Toronto CMA is also exceptional in having wealthy Chinese-dominant neighbourhoods and for its very high levels of immigration. If future trends indicate any movement towards increasing segregation and/or ghettoization, or alternatively further evidence of newer forms of ethnic enclaves (Myles and Hou 2004), it would seem that Toronto would be the first place to look.

Even so, current trends in Toronto hardly fit with common notions of ghettoization and the research examined here suggests that the confluence of increasing income inequality and the particular geography of housing in each given place, including that of tenure, form and price, are more important in determining overall patterns of segregation. Given the complexity of the results outlined above and the wide diversity within the visible minority population, a more nuanced appreciation of neighbourhood dynamics and housing stock changes is warranted for a better

understanding of the directions of social changes in Canadian urban areas.

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