

HOUSING AND LOCATION OF YOUNG ADULTS, THEN AND NOW:
CONSEQUENCES OF URBAN RESTRUCTURING IN MONTREAL AND
VANCOUVER

by

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Abstract

Young adults, 25 to 34 years of age, decide on housing, residential location and commuting patterns in an altered context from when the same age cohort entered housing markets in the early 1980s. Neo-liberalization reduced the availability of low-cost, rental housing, and post-Fordist restructuring increased labour market inequality. Societal changes contributed to decreases in household size and delay in child bearing. This thesis asks how the contextual changes factor into young adults' housing decisions in the Montreal and Vancouver metropolitan areas where restructuring occurred differently, and discusses implications for equity and sustainability. The young adult residential ecology is increasingly concentrated into higher density and amenity-rich neighbourhoods, particularly near transit in Vancouver. The trends are explained by shifts toward the service sector, declining real incomes and growing inter-generational wage inequalities that reduce young adults' spending power in housing markets, especially in Vancouver with its speculative land market and wealthy immigrants. Holding other characteristics constant, young adults in Vancouver are less likely to reside in single-family dwellings than detached, row or apartment units. In Montreal the trend is toward single-family living. Commuting distances and modes are similar between Vancouver and Montreal but multiple-person households and those with children have longer and more automobile-oriented commutes in Vancouver. The changes reflect higher increases in housing costs and densities in central areas in Vancouver. Montreal has more sustained government support for housing, a larger rental sector and therefore less rampant increases in housing costs. The restructuring of Vancouver's housing market makes it more difficult than in Montreal to keep accessible the more 'sustainable' locations to households of all sizes. Household structure and life-cycle stage, not social status alone, determine location and the commute. A greater sustainability challenge in Montreal will be to stem the shifts toward ownership of single-family dwellings. Generally, young adults' housing outcomes are more evidently shaped by their position in the labour market, which is increasingly determined by educational attainment. The thesis works conceptually within structuration theory, noting how contexts shape demand but are themselves re-shaped by changing demand. Both contextual and neo-classical arguments have relevance to the overall argument.

Preface

Chapter Three is in part a modified version of an article that has been previously published by the author, with Andrejs Skaburskis, and is reprinted with permission from *Urban Geography*, Vol. 31, No. 6, pp. 724-749. ©Bellwether Publishing, Ltd., 8640 Guilford Road, Columbia, MD 21046. All rights reserved. The student, Markus Moos, identified the research question, prepared the manuscript and conducted the majority of the analysis of research data and writing. Input from the co-author relates mostly to questions of research design and use of data from previous collaborative work.

The thesis also builds on published research conducted by the student as part of his larger research project. These publications are acknowledged below for their conceptual overlap and use of similar literatures and methods in the research. For instance, the statistical models estimating permanent income and housing consumption included in Chapters Two and Six, and the literature describing the approach, are derived and substantially modified versions from research previously published:

Moos, M. & Skaburskis, A. (2008). The probability of single-family dwelling occupancy: Comparing home workers and commuters in Canadian cities. *Journal of Planning Education and Research*, 27(3), 319-340. ©SAGE Publications Inc. All rights reserved. <http://jpe.sagepub.com/content/27/3/319>

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Quastel, N., Moos, M. & Lynch, N. (Under review). Sustainability as density and the return of the social: The case of Vancouver, British Columbia. *Urban Geography*.

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Dedication

- To Tante Hedy
for always being an inspiration to speak up for what we believe is right
and just

Chapter One: Introduction

“Urban Canada, at all spatial scales, is being transformed through the intersection of changes taking place in the economy, trade patterns, technology, the demographic structure and immigration, as well as through public policy.” (Bourne, 2007a, p. 3)

This thesis is about changes in residential location and housing decisions due to structural transformations in urban housing markets. There have been in recent decades substantive changes in the spatial structure and social composition of Canadian metropolitan areas. This has raised important questions regarding the emerging character of housing markets and the socio-spatial organization of cities (Bourne, 2007b; Bunting, Filion & Walker, 2010). Most population growth, primarily through immigration, has occurred in the largest cities, contributing to their expanding populations (Bourne, 2007a). Urban growth has materialized in two general ways, the continuing expansion of suburbs and the re-development of central cities, although with increasing internal diversity in structure and socio-economic composition (Bourne & Rose, 2001; Smith, 2006; Ley & Frost, 2006). Growth contributed to escalating housing prices, particularly in the inner cities revitalized by the forces of gentrification and government investment in amenities (Ley, 1996; Skaburskis & Moos, 2008). Higher costs have, along with the increase in the number of smaller households and environmentally- and fiscally-motivated growth management policies, in turn facilitated increases in higher density housing forms in central areas and suburban nodes (Champion, 2001; Filion & Bunting, 2010).

These changes have taken place during a time of global socio-economic restructuring that fundamentally altered the character of the industry and occupational

structure of the Canadian economy, now characterized by growth in the service sector and a declining number of manufacturing jobs (Bourne et al., 2011). In the political realm, neo-liberal ideals were brought into effect that resulted in retrenchment of the welfare state (Hackworth & Moriah, 2006). Many, although certainly not all, of the Keynesian-inspired policies that provided a social safety net, and also facilitated suburbanization through infrastructure provision, made way for privatization of government services, including transportation infrastructure that saw increases in user costs (Gillespie, 1983; Fishman, 2005; Filion, 2001; Walks, 2001). The loss of traditionally well-paid, often unionized, employment in the manufacturing sector, coupled with increasing housing prices, a growing number of low-paying service sector jobs and reduced government investment in assisted housing, contributed to growing housing affordability burdens (Bunting, Walks & Filion, 2004; Moore & Skaburskis, 2004; Walks, 2011a).

Growth has also contributed to environmental issues such as traffic congestion, urban sprawl and pollution that pose great challenges for the sustainability of cities (Newman & Kenworthy, 1999; Roseland, 2005; Hanna, 2006). The issues have prompted a set of urban land use and transportation policy responses that aim to reduce automobile use by increasing development densities, providing public transit and containing the spread of cities (Campbell, 1996; Kenworthy, 2006; Banister, 2008). However, various commentators point to the growth agenda inherent in these policies and their potential for redistributive effects; for instance through the displacement of lower-income populations living in denser areas better served by transit and by the continuation of suburbanization by the middle-classes unable to pay inner city housing

costs but faced with increasing oil prices (Hall, 1996; Couch & Dennemann, 2000; Krueger & Gibbs, 2007; Quastel, 2009). The ultimate result of the combined changes, as others have already observed (Clapham, 2002; Carr, 2004; Beer, 2006; Calvert, 2010), is that households encounter a very different set of conditions that shape their location and housing decisions than was the case twenty or thirty years ago. Inevitably, households with different incomes, and differing characteristics determining earnings, will face different kinds of challenges that result in new kinds of inequalities (Furlong & Cartmel, 2007; Walks, 2009; Boschmann & Kwan, 2010; Beer et al., 2011; Kershaw, 2011). The debate sees social equity and environmental advocacy collide, two issues at the forefront of public policy debates in several major cities that are trying to “*green the city*” while struggling to retain affordable housing (Hall, 1996; Marcuse, 1998; Godschalk, 2004; “Briefing: London and Paris”, 2008).

The aim of this thesis is to ask how the location and housing decisions of specifically young adults have changed in the context of these contemporary urban transformations in Montreal and Vancouver, and to document the implications for commuting patterns. In a recent literature review, Calvert (2010) outlines some of the emerging challenges for young adults in Britain as they are moving into the housing market—such as changing age of departure from the parental home, rising debt levels, declining incomes, rising prices and labour market uncertainties. Beer (2006) points to similar changes in Australia, highlighting the changes in housing policy that “*emphasize market-based solutions*” and the growing “*risks*” in labour markets for young adults today as compared to when the baby-boomers were entering housing and labour markets (also see Beer et al., 2011). These findings certainly also resonate with

Canadian social trends (Beaupré, Turcotte & Milan, 2006). As Bourne & Rose (2001) note, however, the trends of socio-economic transformations are already “*reasonably well-documented*” but still today less is known “*about how they come together, in particular places at particular times, with what impacts and for whom*” (p. 107).

While Canadian urban research in recent years has documented severe implications of the transformations for socio-spatial inequalities, housing affordability and poverty (see Walks, 2009), the implications of urban restructuring for young adults warrant further exploration. As young adults are only entering housing and labour markets, their analysis provides useful insight into how households make decisions in a given context and their implications for the commute. Young adults also generally hold a more precarious position in the labour market, thus their analysis provides insight into market conditions (Myles, Picot & Wannell, 1993). Previous empirical studies of young adults have focused on the national or provincial scales warranting more recent study of specific urban contexts (Schrammel, 1998; Skaburskis, 2002; Kershaw, 2011).

Moreover, the geography of age cohorts has been understudied until recently when it became evident that age is an increasingly important variable of socio-spatial differentiation that warrants further exploration in its own right (Hagestad & Uhlenberg, 2006; Vanderbeck, 2007; Rosenberg & Wilson, 2010). Also few have studied young adults’ commute patterns explicitly (Thomas, 2007). Although the association between young age and lower automobile use and shorter commuting distances are well-known as they relate to the lower earnings and higher residential mobility of younger workers, less is known about the influence of the urban context (Finnie, 2004; Hanson & Giuliano, 2004; Shearmur, 2006).

The comparison of Montreal and Vancouver is particularly useful because it sheds light on the consequences of long-term changes in the housing market in cities where the processes of urban restructuring have played out in different ways. The two cities have distinct housing markets and Montreal with its large manufacturing base was much more directly affected by de-industrialization whereas new economy growth and neo-liberal restructuring are more important factors to consider in Vancouver. Urban planning policies that aim to enhance the sustainability of cities have also been in place for much longer in Vancouver, and are reflected in its urban structure (Tomalty, 1997). The temporal period covered in the thesis is from the early 1980s when restructuring was taking hold in Canadian cities (Rose, 1999) until the mid-2000s. The study period ends just before the recent global recession hit property and labour markets, thus earnings and affordability are likely to have declined since the findings presented here. The characteristics of young adults over this timeframe nonetheless reflect the structural changes influencing Canadian urbanism in two specific metropolitan areas. Thus more generally, this thesis asks about changes in the structure of cities as a result of contemporary societal transformations, contributing to and benefiting from the insight of a long line of chiefly, but not exclusively, Canadian urban research on the relationship between changes in society and space in the urban realm (Massey, 1980, 1995; Ley, 1988, 1996; Bunting & Filion, 1988; Mills, 1989; Bourne, 1993; Wyly, 1999; Walks, 2001, 2009; Germain & Rose, 2000; Filion, 2001; Bourne & Rose, 2001; Hackworth, 2005; Gauthier & Gilliland, 2006).

Specifically, the thesis adds to the understanding of the impacts of urban restructuring by way of pointed empirical contributions that offer generalizable

evidence on aggregate outcomes. There are three broad sets of research questions that guide the analysis:

- How have the conditions of urban development as they emerged since the early 1980s altered the characteristics of the urban housing markets in Montreal and Vancouver?
- In what ways are the changes in location and housing decisions of young adults in the two cities reflective of the structuring impacts of the changing urban context? What are the implications for their daily commute (journey to work)?
- What do the patterns imply for current policy debates on environmental sustainability and social equity?

Environmental sustainability is loosely measured in this thesis as household adjustments that are resulting in the kinds of housing, location and commuting patterns commonly understood to be associated with lower resource consumption or pollution; adjustments such as residing in proximity to amenities and transit, higher density housing, shorter commutes and walking, cycling and taking transit to work (Hall, 1996; Walker & Rees, 1997; Newman & Kenworthy, 1999; Gunder, 2006; Moos & Skaburskis, 2008; Ewing, Bartholomew & Winkelman, 2008; Quastel, Moos & Lynch, under review). Following Burton (2000), social equity is interpreted broadly through Rawls' notions of "*distributive justice*" in that "*primary goods*" ought to be "*equally distributed*" unless an alternate strategy favours those already worst off (p. 1970-1972). The analysis builds on Burton's measurement of equity outcomes in terms of the income distribution,

housing affordability and “*better access*” to amenities, employment and alternative modes of transportation (p. 1972). The nature of the questions asked also necessitates a conceptual framework that can account for both the contextual and individual level factors acting on location and housing decisions. The contours of such a conceptual framework and the two empirical case studies are discussed next, followed by an overview of the thesis methodology and structure.

1.1 The Role of Context in Residential Location

By asking about young adults’ residential decisions within specific urban housing markets, the thesis assigns import to context in understanding household level decisions. Researchers have put different weights on the importance of individual versus structural factors in shaping socio-spatial outcomes (Chouinard, 1997), but the benefits of drawing on multiple theoretical perspectives have been previously established (Bourne, 1981; Kauko, 2001). While this thesis draws on a broad literature from social, cultural and economic geography and planning, it primarily uses insights from urban economics and structural theorists to interpret a quantitative analysis of the determinants of location, housing and the commute. The approach is accommodated under the conceptual umbrella of Giddens’ (1984) structuration theory. It is inspired by Pratt’s (1996) “*weaving*” of “*micro-processes and macro-structures*” through structuration (p. 1361), as well as Clapham’s (2002) call for a better understanding of how households make decisions within “*the housing context facing them*” (p. 59), Guy & Henneberry’s (2000) “*integrating*” of “*social structures*” and “*economic processes*”, and Jarvis’ (2003) “*household approach*” to “*understand the very significant structures*

of constraint” on residential location and the commute (p. 592). The intent is in part to demonstrate that observable patterns from quantitative analysis can help reveal the ways decisions materialize for different types of households in different housing market contexts. The analysis is not intended, however, to empirically unravel the complex intra-household decision-making processes (Jarvis, 2001) or the multiple “*meanings*” attached to housing shaped through various societal “*relationships and interactions*” (Clapham, 2002, p. 64).

Alonso (1964) laid the groundwork for the neoclassical urban economic models of residential location that focus on individual choice. The model includes the usual neoclassical assumptions of the utility maximizing *homo economicus*, which in this case trades-off housing and journey to work costs within a budget constraint to decide upon a location in a monocentric city. The general ideas of the model have since been expanded considerably to account for changes in urban structure, such as polycentricity, and household composition and the trade-offs with other factors, for instance amenities or transport infrastructure (Shearmur & Charron, 2004; Giuliano, Gordon & Park, 2010; Verhetsel, Thomas & Beelen, 2010). In contrast, the structuralist studies have generally focused on the role of class and race in determining spatial outcomes (McLafferty & Preston, 1996; Wyly, 1998; Boschmann & Kwan, 2010), and important insight has also been gained from the feminist literature on the internal workings of households and gender relations (Hanson & Pratt, 1988; Jarvis, 2005; Ward et al., 2010). What is being called structuralist studies here actually combines a diverse literature, but as a group it differs from the neo-classical economic studies in that spatial differentiation is

conceptualized as the outcome of the workings of social, economic and political processes rather than purely the rational choices of individuals (Clapham, 2002).

Giddens' (1984) framework of "*structuration*" is commonly credited with going some distance in reconciling the agency-structure conundrum, forming a basis for research that asks about the "*constraints that configure the choices that individuals are able actually to implement*" (Pratt, 1996, p. 1359). In simplified terms, structuration theory holds that individuals make decisions within the constraints of the systemic structures, which are simultaneously also the constructs of individual level actions. As Pratt (1996) explains, the "*duality*" of structure and individual is conceptualized by Giddens through "*institutions*", which are "*the organizations, both formal and informal, that we establish to regulate our societies*" (p. 1362). In this thesis the housing context, which is defined as the price, tenure, stock and policy configurations that the household encounters at a given point in time and space, encapsulates the set of institutions that order the location, housing and commute decisions, and also the history of these factors. The physical urban form, such as the housing stock, the transport infrastructure and the shape of the city, is part of this housing context because it is both a manifestation of institutional settings and the structure for household decisions (Filion, 2001; Vandersmissen, Villeneuve & Theriault, 2003). But also important are the characteristics of households in that they reflect societal changes, for instance declining household size or changing occupational structures and incomes, and these in turn alter the reality within which households make decisions (Rose & Villeneuve, 2006).

The use of the neo-classical economic tools is useful because these take into account the influence of household characteristics, such as household size, that are all

too commonly ignored when making comparisons across structural contexts (Clapham, 2002). At the same time, the application of the economic tools in different geographic and temporal contexts is in essence a critique of traditional urban economic theory, which has historically viewed the context of the city as only providing “*secondary... generalizations of a historic-spatial relevant nature*” (Robbins, 1935; MacLennan, 1977, p. 69). To be clear, it is not the act of abstraction that is being problematized here. Rather questionable, however, is the abstraction of factors known to influence the relationship under consideration, such as the important influence of the history of the housing stock, policies and urban form (Harvey, 1973/2008), some of which have since been integrated into economic analysis (Gibb, 2003). Neoclassical economics is nonetheless still often critiqued on the basis of what Howard & King (2001) have established as its “*fallacy of composition*” whereby the theory “*correctly*” assumes “*that any particular structure is reducible to actions*” but incorrectly infers “*that all structures can thereby be eliminated*” (p. 788). Alonso removed the context of the city in his model of residential location almost completely whereas cultural, feminist and Marxist geographers have made context, broadly interpreted, a cornerstone of their analysis in that they have examined the ways class, gender and race produce inequalities that relate to social constructs or structural conditions, not individual preferences (Ley, 1985; Hanson & Pratt 1988; Wyly, 1998; Lee, Slater & Wyly, 2008). Harvey (1973/2008) critiques in particular the notion of equilibrium in economic theory, which he argues ignores the “*various speeds of adjustments in the urban system*” (p. 56). He suggests the existing distribution of resources plays a large role in influencing how different social groups are able to adjust to societal changes. Harvey notes:

“Certain groups, particularly those with financial resources and education, are able to adapt far more rapidly to a change in the urban system, and these differential abilities to respond to change are a major source in generating inequalities.” (p. 56)

An analysis of household-level characteristics for different social groups in different contexts is one strategy for reinserting such structural considerations into quantitative analysis of location, housing and commuting decisions in an era of accelerated urban socio-economic restructuring.

It is important to note that adding the specific temporal and geographic context of the city into the analysis of household level variables does not mean including a *“limitless number”* of explanatory factors but *“rather, it means making”* context *“a question, instead of an answer known in advance”* (Mitchell, 2002, p. 52-53)¹. One example, derived from Harvey (1973/2008), is that instead of assuming that *“competitive bidding”* determines residential location patterns as in the economic models, one can ask about the degree to which the governance context distributes land through *“bidding”*, as opposed to other distributive mechanisms, and the differing outcomes these produce for households (p. 137) (also see Lee et al., 2008). Thus, the temporal and geographic context of the city becomes a variable in the analysis, not as a causal factor but as the place that provides the structure for societal change to occur in particular ways (Filion, 2001).

¹ Mitchell (2002) makes this point more specifically in regards to agency and power. *“[M]aking this issue of power and agency a question...means acknowledging something of the unresolvable tension”* and *“requires acknowledging that human agency, like capital, is a technical body, is something made”*, he suggests (p. 53). The argument can be extended to the idea that the urban context is *“something made”* and thus requires ‘unpacking’ and explicit analysis.

The framing of location and housing decisions in the context of urban change is particularly useful in terms of the debate regarding the sustainability of commuting patterns (Horner, 2004; Jarvis, 2003). The heavy reliance on urban economic and transportation studies to formulate sustainability policies has meant, as Pratt (1996) argues, that questions regarding “*the complex political, economic and social factors*” shaping cities have been largely absent from the sustainability literature (p. 1360). A literature that combines, to various degrees, insights from urban studies, feminist, cultural and economic geographies, housing and sustainability is beginning to emerge, often pointing to the insufficiency of density in reducing commute distance or attaining modal shifts due to the effect of rising incomes, and the potential inequities produced as households are differently able to adjust to rising oil prices and policies that push for greater transit use (Garrett & Taylor, 1999; Pratt, 1996; Jarvis, 2003; Danyluk and Ley, 2007; Quastel, 2009). The thesis makes an empirical contribution to this emerging, inter-disciplinary literature by asking about the housing, location and commuting patterns of young adults in the context of two specific urban housing markets.

1.2 The Case Study Cities

Although Montreal is often praised for the vibrancy of its urban neighbourhoods and the aesthetic qualities of its heritage buildings, some commentators also describe the city as “*ugly*” due to the lack of a consistency in architectural form and dilapidated state of some of the housing stock (Hebert, 1989, p. 17; Frost, 1981a). Regardless of whether one agrees with such an assessment, the contrast with Vancouver is evident, which now often appears to receive exceptionally high praise for its urban design in

architectural and planning circles (Berelowitz, 2005). The influence of emerging urban planning ideals emphasizing the aesthetic qualities of place are reflected in Vancouver's urban form (Lynch & Ley, 2010). This exerts influence on the cost and characteristics of housing. Thus more generally, Montreal provides a setting for analyzing residential location and housing trends that differs from Vancouver in important ways: Montreal is distinguished from Vancouver by its lower growth rates (and even decline), fewer physical and regulatory (planning) constraints on urban expansion, a more fragmented regional governance context, and historically higher central city densities but also lower (even negative) density gains in recent years (Filion et al., 2010).

The two cities have also traditionally been characterized by quite different kinds of housing stock (Demchinsky, 1989; Engeland et al., 2005). Montreal's large rental market in the old, dense inner city surrounded by vast suburbs stands out against Vancouver's high-density centre containing newly developed condominium towers surrounded by single-family dwellings and secondary centres in the suburbs (Figure 1.1). The density profiles in Figure 1.2 show the dramatic growth in the central city residential component in Vancouver, and the relatively higher densities in the outlying suburbs. Montreal's historically higher centrally city densities extend further into the inner suburban areas but the outlying suburbs have lower densities than in Vancouver. At the same time, it is important to remember that Montreal and Vancouver are undergoing similar changes related to demographic shifts, gentrification of the central city and immigration, although again these factors do play out in different ways (Ley, 1996; Heisz, 2006). The two cities differ in size, but both metropolitan regions are

experiencing growth related problems such as housing affordability concerns, traffic congestion and sprawl (Bunting et al., 2004; Tomalty, 1997).

Figure 1.1 – Downtown Montreal and Vancouver

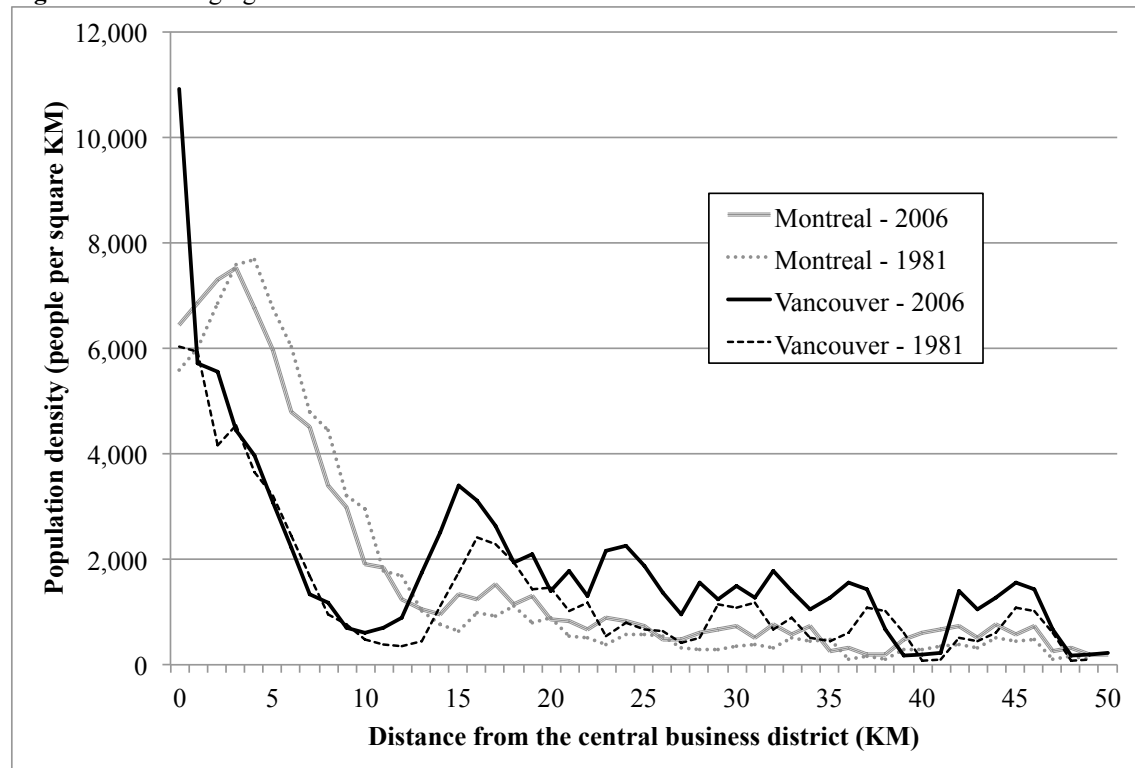


Notes: Montreal's downtown contains a number of high-rise office towers, and the residential components include a mix of row housing, duplexes and high-rise apartment units (Above; May, 2008). Vancouver's downtown also has an office component but high-rise condominium apartments dominate the skyline (Below; June, 2008).

Montreal and Vancouver have relatively well-maintained central city public transport systems with routes to at least a few of the suburbs but in Vancouver the transit stops have become areas of concentration for higher density development (Filion et al., 2010). Tourism plays an important role in the economies of the two metropolitan areas, and nearby recreational destinations such as Mount Tremblant in Montreal and Whistler in

Vancouver benefit from proximity to the large population base and transportation hubs. Neither is the provincial capital of their provinces although Montreal has more public sector functions than Vancouver.

Figure 1.2 – Changing urban densities



Notes: Persons per square kilometer in census tracts, three-kilometer moving average.

Source: Calculated using Statistics Canada census tract data (1981a; 2006a).

However, “*the peculiar nature of the position of Quebec in the Canadian federal state architecture*” also plays a particular role in differentiating urban policy in Montreal from cities in the rest of the country (Boudreau et al., 2007). Montreal and Vancouver differ in their urban policy configuration in the way these are shaped by the workings of local, provincial and federal levels of government. While Vancouver has seen a neo-liberal turn in governance at the provincial and local levels (Mitchell, 2004), the preservation of a quasi-Keynesian welfare state in Quebec despite neo-liberalization

at the federal level means “*Montréal policies can scarcely [be] cast in terms of a neo-liberal agenda*” (Rose, 2004, p. 288). Commenting on Kaplan’s (1994) study of “*Canada’s ambivalent spatial identities*”, Wyly (2010) highlights intra-national differences in shaping urban outcomes in Quebec versus the rest of Canada due to the unique Francophone and Anglophone histories. Wyly also describes Mercer & England’s work (2000) that suggests demographic changes, economic restructuring toward services and neo-liberalization are increasing similarities among US and Canadian cities. As is explored in the next chapter, it would seem that these very factors are actually playing out in different ways in Vancouver and Montreal (see Filion et al., 2010), and that particularly the different degree of neo-liberalization and economic growth create distinct housing market outcomes.

The two cities’ different histories, and changing functions in the urban economic hierarchy are reflected in the changing urban structure. Montreal, located in southwestern Quebec (Figure 1.3), is the largest metropolitan region in the province and with a population of approximately 4 million the second largest in Canada, following Toronto. The city was founded as a French colony on the Saint Lawrence River, and grew to become Canada’s largest city and economic centre, competing even with New York for port and manufacturing activities by the late nineteenth century (Marsan, 1981). The city became a national and regional hub of economic activity for surrounding industrializing towns such as Sherbrooke and Trois-Rivières. As Germain & Rose (2000) explain, economic activity began to shift west as early as the Second World War, but the combination of deindustrialization beginning in the late 1970s and

the outmigration associated with the election of the indépendantiste Parti Québécois government in 1976 increased population loss and economic decline.

Figure 1.3 – Montreal and the regional geography



Notes: Map created by Chris Ley, University of British Columbia.

Source: Statistics Canada census and cartographic boundary files.

Growth in the high-tech sector and a vibrant cultural economy helped to reinvigorate the economy in recent years, but the decline and decentralization of Montreal's manufacturing industry especially affected the central city (Shearmur & Rantisi, 2011). Montreal remains an important regional economic and cultural centre as Canada's largest francophone city but the urban structure displays the archetypal "donut" structure of inner city population losses to the surrounding suburbs associated with de-

industrialization seen in other large manufacturing centres across the US (Germain & Rose, 2000; Figure 1.2).

Vancouver, located in southwestern British Columbia (Figure 1.4), long served primarily as a gateway to resource exploration in the provincial interior but over time the resource industries played a reduced role in development of the city (Ley & Hutton, 1987; Wynn & Oke, 1992). As Vancouver expanded it gained new economy clusters and became a regional service, education and transportation centre that is now competitive with San Francisco and Seattle in terms of port activities and Pacific trade volumes (McGee, 2001; Hutton, 2008). Vancouver today has a population of 2.25 million making it the third largest metropolitan region in the country. Government functions are more heavily concentrated in Victoria, the provincial capital of British Columbia.

Like Montreal, Vancouver too is the largest metropolitan region in its province. Real estate investment has long characterized Vancouver but the sale of a large inner city property to a Hong Kong developer after the 1986 World's Fair was a key moment in the globalization of Vancouver property markets (Olds, 2001). Individual ownership and private property have been persisting characteristics of British liberal thought that, as Mitchell (2004) argues, set the stage for present day neo-liberal property relations in Vancouver. Institutionalized planning as a mechanism to separate incompatible land uses serves important functions in facilitating private property markets in Vancouver (Blomley, 2004) but has also shaped urban development patterns by restricting outward expansion through an Agricultural Land Reserve and permitting growth in designated suburban centres that are connected by public transit.

Figure 1.4 – Vancouver and the regional geography



Notes: Map created by Chris Ley, University of British Columbia.

Source: Statistics Canada census and cartographic boundary files.

The resulting urban form has been likened to “*a series of cities in a sea of green*” (Cameron, 2007). The city grew dramatically since the 1980s from a “*village on the edge of the rainforest*” into a gateway city (McGee, 2001) in what has been described as “*instant urbanism*” (Berelowitz, 2005), so that the urban form reflects contemporary urban planning ideals that arrange the city into nodes and corridors to attain sustainability goals (Hall, 1996; Filion & Bunting, 2010). In part, this is reflected, for instance, in Vancouver’s high central city densities that rebound in the suburbs (Figure 1.2). The role for land use planning, which has become one of Vancouver’s defining characteristics (Harcourt & Cameron, 2007), was established from the early days, with evident influence on urban development through the successive plans prepared by the

then members of the British Town Planning Institute and the earlier British land surveyors who subdivided land for the purpose of selling private property in anticipation of resource booms and the arrival of the transcontinental railway (Hayes, 2007; Berelowitz, 2005; Hodge & Gordon, 2008).

In contrast, land development in Quebec by the French colonists was based on “*egalitarian principles*” through the use of the “*côte*”—rectangular plots of land that all adjoin a common resource such as a river (Germain & Rose, 2000, citing Marsan, 1981). The “*côte*” had a “*stabilizing influence on the rural landscape*” that later came to be a “*powerful factor of uniformity in urban development*” and lent “*the old populous districts of Montreal...their strong gregarious and egalitarian character*” (Marsan, 1981, p. 42-43). Urban development in Montreal is arguably still shaped in recent periods by social policy with relatively greater emphasis on notions of egalitarianism (Seguin & Germain, 2000). Montreal’s French history as compared to the British background, which is more predominant in the rest of Canada, including Vancouver, is perhaps one of the most obvious distinguishing factors between the two metropolitan areas. However, as Marsan (1981) notes, to view Montreal purely through its position within francophone Canada would overlook the important role the city “*has always played in the history and development of Quebec and of Canada*” (p. xxvi). The comparison of French and British histories to explain current trends also ignores the unique yet shared development experiences of Montreal and Vancouver since their founding as European colonies² as well as the diversity of past and current immigrant

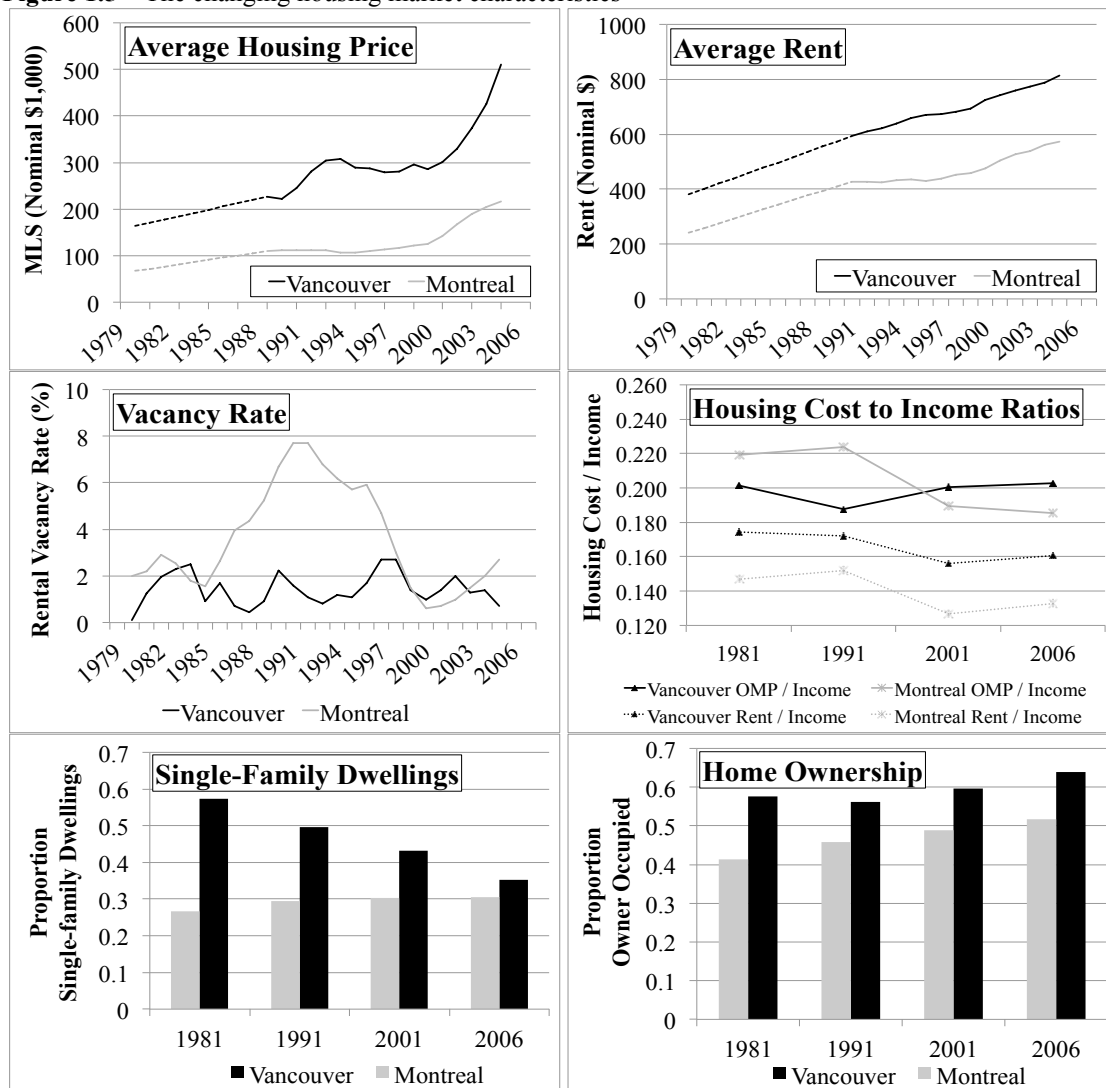
² The author owes thanks for this point to fellow students in David Ley’s graduate seminar (Department of Geography, University of British Columbia, Fall, 2006) who discussed how an exaggerated focus on Canada’s British history overlooks the nation’s development since colonization.

populations (Germain & Rose, 2000). Yet the “*hegemonic tendencies*” of dominant ideologies, for instance as they relate to the liberal versus social egalitarian notions of property arising from the Anglophone versus Francophone history of British Columbia and Quebec, can leave long-lasting impressions on the urban landscape (Mitchell, 2004; Kaplan, 1994). These differences are valuable to keep in mind in this comparative study as long as they are understood in relative terms and in reference to the historic context (see Boudreau et al., 2007).

The different development trajectories are, for instance, apparent in the contemporary housing stock (Figure 1.5). Less favourable economic conditions in Montreal have resulted in lower prices and rents than in Vancouver. High rental vacancy rates peaking in the 1990s are partly attributable to low household formation rates among young adults, who represent a large share of renters and saw their incomes decline (CMHC, 2004; Heisz, 2006). Due to low incomes the cost of owning, as measured by the ratio of an owner’s major payments (OMP) to household income, was actually higher in Montreal than in Vancouver until the 1990s³. Urban densification strategies and rising prices are contributing factors in the decline of the share of single-family dwellings in Vancouver (Tomalty, 1997). The shift away from single-family dwellings in Vancouver has not resulted in a decline in ownership levels, which still remain much higher than in Montreal.

³ The ratio of housing costs to income is often used to compare general affordability levels over time or between places. The figures should not be used to make inference of the relative affordability of renting versus owning because the estimate does not take into account the income differences between tenure.

Figure 1.5 – The changing housing market characteristics



Notes: The vacancy rates in 1971-1991 are for apartment structures of six units and over and in 1992-2006 for row and apartment structures of three units and over. Housing price, rent (one-bedroom only) and vacancy rate are annual data for privately initiated structures only. The housing price and rent data prior to 1990 and 1992 respectively are linear approximations using decennial census data. The housing cost to income ratios are only calculated for census years. OMP: Owner's major payments. All data are for the census metropolitan areas. Nominal value (\$) shown for housing prices and rents.

Source: Calculated using the Statistics Canada census and data compiled by CMHC (2007a) from their Rental Market Survey and the Canadian Real Estate Association's MLS®.

Choko & Harris (1990) suggest several factors behind Montreal's high rental rates. The Montreal economy was historically dominated by the Anglophone business elite, they explain, leaving the property market as one of the few investment opportunities for Francophones. This resulted in an over-supply of rental housing at low

cost. The inertia of this stock, in combination with low income levels, little wealth generating potential for renters and higher cost of self-building (historically an important avenue to ownership), helped to create and reinforce a “*local culture of property*” that kept ownership levels low (Choko & Harris, 1990). In recent years, ownership levels have increased but unlike in Vancouver where condominium apartments have played a large role, suburbanization has been an important factor behind the growing single-family dwelling ownership in Montreal (Germain & Rose, 2000; Harris, 2011). The analysis later returns to a more detailed discussion of these trends.

1.3 Methodology: A Research Narrative of Place

The following section outlines some of the broad parameters of the thesis methodology whereas specific technical details are left to individual chapters. The research takes guidance from urban and housing economics and the branches of urban geography and planning analyzing the changing social space, economic activity and housing markets in cities. The primary empirical evidence is quantitative data from the Statistics Canada censuses and other surveys (e.g., Survey of Household Spending) conducted between the early 1980s and mid-2000s that are interpreted in light of the academic literature, government reports and policy documents detailing urban societal change. Also informing the discussion are conversations with key informants, newspaper coverage and visual observations of the urban housing stock. The highly empirical focus of the research is motivated by Gottmann’s (1961) use of maps and

statistics to point to broad processes of urban change (Pawson, 2008). Also inspiring in this regard is Harris' (2008) methodological suggestion to:

“steep oneself in a complex body of data...and out of that steeping to explore the relevant theoretical literature, and then, in whatever permutations and combinations put the two together.” (p. 413)

The various information sources are combined into what can be referred to as a ‘research narrative of place’⁴. The idea of referring to the analysis as a ‘narrative’ is inspired by those who have used the concept of “*story-telling*” to conceptualize the research and public policy-making process (e.g., Usher, 1997; Throgmorton, 2003). The use of the term ‘narrative’ to conceptualize the research method is also motivated by contemporary epistemological critiques of quantitative research. The work of critical geographers brought to mind potential contradictions in this thesis in regards to the assertions that context matters, yet an explicit aim to produce empirical generalization from data that necessarily abstract reality (Schwanen & Kwan, 2009)—abstraction is commonly critiqued for its reductionism and claim to superiority and neutrality which works, it is argued by critics, to preserve the status quo and produce “*non-local*” “*expert knowledge*” (Philo, Mitchell & More, 1998; Gieryn, 2008, p. 799). The thesis is not able to resolve any such contradictions at an epistemological level, nor does it claim to contribute to the epistemological literature. The intent here is to merely point to the research that argues that the critiques of positivism are often incorrectly extended to all

⁴ In some sense, this research uses census data and other sources to produce what Macfarlane (2009) suggests editors refer to as a “*write-around*”, where “...*a portrait of the subject*”, in this case the two cities and the young adult population, “*is constructed from sources—interviews with colleagues and friends, newspaper stories, drafts of speeches, and personal observations—that excludes the subject himself*” (p. 13).

quantitative research in that claims to neutrality are a component of a particular politics not a methodology (Sheppard, 2001; Barnes, 2009; Schwanen & Kwan, 2009). Also, viewing the research as a narrative works, in some sense, to destabilize the notion that the approach taken here inherently elevates one source of information, quantitative or qualitative, as superior (Philip, 1998). Each source serves a specific purpose to advance the narrative, this narrative being, by dictionary definition, one, not *the*, interpretation of the world. The narrative component highlights the “*temporal element*” and normative decisions made in the presentation of research findings through language that as Solnit (2001) declares “*cannot be perceived all at once*” but “*unfolds in time*” (p. 268). The research narrative “*differs from a fictional account because it embraces [the] data but it remains a story because it must have a beginning, end, and middle*” (Yin, 2009, p. 130), and requires normative interpretation as “*data do not speak*” (Carter, 2009, p. 475).

Any contradiction of using quantitative data to make an argument about the importance of context is thus reduced in the way numbers are used in this thesis, “*not to abstract but to measure*” the general condition of a particular population and context (Sorkin, 2009, p. 28). Inspiration is drawn from what has been called a “*methodologically inspired and infused quantification*”, which recognizes that “*counting matters*” (Carter, 2009, p. 466 & 475) and provides a “*technique for organizing one particular type of information*” (Guy & Henneberry, 2000, p. 2011) necessary to draw conclusions about societal trends and to reveal the social injustices and environmental implications they may produce (Ellis, 2009; Wyly, 2009).

It should also be noted that the case of young adults in Montreal and Vancouver are used to generalize to “*theoretical propositions and not to populations or the*

universes” (Yin, 2009, p. 15)⁵. Thus, following Yin, the characteristics of young adults in the two cities are seen to be revealing of the way specific contextual features shape location and housing decisions; they are not merely numerical examples of young adults ‘everywhere’. Methodologically, the research question necessitates an approach that compares housing decisions across different contexts while taking into account the differences in the household level characteristics. All statistical models in this thesis are therefore specifically developed to operationalize the combined insights from the neo-classical and structural theories of the factors shaping housing, location and commute patterns. In the neo-classical economic theories, the housing decisions are made at the level of the household. The decision depends on household size and composition that shape the space requirements, constrained by the households’ budget, and the factors that determine the ability to earn an income (Bourne, 1981; Goodman, 1986; Quigley & Raphael, 2004; Skaburskis & Moos, 2010). Following this theory, the housing decisions are analyzed using multivariate models to take into account the household level factors.

The multivariate models also contain two specific methodological features to permit comparison of how the influence of contextual factors, based on the structural theories, differs between time periods and metropolitan areas. First, the models are generally constructed separately for each metropolitan area, permitting comparison of the magnitude and direction of regression coefficients in different housing contexts, as is done for instance in the literature on housing sub-markets (e.g., Cho, 1997). When the models include both metropolitan areas, dummy variables are used to detect

⁵ A second aim of using case studies also arises from the broader purpose of the discipline of geography to “*show the world to be persistently diverse*” but realizing that the local arises from “*multiscaled relations*” (Castree, 2005) so that geography necessarily amounts to more than simple “*uniqueness of place*” (Cox & Mair, 1989; Sharpe, 2009).

metropolitan-specific effects. Second, some versions of the models combine datasets from different years, allowing the use of a dummy variable to test for temporal changes. An explicit example of this approach is Vandersmissen et al.'s (2003) analysis of commuting patterns over time in Quebec but the inclusion of temporal lags is widely used in the housing literature.

Following structuration theory, the quantitative models thus permit individual-level variables to influence housing, location and commute patterns but these relationships necessarily are shaped by the specific structural context of the city, and in turn re-shape the context for future cohorts. The analysis measures empirically the nature of these effects in two metropolitan areas where restructuring occurred very differently. This contributes to better understanding of the nature of individual decisions by comparing the urban form as it emerged in Vancouver and Montreal since the early 1980s. Neo-classical economic theories provide a guide for understanding and operationalizing individual and household level variables in the statistical models throughout the thesis, while structural theories provide guidance for interpreting the variables as the outcomes of larger societal processes and contextual factors. From a geographic disciplinary perspective, it is certainly expected that 'context matters'—the intent here is to provide an empirical analysis of how the context has changed and how individual-level relationships are shaped by different contextual conditions using statistical models.

1.3.1 Data sources and geography

The Statistics Canada census data (1981, 2001, 2006) used for analysis come from three types of files—census tracts, individual public-use micro data files (PUMFS) and household PUMFS—that are available for academic use through Canadian university libraries⁶. The analysis is conducted for the Montreal and Vancouver census metropolitan areas, simply referred to as the CMAs, or the metropolitan areas for shorthand. CMA boundaries are determined by Statistics Canada according to commuter flows (Statistics Canada, 2001c). At the intra-urban scale, census tract files provide data as averages or counts for areas containing 2,500 to 8,000 people. The size of tracts thus varies depending on population density. Because census tract boundaries change over time to keep population counts reasonably consistent, and new tracts are added as the CMAs grow, the more recent tract data are matched to the 1981 boundaries to facilitate temporal comparisons. The 1981 and 2001 data were available from previous collaborative research (Skaburskis & Moos, 2008), and are expanded for this thesis to include the 2006 data, the most recent census at the time of writing.

The PUMFS are 3 percent population samples. They allow analysis of individuals and households in CMAs but do not reveal their intra-urban location. Variables are sufficiently similar across census years so that with some modifications the files can be merged to facilitate temporal analysis. The use of census data limits the analysis to a particular scale and to a pre-determined set of variables. The census is particularly useful, however, for this kind of analysis in that it is the only data source

⁶ The combination of observations from different census years into one dataset with “*comparably coded variables*” provides a useful means for examining societal change (Dillon, 1997, p. 381). The 1981, 2001 and 2006 PUMFS were combined into one database for the purposes of this thesis. This database then also formed the basis for analysis published in Moos & Skaburskis (2010).

that provides a consistent database with at least some information on the location, labour, housing and commuting characteristics of the population in all areas of the two CMAs. The 2006 data were available for individuals but the household data had not been released when the analysis was conducted, thus the 2001 data are used for household level analysis.

Interpretation of the data was facilitated by a vast literature ranging across diverse fields of study gathered using searches of scholarly databases, web searches and article bibliographies. Also informing the data analysis is a number of newspaper articles, observations from visiting the cities and conversations with key contacts. Current newspaper articles were obtained from casual reading while a historic search of the Vancouver Sun, Montreal Gazette and The Globe and Mail provided articles pertaining to young adults, housing and commute issues from the late 1970s to 2006⁷. Efforts were made to visit several census tracts where the data showed particularly high concentrations of young adults or dramatic changes in the housing stock, and to make use of the public transit system in both metropolitan areas⁸. Sixteen key contacts with long-term knowledge of the two cities were asked to comment on the changes in the housing markets, policies and young adult location decisions⁹. The intent behind

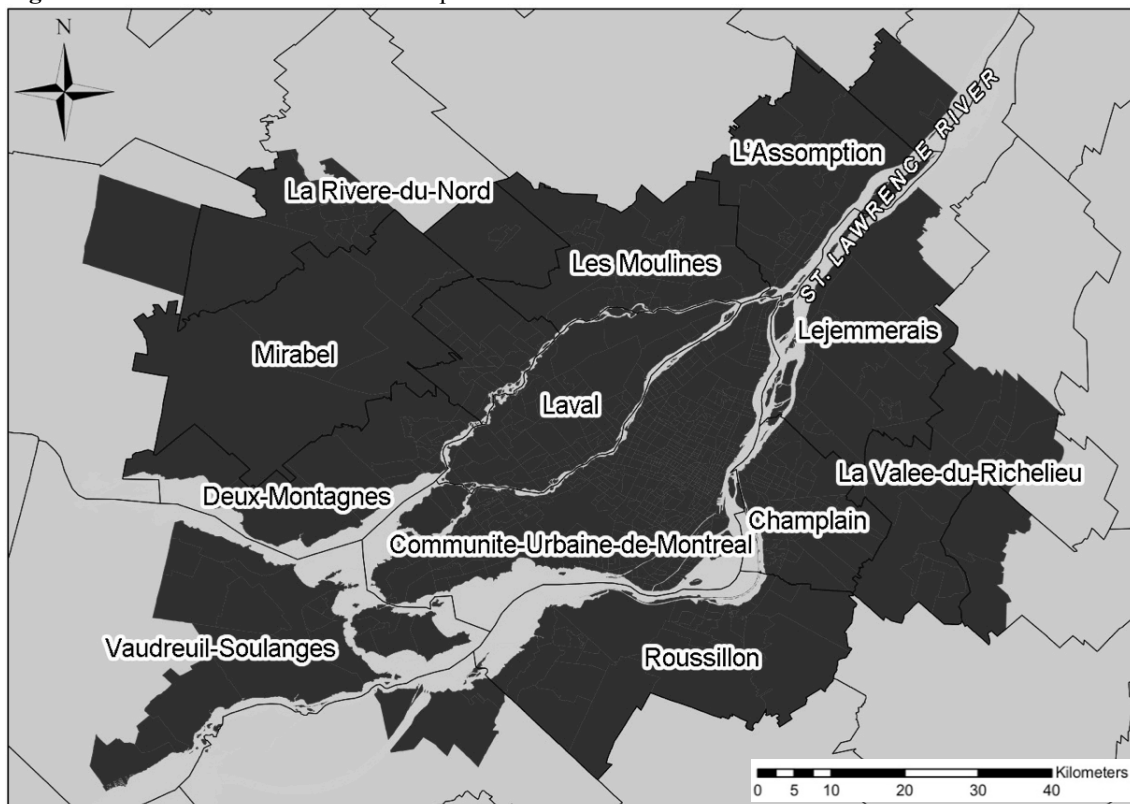
⁷ Newspaper archives were accessed through the University of British Columbia Library databases. Several variations of the terms ‘commute’, ‘housing’ and ‘young adults’ were combined to search for articles relevant to Montreal and Vancouver. The search yielded several hundred results but only select articles were read in full. Articles were selected for reading when titles and abstracts suggested relevance to housing and commute trends in the two metropolitan areas. I owe thanks to Yolande Pottie-Sherman (2008) for inspiring me to think about media analysis in a more systematic fashion.

⁸ The researcher lived in Vancouver while conducting the research for this thesis (2006-2010) and visited Montreal on three occasions (April 2008; July 2009; March 2010).

⁹ The key contacts are a mix of current and former senior public servants (5), former politicians (2), senior real estate agents (5) and public-policy researchers/academics (4). The key contacts were explicitly

consulting newspapers, visiting the cities and talking to key contacts was to gain more insight than what could be attained from the numbers alone (Dandekar, 2003; Phillips, 2010). The information enhanced and guided the data analysis. However, findings from these other sources are not presented on their own but rather are cited where they assist in adding depth in interpretation.

Figure 1.6 – The Montreal census metropolitan area



Notes: Map created by Chris Ley, University of British Columbia.

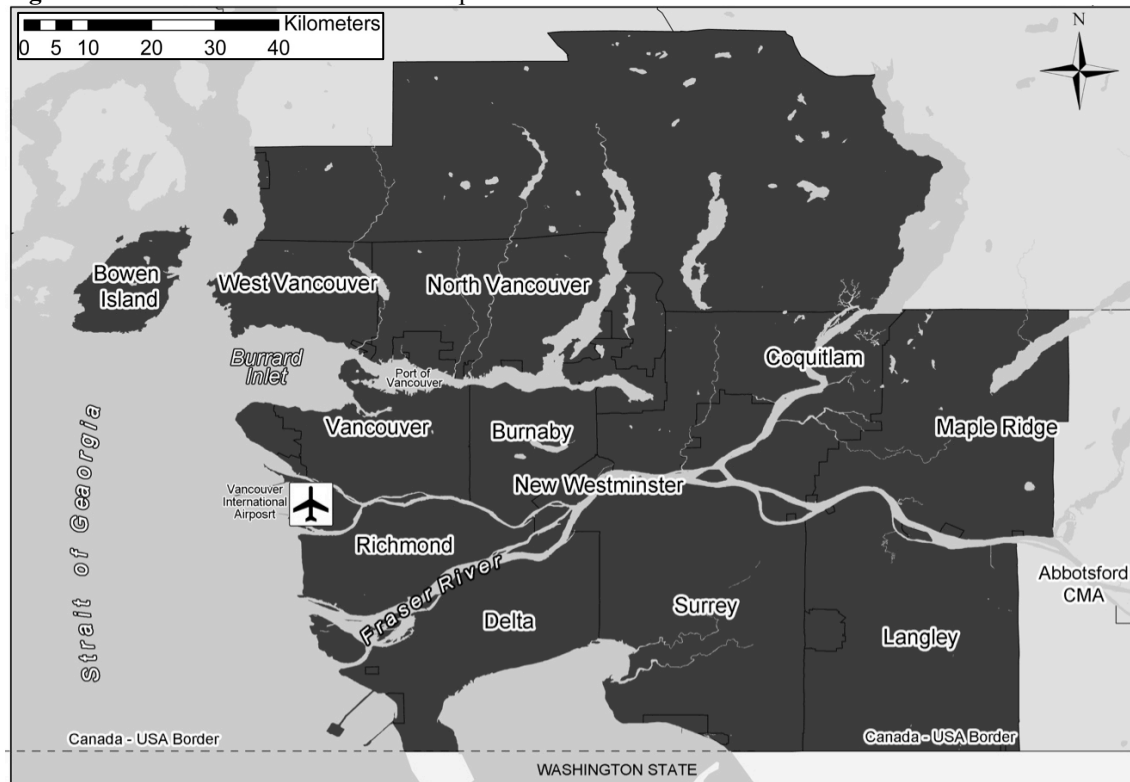
Source: Statistics Canada census and geographic boundary files.

identified for their long-term knowledge of Vancouver and Montreal. Conversations ranged in length from 20 minutes to over 1 hour, and were semi-structured. The conversations took place during the fall and winter of 2008 and 2009. Approval was obtained for the research from the University of British Columbia Office of Research Ethics.

The metropolitan areas include many separate municipalities, and the analysis at times makes reference to the names of these municipalities when discussing intra-urban trends. The central municipalities are the City of Montreal and the City of Vancouver (Figures 1.6 & 1.7). The City of Montreal is located on the Island of Montreal along with several other municipalities that form the Communauté urbaine de Montréal. Bridges connect the Island to Ile Jesus to the north where the suburban municipality of Laval is located. Across the bridge on the southwest end of the Island of Montreal is Longueuil that is also connected to the Island by the underground Metro. The Metro has also been extended to Laval in recent years. The suburban municipalities are commonly referred to as the north and south shores.

The City of Vancouver is juxtaposed with the City of Richmond to the south and the City of Burnaby to the east. A bridge connects downtown Vancouver, through Stanley Park, to the north shore municipalities of North and West Vancouver. The lands immediately to the west of the City of Vancouver do not have municipal status and are referred to as electoral area A. The lands are held in the form of an endowment by the University of British Columbia and are under directive of the Province. The SkyTrain, an elevated rapid transit system, extends from the City of Vancouver through Burnaby and New Westminster into Surrey. The suburban municipalities extend to the US border on the south and to the Abbotsford CMA to the east. The Vancouver CMA follows the boundary of Metro Vancouver, an upper-tier regional governing body.

Figure 1.7 – The Vancouver census metropolitan area



Notes: Map created by Chris Ley, University of British Columbia.

Source: Statistics Canada census and geographic boundary files.

1.4 Thesis Overview

Following this introduction, the thesis has six remaining chapters. The second chapter, titled ‘The Changing Cities’, deals further with conceptual issues and the changes in the housing context. It elaborates on the use of a cohort approach in concert with structuration theory as a conceptual framework for the empirical analysis. The chapter also describes more specifically the societal restructuring associated with changes in governance, the economy, demographic transitions and planning policies aimed at increasing the sustainability of commuting and land use patterns. Because the changes are discussed in relation to the specific cases of Montreal and Vancouver, the chapter also helps describe empirically the changes in housing market context.

Highlighted are the changes in the labour and housing market associated with neo-liberalization and post-Fordist restructuring, inner city revitalization and the coordination of land use and transportation as a sustainability strategy. The emerging inequalities arising from restructuring are discussed. Chapter Three, 'Global Restructuring and Changing Housing Demand', delves in more detail into one specific aspect of housing market restructuring, analyzing the changes in the relationship between income and housing consumption due to immigration. The analysis helps build the economic relationships that link housing and household characteristics. Chapter Three also provides an analysis of the spatial dimensions of changes in the housing stock in the two cities. It helps reveal important differences in context within which young adults make decisions.

Chapter Four, 'The Changing Metropolitan Economies and the Young Adult Labour Force', describes the changing labour and household characteristics of the young adult labour force. The main purpose is to detail the changes in the earnings of young adults, and the inequality implications. The analysis identifies the determinants of income and how these have changed over time in relative terms; and it links the findings to the theme of inter-generational equity as a component of the sustainability debate. The fifth and sixth chapters include the empirical analysis of the young adult residential location, housing and commute decisions. Chapter Five, 'The Changing Residential Ecology', analyses young adults' changing residential geographies in relation to other characteristics of the urban form. It considers how young adults locate in relation to the social space, housing characteristics, commute mode, walkability and distance to transit and the central business district. These variables are used as measures

of whether over time, and compared between CMAs, young adults are locating and commuting more or less sustainably, and whether these patterns are distributed equitably.

Chapter Six, ‘The Housing and Commute Decisions’, analyses young adults at the household scale, considering the changes in housing type, tenure and expenditure over time. In Chapters Five and Six, multivariate models are used to investigate the changes in location and housing, holding household level factors constant, and their implications for commute patterns. The concluding chapter brings together the key empirical findings but its primary purpose is to serve as a platform to relate the empirical findings to the broader conceptual themes introduced in this and subsequent chapters. Empirical conclusions deal with the sustainability and social equity implications of the changes in the societal context and the nature of young adult decisions in the two metropolitan areas. Conceptually, the analysis permits conclusions regarding the ways societal transformations are reflected in urban space (Mills, 1989).

Chapter Two: The Changing Cities

Part of the question addressed by this thesis is how the two metropolitan areas have changed over the study period. There have been numerous accounts of the formative changes in Canadian society on the city structure, governance, economy and social space (e.g., Ley, 1996; Bourne & Rose, 2001; Hutton, 2004; Bunting et al., 2010; Barnes et al., 2011). Common themes highlighted by these accounts are the transition toward a post-Fordist socio-economic structure and post-industrial central city space, increasing globalization and neo-liberalization, demographic transitions associated with the aging of the population and increasing diversity of households, and growing concern over environmental issues materializing in sustainability policies. Filion & Bunting (2006) suggest that the outcomes of these contemporary societal changes in cities are greater “*unevenness*”, “*uncertainty*” and concern over “*sustainability*”. They suggest that the themes are not new but that they

“...raise more concern at present than in the past—especially in regard to environmental sustainability. They have also become more manifest as differences between people and places have been accentuated over the last decades, and as globalization has eroded local control over the economy and thus raised uncertainty levels.” (p. 1).

Added to their list may be the greater ‘connectivity’ of people and places arising from globalization and technological change (Castells, 2010), and the heightened emphasis on ‘flexibility’ and ‘efficiency’ as desirable attributes of social and economic systems (Peck, Theodore & Ward, 2005; Siemiatycki, 2005). The implications of these changes for the housing market context within which young adults make decisions are wide-ranging (Beer et al., 2011). Unevenness, for instance, has materialized in more

segmented housing markets and increasingly segregated social space (Walks, 2010; Rose & Villeneuve, 2006). Uncertainty, in part a product of increasing flexibility in labour markets, means that households change their expectations about the permanency of work locations and their earnings. Some have argued these changes would increase the attractiveness of rental markets and central locations in that there are fewer transaction costs to moving when renting, and that more employment opportunities can be reached from central residential locations, particularly for dual-earner households (Costa & Kahn, 2000; Skaburskis & Moos, 2010).

At the same time, housing, which serves the dual function of investment and shelter (Bourne, 1981; Pozdena, 1988), has arguably become a more important component of household investment in a context of neo-liberalization that emphasizes the role of individual rights and privileges, which in the western context remain tied to property ownership (Blomley, 2004; Ronald, 2008). Flexibility and uncertainty have also translated into more part-time work and outsourcing, to which some households may respond by becoming self-employed or by including office space in their residential dwellings (Moos & Skaburskis, 2008). Growing entrepreneurialism is ostensibly required both on the part of households and governments in a context of growing global competition and less certainty about the future (Leitner, 1990; Larner, 2000). The entrepreneurialism and efficiency associated with neo-liberalization spur renewed interest in self-sufficiency and localism, which are also components of some emerging environmental movements (Kohler & Wissen, 2003; Geddes, 2005). But in terms of local government, the environmental concerns have largely materialized in urban planning as a set of policies aimed at coordinating land use and transportation

patterns to reduce vehicle use and emissions, and by limiting the spread of cities through growth management policies (Hall, 1996; Gunder, 2006; Moos & Skaburskis, 2008). The changes have opposite effects in that increasing property ownership, both in terms of physical size and investment amount, seemingly help households attain a degree of economic, and environmental, self-sufficiency in a context of uncertainty and flexibility. Yet at the same time this same uncertainty and flexibility, and also growing emphasis on sustainability, would make smaller, denser, and therefore less resource intensive housing options potentially more desirable. Households entering the market would balance these concerns in combination with their demands for housing space depending on life-cycle stage and household composition, which are also becoming more uneven (Rose & Villeneuve, 2006). Beer (2006) categorizes the changes in housing markets facing the different young cohorts over the past 30 years by changes in “*sequence*” (e.g., delay in child bearing, divorce), “*meaning*” (e.g., investment versus shelter, retirement plan), differentiated “*choice/constraints/risks*” (e.g., housing supply, labour market segmentation, inheritance) and “*housing policy*” “*re-orientation*” toward the market (also see Beer et al., 2011).

The label of heightened complexity might be an apt description of these changes that Dear & Flusty (2002) have argued produce a “*contingent mosaic of variegated monocultures*” in the “*post-modern*” urban field that is no longer focused on one specific central business district (p. 227). In contrast others have shown the persistence of the generalizable forms in social space and housing characteristics that continue to display the spatial patterns of the city organized into nodes, sectors and concentric circles by demographic variables as theorized by the Chicago School’s social ecologists

(Shearmur & Charron, 2004; Hackworth, 2005). Underlying this debate are disagreements not just on the changing urban socio-spatial structure but also as to whether the drivers of the changes arise from individual, such as life-cycle stage or household characteristics, versus structural factors, such the growing entrepreneurialism of states that results in their investing in central city amenities (Larner, 2000; Shearmur & Charron, 2004; Skaburskis & Moos, 2008). As is often done, these views can be considered as complementary explanations of changing residential geographies and housing markets (Bourne, 1981; Ley, 1988; Kauko, 2001) and structuration theory would see the two, individual and structural, as reciprocally reinforcing one another.

The issues raised above are further explored throughout this thesis. This chapter deals specifically with how the societal changes have altered government involvement in housing and the organization of production, and their implications in the structure of cities, particularly through inner city revitalization and the coordination of land use and transport patterns, in the specific case of Montreal and Vancouver. The overarching aim is to paint a broad picture of the two metropolitan areas' housing market contexts, and their changes since the early 1980s to set the stage for the analysis of young adult location, housing and commuting decisions in the chapters that follow. The chapter begins by defining the young adult cohort in more detail and in connecting cohort changes to structuration theory demonstrating how young adults at a given point in time are operating under different formative contexts, which they themselves alter as they make new kinds of decisions and eventually replace older cohorts. After discussing the changes occurring in Montreal and Vancouver, the chapter analyses quantitatively differences in the housing expenditure patterns using data from the 1982 Family

Expenditure Survey (FAMEX) and the 2005 Survey of Household Spending (SHS).

Linear regression models are constructed using geography, housing and household characteristics as independent variables. The variables identifying the geography and survey year help to compare young adults' spending patterns in the different temporal and metropolitan contexts. In line with the objectives of the thesis, this describes how households make decisions about housing under different conditions.

2.1 Defining the Young Adult Cohorts

Demographer Rindfuss (1991) argues that there is an “*inherent ambiguity*” in determining an appropriate age range to define “*anything so nebulous*” as young adults (p. 494). As Calvert (2010) discusses in her literature review, sociologists commonly refer to “*transition markers*” such as completing education, moving out of the parental home, obtaining employment, marriage and childbirth to signify transition from youth to adulthood, with young adults being in the early stages of having attained these markers. However, the decline of traditional norms surrounding family formation and marriage, growing educational attainment and young adults' own changing and varying perception of adulthood, question any universality the markers may have held; although the “*destandardisation argument*” does remain “*subject to debate*” as some find a delay in attainment of markers as opposed to greater diversity in life courses (see Calvert, 2010, p. 9; Shanahan, 2000; Elchardus & Smits, 2006). The young adult

category is defined here as those from 25 to 34 years of age¹⁰. The important distinguishing factor is that young adults are more likely to be influenced by the current housing context than the older cohorts. The use of the 25 to 34 age group in the 1981, 2001 and 2006 census data captures individuals that would be considered part of the baby boomers, generation x and generation y “*when they were at the start of their housing careers*” (Skaburskis, 2002, p. 378). Those younger than 25 are more likely to be full-time students whose location and housing decisions are tied to the parental home or an educational institution, whereas those over the age of 34 would rarely be considered young adults.¹¹ In fact, some accounts use 30 as the age of attaining adulthood (Rindfuss, 1991) but the later cut-off is useful since several transition markers today evidently extend into the mid-30s (Clark, 2007). The exact age cut-offs are also constrained by the use of census data that groups the population into five- or ten-year cohorts in some of the data files.

The analysis in this thesis uses three different categories of young adults. The first is the total young adult population (or cohort) determined solely by age using the 1981 and 2006 individual PUMFS and the census tract data. The young adult cohorts are similar in size in Montreal and Vancouver, constituting about 18 and 14 percent of the total population in 1981 and 2006 respectively. The second category of young adults restricts the population to those in the labour force, which includes those employed or

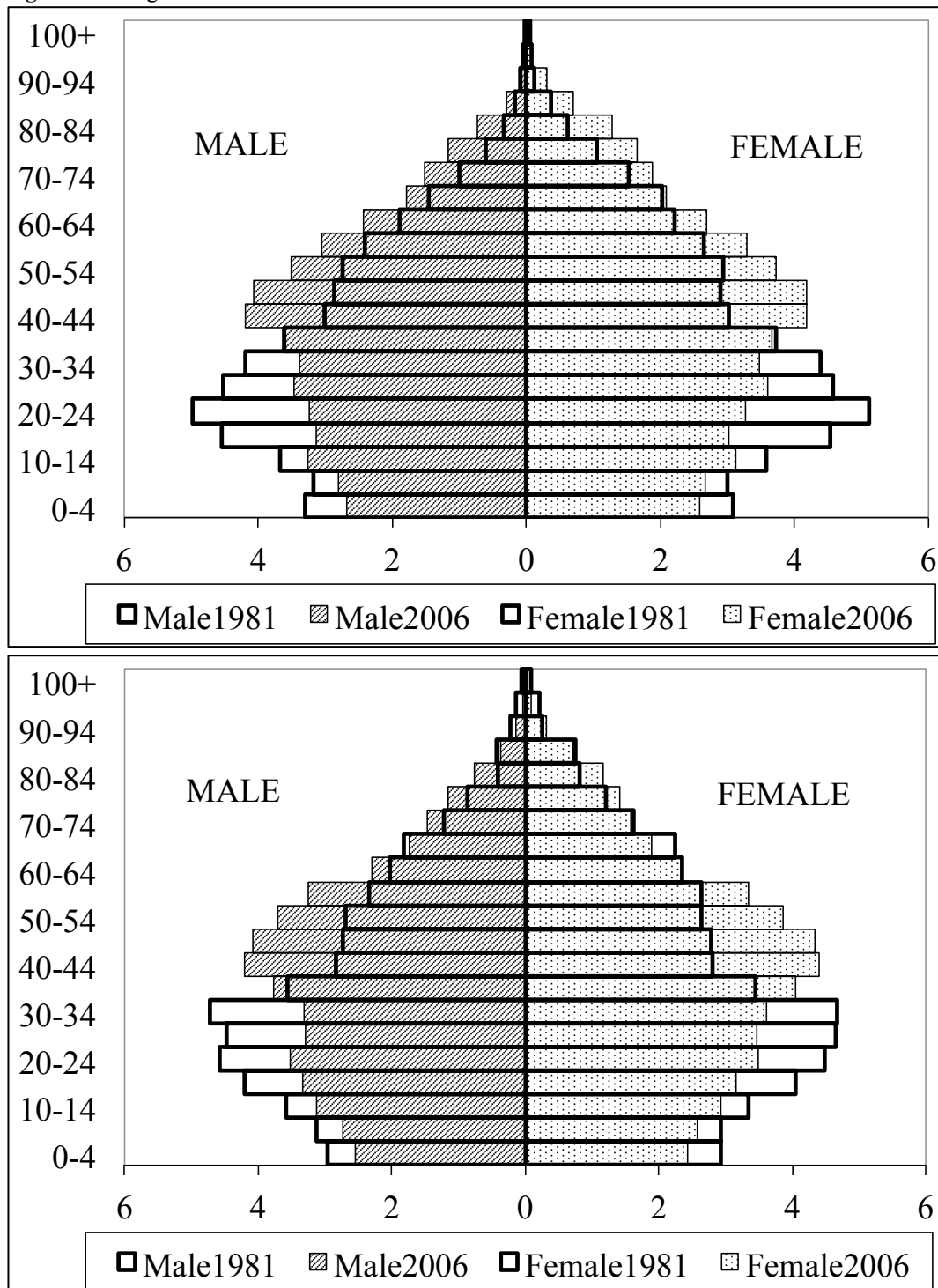
¹⁰ The comparison of fixed age cohorts over time in a context of an aging population means that young adults are on average ‘older’ in the 2001 and 2006 data than in 1981, which may result those in the more recent census data being more established in terms of the transition markers (see Boyd & Norris, 1999).

¹¹ According to the 2006 census, almost 60 percent of those 20 to 24 years old are attending school in Montreal and Vancouver, compared to only about 24 percent and 23 percent of those 25 to 34 years old attending school in Montreal and Vancouver respectively.

unemployed but excludes those not actively looking for work. When using the 1981 and 2001 household PUMFS a third categorization of young adults is used based on the age of the primary household maintainer. The category is also restricted to those in the labour force. The category used in the household file is not directly comparable to the individual file in that it excludes young adults who may be residing with a primary maintainer outside the young adult age range. The size of the young adult labour force is similar in Montreal and Vancouver at about 28 and 21 percent of the total labour force in 1981 and 2006 respectively. Well-known is the declining size of the young adult cohort due to the aging of the population (Figure 2.1; Foot & Stoffman, 1996). The historically larger size of the young adult cohort is attributable to the baby boom—occurring between the late 1940s and mid 1960s—which some observers explain as an outcome of increasing fertility rates in a context of rising living standards and enduring patriarchal family values in the post-war period (Bean, 1983; Roberts et al., 2005).

The definition in the household PUMFS excludes the growing share of adult children living in their parents' home, either never having moved away or having returned after leaving initially (Boyd & Norris, 1999). A Statistics Canada study found that the percentage of young adults still living at home doubled from 1981 to 2001 from 12 to 24 percent for those 25 to 29 years of age and from 5 to 11 percent for those 30 to 34 (Beaupré et al., 2006). The study notes that the trends are at least in part attributable to the recession of the 1990s and declining overall economic prospects. The trend is of course highly relevant in terms of the questions posed in this thesis regarding the implications of context on housing decisions but the datasets used do not permit analysis of young adults living at home separately.

Figure 2.1 – Age distribution in the Montreal and Vancouver CMAs



Notes: Percentage of population in each age cohort. Montreal (top) and Vancouver (bottom) census metropolitan areas.

Source: Calculated using the Statistics Canada PUMFS (1981c; 2006b).

However, knowledge of the parents' characteristics with adult children living at home helps reveal how inclusion of this group when using the individual PUMFS and census tract data impacts the results. Turcotte (2006) finds that single-family homeownership, immigrant status, Asian and South American place of birth and residing in large urban centres increase the probability of having an adult child living at home. Thus, inclusion of young adults living at home in this thesis likely overestimates young adults' own housing consumption and their tendency to reside in single-family dwellings, particularly among immigrants.

2.2 Young Adult Cohorts in Specific Times and Locations

The assumption underlying the cohort approach is that each generation, or birth cohort¹², is distinguished from those preceding, having confronted "*similar opportunities and constraints*", which leads to distinguishable patterns of behaviours, norms, values and beliefs (Myers, 1999; Carr, 2004, p. 453; Twenge, 2006). Norman Ryder's (1965) work is often credited for the development of the cohort approach¹³. Ryder argues:

"in an epoch of change, each person is dominated by his birth date. He derives his philosophy from his historical world, the subculture of his cohort" (p. 855).

¹² The terms 'generation' and 'cohort' are sometimes used interchangeably. Following Riley (1987), the term 'cohort' is used here to refer to people born in a similar time period, and 'generation' to refer to kinship instead.

¹³ French demographer Jaque Vallin referred to Norman Ryder as the "*father of a method that no serious demographic textbook can afford to overlook*" (cited in Quinones, 2010).

Constable (1996) notes that cohort differences need to be understood as context specific because they are contingent upon the pace of social change itself—and it is therefore perhaps not too surprising that in the recent times of “*high modernity*” (Giddens, 1984), characterized by rapid changes in technology and social and economic organization, the concept of generational differences is seemingly amplified in popular consciousness (Furlong & Cartmel, 2007).¹⁴ In the media, generational differences are therefore often essentialized and believed to be omnipresent. This apparent belief that “*we resemble our times more than we resemble our parents*”¹⁵, as an Arab proverb proclaims, arguably has the effect of excluding historically contingent variables, such as class or ethnicity, from our understanding of societal outcomes. Furlong & Cartmel (2007) draw on the works of Giddens to argue that the importance of class, ethnicity or gender has not disappeared but certainly shifted due to greater “*individualization*” and “*uncertainty*” of flexible labour markets. Young adults, according to Furlong & Cartmel, thus not only encounter increasingly less favourable conditions but also a changed context where responsibility for ‘success’ is increasingly defined in terms of individual effort. In other words:

¹⁴ A title search for books using the phrases “*generational change*” or “*generation x*” or “*generation y*” from 1990 to 2010 yields 55 relevant book titles using the University of British Columbia Library Catalogue, including several translated versions of Douglas Coupland’s (1991) popular book “*Generation X: Tales for an Accelerated Culture*” that arguably foreshadowed growing interest in generational differences.

¹⁵ There appear to be several different versions of this proverb in use. The quote is adapted here for gender-neutrality. Twenge (2006) uses the proverb in her study of the changing attitudes, norms and behaviours of young adults in different cohorts to allude to the importance of generational differences. I came across Twenge’s work while writing this thesis thanks to a CBC One radio program, “Ideas in the Afternoon” hosted by Mary O’Connell on January 3, 2011.

“The intersection of life course stage with key social structures at particular historical moments matters, and matters greatly” (McDaniel, 2004, p. 32-33).

The use of a cohort approach is useful in this thesis because it provides insight on how individuals’ decisions reflect the particulars of different time periods; and because it serves as a conceptual framework that connects individuals to structures through the process of aging of successive cohorts, each growing up under different kinds of conditions (Beer, 2006). Riley’s (1987) description perhaps best elucidates the basis of the cohort approach. She explains two “*dynamisms*” that make aging a process of social change: First, since everyone ages there are necessarily “*successive cohorts*” aging together. Second, at any given time societies, and their institutions, are composed of numerous “*age strata*”. Riley describes how these two processes can be visualized as a series of diagonal (cohorts) and horizontal (strata) lines in a two dimensional space of time (x-axis) and age (y-axis) (Figure 2.2). The implication is that as time passes, society and its institutions are altered by the “*dynamisms of aging*” (p. 4):

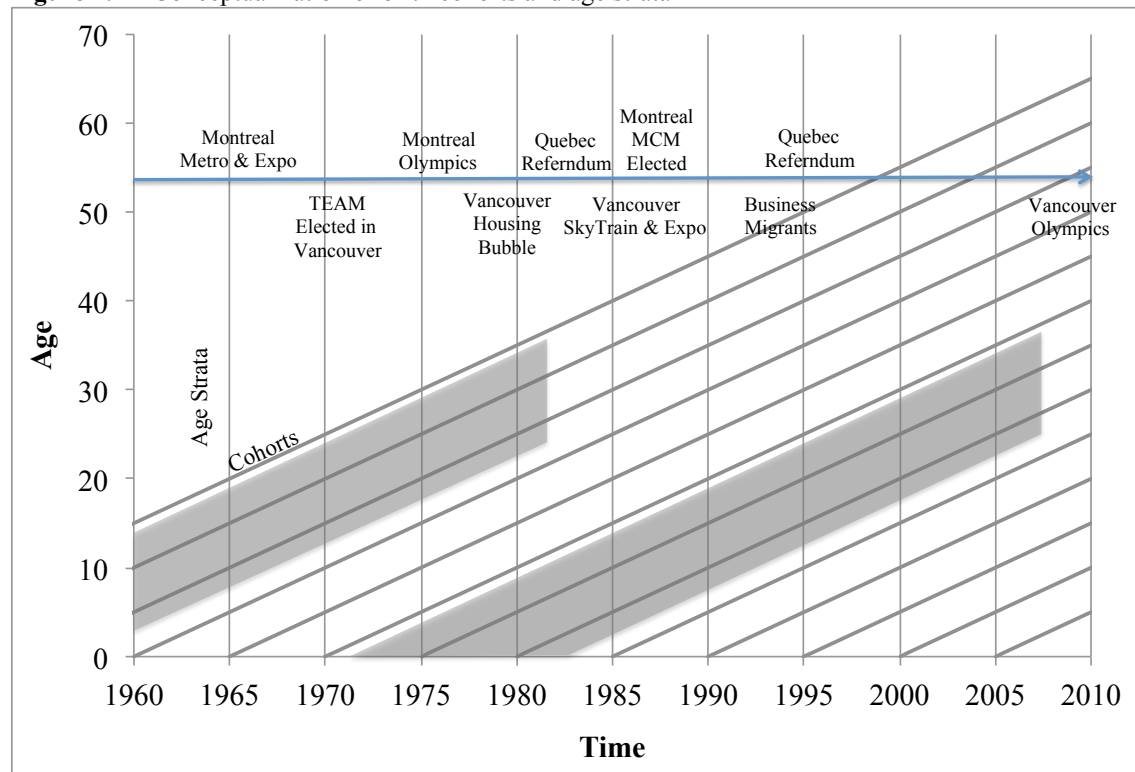
“[T]he people in a particular age strata are no longer the same people: they have been replaced by younger entrants from more recent cohorts, with more recent life experiences.” (Riley, 1987, p. 4)

Therefore, the process of aging, while not explicitly treated by Giddens, actually provides a mechanism of how individuals serve to “*constitute and reconstitute*” social institutions through the “*duality*” of structuration (Giddens, 1984, p. 25). Giddens does not directly theorize how institutions change over time despite acknowledging the existence of time and life-cycles (Johnston, 2006). Some interpret the occurrence of change in structuration theory through “*thresholds*”, which means behaviours that

begin as “*deviant*” within existing structures eventually tilt the scale of what is socially acceptable, thus forming new structures for subsequent behaviours (Mills, 2004).

Adding the element of aging highlights the way this “*threshold*” may actually be reached as younger cohorts replace older ones in the age strata and selectively transfer emerging behaviours into existing settings, such as the workplace, housing markets or political institution, whereby structures are then remade.

Figure 2.2 – Conceptualization of birth cohorts and age strata



Notes: The shaded areas depict the young adult cohorts, 25 to 34 years of age in the 1981 and 2006 censuses. Select events in the urban histories of Montreal and Vancouver are shown to illustrate the different contexts within which young adults make location and housing decisions in different time periods and cities.

Source: Based on Riley (1987).

The portraying of society as an age stratum also links the past and the future to the present in that at any given time, society is composed of a series of cohorts each

with different histories, which then as a whole serve as a structure for future cohorts. Pred (1984) argues that these connections are absent from structuration theory but can be incorporated by drawing on time-space geography through an understanding of the “*paths*” of “*individual biographies*” (p. 281). The cohort approach can also introduce these notions of how individual histories work to build structures but it is more limited than Pred’s approach of using “*individual biographies*” in that cohorts are an aggregation of individuals’ histories. It is, for instance, difficult to account for the varied histories of immigrants and locally born young adults under the same conceptual umbrella of a shared cohort experience. The same applies for young adults with varied genders or class and ethnic backgrounds. The cohort approach is therefore not unproblematic as it can have the effect of ‘flattening’ place and temporally specific conditions. The issues associated with the aspatial treatment of cohorts are arguably amplified by the growth in global migration patterns.

However, the fact that migration changes the cohort composition does not imply that aging is not a driver of social change; it merely acknowledges that it is not the only one. Furthermore, the idea of the cohort approach as applied here is not to suggest that all young adults necessarily have similar histories but rather that at any given time and place there are broad social structures and conditions within which young adults make decisions; and at the same time recognize that there are intra-cohort differences in the ability to make these decisions due to factors such as class, gender, ethnicity that require exploration (Furlong & Cartmel, 2007). Place and temporal specific conditions can be introduced more explicitly into cohort analysis by considering how cohort characteristics originate from local conditions, which also are a product of global-local

interactions (Swyngedouw, 2004; Chapter Three). Figure 2.2 overlays select events in the history of urban development in Vancouver and Montreal to illustrate the way aging occurs in a geographic-specific context. Young adults in Montreal and Vancouver would of course also experience similar kinds of broad changes occurring society-wide. The question explored primarily in the remainder of this, and also the following chapters deals with both these local and global changes that reshaped the conditions within which young adults make housing decisions, and how these differ between the two metropolitan areas. Applied is what Myers (1999) refers to as a “*quasi-panel approach*” in using “*cohort data from repeated cross-sections*” (p. 478).

2.3 Reduced Government Involvement in Housing

An important change along the timeline of the two young adult cohorts is the embrace of a neo-liberal political ideology in the late 1970s and early 1980s. Neo-liberalism, characterized by the three “*major tenets*” of laissez-faire government, free markets and the liberties of the individual, is often understood as a set of policies that differ from those of the preceding Keynesian welfare state based on interventionist, redistributive and egalitarian principles aimed to manage the shortfalls of markets (Larner, 2000; Hackworth, 2007, p. 4). The “*roll-out*” of neo-liberalism became widespread in North American in the 1990s (Peck, 2001), and actually required a substantial degree of state involvement to “*impose market rule on all aspects of social life*” (Brenner & Theodore, 2002, p. 352). Neo-liberal policies also became largely “*depoliticized*” (Peck & Tickell, 2002) and the rule of the market “*naturalized*” (Peck, 2001; Jessop, 2002). In Canada, neo-liberalization had a particularly profound impact

on housing through the changes in state involvement in housing provision that lowered the supply of affordable housing and led to a decline in welfare state functions, reducing income support (Bunting et al., 2004).

Canadian housing policy has been described as having moved from goals of “*social development*” in the 1960s and 70s to “*financial restraint*” into the early 1980s, “*disentanglement*” associated with a reduced government presence in the early 1990s and finally almost complete “*disengagement and privatization*” starting in 1994 (Carroll & Jones, 2000, p. 279). The federal government began its involvement in “*building a non-market social housing sector as part of a broader social safety net*” in 1964 (Hulchanski, 2004, p. 179). Some observers characterized housing in Canada during the 1960s and 70s as relatively equitable and affordable (Sewell, 1994). Federal involvement began to decline in the 1980s but still funded new supply, such as cooperative housing (Cole, 2008). In the mid-1990s, the federal government made an “*unprecedented... decision to abandon a federal role in social housing*” altogether (Shapcott, 2004, p. 198). Also restructured was the role of the Canada Mortgage and Housing Corporation (CMHC) by emphasizing its function as a mortgage insurance provider, eliminating its former role in rental housing provision (Harris, 2006; Dalton, 2009). The cuts in funding at the federal level were mirrored by almost all provinces and led to the downloading of responsibilities to municipalities, which often lacked resources to carry out programs, and therefore involvement of not-for-profit providers increased (Hulchanski & Shapcott, 2004; Germain & Rose, 2000).

In terms of provincial policy frameworks, British Columbia has undergone neo-liberalization (Mitchell, 2004), whereas Quebec has generally resisted the trend (Rose,

1999). However, in terms of housing both Provincial governments have been said to retain more “*extensive housing programs*”, particularly when it comes to support for co-operative housing (Evans, 2007, p. 6; Cole, 2008)¹⁶. British Columbia is certainly more neo-liberal than Quebec, but less so than most US states and definitely less than other Canadian provinces, notably Alberta and Ontario (McBride & McNutt, 2007; Stewart, 2009). The situation in British Columbia changed in 2001-2002 when a right-of-centre Liberal party replaced the former left-of-centre New Democrats, introducing “*sweeping changes to the social programs*”, and making “*severe cuts*” (Tang & Peters, 2006, p. 573). Locally, the City of Vancouver and the City of Montreal retained housing programs as cuts occurred but the delivery, particularly in Vancouver, shifted more toward provision of emergency shelter as opposed to building stock, whereas the latter goal remains more prominent in Montreal (Germain & Rose, 2000). One key contact noted that staff working on housing in Vancouver increased since the 1980s but that much more time is now devoted to acquiring funding as provincial and federal contributions declined since the 1970s (cf. Hackworth & Moriah, 2006). In contrast, Quebec signaled “*definite intentions*” to retain a government presence in housing markets and “*acknowledged the importance of social housing policy*” by compensating for the loss of federal funding (Vaillancourt et al., 2001, p. 13). The City of Montreal thus had greater abilities to pursue “*housing and neighbourhood initiatives since the 1970s*”, including building new stock, thus “*earn[ing] it the justifiable reputation of the most interventionist municipality in Canada as regards the housing sphere*” (Germain & Rose, 2000, p. 163, citing Gaudreau, 1992, and Hulchanski et al., 1990).

¹⁶ Conversation with key contact, January 30, 2009: Former municipal planner.

Young adults today are facing a housing market with less government intervention in Vancouver whereas Montreal appears to have retained many of the social welfare functions of the Fordist era. The effects of reduced government intervention in housing is believed to be especially influential for low-income earners who would see the supply of lower priced units decline as private developers have few incentives to build low-cost rental housing (Hulchanski & Shapcott, 2000). The effects of neo-liberalization are likely to be felt unevenly (Walks, 2010). The long-term implication is that the federal government is today more *“poorly placed to represent the interests of low income households who are experiencing new and enduring forms of disadvantage”* (Dalton, 2009, p. 19).

2.3.1 Concurrent changes in the organization of production

Another material difference for young adults today is the change in the organization of production arising from shifts toward post-Fordism that occurred in concert with neo-liberalization. The post-war years, commonly referred to as the Fordist period, were characterized by the Keynesian welfare policies and an economy based on mass production that offered high wages for the middle class and stability in employment arising from unionization (Filion & Bunting, 2006). The shift toward post-Fordism beginning in the 1970s brought with it increasing internationalization and greater flexibility in the production process, and reduced protection for workers (Harvey, 1989). The *“social context”* began to change in the 1970s but Fordist policies remained for some years so that young adults in the 1980s came of age amidst this transition (Filion, 2001). On the one hand, the transition resulted in a process of de-

industrialization of central city neighbourhoods and the decline of urban economies previously relying on manufacturing, bringing with it large job cuts due to rationalization and outsourcing in the production process (Lloyd, 2006). Growth, on the other hand, was beginning to occur in the service and technology sectors of what has come to be termed more broadly as the “*new economy*” that also includes the growing employment in the ‘creative’ industries and quaternary sector occupations (Hutton, 2008).

For workers, the implications of the changes in production have been increasing income inequality, as employment in the post-Fordist economy is more concentrated in managerial and professional occupations and lower level services (Sassen, 1991; Walks, 2001). There is also less certainty about long-term job security and earnings as labour has become more “*flexible*” in production and neo-liberalization reduced the protection offered by the welfare state, and unions, under Fordism (Peck et al., 2005). At the urban scale, one implication has been that economic development is more directly tied to the ability to compete globally to attract increasingly mobile capital (Leitner, 1990; Hall, 2006). Localities are using “*entrepreneurial*” strategies focused on economic competitiveness as opposed to the “*managerial*” policies during Fordism that “*primarily focused on the local provision of services, facilities and benefits to urban populations*” (Harvey, 1989, p. 3). As “*cities have become strategically crucial arenas in which neo-liberal forms of creative destruction have been unfolding during the last two decades*” (Brenner & Theodore, 2002, p. 369), the uneven effects of an “*unforgiving*” competition have become visible as resources are channeled to

individuals, neighbourhoods and cities “*with economic potential, rather than those in need*” (Peck & Tickell, 2002, p. 394).

Montreal and Vancouver followed very different paths in the context of neo-liberal and post-Fordist restructuring (Bourne et al., 2011). Montreal was known as a “*gateway to the continent*” at the height of Fordism (Marsden, 1981), “*labour-intensive*” manufacturing industries “*supported*” by a strong welfare state, “*poor rural population*” and “*Anglo money*” (Naylor, 1990, p. 71). Over the course of the 1960s and 70s, the effects of de-industrialization materialized in the loss of manufacturing jobs and “*decline in the Canadian urban system...in terms of the loss of head offices and financial institutions*” (Slack, 1981, p. 27). As Germain & Rose (2000) note, Montreal’s decline thus already occurred before the referendums (in the early 1980s and mid 1990s) that raised fears about Quebec separating from the rest of Canada. But the political instability certainly contributed further to the unfavourable economic conditions. In contrast, Vancouver, although impacted by de-industrialization, had at the time of restructuring a much smaller population base and manufacturing sector, being focused more heavily on resource industries (McGee, 2001). Vancouver’s transition to post-Fordism thus could occur more readily with new growth whereas Montreal was faced with a large, unemployed, low-income population but an economic context that increasingly demanded education and fewer workers (Naylor, 1990; Hutton, 2008).

The embrace of “*entrepreneurial*” urban strategies to attract new capital is being pursued by municipalities by way of “*urban spectacles*” such as large scale sports events, festivals and cultural events (Hall & Hubbard, 1996; Gotham, 2002), and is exemplified in the Vancouver World’s Fair (EXPO) of 1986 that saw the cooperation

of governments, at all scales, and private sector interests in attracting investment to Vancouver (Mitchell, 2004; Olds, 2001). Interestingly, however, Montreal has an even more sensational history of hosting large events, particularly under the leadership of Mayor Drapeau known for his legacy of mega-projects, including Expo 67 and later the Olympics in the 1970s.

“Jean Drapeau side-stepped the other levels of government and handed down a series of “faits accomplis” in international relations. The government of Montreal conducted affairs with cities in other countries, and with other national governments, signing agreements to realize projects of benefit to Montreal and the commercial enterprise doing business here.” (Leonard & Leveillee, 1986, p. 56)

In one sense, Major Drapeau’s efforts go to show that *“the role of the local state in actively promoting conditions favourable to capital accumulation”* is likely not an exclusive condition of neo-liberalism (Hall & Hubbard, 1996, p. 155). However, the Vancouver EXPO is an example of how the state reworked the rules that governed international events so as to facilitate foreign investment in the provincial economy, particularly from Asia, which in practice became investment in local real estate (Olds, 1995; Mitchell, 2004). While Montreal’s *“urban spectacles”* in the 60s and 70s certainly aimed to increase the city’s international profile, the Vancouver EXPO was used to *“facilitate the process of de-industrialization”* (Mitchell, 2004; Hutton, 2004) and transition the urban economy so that real estate markets could become a *“vehicle for capital accumulation”* (Blomley, 2004; Newman & Wyly, 2006, p. 31).

The transition to post-Fordism alters the housing context for young adults in that urban growth, and housing costs, are increasingly tied to the metropolitan position in the urban hierarchy. The neo-liberal strategies of *“making the city attractive”* are also

used to compete for global investment in Montreal (Belanger, 2000; Darel, 2004; Ley, 1996). But the city's difficulties in overcoming economic decline have meant that its housing market has not been exposed to the same inflationary impacts to the same extent as is the case in Vancouver (Walks & Maaranen, 2008). While in Montreal the state is playing in recent years a more active role in promoting central city housing developments, this has been linked more directly to the "*interregional scale of municipal 'competitiveness'*" than the case of neo-liberalization responding to global pressures (Rose, 2009, p. 425). In contrast, foreign investment in real estate disconnected Vancouver's housing markets from local conditions, in part through immigration that took on new dimensions due to the increase in wealthy business migrants explored in more detail in Chapter Three, but importantly also through neo-liberal interventions by the state (Mitchell, 2004).

The changes have created a condition where gains from real estate markets have become economic development tools and cities are being marketed for their amenities so that the urban policies in effect actively facilitate higher prices in concert with the creation of 'desirable locations' (Gurran, 2008; Kipfer & Keil, 2002; Kern, 2010). In Montreal, economic decline has kept affordability in check by preventing large housing market gains. Yet at the same time the city has also seen declines in employment opportunities so that there is a larger segment of low-income earners and those unable to find work than in Vancouver for whom affordability remains a concern. Housing cost inflation in Vancouver is, however, nothing new. It should be remembered that Vancouver experienced a short, sharp real estate bubble in the early 1980s that dramatically raised prices before it burst (Skaburskis, 1988). Interest rates are also an

important component of housing affordability in terms of ownership, and these rates were (briefly) as high as 20 percent in the 1980s. One key contact noted that housing policies in the early 1980s actively tried to address the high cost of borrowing, whereas today the policies have shifted to addressing the higher purchasing cost of housing (also see Beer, 2006).¹⁷ One implication for young adults is that while the high price of housing is more prohibitive today, the lower borrowing costs would serve as an incentive to enter the housing market more quickly to ‘lock in’ low interest rates. There were also two recessions between 1980 and the mid 2000s, which had the effect of lowering prices but at the same time also reducing employment prospects (Yelowitz, 2006). The ‘beneficiaries’ of recessions are those with stable employment as prices decline but young adults entering the market would likely face greater challenges (e.g., Brethour, 2008). Today’s young adults may face “*twin pressures*”, as Beer (2006) suggests, from the growth in the service sector that increases desirability of central locations and the heightened competition for housing from the larger cohort of baby boomers. In addition there are the changes in the labour force arising from post-Fordist restructuring, which have generally been associated with a polarizing income structure impacting households’ ability to afford housing unevenly (Sassen, 1991; Walks, 2001). The discussion returns to this issue in more detail in later chapters.

2.4 Inner City Revitalization

Post-Fordist restructuring contributed to a return of investment to the inner city that had been in decline since the 1960s due to de-industrialization. The economic

¹⁷ Conversation with key contact, December 9, 2008: Former politician.

restructuring occurred along with demographic trends and cultural changes that began to favour urban living (Ley, 1996). “*The stability of post-war Fordism*” was predicated on several cultural factors such as “*an ethic of conformity, the primacy of the nuclear family, and the embrace of rationalized consumption*” (Lloyd, 2006, p. 35). The changes in household structure and demography beginning with the decline of traditional norms regarding family formation and the equalization of women’s rights in the 1960s worked along with growing post-modern ideals and a rejection of the homogenous suburbs to facilitate renewed interest in inner city living (Mills, 1989; Ley, 1988). The changes contributed to the gentrification of the inner city by a “*new middle class*” of quaternary sector workers with implications for displacement of lower income populations (Ley, 1996; Atkinson, 2000). The changes reshaped the housing landscape both in terms of price gradients and the amenity and housing stock available in the central city so that young adults’ housing decisions today are made in a context where the central city real estate market has increased in importance and size due to gentrification while suburbanization is continuing, in part, driven by high central city housing costs (Skaburskis & Moos, 2008).

According to the stage model of gentrification, the process begins in specific neighbourhoods through an influx of artists and students attracted by the pragmatic and counter-cultural appeal of residing in industrial or declining low-income areas (Ley, 2003a). The presence of the artists works to attract more residents that often use their sweat-equity to upgrade the existing housing stock, thus raising prices and eventually displacing the original artists and low-income residents. In Vancouver and Montreal, gentrification in the 1970s and 1980s also commonly took the form of rental

conversions to condominium apartments, creating severe opposition from residents concerned about the loss of rental housing in the city (Ley, 1996; Harris, 2011). Both cities eventually placed a moratorium on conversions in select neighbourhoods but in Montreal a by-law remains in effect today that would allow the city to ban conversions to condominium apartments if the percentage of rental apartments fell below a certain level. However, a key informant noted that this is rarely enacted in practice. Nonetheless, gentrification is more widespread and rent increases associated with new developments are higher in Vancouver than in Montreal, which relates to the differences in the restructuring of housing policy:

“In Montreal, almost three-quarters of the [census] tracts experiencing some gentrification remained in an incomplete state by the end of the study period (2001), potentially due to the greater state of original disinvestment in inner-city Montreal...[p]rovincial and municipal policies of siting new social housing and rental apartments in such neighbourhoods...[t]he marginality of Montreal’s position within the global economy and its more limited occupational transformation.” (Walks & Maaranen, 2008, p. 65).

As inner cities again became more desirable places, gentrification increasingly took the form of large-scale condominium apartment developments built on former industrial lands, something much more common in Vancouver than in Montreal. In fact, because condominiums have *“become the principal form of residential property ownership in the inner city”*, any *“account of Vancouver’s transformation would be incomplete without considering the role of condominiums”* (Harris, 2011, p. 24). As Kern (2010) argues, the condominium apartment has been described as *“a spatial fix for the deindustrialized city”* that permitted the expansion of the social and cultural ideals of suburban homeownership to the central city (p. 664). Kern also assigns the growth of

condominium apartments to their ease as an investment tool; and property markets are therefore increasingly for their investment as opposed to their use value.

“Urban housing markets have become important sites for neoliberalization, as witnessed by the elimination of rent controls, state withdrawal from housing provision, and the facilitation of speculative investment in inner-city sites.” (Blomley, 2004, p. 31).

Thus, as Blomley goes on to explain citing Smith (2002), inner city gentrification became entangled not only with the post-Fordist restructuring that provided the de-industrialized spaces and a quaternary sector workers willing to live in central areas. Gentrification is also now, notes Blomley, a facet of neo-liberalization since the state, largely by way of facilitating private investments, actively promoted investment in inner city real estate markets as an economic development strategy (also see Mitchell, 2004).

One key aspect of successfully marketing inner city real estate has become the amenity component (Kern, 2010). Perhaps now seeming ironic given today’s corporate dimension of inner city revitalization projects, it was indeed opposition to *“pro-business”* governments that resulted in the election of the Electors Action Movement (TEAM) in Vancouver’s municipal council in the early 1970s, and replaced *“boosterism”* with *“the pursuit of the quality of life; the humane city would supersede the city efficient”* (Ley, 1987, p. 45). The change in political ideology, as Ley explains, was connected to broader rejections of modernist principles that guided city planning in the 1950s. It resulted in the elimination of a proposal to build an expressway through Vancouver’s inner city and instead focused on increasing urban amenities; *“park space was expanded, pedestrian areas opened up, new cultural and recreational amenities developed”* (Ley, 1987 p. 45). The changes were exemplified in the transitions in False

Creek from, as one key contact put it, “*an industrial slum to a recreational and residential space*”.¹⁸ The support for an increasing inner city amenity component by TEAM resonated with the politically left-leaning, generally well-educated, quaternary sector workers, reinforcing gentrification pressures (Ley, 1996). De-industrialization in favour of a post-industrial urban landscape in Vancouver was also facilitated by the re-zoning of industrial lands by the City (Hutton, 2004).

In Montreal, similar kinds of political pressures began to build in the 1960s through opposition particularly to long-term mayor Drapeau who had pursued a series of modernist mega-projects, including the construction of central city highways that unlike in Vancouver were actually completed. Issues of social justice entered public debate in the 1960s in Montreal as elsewhere due to the lobbying of the social movements of the times (Leonard & Leveille, 1986). However, it took almost two decades until the political administration changed its course:

“Around the 1980s, the government of Drapeau-Lamarre modified its public discourse and its priorities instead of simply waiting for another extravaganza. It became concerned with the revitalization of commercial streets, renovations of housing in old neighbourhoods, development of new industries and, in general, a regeneration of the traditional city.” (Leonard & Leveille, 1986, p. 55)

First as the opposition to Drapeau during the early 1980s, and then winning the municipal election in 1986 the Montreal Citizens’ Movement (MCM) also aimed to focus on the social aspects of the city, representing a similar constituency of left-leaning urbanites as TEAM did in Vancouver (Ley, 1987; Demchinsky, 1989). Drapeau began

¹⁸ Conversation with key contact, January 20, 2009: Former politician.

focusing on neighbourhood issues through housing programs intended to attract the middle-class back to the central city; and the MCM aimed to work for more citizen engagement and affordable housing that was beginning to decline because of Drapeau's neighbourhood improvement programs that attracted gentrification (Leonard & Leveillee, 1986; Germain & Rose, 2000). Similarly, the embrace of "*social diversity*" by the left-leaning quaternary sector workers certainly also helped build support for social and affordable housing strategies being pursued by TEAM in Vancouver (Ley, 1987).

The combination of the changes in the political ideology and economic restructuring that increased the quaternary sector occupations in the inner city had two key implications for urban housing markets. First, the changes made it much easier to co-locate jobs and housing as new service industries were generally non-polluting and the density and proximity dimensions of the inner city became a desirable aspect both in the consumption and production of services in the new economy (Ley, 1996; Hutton, 2004). Second, the success of increasing urban amenities and the emphasis on homeownership contributes to rising housing costs and the loss of rental stock, which makes it more difficult to address ideals of social inclusivity, which the "*new middle class*" originally desired (Ley, 1987; Blomley, 2004; Kern, 2010; Harris, 2011). These pressures are less severe in Montreal having experienced de-industrialization more severely and retained a stronger government presence in protecting affordable housing (Walks & Maaranen 2008; Germain & Rose, 2000). While policies in Montreal and Vancouver both emphasized inner city neighbourhood revitalization, they took place in

different contexts so that gentrification of neighbourhoods was much more pronounced in Vancouver.

2.5 Coordinating Land Use and Transport as a Sustainability Strategy

A key difference between the two metropolitan areas is that investment in the inner city in Vancouver became part of a larger regional planning strategy to coordinate land use and transportation patterns (Filion et al., 2010). As early as the 1970s a report on a public opinion survey of residents, local politicians and urban visionaries referred to the need to connect different parts of the urban area with transit, constraining the automobile and limiting urban growth to protect Vancouver's quality of life (Clint, 1974; Brunett-Jailly, 2008; Hutton, 2009). One former planner noted that “*accessibility*”, by co-locating jobs, housing and amenities at higher densities, had long been a planning objective in Vancouver as opposed to the “*mobility*” objective of efficiently moving people between two places more common in planning in other cities.¹⁹ The “*accessibility*” policies incorporated Smart Growth and other sustainability planning goals that aim to limit urban expansion and raise local densities to reduce automobile use by creating conditions that make it easier to walk, cycle or take transit (Tomalty, 1997; Newman & Kenworthy, 1999; Roseland, 2005). As Hall (1996) explains, sustainability became popular on a global scale in the late 1980s through the Brundtland Report. The Brundtland report famously defined sustainable development as “*development which meets present needs without compromising the ability of future generations to achieve their own needs and aspirations*”.

¹⁹ Conversation with key contact, January 30, 2009: Former municipal planner.

It was given specific meaning in urban planning through land use and transport policies (also see Moos & Skaburskis, 2008; Quastel et al., under review). Hall suggests that the pragmatic ‘definition’ of sustainability in planning arose in part from the work of Newman & Kenworthy (1999) who demonstrated an evident relationship between the density of urban form and automobile use (also see van Diepen & Voogd, 2001; Ewing et al., 2008). Many argue that sustainability has nonetheless remained “*an empty term*” taking on many meanings depending on context (Gunder, 2006). The implementation of densification policies has raised difficult questions regarding the “*right to retain neighbourhoods*” (Godschalk, 2004) and the connections between the capitalist growth imperative and densification policies (Kipfer & Keil, 2002; Krueger & Gibbs, 2007) have led some places to implement alternative “*slow*” or “*no growth*” strategies (Roseland, 2005; Mayer & Knox, 2006). These have in turn also generated critiques because of the implications of social exclusion of “*no growth*” in a context of increasing global immigration (Neumayer, 2006). It is interesting that when the land use and transport policies now being called sustainable were initially implemented in Vancouver, the quality of life factor appeared to be a dominant driver:

*“Environment, sustainability, nahh, believe you me, no one talked about it...we did talk about compact communities [in the 1970s]...how to build communities where people could walk to neighbourhood shops...this translates into what today is being called sustainability, but this was not our explicit goal.”*²⁰

So Vancouver differs from Montreal in that it had already begun to lay the groundwork for “*creating cities that are denser and more compact*” in the 1970s for what came to

²⁰ Conversation with key contact, December 9, 2008: Former politician.

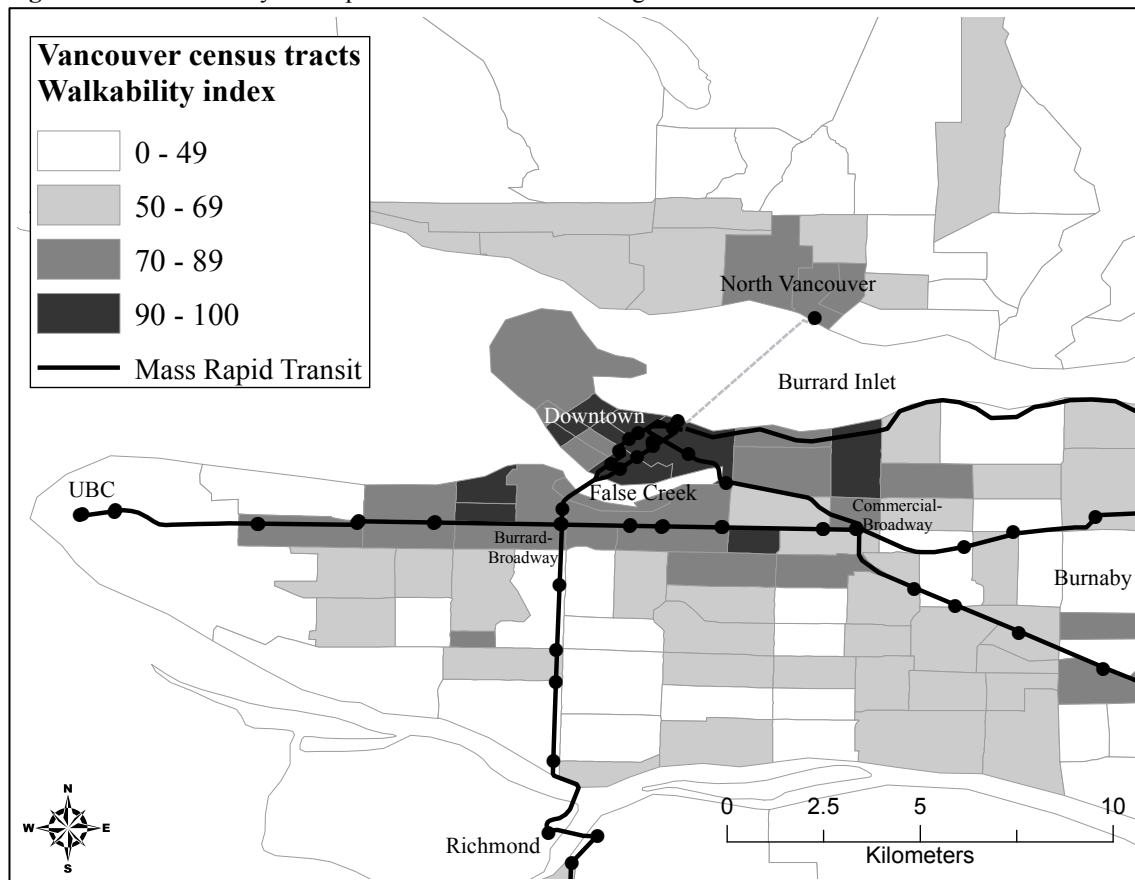
be seen as examples of more sustainable urban development patterns in the 1990s when sustainability “*emerged as almost a Holy Grail*” in the planning profession (Hall, 1996, p. 413; Brown, 2006; Gunder, 2006; Quastel et al., under review).

The establishment of an Agricultural Land Reserve that contained urban growth and the Liveable Region Strategic Plan, identifying growth centres and visions for protecting environmental assets, helped in the mid-1970s to place the ideals of ‘compact communities’ into policy documents with an overarching aim to maintain “*liveability*” (Harcourt & Cameron, 2007). The Agricultural Land Reserve and the designation of specific growth centres were certainly not fully successful as one former city planner noted but a provincial policy-maker argued that these policies became two of the “*strongest determinants of development patterns*” since the 1990s.²¹ The policies had a net effect of centralizing amenities in and around transit corridors and the growth centres, shown in Figures 2.3 and 2.4 using a walkability-index that measures proximity to surrounding amenities.²²

²¹ Conversation with key contact September 26, 2008: Former municipal planner. Conversation with key contact, December 18, 2008: Provincial policy-maker.

²² The walkability index was calculated using an Internet-based program called WalkScore (2010). The index ranges from 0 to 100, with walkability increasing with higher values. The application uses straight-line distances from a street address (or intersection) to amenities (retail, schools, transit, restaurants, parks) within a .25 mile radius to calculate the index. The street intersections nearest the centroids of census tracts were used to approximate the walkability. In sparsely populated tracts, walkability was calculated at a central intersection in the most populated area. The index as used here is only a very crude approximation of walkability but it serves its purpose to capture relative differences in walkability across tracts. The walkability profiles of the census metropolitan areas fit expectations based on knowledge of the streetscape and other more sophisticated measures of walkability (e.g., Frank et al., 2010).

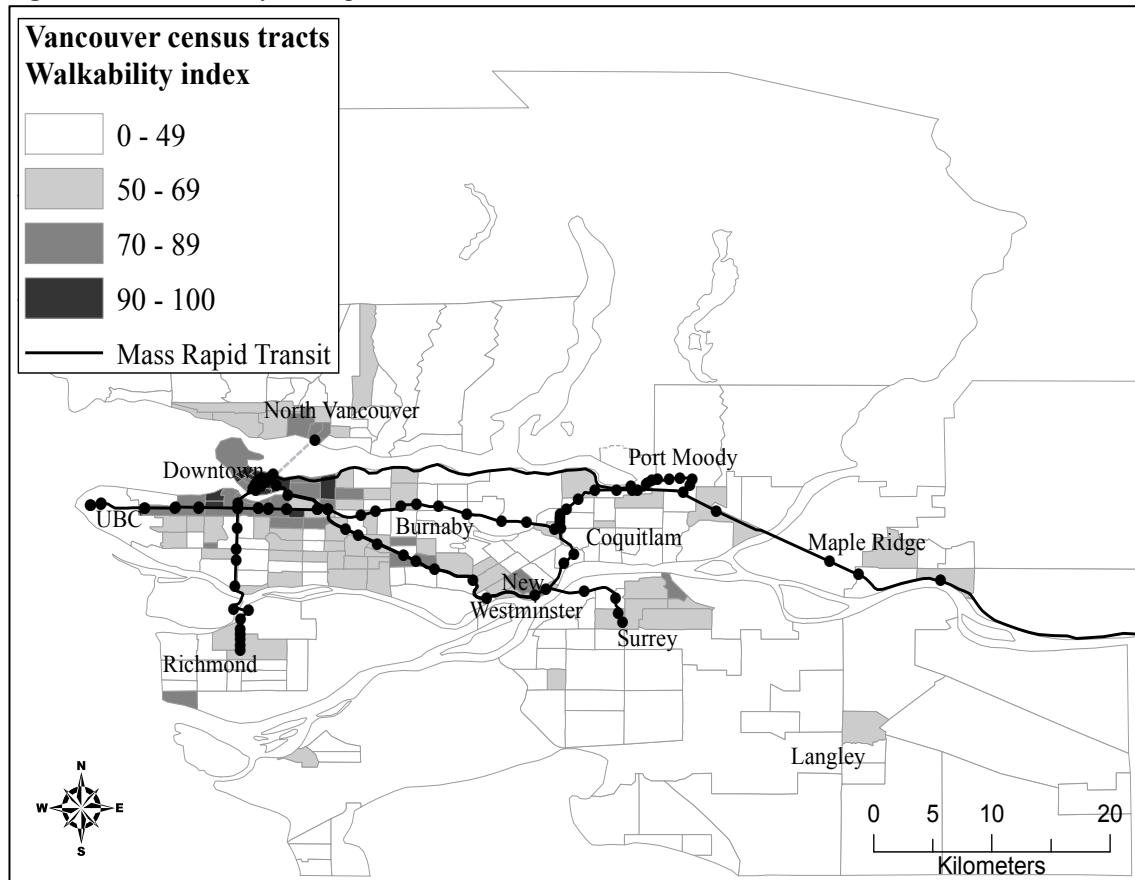
Figure 2.3 – Walkability and rapid transit lines surrounding Vancouver’s downtown



Notes: Rapid transit did not exist in 1981 but there was frequent bus service in the corridors eventually served by rapid transit. By 2006, mass rapid transit connecting the core included express buses from Commercial-Broadway station to UBC (99B) and downtown to Richmond (98B), two SkyTrain lines (Expo and Millennium Line) splitting at Commercial-Broadway station, the SeaBus ferry to North Vancouver and the West Coast Express commuter rail from downtown heading east along Burrard Inlet.

Source: Created using Statistics Canada and DMTI (2009) shape files, WalkScore (2010) data and reference maps from TransLink (2011).

Figure 2.4 – Walkability and rapid transit in the Vancouver CMA



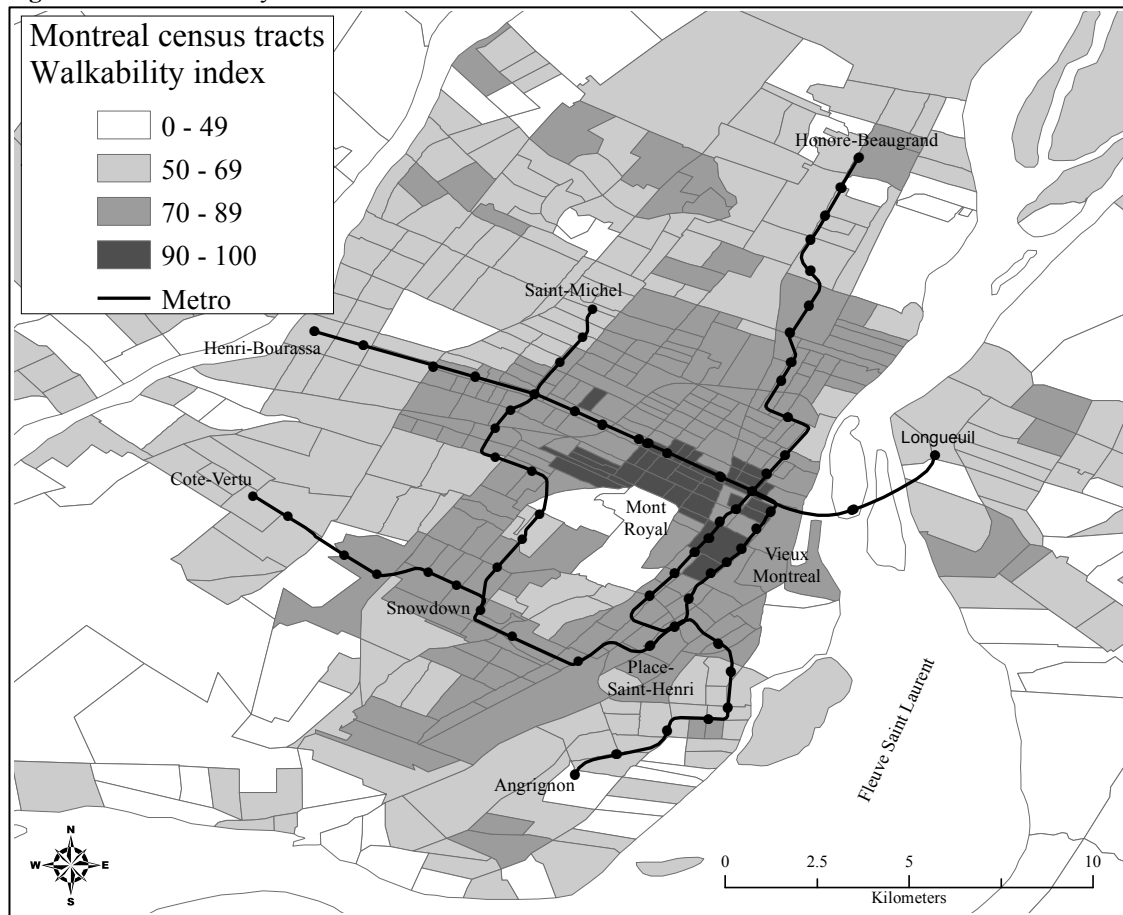
Notes: A rapid transit system did not exist in 1981 but there was frequent bus service in the corridors that eventually became served by rapid transit. By 2006, mass rapid transit consisted of an express bus from Commercial-Broadway station to UBC (99B), an express bus from downtown to Richmond (98B), an express bus connecting Port Moody and Coquitlam to Burnaby (97B), a SkyTrain (ExpoLine) from downtown to Burnaby, New Westminster and Surrey to the south-east, a SkyTrain (the Millennium Line) from downtown heading north into Burnaby at Commercial-Broadway, the SeaBus ferry from downtown to North Vancouver and the West Coast Express commuter rail from downtown along Burrard Inlet to Port Moody and Maple Ridge.

Source: Created with Statistics Canada and DMTI (2009) shape files, WalkScore (2010) data and reference maps from TransLink (2011).

The situation regarding planning was different in Montreal in that local politicians in the early 1980s argued for the strengthening of the downtown and opposed the kind of nodes and corridor system pursued in Vancouver. As Leonard & Leveille (1986, p. 94) note, *“both the MCM and the then governing Civic Party objected to the creation of what they called “artificial growth centres” in the suburbs”*, so that the high-amenity and density areas are centralized (Figures 2.5 & 2.6). Montreal

also did not make a direct effort at regional or sustainability-motivated urban planning until the mid-2000s, although elements of sustainability are reflected in planning policies (Brown, 2006; Filion & Bunting, 2010; Fischler & Wolfe, forthcoming). A regional growth boundary actually existed for some time, as one Montreal academic noted in conversation, but it ultimately has had little effect because of the large amount of undeveloped land still available inside the boundary.

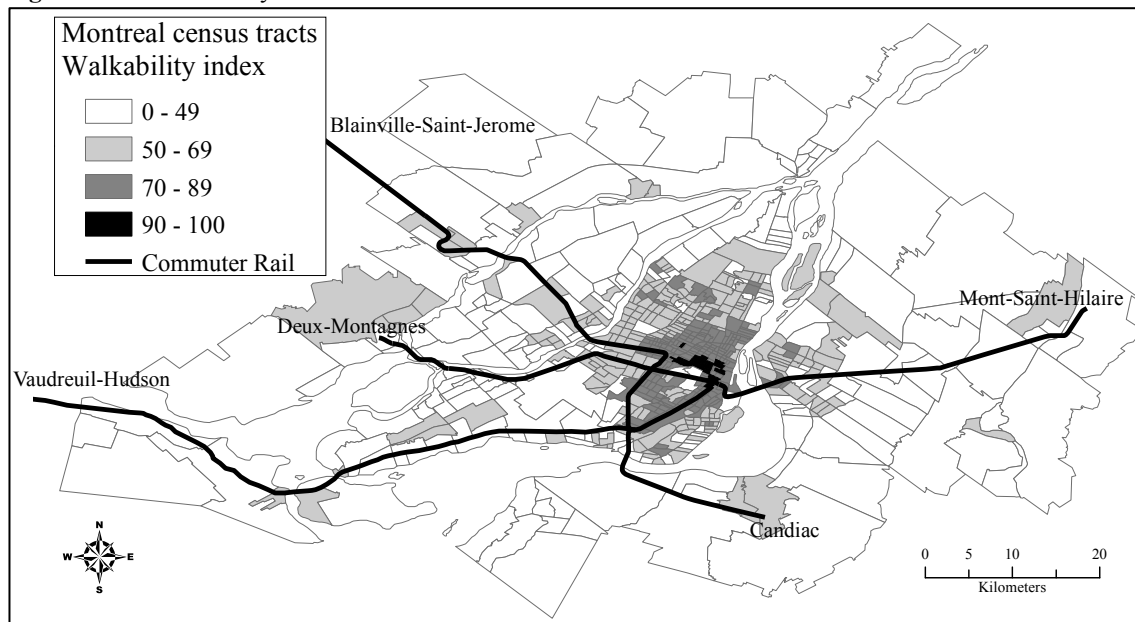
Figure 2.5 – Walkability index and Metro lines on the Island of Montreal



Notes: In Montreal, the Metro lines are referred to by colour. In 1981, the Metro included the ‘Green line’ from Angrignon to Honore-Beaugrand, the ‘Yellow line’ from downtown to Longueuil and the ‘Orange line’ running from Henri-Bourassa to Place-Saint-Henri. By 2006, the Metro also included the ‘Blue line’ from Snowdown to Saint-Michel and an extension of the ‘Orange line’ to Cote-Vertu.

Source: Created using Statistics Canada and DMTI (2009) shape files and WalkScore (2010) data. Metro lines based on spatial files from Section Information et production graphique, Société de Transport de Montréal (STM) received with permission from McGill University Library.

Figure 2.6 – Walkability and commuter rail lines in the Montreal CMA



Notes: At the time of the 1981 census only the lines to Vaudreuil-Hudson and Deux-Montagnes had regular service. By 2006, all the lines shown above had some regular commuter rail service.
Source: Created using Statistics Canada and DMTI (2009) shape files and WalkScore (2010) data. Commuter rail lines based on spatial files from Section Information et production graphique, Société de Transport de Montréal (STM) received with permission from McGill University Library.

Germain & Rose (2000) argue, citing Frisken (1994), that “*the Montreal metropolitan region has never been able to successfully integrate the development of transportation and land use planning*” (p. 108). Several unsuccessful attempts were made over the years to consolidate what remains a very “*fragmented regional governance*” context (Boudreau et al., 2007). Filion et al. (2010) argue that the highly fragmented nature of urban governance and high degree of municipal competition contributed to suburbanization in Montreal as outlying municipalities could provide ready infrastructure and housing types not available in the historically dense inner city (also see Rose, 2009).

The policies during the 1980s that aimed to attract people to the inner city in the face of decline, such as Operation 2000 logements, actually increased single-family and

townhouse developments in the inner city (Germain & Rose, 2000), contrasting with Vancouver's active attempts to raise development densities in the downtown (Blomley, 2004; Hutton, 2004). While at the provincial level Quebec has been proactive in implementing sustainability strategies, land use and transport strategies have not received as much attention—there has been “*less of a political urgency*” for sustainability in Montreal as a result of “*spotty ideological commitment, fragmented governance structures and a favorable urban and regional ecology*” that permitted expansion (Fischler & Wolfe, forthcoming, p. 33). Nevertheless, Montreal's inner city has long had the high density and amenity components that today are promoted as sustainable since its early industrial origins (Newman & Kenworthy, 1999). Even without the proactive efforts present in Vancouver, Montreal manages to have superior transit usage rates (Danyluk & Ley, 2007; Filion et al., 2010).

Vancouver's regional planning efforts were aided by the creation of a regional government (first the GVRD, later Metro Vancouver) and a regional transit agency (TransLink) (Harcourt & Cameron, 2007). One policy-maker noted that the province actually played a key role in facilitating planning goals in that it created a “*governance apparatus*” that permitted these regional planning functions.²³ In the mid 1980s, the then NDP provincial government took an interest in funding public transit and “*key people*”, as another provincial policy-maker noted, viewed transit “*as a basis for shaping urban form*”.²⁴ As part of the EXPO in 1986 – originally named Transpo 86 – an elevated rapid transit system (SkyTrain) was built to connect the downtown with several of the suburban growth centres (Figure 2.4). It initially had one line built in

²³ Conversation with key contact, December 18, 2008: Provincial policy-maker.

²⁴ Conversation with key contact, December 5, 2008: Provincial policy-maker.

conjunction with the World Exhibition (the EXPO line). Developed over the 1980s and 1990s, Vancouver now has a multi-modal rapid transit system consisting of express buses, sea ferries, commuter rail and the SkyTrain network. Montreal also created a regional government in the 1970s (the Montreal Urban Community) but it was arguably much less influential in shaping development patterns, and until the early 2000s only included select municipalities on the Island of Montreal. Also founded as part of the MUC in the early 1980s was a regional transport commission, the Societe du transport de la communaute urbaine (STUCM) but it took until 1989 when the province introduced funding that a fully regional transit agency was established that included Laval and the municipalities on the north and south shores (Leonard & Leveillee, 1986). However, as Germain & Rose (2000) explain, the process of establishing the regional agency was fraught with disagreements and years of uncoordinated transit development that led to declines in ridership. The rapid transit system began with the construction of the Metro in the 1960s and expanded over the years (Figure 2.5), but also not, of course, without several gaps as funding came and went with different governments. In the late 1970s and early 1980s, the provincial government re-opened discussions regarding suburban commuter rail lines and integration with the Metro (Frost, 1981b), but rapid transit use still remains mostly concentrated in the inner city.

The combination of policies aimed at increasing “*livability*” and facilitating de-industrialization through re-zoning, it is commonly suggested, have been successful in attracting growth in Vancouver, particularly in the “*new economy*” sectors, while sustaining a high quality of life and access to the surrounding natural environment (Berelowitz, 2005; Boddy, 2004; Hutton, 2008; Harris, 2011). Also a relative success in

the context of North American cities, dominated by sprawl and the automobile, is that Vancouver has attracted more residential development to central areas than any other city and made walking, biking and public transit realistic alternatives to driving a car (Newman & Kenworthy, 1999; Filion et al., 2010). Montreal because of its longer history of urban density and rapid transit provision, and lower incomes, has long seen higher transit usage and walking and cycling in the central city. Over 60 percent of commuters living in the City of Vancouver travelled by automobile in 2001 as compared to just under 49 percent in the City of Montreal (Danyluk & Ley, 2007, p. 2203). But suburbanization, facilitated by provincial investments in highway infrastructure, also contributed to continuing automobile use in Montreal, which is also the case in Vancouver (Filion et al., 2010; Fischler & Wolfe, forthcoming; Table 2.1).

Table 2.1 – Change in the modal split in the journey to work

	Montreal CMA		Vancouver CMA	
	2006	Δ 06-81	2006	Δ 06-81
Automobile	.705	.072	.742	-.003
Public transit	.215	-.053	.169	-.011
Bicycle	.015	.013	.016	.006
Walking	.057	-.034	.063	-.001
Other mode	.008	.002	.011	.008

Notes: Employed labour force only. Automobile includes car commutes as a driver or passenger. Bicycle category combines motorbikes and bicycles in 1981 only. Proportions shown are based on weighted number of cases. Statistical significance of difference in distribution between years is $p < 0.0001$ in Montreal and $p < 0.05$ in Vancouver based on unweighted samples.

Source: Calculated using Statistics Canada PUMFS (2006b) and Statistics Canada Travel to Work Survey (1981d).

Montreal's inner city is arguably equally amenity-rich, perhaps in terms of consumption even more so, than Vancouver's but the combination of economic decline, reluctance toward neo-liberalization and the stronger commitment to affordable (rental)

housing provision have kept the inner city relatively more affordable. In contrast, it is the creation of the amenity-rich urban environments that have been associated with gentrification and rising housing costs in Vancouver (Ley, 1996; Blomley, 2004; Quastel et al., under review). One explanation that has been proposed is that the centralization of residential development is actually increasingly fed by the environmental concerns of “*eco-gentrifiers*” (Quastel, 2009), who, as it turns out, do not necessarily reduce automobile use due to their higher incomes (Danyluk & Ley, 2007) yet reside downtown to forego long travel distances and the growingly congested suburbs.

The “*eco-gentrification*” hypothesis foresees an urban accessibility surface increasingly defined by public transit, bike lanes and the walkability of pedestrian environments (Figure 2.7), introducing a class conflict into the urban sustainability debate as lower income households, who may not necessarily afford a car, are priced out of the inner city or at least out of its ownership market (Marcuse, 1998; Burton, 2000; Quastel, 2009; Filion & Bunting, 2010). Affordable housing developer Howard Rotberg (2008) goes as far to typify “*Vancouverism*” by a “*narcissistic*” culture that brags about real estate development at high densities to protect existing neighbourhoods and natural areas at the expense of the younger generations and low-income populations who are priced out of the market. Whether or not this is a distinctively local occurrence, or purely connected to gentrification, is debatable as other observers have pointed to a coalescing of conditions, including the aging of the population, rising gas prices, environmental concerns and declining household size, that would see cities generally, and households of different socio-economic status, move toward higher density patterns

and support transit, cycling and pedestrian infrastructure (Hall, 1996; Champion, 2001; Filion & Bunting, 2010).

Figure 2.7 – Cycling infrastructure in Montreal and Vancouver neighbourhoods



Notes: Traffic-separated bike lanes in downtown Montreal (top left), and the Bixi bikes available for rent for a small fee throughout the inner city (top right)²⁵. Traffic calming in Vancouver's Kitsilano neighbourhood (bottom left). The City of Vancouver has designated several bicycle routes on neighbourhood streets off main arterial roads (bottom right).

Source: Montreal photographs taken July 2009. Vancouver photographs taken June 2010.

The arguments hold in a general sense in that pressures on price and their equity implications are more acute in Vancouver than for instance in Montreal, although even here observers are beginning to question the exclusivity of housing developments built according to sustainability principles (Poitras, 2009). But changes in the share of

²⁵ One key informant indicated that the geography of the Bixi bikes initially coincided closely with the pattern of gentrification but that less affluent neighbourhoods began to ask for the Bixi's as well. April, 2008.

workers commuting by car certainly point to a tendency toward “*eco-gentrification*” more prevalent in Vancouver where the proportion of workers in the social sciences, arts and culture occupations and those with university education traveling to work by car have decreased by 14 and 13 percent respectively from 1981 to 2006, whereas automobile commutes increased for primary sector and clerical workers (Table 2.2).²⁶ In Montreal, automobile commutes have increased for those in clerical and manual occupations but the changes are not statistically significant for occupations characteristic of the quaternary sector implicated in gentrification or those with university education.

The trends point to the broader changes in the factors influencing urban development as young adults today would make different kinds of decisions compared to twenty or thirty years ago when environmental issues were not as high on the political agenda (Beer, 2006; Filion & Bunting, 2010). It should not be forgotten that densification substantially increased the housing supply in and around transit and the downtown in Vancouver that would offer young adults today a larger diversity of housing. But this housing is becoming more expensive and smaller, and the remaining lower density stock, or units with a sufficient number of bedrooms to accommodate larger households, has increased in cost so that it is becoming out of reach for an

²⁶ Occupational categories are groupings of related categories from the census: *Managerial* (1981: Managerial, natural sciences, engineering, math; 2006: Management, business and finance, natural and applied sciences). *Health* (1981: Medicine and health; 2006: Health). *Social sciences* (1981: Social sciences, teaching, art, literature, recreation; 2006: Social sciences, education, government services, religion, art, culture, recreation and sport). *Sales and services* (1981: Sales, services; 2006: Sales and services). *Clerical* (1981: Clerical and related; 2006: Clerical and administrative occupations). *Manual* (1981: Processing, machine, fabrication, assemble, repair, construction trades, transport equipment operating; 2006: Trades, transport and equipment operators, processing, manufacturing and utilities). *Primary* (1981: Farming, horticulture, animal husbandry, other primary; 2006: Occupations unique to primary industry, e.g., farming, mining, forestry). Statistics Canada (1981a; 2006a).

increasing proportion of the population (Gray, 2006; Lee et al., 2008; Rotberg, 2008).

This creates tensions between the environmental objectives of higher density development and social objectives of equality (Burton, 2000; Quastel, 2009).

Table 2.2 – Proportion of automobile commuters by occupation and educational attainment

	Montreal CMA			Vancouver CMA		
	2006	Δ 06-81		2006	Δ 06-81	
<i>Occupation</i>						
Managerial	.761	.009		.794	-.043	
Health	.717	.114	**	.759	-.043	
Social sciences, arts and culture	.651	-.034		.708	-.140	***
Sales and services	.628	.026		.661	.002	
Clerical	.644	.120	***	.710	.096	**
Manual	.847	.150	***	.869	.014	
Primary	.816	.035		.856	.243	*
<i>Educational attainment</i>						
Less than high school	.704	.074	***	.728	.011	
High school	.708	.126	***	.758	-.023	
College or trades	.741	.104	***	.777	.068	
University degree	.669	-.038		.715	-.129	***

Notes: Auto commutes (driver or passenger) versus walking, cycling or taking public transit. Employed labour force only. Proportions shown are based on weighted number of cases. Statistical significance of difference between years ***p<0.0001; **p<0.01; *p<0.05 based on unweighted samples.

Source: Calculated using Statistics Canada PUMFS (2006b) and Statistics Canada Travel to Work Survey (1981d).

As Hall (1996) suggests:

“So the phenomenon of environmentally-conscious NIMBYism looms ever larger; and it is very difficult to combine it with any concept of social equity, whether for the less fortunate in the local community, or still more for the less fortunate in other places, or for younger generations, or for generations still unborn.” (p. 422)

Smaller households can be more readily accommodated in central, high-density areas advocated by sustainability policies; and housing affordability may therefore also

become an increasingly important variable in the decision as to whether to form families or have children (Skaburskis, 1994; Lauster, 2010).

The coordination of home and work locations have also become complicated over the past twenty to thirty years by changes related to the shifts in the organization of production. Post-Fordist restructuring increased the employment component for centrally located quaternary sector workers. But de-industrialization resulted in the suburbanization of employment particularly in manufacturing industries, and warehousing; and the emergence of business parks and ‘edge cities’ also increased the office and retail components of suburban areas, particularly of back-office functions (Hutton, 2010). This partly explains the increases in auto commutes for clerical workers (Table 2.2). The employment components have grown substantially in suburban areas, yet in the case of Montreal and Vancouver the central cities still remain the largest concentration of employment (Heisz et al., 2005). Shearmur & Coffey (2002) in their analysis of the “*space economy*” conclude that Montreal remains “*a city with a strong CBD, around which economic activity tends to converge*” whereas Vancouver, which they call a “*paradoxical case*”, also “*has a strong and fast-growing CBD*” but “*stands out as having a large number of...isolated centres*” capturing a “*significant proportion of employment growth*” (p. 594).

The impact on commuting patterns has been an increase in suburb-to-suburb commutes and so called reverse commuting but the persistence of central employment growth, and “*scattered, low-density developments*” of suburban employment, has also meant increased congestion, particularly in Montreal (Heisz et al., 2005; Hutton, 2010, p. 121). Average commute distances, and time, continue to be shorter in inner areas, and

the continuing expansion of the suburbs and inner city growth provide a setting today where central locations may increasingly be sought after due to the loss of time associated with being ‘stuck in traffic’. This is particularly the case among the increasingly educated who place a higher perceived value on their time and the young adults who according to social surveys dislike the commute more than older workers in Canada (Wheaton, 1977; Turcotte, 2008a; Skaburskis & Moos, 2010, p. 238).

2.6 Paying More for Housing

The difficulty in finding and affording housing for Vancouver’s young adult labour force as compared to the past and to other metropolitan areas is a common theme in public discourse, perhaps most dramatically captured by a headline that claims the city “*eats its young*” (Beers, 2007; see Rotberg, 2008). Another newspaper article that also highlights the rise in housing costs in Vancouver, and the more favourable rental market in Montreal, is particularly germane in that it compares the housing experience of one young adult woman in the two metropolitan areas. The woman asserts: “*In Vancouver, a renter’s rat race: Just here from Montreal, I figured finding a decent, non-frills place would be easy. Crazy me*” (Addleman, 2009). Caution is undeniably warranted in taking the anecdotal, and perhaps sensational, newspaper reports as representative of larger trends but the high cost of Vancouver’s housing market is certainly also exposed in systematic accounts (Ley & Tutchener, 2001; Luffman, 2006; CMHC, 2007d).

Housing expenditure is one of the largest components of household spending—Canadians allocate just below twenty percent of their household expenditures to pay for

shelter costs, followed by transportation and food (Statistics Canada, 2006e; Chawla, 2007). The percentage of household income allocated to housing expenditure is also an important indicator of affordability—households paying more than 30 percent of their income towards their principal accommodation are commonly considered to be at risk of affordability issues (Lefebvre, 2003). Low-income households, lone-parent families, women, ethnic minorities, the elderly and those residing in the largest cities are well-known to be more likely to face affordability issues in Canada (Moore & Skaburskis, 2004). The increasing share of income that young adults allocate to housing over time could be in part related to stagnant incomes (Chapter Four) but nonetheless speaks to the rising cost of housing as a share of total expenditures in Montreal and Vancouver (Table 2.3). The expenditures are lower in Montreal than in Vancouver due to the differences in incomes and cost of housing. The renters in Vancouver saw their real housing expenditures decline somewhat, which likely relates to the declining incomes of renters observed more generally (Hulchanski & Shapcott, 2004).

Table 2.3 – Expenditure on principal accommodation by tenure

Montreal				
	Average expenditure		Share of Income	
	1982	2005	1982	2005
Renters	5,818	6,090	.132	.167
Owners	10,752	13,247	.139	.146
Vancouver				
	Average expenditure		Share of Income	
	1982	2005	1982	2005
Renters	9,612	9,252	.189	.205
Owners	14,499	18,430	.169	.225

Notes: Dollar values adjusted to \$2006 using Bank of Canada rates (2010). Includes households with a maintainer 18 to 39 years of age. Expenditure shown for rented or owned principal accommodation by tenure of the household.

Source: Survey of Household Spending and Survey of Family Expenditure Statistics Canada custom tabulations.

Both young adults who are renters and those who are owners pay a larger percentage of their income toward housing in Vancouver where dwelling values and rents are also higher. The trends are revealing of the increasing cost of housing that has become a seemingly accepted characteristic of housing markets in major cities (Hackworth, 2007; “Briefing: London and Paris”, 2008; Kern, 2010). Rising housing costs are in one sense an indicator of the desirability of a particular location as some households are willing to pay more (Glaeser & Gottlieb, 2006), but increases in the share of income allocated toward housing also means that households would have to downscale their housing consumption to maintain similar levels of expenditure on other goods and services. Thus, increases in the cost of housing raise questions regarding affordability and the potential displacement of low-income populations (Ley, 1996; Gurran, 2008; Harris, 2011). Kern (2010), drawing on work by Blomley (2004), sees these trends connected to the neo-liberal restructuring of urban housing markets whereby urban space is increasingly privatized, social and assisted housing policies disappear and space is allocated on the principles of “*highest and best use*”.

While location has long been a question of being able to pay more than someone else, neo-liberalization, which helped produce an inner city condominium market in Vancouver, is a dramatic departure from the more inclusive Keynesian-inspired urban policies of the 1970s (Mitchell, 2004). Different in the Montreal (and Quebec) case are governments that “*have continued to support the construction of social housing, and that require the inclusion of affordable housing as part of new infill development on brownfield sites*” (Walks & Maaranen, 2008, p. 60). Also influencing the housing expenditures are the global exposure of Vancouver’s housing market, and the tighter

land constraints that contrast with Montreal's less favourable economic conditions that alleviate pressures on housing markets.

The intent of the analysis that follows in this section is to reveal empirically how the differences in urban restructuring between two metropolitan areas have shaped young adults' housing expenditures. Since the average expenditures shown in the table above do not account for other changes in the decisions relating to dwelling type and tenure or household characteristics, a multivariate analysis is used to test changes over time in the share of income allocated to housing than similar households in the two metropolitan contexts. If the housing context in Vancouver is more restrictive due to neo-liberal restructuring, the similar households should be paying a higher percentage of their income for similar kinds of housing. The multivariate models also permit insight into the ways the constructed permanent and monetary incomes, and by inference their determinants such as education, occupation and gender, are associated with housing expenditures, revealing potential inequalities in the way housing markets have changed.

2.6.1 Data summary and preparation

The analysis of housing expenditure over time presents several challenges related to sample size and data comparability. The Survey of Household Spending (SHS) (known as the Survey of Family Expenditure (FAMEX) prior to 1997) that provides data on spending patterns of Canadian households includes a much smaller number of cases than are available in the census files. The total number of cases in the 2005 SHS and the 1982 FAMEX are 15,222 and 10,938 respectively as compared to

312,513 cases available in the 2001 PUMFS (“Survey of household spending”, 2009).²⁷

The SHS and FAMEX data are not available publicly at the same level of geography as the PUMFS due to privacy concerns. The SHS and FAMEX identify households’ location by province and size of urban area, thus permitting analysis for urban areas with populations larger than 100,000 in Quebec versus British Columbia.²⁸ However, since it is necessary for the purposes of this analysis to further restrict the sample of large urban areas to include only young adults, sample size becomes too small to conduct analysis that yields statistically significant results, and in some cases cross-tabulation yields cell counts below Statistics Canada’s minimum data reliability threshold (Statistics Canada, 1982a; 2005b).

Due to the issues with sample size, the analysis using the SHS and FAMEX micro-data files include all sample households in each of the two provinces with a maintainer 25 to 34 years of age. This obviously limits direct comparability to the analysis conducted for the two metropolitan areas using the census data but several tests using interaction terms reveal that the relationships in question—spending patterns over time and by household characteristics—do not actually vary by urban size or urban/rural distinctions.²⁹ The contextual differences between Montreal and Vancouver also extend,

²⁷ The 1982 FAMEX is closest to the 1981 census (previous and subsequent FAMEX conducted in 1978 and 1984 respectively). The SHS is conducted annually but the 2005 income figures are comparable to the 2006 census that asks about income from the previous year (Statistics Canada, 2005a).

²⁸ Custom data were purchased from Statistics Canada to obtain summaries at the metropolitan scale but the definition of young adults is expanded to those 18 to 39 year old due to small sample size and does not permit further cross-tabulation (Table 2.3).

²⁹ When the data were restricted to include only the largest urban areas in each of the two provinces, the overall conclusions remain the same, although one cannot be certain as to the statistical significance due to the high variance. It is expected, however, that the analysis of provincial data would result in lower housing expenditure estimates since housing costs are generally higher in the large metropolitan areas.

albeit in more complex ways than can be accounted for here, to the provinces as a whole, thus still making relevant an analysis that compares Quebec to British Columbia. The de-industrialization and economic decline certainly afflicted housing markets across Quebec, whereas rapid housing market appreciation occurred across British Columbia. There are also the differences in provincial policies that made neo-liberalization of the state more common in British Columbia than in Quebec.

Table 2.4 shows a summary of the variables separately for each province and census year.³⁰ The data reflect the increase in the percentage of young adult households with a female maintainer and the decline in the presence of children and number of rooms, trends explored in more detail in Chapter Four. The summary shows a higher share of young adult households in rented multiple-dwellings and lower shares in the more recently constructed housing in Quebec than in British Columbia, findings which will be put to a multivariate test in Chapter Six. The variable measuring urban size shows a decline in the proportion of young adult households in the rural areas and cities with populations less than 100,000. It reflects the movement of young adults into larger urban areas and the overall urbanization of the population that in Canada is primarily

The regression models do include a variable to account for the differences in the magnitude of spending patterns by urban size.

³⁰ The data include young adult households 25 to 34 years of age and exclude seasonal households. Categorical variables were collapsed into dummy variables due to cell counts below 30. The variable identifying dwelling type and tenure even when reduced into four categories still had one cell with counts below 30 when tabulated for the two years and provinces separately. Thus, this variable combines the 1982 and 2005 data for the purpose of the summary table.

taking place in and around the largest cities (Bourne, 2007a; Moos & Skaburskis, 2009).

Also shown are the permanent and monetary incomes.³¹

Table 2.4 – Summary of young adult households in the provinces of Quebec and British Columbia

	Quebec		British Columbia	
	1982	2005	1982	2005
Female = 1	.192	.446	.217	.418
Children present = 1	.548	.383	.557	.359
Own single-detached house	.311		.322	
Rent single-detached house	.077		.202	
Own multiple-dwelling	.069		.099	
Rent multiple-dwelling	.544		.376	
Dwelling built > 1960 = 1	.583	.694	.607	.854
Population < 100,000 = 1	.378	.222	.445	.198
Number of Rooms	5.057	4.974	5.779	5.252
Permanent income (000s)	56.097	51.904	59.413	56.539
Monetary income (000s)	2.714	5.884	5.982	6.652
Housing expenditure (000s)	7.085	8.278	10.791	12.680
Housing expenditure (%)	12.081	14.341	16.481	20.066
Imputed rent (000s)	5.209	5.638	7.477	7.733
Imputed rent (%)	8.882	9.767	11.420	12.237

Notes: The 1982 and 2005 data are combined when cell counts are below Statistics Canada's recommended minimum for release (<30). Housing expenditure and imputed rent shown as a percentage of household income. Dollar values adjusted to \$2006 using Bank of Canada rates.

Source: Calculated using data from the Statistics Canada Survey of Household Spending (2005b) and the Survey of Family Expenditure (1982b).

In an analysis of labour and housing market dynamics, it is especially important to distinguish between the permanent and monetary incomes.³² The housing literature has long emphasized the need to estimate separately the differing effects of regular

³¹ The linear regression included 10,970 cases and showed an r-squared of 0.388 in 2005 and 8,858 cases with an r-squared of 0.375 in 1982. The incomes are predicted using all households earning a positive income, excluding seasonal households and those with no maintainers in the labour force. The coefficient estimates are similar to those found in the census data (Chapter Three) with almost all variables producing statistically significant coefficients at the $p < 0.0001$ level, except some of the categories in the variable identifying the metropolitan areas.

³² The discussion of permanent income in this and the subsequent paragraph draws on research previously published by the author (see Moos & Skaburskis, 2008).

(monetary) earnings and the long-term (permanent) income potential on housing demand (Goodman, 1986). The permanent income, the expected earnings over a longer time frame, is believed to be the basis for housing decisions as households pay for their housing over several years and want to minimize search, moving and other transaction costs. Financial institutions also base their decisions to lend on households' stability of earnings, which is a function of permanent income.

The method of estimating permanent and monetary income is based on work by Goodman (1986), Goodman & Kawai (1984), Skaburskis (1996) and subsequent application of the technique (e.g., Moos & Skaburskis, 2008; 2010). To estimate the permanent income, the natural log of household income is regressed against factors influencing the household's ability to earn an income over time. The exponent of the predicted value is the estimate of the permanent income, and the monetary income is the actual income less the permanent income. The independent variables generally included in the estimates of permanent income are gender, number of earners, age, occupation and level of schooling. A variable identifying census metropolitan areas is also added here to identify regional differences in earnings.

One limitation in the use of the SHS and FAMEX data is a change made by Statistics Canada in what is included under housing expenditure (Lafrance & LaRochelle-Cote, 2011). The main difference is that the 2005 table includes the mortgage principal and interest payments whereas the 1982 data only include mortgage interest payments.³³ Therefore, it is not known whether any increases in housing

³³ The two variables used to measure housing expenditure are differentiated by tenure as 'rented principal residence' and 'owned principal residence' in the surveys. The variable for renters includes spending on rent, parking, tenant insurance and repairs not covered by the landlord in 1982 and 2005. The variable

expenditure of owners shown in Tables 2.3 and 2.4 are actually due to changes in the cost of housing or simply arise from discrepancies in variable definition. Adapting approaches used by Crossley & Curtis (2006) and Lafrance & LaRochelle-Cote (2011), the issue is addressed by estimating an imputed rent as a measure of housing expenditure. As these authors explain, imputed rent is the amount a household could be expected to pay given the rents charged for the type of housing they are consuming. The changes over time in imputed rent do suggest an increase in total housing expenditure and as a percentage of household income for a standardized dwelling (Table 2.4). There are also differences in the number and types of categories used in the 2005 SHS and 1982 FAMEX to define dwelling characteristics, such as type and year of construction, and urban size. These issues are resolved by combining categories for these variables when the 1982 and 2005 tables are used jointly, which results in some loss in detail.

Imputed rent is predicted for young adults using a regression model that estimates the natural log of rent as a function of housing and geographic characteristics for all tenant households (Table 2.5). The results are similar to those of a previous estimate of imputed rent by Lafrance & LaRochelle-Cote (2011), although they did not include year of construction and urban size (and charges for water, electricity and heat that they include are excluded here). Duplex and apartments are associated with higher rents, which as Lafrance & LaRochelle-Cote suggest is likely due to the location of multiple-dwellings in central areas of larger cities. In 1982, the newer buildings are associated with higher rents but this relationship becomes less clear over time, perhaps

‘owned living quarters’ includes spending on maintenance and repairs, condominium charges, property taxes, homeowner insurance and mortgage payments.

due to the value appreciation of the older housing due to gentrification (Skaburskis, 2006a).

Table 2.5 – Household expenditure on rent as a function of dwelling and geographic characteristics

1982 FAMEX			2005 SHS		
Variables	Coeff.		Variables	Coeff.	
Semi-detached dwelling	.109		Semi-detached dwelling	.071	
Row house	.077		Row house	-.017	
Duplex	.201	***	Duplex	.133	*
Apartment	.241	***	Apartment	.225	***
Other dwelling	-.111		Other dwelling	-.093	
Built 1946 – 1960	.086	*	Built 1946 – 1960	.101	*
Built 1960 – 1970	.169	***	Built 1961 – 1970	.093	*
Built 1971 – 1975	.135	*	Built 1971 – 1980	.063	
Built 1976 – 1980	.313	***	Built 1981 – 1990	.033	
Built 1981	.122		Built 1991 to 2005	-.008	
Built 1982	.036		Number of rooms	.222	***
Number of rooms	.206	***	Number of rooms^2	-.017	***
Number of rooms^2	-.013	**	Number of bathrooms	.106	
Number of bathrooms	.160		Number of bathrooms^2	-.016	
Number of bathrooms^2	-.013		Nova Scotia	.185	*
Quebec	-.070		New Brunswick	.120	
Ontario	.061		Quebec	.130	
Prairies	.141	**	Ontario	.461	***
British Columbia	.278	***	Manitoba	.091	
Population 30,000 – 99,999	-.102	***	Saskatchewan	.088	
Population less than 30,000	-.284	***	Alberta	.361	***
Rural areas	-.558	***	British Columbia	.478	***
Constant	6.948	***	Territories	.311	**
N-cases	3,359		Population < 100,000	-.215	***
R-Squared	.212		Rural areas	-.249	**
			Constant	7.649	***
			N-cases	2,899	
			R-Squared	.165	

Notes: Sample weights are used in estimation of linear regression models. Table includes households who are renting. The base in 1982 is the households in single-detached houses, built before 1946 in Atlantic Canada and urban areas with populations greater than 100,000. The base in 2005 is the households in single-detached houses, built before 1946 in Newfoundland and Labrador and urban areas with populations greater than 100,000. ***p<0.0001; **p<0.01; *p<0.05
Source: Calculated using data from Statistics Canada Survey of Household Spending (2005b) and the Survey of Family Expenditure (1982b).

The value of rent increases with the number of rooms but the effect declines as the number of rooms increases. The variable identifying urban size points to the higher rents in large metropolitan areas. The variable identifying provinces shows that rents are higher in British Columbia compared to the base for otherwise similar kinds of dwellings, whereas there is no statistically significant distinction between Quebec and the base. The finding clearly points to the higher cost of the rental market in British Columbia compared to the rest of Canada that is independent of the effect of urban size and housing characteristics on rents.

2.6.2 A geography of expenditure patterns

The first two multivariate models find that young adult households spend a higher percentage of their income on housing in British Columbia than in Quebec, despite lower incomes in the latter (Table 2.6).³⁴ The models are constructed separately for the 1982 and 2005 surveys. The dependent variable is the percentage of household allocated to housing expenditures and the independent variables denote the province, urban size and housing and household characteristics. The regressions account for several household level variables that would influence the share of income allocated to housing. Therefore, the coefficients for the variables denoting province point to how the

³⁴ The models using FAMEX and SHS include Stata's pweight and jackknife estimation options, using Statistics Canada's sampling weights, to estimate the variance in the case of "complex survey design" (Statistics Canada, 2005a). The pweight command with jackknife specified is a "robust variance estimation technique" that "adjusts for the design characteristics" using weights and repeated estimation using sub-samples "so that variances, standard errors and confidence intervals" are more accurate reflections of their true values ("Choosing the correct weight syntax", 2010). Since the public files do not include all information regarding sampling stratification and clustering, the variance calculated is still likely an underestimate (Statistics Canada, 2005a). There are different views on whether the use of weights actually improves the reliability of variance estimates—Nichols (2007) and von Hippel (n.d.) point to sources that discuss the issue in further detail.

differences in housing context, including the degree of neo-liberal restructuring, and housing costs, combine to create a specific geography of housing expenditure patterns. The magnitude of the coefficient for province shows that in 1982 a young adult household in Quebec spent about 5.8 percent less of their income toward housing than those in British Columbia. In 2005, the difference increased to about 8.5 percent. The second set of models combines the 1982 and 2005 data for each province. It finds that young adults allocate a higher percentage of their income toward the imputed rent in 2005 than in 1982 but the increase over time is larger in British Columbia (Table 2.7).

Table 2.6 – Correlates of the percentage of household income allocated to housing expenditure by year

	1982 FAMEX			2005 SHS		
	Coeff.	Beta		Coeff.	Beta	
Quebec = 1	-5.767	-.283	***	-8.525	-.272	***
Female = 1	1.898	.080	*	-.005	.000	
Child present = 1	-.512	-.027		-2.819	-.091	*
Rent single-detached house	-5.110	-.177	***	-9.780	-.207	***
Own multiple-dwelling	-.060	-.001		-5.448	-.115	*
Rent multiple-dwelling	-3.352	-.177	***	-9.854	-.329	***
Dwelling built > 1960 = 1	2.201	.115	**	-.740	-.021	
Population < 100,000 = 1	-3.935	-.204	***	-7.356	-.202	***
Number of rooms	.171	.034		.476	.067	
Permanent income (000s)	-.160	-.317	***	-.257	-.340	***
Monetary income (000s)	-.162	-.400	***	-.237	-.451	***
Constant	30.311		***	48.815		***
N-cases	857			453		
Adjusted R-squared	.290			.321		

Notes: Standard errors used to determine significance levels calculated using jackknife estimation procedures. Sample weights are used in estimation of the models. Includes households with a maintainer 25 to 34 years of age. The base is the British Columbia households with male maintainers, no children present, owning a single-detached house, dwellings built before 1960 and residing in a city with a population of at least 100,000.

***p<0.0001; **p<0.01; *p<0.05

Source: Calculated using data from Statistics Canada Survey of Household Spending (2005b) and the Survey of Family Expenditure (1982b).

Table 2.7 – Correlates of percentage of household income allocated to imputed rent by province

	Quebec			British Columbia		
	Coeff.	Beta		Coeff.	Beta	
Female = 1	.611	.029		1.946	.060	
Children present = 1	-1.214	-.063	**	-2.040	-.067	*
Population < 100,000 = 1	-5.232	-.252	***	-5.327	-.164	***
Year = 2005	6.415	.333	**	10.502	.346	*
Permanent income (000s)	-.184	-.361	***	-.212	-.280	***
Permanent income * Year	-.088	-.267	*	-.140	-.291	*
Monetary income (000s)	-.188	-.476	***	-.232	-.442	***
Constant	24.533		***	31.251		***
N-cases	779			531		
Adjusted R-squared	.539			.416		

Notes: Standard errors used to determine significance levels calculated using jackknife estimation procedures. Sample weights are used in estimation of the models. Includes households with a maintainer 25 to 34 years of age. The base is the 1982 households with male maintainers and no children present. ***p<0.0001; **p<0.01; *p<0.05

Source: Calculated using data from Statistics Canada Survey of Household Spending (2005b) and the Survey of Family Expenditure (1982b).

The geography of expenditure patterns across provinces reflects in part what is often described as the ‘high desirability of British Columbia real estate’ and the associated quality of life factors. Housing types in the regressions are therefore not completely similar in that not accounted for are the external factors associated with particular housing locations. One such factor of Vancouver’s real estate market is the aesthetic aspect of the surrounding natural environment. Berelowitz (2005, p. 161 & 175) suggests, for instance, that “*the city acts as a sort of mirror or a vast display case for the aesthetic consumption of nature*” and that people “*are prepared to pay dearly for their piece of visual paradise*”. The provincial variable also encompasses information on economic success as British Columbia was experiencing growth from Asia-Pacific trade, strong natural resources demand and the expansion of the new economy in Vancouver, whereas Quebec was continuing to struggle to adjust from decline associated with de-industrialization and the separatist movement (Ley & Hutton,

1987; Germain & Rose, 2000; Barnes et al., 2011). However, the regressions do not account for the more subtle differences in housing quality such as overcrowding or even simply residing with roommates that households might use to reduce housing expenditures in high-priced markets.

The data also importantly point to the potential repercussions for affordability and displacement of institutional restructuring that facilitates real estate price gains and reduces public intervention in the housing market on the premises of neo-liberal (entrepreneurial) governance to enhance the attractiveness of place for global investment (Kipfer & Keil, 2002; Kern, 2010). Households have to allocate more of their income in higher priced locations toward housing and those with lower incomes pay an even larger share of their income. The coefficients for the permanent and monetary income variables show that the percentage of income allocated to housing decreases as income increases. The permanent income variable includes information regarding education, occupation and gender, thus pointing to the ways labour market restructuring that is often shown to increase class and gender income inequality works its way into the housing market to produce affordability concerns (see Chapter Four). The findings also resonate with evidence from the housing affordability literature that suggests low incomes, not just price increases, are behind growing affordability concerns (Lefebvre, 2003; Moore & Skaburskis, 2004). In the model in Table 2.7, the variable indicating the year of the survey data was also included as interaction effects with the income variables but only the interaction with permanent income that produced statistically significant outcomes is shown. The interaction points to the strengthening of this negative relationship between income and the percentage of income allocated to

housing over time. It points to the greater potential for affordability concerns for low-income households today than in the past.

The findings for the variable measuring urban size are also interesting in that they show an increase over time in the difference in housing expenditures between large cities with populations over 100,000 and the smaller cities and rural areas. This corresponds with Ley's (2007) finding that growing domestic outmigration from large metropolitan areas is related to housing affordability issues. The reverse of this trend is that larger cities with high priced markets potentially become out of reach of those in areas where they are spending relatively less of their income on housing, which would constrain migration between places with various successes in integrating into the new economy. The finding of increasing differentiation of housing expenditure by urban size also relates in more general terms to the way the Canadian urban system has developed over the past twenty to thirty years. Most economic and population growth occurred in large urban centres (Bourne, 2007a)—the relative increases in the share of income allocated to housing over time in the larger cities points to the way the restructuring of the urban system raises housing expenditures by increasing competition for land and housing in large cities. Housing expenditures define the geographies of affordability across provinces and the urban system. They shape young adults' housing and commute decisions as will be explored in subsequent chapters.

2.7 Discussion

Evidently young adults are entering housing and labour markets under quite different conditions today than in the past. Urban growth and investment in inner city

amenities and real estate markets have resulted in increases in the cost of housing, particularly in Vancouver. The changes have also, however, dramatically altered the housing stock characteristics, for instance increasing the supply of smaller condominium units and the availability of rapid transit. At the same time, flexibility in the labour market associated with neo-liberalization has meant decline in the security of employment and earnings that shape housing and location decisions. In some sense, the perceived imperative of homeownership is often argued to have increased with neo-liberalization (Ronald, 2008) but rising prices and declining government support actually make it more difficult to enter the market (also see Calvert, 2010; Beer et al., 2011). One expected outcome, which pans out in the spending data, is that young adults would spend an increasing share of their income on housing, reflecting both the increasing amenity component and urban growth that have impacted price as well as perhaps an increase in the investment component households allocate toward housing. Housing expenditures, despite also having increased, remain lower in Quebec than in British Columbia, and reflect in part the differences in the degree of neo-liberalization of housing policy and the negative impact post-Fordist restructuring has had on the Quebec, and Montreal, economy.

An important finding of the analysis of housing expenditures is the relatively greater effect of income on housing consumption than in the past. This points to the fact that higher income households are increasingly allocating more of their income toward housing, which suggests some internalization of neo-liberal ideals that emphasize the investment, as opposed to the shelter, component of home ownership (Bourne, 1981; Larner, 2000). The findings squarely point at the growing affordability burdens faced by

lower income households who are competing with higher income earners who not only have more to spend on but also allocate a larger share of their earnings toward housing and are being compensated more due to the inequities emerging in labour markets (see Walks, 2010). Subsequent chapters continue to add to this discussion of the differences in the housing context and their implications for earnings and housing market outcomes at the neighbourhood and household scales. Chapter Three considers in detail the role of immigrants; immigration is now the largest component of population growth in major metropolitan areas and analysis of its transformative effects on especially the Vancouver housing ownership market contributes to the thesis' aims of adding insight into how housing markets have changed over time. The analysis in Chapter Three also provides an opportunity to add a quantitative dimension to the changes in the housing context broadly established in the discussion above. Chapters Three and Four further analyze two themes only touched upon briefly in this chapter, and these are the important relationship between housing consumption and the demographic characteristics of the households and the way labour market restructuring is altering the income distribution, which influences young adults' abilities to afford housing.

Chapter Three: Global Restructuring and Housing Demand³⁵

An important driving force of urban restructuring in Canada since the 1980s has been the increasing influence of globalization that manifests itself as processes of institutional and socio-economic restructuring at different scales. Cities play a unique role, becoming nodal centres of economic and population growth (Castells, 2010). The internationalization of the production process and competition among locales for capital and labour are characteristics of a globalizing world system in which people and places are ever more tightly connected. While there is already a rich urban literature that documents the social and economic transformations of the postwar, intra-urban landscape, much remains to be explored about how globalization processes have materialized as shifts in the internal structuring of Western cities (Marcuse & van Kempen, 2000; Olds, 2001; Walks, 2001), especially through changes in urban housing markets (Bartelt, 1997; Ley & Tucherer, 2001).

In a globalizing world it is of course difficult, if not futile, to isolate truly local versus global forces that shape the internal organization of cities, especially if one accepts that the processes operating at different scales are interrelated (Swyngedouw, 2004). Nonetheless, if certain aspects of cities are qualitatively and quantitatively different than when economies were more nationally contained, it is possible to speak about the local outcomes of the globalization process (see, for instance, Bartelt, 1997). The growing involvement of foreign capital in land speculation and real estate development projects has received prior treatment in the literature (Olds, 1995), but less

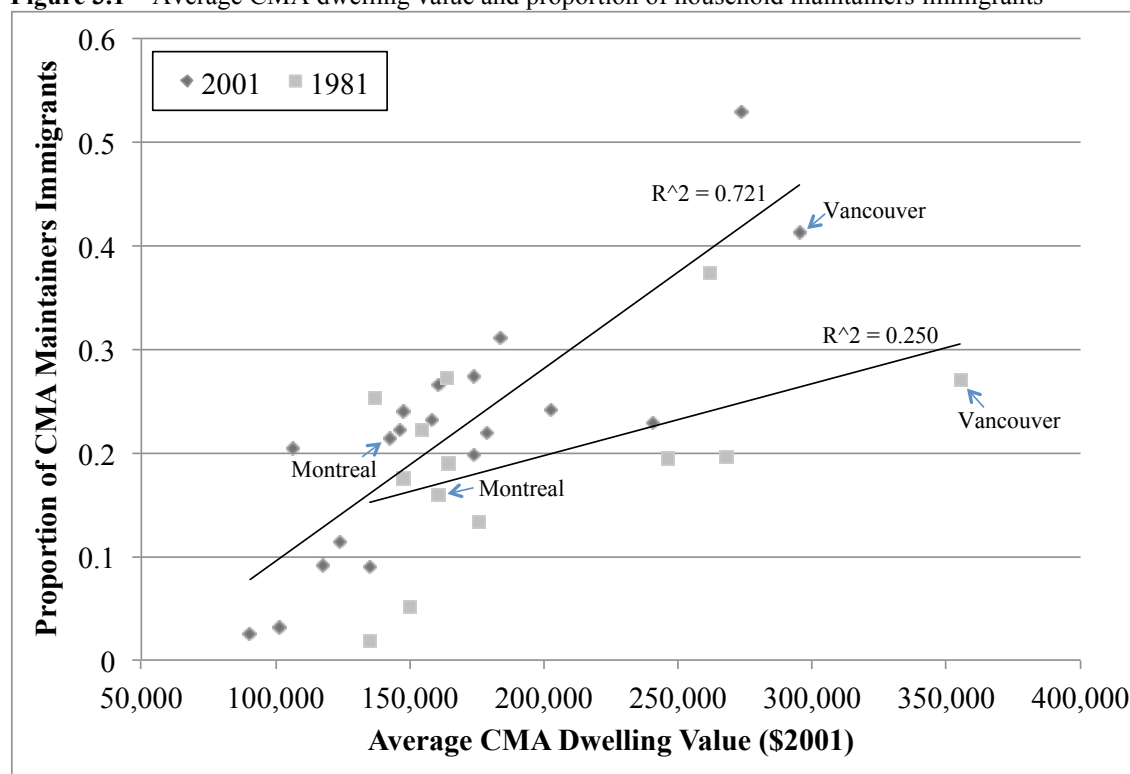
³⁵ This chapter is in part a modified version of an article that has been previously published by the author, with Andrejs Skaburskis, and is reprinted with permission from *Urban Geography*, Vol. 31, No. 6, pp. 724-749. ©Bellwether Publishing, Ltd., 8640 Guilford Road, Columbia, MD 21046. All rights reserved.

attention has been paid to immigrants as agents of the globalization process in residential housing-market functions (Carter, 2005; Saiz, 2007). This chapter focuses on the changing relationship between housing demand and income in the Montreal and Vancouver metropolitan areas, and how the changing nature of this relationship due to immigration influences the ways neighbourhoods change. The analysis thus further contributes to the objective of the thesis to illuminate the changes in the urban housing market context within which young adults make decisions; and it also develops the methodologies applied in subsequent chapters to understand the relationship between housing and household level variables.

A specific focus on immigration as a facet of the changing housing context is warranted since for many observers there is little doubt that immigration has become a more important factor in urban housing market growth in Canada, particularly in Vancouver (Figure 3.1; Ley & Tutchener, 2001). Hou & Bourne (2006) explain how net domestic migration and high levels of international immigration have made the latter a more significant influence on residential markets. This is especially the case in Toronto and Vancouver that are the main destination for immigrants arriving in Canada, and where immigration is the largest component of population growth (Heisz, 2006). Montreal is also one of the three largest recipients of immigrants to Canada but as a proportion of household maintainers the share remains smaller than in several other medium-sized CMAs, perhaps in part due to the large size of immigrant households in Montreal (Rose, Germain & Ferreira, 2006). Due to the larger size of the rental market and relatively lower pressure on its ownership market, aggregate property value effects are likely less pronounced in Montreal. In contrast, Ley et al. (2001) show that

immigration was the most important correlate of changes in residential dwelling value from 1986 to 1996 in Vancouver when differentiating between the effects of gentrification, social polarization, and immigration³⁶. The impact on housing demand from growing immigrant flows are compounded by the shifting profile of migrants due to changes in Canadian immigration policy that favour skilled and economic migrants (Hiebert, Mendez & Wyly, 2008).

Figure 3.1 – Average CMA dwelling value and proportion of household maintainers immigrants



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³⁶ Muller & Espenshade (1985) in Los Angeles and Burnley et al. (1997) in Sydney also find positive correlations between housing prices and immigration. Saiz (2007) confirms the positive association in the U.S. while controlling for other factors affecting housing prices. Carter (2005, p. 266) summarizes further changes in Canadian cities, such as *“the growth of exclusive, prosperous immigrant neighborhoods, the development of monster homes, new architectural designs, ethnic businesses and changing household growth patterns.”*

The implications of the large influx of wealthy and skilled, particularly Asian, migrants to Vancouver have received substantial prior attention (Li, 1994; Ley, 1995, 2010; also see Winders, 2000, for a review), but understanding of its impact on the housing market can be further elucidated by an examination of the determinants of the demand for owned housing, particularly in comparison to Montreal that has a different immigrant profile and settlement patterns (Rose et al., 2006). Income is emphasized because global restructuring alters the way earnings are allocated to housing. While immigrants continue to be socio-economically diverse, the arrival of increasingly skilled and wealthy migrants would change the relationship between local labour market earnings and housing as immigrants arrive with established savings, or in some cases even continue to earn income outside the country. The picture is further complicated by growth of well-educated native-born workers moving into central areas, an emphasis on real estate as an investment, and urban growth induced price escalations that change the ways households consume housing in globalizing cities, and thus reshape the conditions within which young adults entering the market operate.

The chapter begins with a conceptual discussion of how others in the literature have placed housing in a global context. It considers the changing dynamics between housing and labour markets in a context of global restructuring, and then the particularities of immigration in Montreal and Vancouver. The analysis explores the changes in the housing stock, such as prices, rents and dwelling types and densities, over time and their intra-urban spatial dimensions so as to add a quantitative dimension to the changes in the housing context discussed in the previous chapter using the 1981 and 2006 census tract data. The empirical analysis of the determinants of housing

demand uses the 1981 and 2001 PUMFS. The user cost of housing, a measure of housing demand (or consumption), is estimated as a function of a household's demography and income, holding housing characteristics constant. Census tract data are used to explore intra-urban dimensions by way of an analysis of the determinants of changes in dwelling values, which provides further context on the changing housing markets in Montreal and Vancouver.

3.1 Housing and Labour Market Dynamics in a Global Context

There is a clear recognition that while housing “*tended to have more the flavor of Main Street than of Wall Street*” (Logan, 1993, p. 35)—and the local orientation of housing markets justified the analytical focus at the intra-urban scale—housing must now be studied in light of regional as well as global scale effects (Coakley, 1994; Bartelt, 1997; Ley & Tutchener, 2001; Terrones, 2005; Ley, 2007). Following Dymski & Isenberg (1998), globalization is understood here as a process whereby institutions at various scales are setting very specific conditions that facilitate the movement of capital and people across national boundaries, plus the neo-liberal restructuring that is working to configure institutions in a manner that enhances these flows (Smith, 2001; Mitchell, 2004; Aalbers, 2009). Bartelt (1997) explains how these global “*capital and labor flows in the modern world economy are mediated through existing urban locales*” (p. 124), and his analysis of the ways in which the flows reshape and modify the local housing markets reveals impacts of globalization. Also, Badcock (2004) examines how global capital flows exploit national variations in interest rates in real estate investment decisions and the implications for local housing and lending markets, thus emphasizing

the changing local conditions in facilitating globalization processes. The analysis in this chapter follows along a similar vein as these previous studies by examining how immigration reconstitutes the local housing market by altering the determinants of housing demand.

Although the factors affecting urban housing markets are diverse and multi-scalar, the changes in labour markets arising from globalization offer one explanation for the shifts in housing demand and the internal structure of cities. Labour markets are closely related to housing demand, the latter being a function of household formation, income, wealth, and preferences for housing space (Bourne, 1981). Households may also alter their labour market participation to match their preferences for housing consumption. The connection between labour market income and housing consumption became especially apparent as many North American cities transitioned from industrial to service-oriented economies due to the internationalization of the production process. The growing numbers of high-income earners in the tertiary and quaternary sectors of the economy raised the profitability for high-priced housing, especially in the inner city through gentrification, often resulting in greater affordability burdens for renters and those in lower-level occupations (Badcock, 2004; Hulchanski & Shapcott, 2004; Hutton, 2008). The higher earner households may spend more of their income toward housing to pay for proximity to amenities or to invest in the real estate market (Hackworth, 2005; Meligrana & Skaburskis, 2005). In contrast, the job losses and diminishing employment benefits and security associated with de-industrialization of North American cities contribute to neighbourhood decline and housing stock deterioration (Bartelt, 1997).

Immigration factors into the processes that alter local housing market functions

by shifting the composition of the labour force (Saiz, 2007). By expanding population growth, immigrants increase local demand for housing, pushing up prices unless accommodated by new supply or offsetting native out-migration (Ley, 2007). Immigrants differ in their household formation rate, changing their demand for housing; and housing consumption also differs by race and ethnicity (Skaburskis, 1996). Immigration can further increase the size of the labour pool, especially in lower-level occupations, decreasing wages which then would reduce spending power and raise demand for lower-level housing submarkets. When immigrants arrive with savings or earn income outside the country, they also de-couple the relationship between local housing and labour markets. There were likely always people whose housing consumption was supported by means other than their labour market participation. However, the scale and changing profile of immigrants, and also the increasing cost of housing in cities where real estate markets are seen as investment tools (Blomley, 2004; Hackworth, 2005), reshape the relationship between income and housing consumption when measured at the local scale. Wealthy migrants who buy directly into ownership markets keep housing markets afloat without necessarily resulting in corresponding increases in local labour market incomes, whereas the domestic labour force is spending higher shares of their income on housing either for investment reasons or to pay for particular housing locations, which include the rising cost of living in an expanding city.

The result at the neighbourhood level is that the socioeconomic characteristics no longer correspond as closely with investment and construction of housing at different stages of the neighbourhood cycle as assumed in traditional models of neighbourhood transition (Bourne, 1981). The traditional way of thinking about neighbourhood

transition was based on an economic theory of blight-decay-abandonment cycles, building on theories of succession (Park, Burgess & McKenzie, 1925; Hoyt, 1938). The models equate neighbourhood desirability with higher housing values. Expanding areas benefit from increasing values while older areas stabilize and later exhibit declining values as the housing stock ages and “*filters down*”. Due to gentrification and rehabilitation, models began to allow for interruptions in the depreciation cycle (Lowry, 1960; Metzger, 2000). The continuing social upgrading of central city neighbourhoods and the “*entrenchment of wealth*” in elite neighbourhoods counters the assumption of an assumed ‘natural’ cycle of neighbourhood change that sees decline as somehow inevitable (Ley, Tutchener & Cunningham, 2001). “*Filtering*” is not occurring, at least not in Canadian cities, and is arguably working to increase housing affordability burdens (Skaburskis, 2006a).

In the case of immigrants, neighbourhood change was traditionally studied through the invasion of inner-city reception points and subsequent succession into established neighbourhoods; but it is now commonly understood that neighbourhood change needs to be viewed in a broader spectrum of immigrant experiences (Mark & Goldberg, 1985; Ley & Murphy, 2001). Today, wealthier immigrants often move directly into ownership markets and can raise demand for housing locally, especially if they display strong locational preferences to form ethnic communities, which is particularly the case in Canada in Vancouver and Toronto (Logan, Alba & Zhang, 2002; Hou & Milan, 2003; Ley, 2003b, 2010; Hou, 2004). The changes alter the ways neighbourhoods transition as the linkages between income and housing stock changes become strengthened on the one hand through gentrification but de-coupled on the other

by influx of savings and income through immigrants.

3.1.1 The changing profile and settlement patterns of immigrants

The demographic profile of immigrants has changed across Canada over the past 30 years due to shifts in immigration policy that influence the location and housing patterns (Ley & Murphy, 2001). The Canadian Immigration Act of 1967 introduced a point system and business migration program, which was expanded in 1978 and 1986. Whereas people were still admitted under humanitarian (refugee) and family reunification criteria, the majority of immigrants in recent years have been admitted under the points system (Hoering & Walton-Roberts, 2006). In particular, Chinese and Hong Kong immigrants to Vancouver tended to have higher educational levels, occupational skills, and financial assets than immigrants in the past and those moving into other Canadian cities such as Montreal (Hiebert, 1999; Hou, 2004). Migration to Vancouver was partly triggered by the 1997 return of Hong Kong from British to Chinese rule (Badcock, 2002). Vancouver became one of the main destinations for business migrants to Canada. *“The combined figures from Hong Kong and Taiwan amounted to some 63,000 business immigrants between 1980 and 2000, or 63.5% of the BC total”* (Ley, 2003b, p. 430). Only about 5% of those arriving in Vancouver after 1980 were refugees. Vancouver, valued for its quality of life, became a commuter suburb for wealthy transnational workers from the Asian Pacific Rim (Crossette, 2001, p. A6; Ley, 2010).³⁷ Arriving with established wealth, and commonly continuing to earn

³⁷ The increase in wealthy immigrants and their transnational lives have been documented in the academic literature (Mitchell, 2004), highlighting the conditional affiliation with a single national

income outside the country, wealthy migrants to Vancouver can support much higher levels of housing consumption than their locally earned income would suggest.

In contrast, among the three largest Canadian metropolitan areas Montreal receives the lowest share of immigrants, *“the largest share of refugees”*, *“the least affluent immigrants”* and the largest continuing influx of European immigrants such as from *“France and its former colonies...Haiti and the [North African] countries of the Maghreb”* (Hiebert et al., 2006, p. 2). More than 80 percent of recent immigrants to Montreal are renters, yet all immigrants *“are more likely to be homeowners than Canadian-born Montrealers, though the gap is closing”*, particularly among the young (Rose et al., 2006, p. 11). Since there are fewer recent immigrants and even fewer enter the ownership market, the effects on dwelling values have not traditionally been a point of discussion in Montreal as they have been in Vancouver. The settlement patterns of recent immigrants also vary between Vancouver and Montreal. In Vancouver, the suburbanization of jobs, more widespread gentrification of the inner city and increasing diversity of immigrants contributed to the suburbanization of the immigrant social landscape (Balakrishnan & Kralt 1987; Hiebert, 1999; Anisef & Lanphier, 2003). In Montreal, all immigrants, even as homeowners, are *“largely concentrated in the center of the region, that is to say on the Island of Montreal and in adjacent parts of the South Shore and Laval”* (Rose et al., 2006, p. 8). Whereas low-income immigrant groups still reside in Vancouver’s inner city (Hou & Milan, 2003), most increases in the immigrant

jurisdiction among *“flexible citizens”* (Ong, 1999). The experiences of *“satellite kids”* and *“astronaut families”* in Vancouver have received particular attention (Waters, 2003; Kobayashi & Preston, 2007). Some immigrant families who bought houses in Vancouver return to their home country but their *“satellite kids”* remain in Canada to attend school. In the case of the *“astronaut family”*, only the husband returns to work in Asia shortly after the family immigrates to Canada.

population in Vancouver's inner city since the 1980s involved wealthier, often Chinese, immigrants moving directly into ownership markets in existing middle- to upper-income neighbourhoods (Laryea, 1999; Li, 1994).

However, a word of caution is warranted: the examination of ownership markets, particularly in Vancouver, portrays a somewhat romanticized view of immigrants' ability to attain housing. Integration remains a slow process because many recent immigrants often move into rental housing (Fiedler, Schuurman & Hyndman, 2006; Mendez, Hiebert & Wyly, 2006), while the arrival of wealthy business migrants that displace former local residents in Vancouver (Mitchell, 2004) contrasts with those needing to "*double up*" and live in overcrowded conditions due to severe affordability burdens that are increasing for recent immigrants in Montreal and Vancouver (Jakubec, 2004). It thus must be remembered that the analysis in this chapter focuses on the determinants of demand for owner-occupied housing during a period when the migration of skilled and wealthy business migrants dominated immigrant flows to Vancouver (Ley et al., 2001; Hou, 2004). The trends are being compared to Montreal where ownership markets constitute a smaller share of the total housing stock, fewer immigrants arrive and an even smaller proportion of recent immigrants are homeowners (Rose et al., 2006).

3.2 Measuring Housing Demand and Neighbourhood Transition

The aim of this analysis is to ask in general how housing consumption is related to the characteristics of the household in the Montreal and Vancouver metropolitan areas in two time periods. Of specific interest is how the relationship between income

and housing differs between recent immigrants and the rest of the population. The hypothesis is that due to the changing profile of immigrants to Vancouver, recent immigrants identified in the 2001 census would allocate a smaller share of their locally earned income to their housing consumption than is the case for local residents, suggesting a de-coupling of local housing and labour markets. The analysis tests the reverse argument that the difference between recent immigrants and the local population should not have been visible in the early 1980s. The attribution of changing relationships to an influx of business migrants in Vancouver is tempered by a comparison to Montreal that has received fewer wealthy migrants. But nonetheless the impacts of the increasing skill requirement of immigrants could bring similar changes to the relationship between income and housing in Montreal but have lower aggregate impact in a city where ownership markets provide a much smaller component of the overall housing stock. The investigation turns to the neighbourhood scale to shed light on how changes in housing values are linked to changes in the socioeconomic composition, again focusing on the presence of recent immigrants.

The first task of the analysis is to develop multivariate regression models of housing consumption to discern the relationship between a household's income (labour market participation) and housing demand. The model controls for numerous factors affecting housing consumption and distinguishes recent immigrants (estimated to be those who arrived within 20 years before census administration) from the rest of the population. In the 2001 census, the recent immigrants account for 24 percent of Vancouver's metropolitan population compared to 14 percent of Montreal's. Migrants are also distinguished by place of birth, but only in broad categories (Canada, Europe,

Asia, other) available in a temporal analysis comparing censuses 20 years apart.

Variables affecting housing consumption are linked to the variable denoting recent immigrants to examine differences in housing consumption. Of most interest will be the interaction between the immigration variable and the household's income. The regressions show differences in housing consumption between recent immigrants and the rest of the population with otherwise similar household characteristics, living in similar types of dwellings. Separate regression equations are also constructed for recent immigrants and the local population to compare the magnitude and direction of resulting coefficients.

The user cost of housing is derived from the Statistics Canada PUMFS and used as a measure of housing consumption that recognizes the dual functions of housing as shelter and investment. It more directly reflects the costs of homeownership than dwelling value or resale price and accounts for the impact of changing interest rates on the annual cost of owning (Pozdena, 1988; Himmelberg, Mayer & Sinai, 2005). The user cost of housing is usually calculated as the sum of the opportunity cost of capital, property taxes, maintenance costs, and risk premium of owning versus renting minus expected capital gains and applicable tax deductions. Given the data availability of the PUMFS, the user cost of housing is only roughly approximated for each census year as follows:

$$\text{User cost of housing} = \text{Property Taxes} + \text{Utilities} + (\text{Dwelling Value}) \times (\text{Interest rate} + \text{Risk Premium} + \text{Depreciation Rate} - \text{Expected Capital Gain}).$$

Property taxes and utilities are reported in the census as “*owner’s major payments*”.³⁸ Dwelling value is the dollar amount expected by the owner if the dwelling were to be sold. A long-term, low-risk interest rate is used to account for the opportunity costs of owning a home (Himmelberg et al., 2005). The interest rate is set to the 1980 and 2000 yearly average treasury rates of 12.8 and 5.7 percent, respectively, available from the Bank of Canada. All dollar amounts are adjusted for inflation using Bank of Canada rates to 2001 dollars. The risk premium of owning a home and the depreciation rate (or maintenance costs) are set at 4.0 and 3.0 percent, respectively (Green & Hendershott, 1993). Expected capital gains are estimated by the long-term, real appreciation rates of Canada’s 13 largest urban housing markets from the 1981 to the 2001 census (4.4 percent).

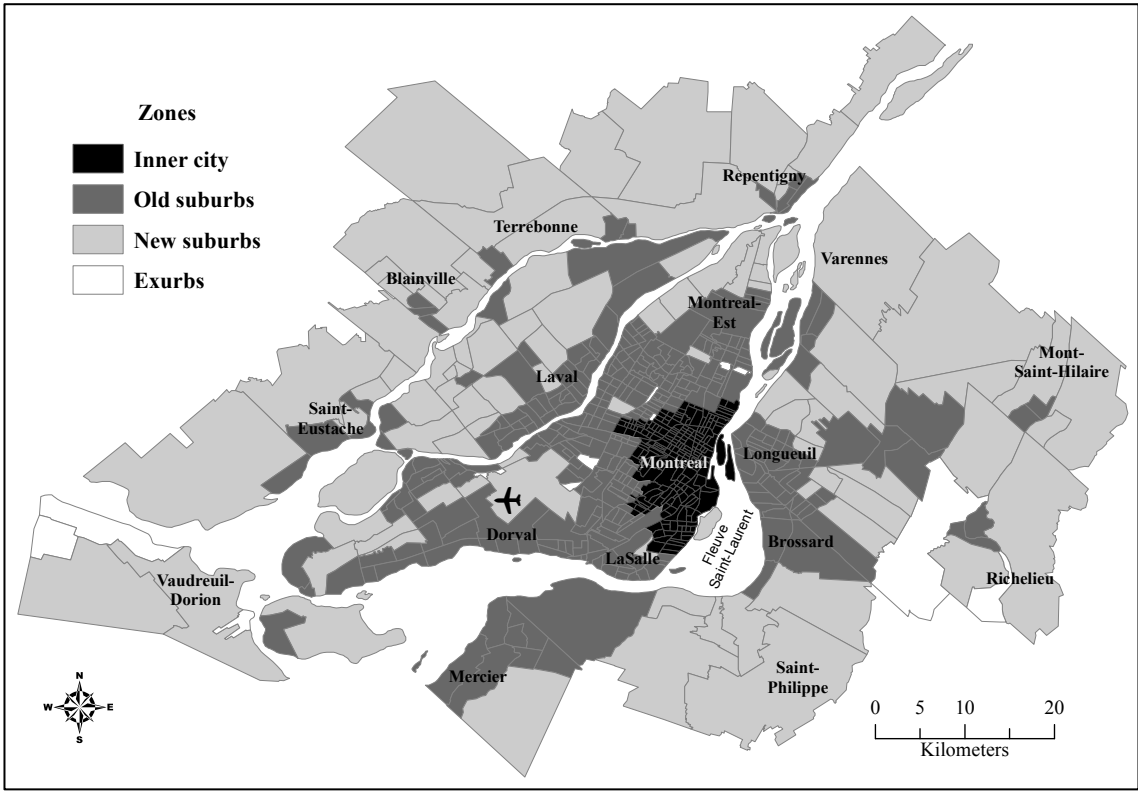
The user cost of housing is then estimated in additive form as a function of the following independent variables: the household’s long-run income potential, temporary (transitory) income, proportion of income derived from investments, household size, age of primary maintainer, gender of primary maintainer, and presence of children. The variables take into account several household characteristics that influence the consumption of housing. Independent variables describing the physical attributes of the home (dwelling type, period of construction, number of rooms, and repair status) are also included so the coefficients on demographic or income variables measure the impact on housing demand for a similar amount and quality of housing (Green & Hendershott, 1993).

³⁸ The “*owner’s major payments*” variable includes mortgage payments unless the household owns the home out- right. Including mortgage payments incorrectly inflates the user cost of housing. Hence, for households with mortgage payments, taxes/utility payments were predicted using a regression model that relates tax/utility costs to the characteristics of the home.

The second task of the chapter is to examine whether immigration alters the traditional depiction of neighbourhood transition where changes in dwelling value parallel the socioeconomic status of a neighbourhood. This task is tackled by way of a multivariate regression model that estimates change in average census tract dwelling value from 1981 to 2001 as a function of independent variables describing changes in the tract's housing stock and socioeconomic composition. A variable on household income is included, expecting a positive relationship with changes in dwelling value as expected by our traditional understanding of neighbourhood transition. Variables describing the proportion of recent immigrants residing in a tract test for the association between immigration and dwelling value, and interaction effects with income reveal whether the relationship between change in dwelling value and income is mediated by immigration.

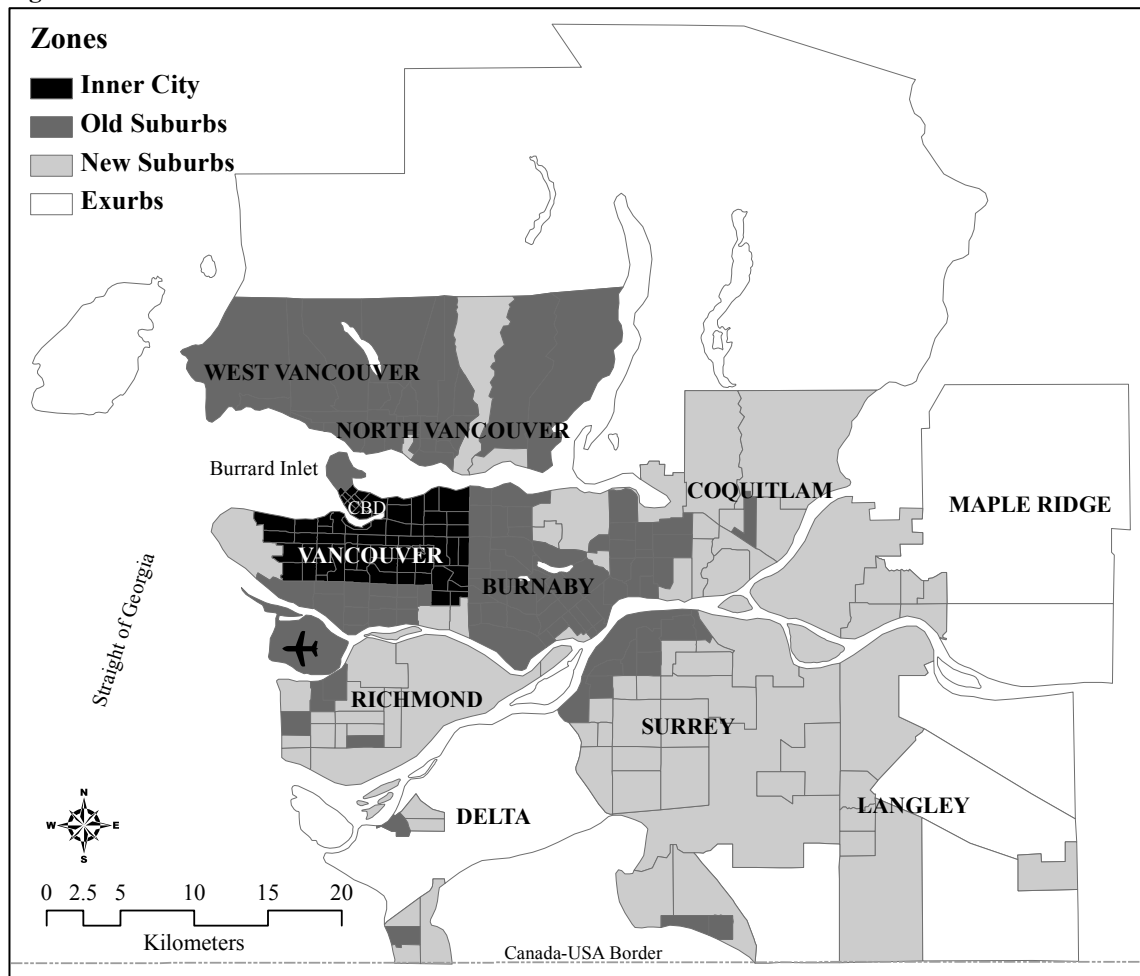
Variables measuring dwelling density, proportion of the stock single-family dwellings, and proportion of the stock built before 1946 control for the changing physical characteristics of census tracts that impact dwelling value. A variable measuring the distance from the census tract to the CBD, and also CMA zones, analyzes value changes in relation to the tract's location in the larger urban context. The categorization by CMA zones—inner city, old suburbs, new suburbs, exurbs—has been previously utilized to divided Canadian urban regions into areas by their “*dominant period of urban development*” (Filion & Bunting, 2010; Walks, 2001; Skaburskis & Moos, 2008; Figures 3.2 & 3.3).

Figure 3.2 – Montreal CMA zones



Source: Calculated using Statistics Canada census data and shape files (1981a).

Figure 3.3 – Vancouver CMA zones



Source: Calculated using Statistics Canada census data and shape files (1981a).

3.3 Changing Determinants of Housing Demand

The analysis is particularly concerned with the changing importance of income in determining housing demand due to changes in the labour force arising from immigration. Several other household-level variables that influence housing demand require inclusion in the multivariate models to account for their effect on the user cost of housing (Green & Hendershott, 1993; Himmelberg et al., 2005). Tables 3.1 and 3.2 show the variables included in the model describing the characteristics of households in the 1981 and 2001 census data. Included are only the households residing in owner-

occupied dwellings. Permanent and temporary incomes are estimated as described in Chapter Two.³⁹ The household income can be influenced by the decisions regarding housing expenditure as households may work more to afford more expensive housing (Kohlhase, 1986), and as discussed above, immigration status also affects labour market outcomes. Thus, the permanent income is estimated without inclusion of the immigration variable or information regarding housing. This permits the use of the permanent income variable in the estimation of housing demand to determine if differences in the income prospects of households affect housing consumption differently for recent immigrants than for the rest of the population. The effect of monetary income shows how housing demand varies with participation (and earnings) in the local labour market. Real permanent income has increased for recent immigrants over the 20-year time frame in Montreal and Vancouver (Tables 3.1 & 3.2), reflecting the growing emphasis of immigration policy on educated and skilled migrants.

³⁹ Separate models are estimated using the 1981 and 2001 PUMFS data, including all household records, except those reporting negative incomes (output not shown). The number of cases and adjusted r-squared values are 31,166 and 0.305 in the 1981 model and 106,555 and 0.243 in 2001. With the exception of select dummy variables identifying census metropolitan areas, the p-values are less than 0.0001 for the regression coefficients in both years. The direction of coefficients remains the same in both years with male maintainers, more earners, older age, higher order occupations and higher levels of schooling positively associated with household income. The magnitude of the coefficients show the impact of gender on income declining and the impacts of education and higher occupational status increasing from 1981 to 2001. The implications of these findings are discussed further in Chapter Four.

Table 3.1 – Means of housing and household characteristics of owners, Montreal CMA 2001 and 1981

	Recent Immigrants		Rest of the Population	
	1981	2001	1981	2001
User Cost of Housing (\$1,000)	33.939	18.395	29.267	16.741
Dwelling Value (\$1,000)	168.136	158.764	140.104	141.514
Average Number of Rooms	6.705	6.734	6.458	6.793
Single-Family Dwelling	.452	.440	.612	.608
Dwelling Built Pre-1946	.114	.104	.159	.108
Dwelling Built 1946 – 1980	.858	.555	.818	.526
Dwelling Built 1981 – 2001	.028	.342	.023	.366
Only Regular Maintenance	.753	.548	.769	.643
Minor Maintenance Required	.174	.335	.175	.297
Major Maintenance Required	.073	.116	.057	.061
Permanent Income (\$1,000)	60.617	70.951	55.753	67.209
Temporary Income (\$1,000)	10.051	-4.109	14.171	15.255
Prop. Investment Income	.043	.044	.074	.049
Household Size	4.178	3.743	3.463	2.739
Maintainer Age	43	50	48	56
Dependent Children Present	.740	.625	.528	.353
Maintainer Female	.052	.274	.166	.324
Maintainer Place of Birth				
Canada	-	-	.858	.838
Asia	.155	.381	.002	.020
Europe	.632	.308	.133	.109
Other	.213	.311	.007	.033

Notes: All dollar values adjusted for inflation to \$2001 using the Bank of Canada consumer price index. Recent immigrants: Immigrated to Canada within 20 years before census enumeration.

Source: Calculated using Statistics Canada household PUMFS (1981b; 2001a).

Table 3.2 – Means of housing and household characteristics of owners, Vancouver CMA 2001 and 1981

	Recent Immigrants		Rest of the Population	
	1981	2001	1981	2001
User Cost of Housing (\$1,000)	63.044	30.689	60.659	28.993
Dwelling Value (\$1,000)	366.831	309.571	352.900	291.783
Average Number of Rooms	6.926	6.608	6.716	6.955
Single-Family Dwelling	.861	.572	.848	.619
Dwelling Built Pre-1946	.181	.046	.212	.099
Dwelling Built 1946 – 1980	.769	.292	.741	.429
Dwelling Built 1981 – 2001	.050	.662	.047	.472
Only Regular Maintenance	.789	.703	.807	.699
Minor Maintenance Required	.183	.214	.154	.227
Major Maintenance Required	.028	.084	.040	.074
Permanent Income (\$1,000)	64.712	73.991	53.689	71.426
Temporary Income (\$1,000)	14.232	-7.022	18.557	21.268
Prop. Investment Income	.054	.108	.100	.066
Household Size	4.279	3.808	3.041	2.657
Maintainer Age	42	51	51	58
Dependent Children Present	.704	.581	.401	.301
Maintainer Female	.074	.253	.242	.335
Maintainer Place of Birth				
Canada	-	-	.733	.680
Asia	.424	.799	.032	.106
Europe	.435	.113	.223	.174
Other	.139	.088	.012	.041

Notes: All dollar values adjusted for inflation to \$2001 using the Bank of Canada consumer price index. Recent immigrants: Immigrated to Canada within 20 years before census enumeration.

Source: Calculated using Statistics Canada household PUMFS (1981b; 2001a).

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It is interesting to note that recent immigrants already had higher income prospects than the local population in the 1981 census, and the difference vis-à-vis the rest of the population actually decreased by the 2001 estimates. In other words, while it is certainly true that the share of skilled and well-educated migrants to Canada increased since the shift to the points system in immigration policy, recent immigrants already exceeded the rest of the population with respect to their earning potential in 1981. The negative temporary income of recent immigrants shows that their monetary earnings in the labour market in 2001 are below their earning potential. This income penalty can result from non- acceptance of foreign professional accreditation as labour market integration remains a slow process in Canada so that immigrants earn less than their labour market profiles would predict (Jakubec, 2004).

The negative temporary income is also in line with the arrival of wealthier migrants who are earning little or no income in the local labour market (Ley, 2003b; 2010), and the absolute magnitude of the negative monetary income is higher in Vancouver, the city that received the largest relative influx of Asian migrants. Table 3.2 also shows the proportion of income received from investments, which are another indication of the increasingly wealthy migrants arriving in Vancouver. It is the only crude measure of household wealth available in census data. Household wealth plays a potentially crucial role in housing consumption. Recent immigrants in Vancouver derive more than 10 percent of their income from investment in 2001, almost twice as much as for the recent immigrants in 1981 and higher than for the rest of the population whose share of income derived from investment decreased from 10 to 7 percent. In Montreal, the percent of income recent immigrants earn from investment is lower than in

Vancouver and remained relatively constant from 1981 to 2001 (Table 3.1).

The variables measuring user cost of housing (and dwelling value) show that recent immigrants consume more housing than the rest of the population in Montreal and Vancouver, a finding also of the 1981 census. Due to high interest rates in the early 1980s, the user cost of housing actually decreased from the 1981 to 2001 census. The value of dwellings also declined in real terms in Vancouver due to a housing bubble that inflated prices leading up to the 1981 census (Skaburskis, 1988). In Vancouver, recent immigrants identified in the 1981 census were more likely to live in single-family dwellings with more rooms compared to the local population. The share of households in single-family dwellings and their average number of rooms decreased from the 1981 to the 2001 census, which relates to the higher-density development patterns facilitated by higher prices and the urban growth management strategies discussed in Chapter Two. In Montreal, the recent immigrants are less likely to reside in single-family dwellings than the rest of the population in both census years, and the change over time is not different from zero at a statistically significant level. It is known that the difference in single-family dwelling occupancy between immigrants and the local population has traditionally disappeared with length of stay in Canada (Mendez et al., 2006). The lower share of recent immigrants in single-family dwellings and the relatively higher proportion in older dwellings in Montreal reflects the more centralized location patterns of immigrants in this metropolitan area. In Vancouver, the recent immigrants have increasingly come to reside in newer buildings in the expanding suburban fringe.

The comparison of household characteristics between Montreal and Vancouver

reflects these differences in the transformations in the owner-occupied housing stock and the immigrant social landscape. The percentage of the rest of the population residing in single-family dwellings declined in Vancouver so that the magnitude in 2001 is almost the same as in Montreal, whereas the percent of recent immigrants living in single-family dwellings remains higher in Vancouver where the immigrant residential location patterns have become more suburbanized. Reflecting the differences in dwelling type, household size of the rest of the population is smaller in Vancouver than in Montreal whereas the recent immigrant households are on average larger in size in Vancouver than in Montreal. Household size is included in the regression as larger households will have greater expenditures on food, clothing, and other goods, thus leaving less to be spent on housing (Ho & Chiu, 2002). Household size is lower for recent immigrants and the local population in 2001 as compared to their counterparts in 1981.

Age is included in the analysis as it is expected to be positively related with housing consumption. Older maintainers had more time to accumulate equity. Maintainers are generally older in 2001 than in 1981 due to the aging of the population. The recent immigrants are younger than the rest of the population in both years. The presence of children could increase housing consumption as households might pay a premium for housing with yards or to reside closer to desirable schools, although the presence of children also reduces income available to spend on housing (Murdie et al., 1999). Recent immigrants are more likely to have children in their home than the rest of the population, and the Montreal households are more likely to have children than those in Vancouver. Gender is also associated with housing consumption decisions, partly due

to differences in income and household size (Skaburskis, 1997). The proportion of females who are household maintainers is lower among recent immigrants than the rest of the population but the difference becomes smaller by 2001.

3.3.1 Multivariate analysis of the user cost of housing

Table 3.3 shows the regressions with the user cost of housing as a function of housing and household characteristics in 2001. The regressions pool all owner households, and interaction terms are included to identify the recent immigrants. Interaction terms were removed from the model if they were not statistically significant⁴⁰. The standardized beta coefficients permit comparison of the relative contribution of each independent variable in the prediction of the user cost of housing. Table 3.4 shows the regressions constructed using the 1981 data. For brevity, only selected variables are shown. As expected, the regressions show that households with older maintainers and the presence of children are associated with a higher user cost of housing. Dwellings with more rooms and in better state of repair command a higher user cost of housing in both metropolitan areas. Also, housing built before 1946 has positive coefficients, showing that older housing primarily located in the inner city is more highly valued due to gentrification (Filion & Bunting, 1990; Skaburskis, 2006a), whereas the areas built-up between 1946 and 1980 that comprise the old post-war suburbs are devaluing (Skaburskis & Moos, 2008).

⁴⁰ Comparison of coefficients in the models constructed for recent immigrants and the rest of the population separately reveals the same overall conclusions as those presented here.

Table 3.3 – User cost of housing as a function of housing and household characteristics

	Montreal CMA			Vancouver CMA		
	Coeff.	Beta		Coeff.	Beta	
Recent Immigrants	3.614	.096	**	2.261	.080	*
Average Number of Rooms	1.514	.283	***	1.670	.291	***
Single-Family Dwelling	-1.918	-.101	***	4.253	.167	***
×Recent Immigrants	1.165	.022	*	1.697	.049	**
Dwelling Built Pre-1946	3.189	.101	***	3.840	.092	***
Dwelling Built 1946 – 1980	-1.209	-.067	***	-1.966	-.081	***
Dwelling Built 1981 – 2001	Base					
Only Regular Maintenance	Base					
Minor Maintenance Required	-.790	-.041	***	-.853	-.031	**
Major Maintenance Required	-.956	-.025	**	-2.968	-.061	***
Permanent Income (\$1,000)	.104	.272	***	.091	.205	***
×Recent Immigrants	-.047	-.095	***	-.063	-.180	***
Temporary Income (\$1,000)	.059	.237	***	.042	.150	***
×Recent Immigrants	-.026	-.026	**	-.041	-.065	***
Prop. Investment Income	12.380	.131	***	9.159	.091	***
LN(Household Size)	-3.029	-.116	***	-2.022	-.065	***
×Recent Immigrants	1.846	.068		3.964	.199	***
Maintainer Age	.073	.085	***	.134	.120	***
Dependent Children Present	1.657	.092	***	1.710	.072	***
×Recent Immigrants	-1.481	-.034		-2.251	-.069	**
Maintainer Female	.037	.002		.131	.005	
Constant	-1.114			2.926		**
N-cases	12410			7492		
R ²	.292			.328		

Notes: Table only includes households in owner-occupied dwellings. Natural log of variables used when it improved model fit. Recent immigrants: Immigrated to Canada within 20 years before census enumeration. *p<0.05, **p<0.01, ***p<0.001.

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One key difference between metropolitan areas is that the user cost of housing is higher for single-family dwellings as compared to other dwelling types in Vancouver whereas this effect is reversed in Montreal. In Vancouver, the single-family dwellings cost more than other dwelling types, holding constant the number of rooms, repair

status and period of development. Since the variable identifying number of rooms roughly controls for the effect of size, the coefficient for single-family dwellings in Montreal is likely detecting the lower per unit cost of single-family housing in the suburbs as compared to the higher density units in central areas. It detects the impact of location on cost not accounted for in the model, and reflects the decentralized nature of the single-family dwelling stock in Montreal. It should be noted that Montreal is somewhat unique in the Canadian context in terms of the lower user cost of housing for single-family dwellings as the coefficient has a positive sign when the regressions are constructed for other metropolitan areas in Canada. Single-family dwellings are often thought to reap a premium due to their location in established neighbourhoods, however in the case of Montreal that has a much smaller share of single-family housing the premium appears to be simply due to size.

An important finding to note in terms of the aims of this analysis is that recent immigrants in 2001 exhibit higher housing consumption than similar households living in similar types of dwellings in Vancouver and Montreal (Table 3.3), but that this was already true in the early 1980s in Vancouver (Table 3.4). In fact, comparing the beta coefficients for the variable denoting recent immigrants in Vancouver reveals that immigrant status contributed more to the prediction of housing consumption in the 1981 data, before globalization was generally described as a noteworthy force of urban change. To some extent this is not too surprising given that immigrants who arrived between 1981 and 2001 would have encountered a more expensive market and a higher-density urban setting, reducing the difference in housing consumption between immigrants and the rest of the population with similar households. In Montreal, the

recent immigrants who are owners did not have a higher user cost of housing in 1981 but by 2001 the magnitude of the coefficient is actually larger than in Vancouver.

Table 3.4 – Effect of income and immigration status on the user cost of housing, 1981 and 2001

Montreal CMA	1981 Census		2001 Census		
	Coeff.	Beta	Coeff.	Beta	
Recent Immigrants	3.619	.079	3.614	.096	**
Permanent Income (\$1,000)	.103	.270	.104	.272	***
×Recent Immigrants	-.049	-.074	-.047	-.095	***
Temporary Income (\$1,000)	.089	.237	.059	.237	***
×Recent Immigrants	.043	.033	-.026	-.026	**
Prop. Investment Income	2.553	.036	12.380	.131	***
Constant	11.212		-1.114		
N-cases	4670		12410		
R ²	.300		.292		
Vancouver CMA	1981 Census		2001 Census		
	Coeff.	Beta	Coeff.	Beta	
Recent Immigrants	11.114	.249	2.261	.080	*
Permanent Income (\$1,000)	.073	.157	.091	.205	***
×Recent Immigrants	-.036	-.061	-.063	-.180	***
Temporary Income (\$1,000)	.040	.101	.042	.150	***
×Recent Immigrants	-.016	.017	-.041	-.065	***
Prop. Investment Income	5.764	.069	9.159	.091	***
Constant	31.417		2.926		**
N-cases	3079		7492		
R ²	.248		.321		

Notes: Table only includes households in owner-occupied dwellings. Regressions include control variables describing housing stock and household characteristics. Recent immigrants: Immigrated to Canada within 20 years before census enumeration. *p<0.05, **p<0.01, ***p<0.001.

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The regression results in Table 3.3 suggest that long-term income prospects rather than their current earnings (temporary income) explain recent immigrants' housing consumption in Vancouver. The coefficient for the interaction effect between recent immigrants and temporary earnings is negative and similar in magnitude to the

effect of the temporary income variable so that when the regressions are constructed solely for recent immigrants, the effect of the temporary income is not different from zero at a statistically significant level. These findings point to a de-coupling of housing from local labour markets. Table 3.4 repeats the analysis using 1981 data and shows that this de-coupling effect was not visible in the aggregate data before Vancouver experienced globalization of its real estate market and an influx of more skilled and wealthy migrants. However, in both metropolitan areas the permanent and temporary incomes contribute less to the prediction of recent immigrants' housing consumption than they do for the rest of the population. But in Montreal the effect of temporary income on housing consumption was actually larger in magnitude for recent immigrants in 1981 than for the rest of the population. In the 2001 data the temporary income variable still does have an effect on housing in Montreal albeit less so than for the rest of the population.

Thus, recent immigrants have a lower income elasticity of housing demand in 2001, meaning that they are less responsive to income changes in their housing consumption than the rest of the population. In Vancouver, the difference is almost completely absent in 1981. At least one explanation is that recent immigrants today, other things being equal, tend to arrive with established wealth or continue to earn income outside the country. This renders them less likely to make out-of-pocket expenses on housing from locally derived income. Because recent immigrants actually reside in more expensive dwellings than the rest of the population and have a higher user cost of housing (Table 3.1), the results indicate that they likely have "*invested*

more heavily in equity” (Hiebert et al., 2008, p. 40). The occurrence of this

“immigration effect” has been previously documented by Hiebert et al.:

“immigrants draw on wealth and/or income transferred to Canada or save high proportions of their income in Canada as renters (or both) in order to purchase housing quickly and with lower mortgage payments.”

The regressions also include the share of income earned from investments (Table 3.3). The beta coefficient is larger for this variable when the regressions are only constructed for recent immigrants as compared to regressions for the rest of the population but in the combined data an interaction effect is not statistically significant. The effect of investment on the user cost of housing is higher in the 2001 data than in 1981, hinting at the increasing importance of household wealth in supporting housing consumption. The magnitude of the coefficient is larger in Vancouver in 1981 but larger in Montreal by 2001. Housing prices were escalating quickly in the early 1980s in Vancouver (Skaburskis, 1988), which may have inclined those with investment income to increase their housing consumption. Since the ownership market is much smaller in Montreal than in Vancouver but has historically been an important source of investment income for owners who reside in and also rent multi-unit dwellings (Choko & Harris, 1990) investment income could be expected to be a more important predictor of housing consumption in Montreal than in other metropolitan areas as is the case in the 2001 data.

The negative sign for household size indicates that as household size increases, more must be spent on other expenditures, leaving less to be spent on housing (Ho & Chiu, 2002). Yet for recent immigrants in Vancouver, household size has a positive sign. This can be explained, at least in part, by the larger number of employment income

recipients in immigrant households and the larger share of South Asian immigrants, which have a strong cultural tradition of living with extended family, than in Montreal (Rose et al., 2006). As expected, the presence of children increases housing consumption. However, the effect is negative in the case of recent immigrants in Vancouver. One explanation is that immigrant households with children reduce housing consumption due to economic necessity—although the variable does not show a statistically significant coefficient when the regression is constructed only for the recent immigrants. The positive coefficient for the variable identifying single-family dwellings confirms the commonly held notion that immigrants, as compared to similar households, place greater value on single-family living for cultural and status reasons (Murdie et al., 1999).

One important variable that has been missing from the analysis thus far is place of birth. Tables 3.5 and 3.6 repeat the regression analysis by place of birth. Asian, European, and Other migrants are compared to the rest of the population, in each case excluding the remainder of the recent migrants. The results show that the findings in the previous regressions for Vancouver are due to those of Asian migrants. As shown in Table 3.1, the profile of recent immigrants has shifted from European migrants to those from Asia, the latter dominating immigrant flows to Vancouver since the 1980s. It is also primarily Asian migrants who have been documented to arrive with significant amounts of equity.

Table 3.5 – Effect of income and immigration status on user cost of housing by place of birth, Montreal

Montreal CMA						
Regression Coeff.	Asia		Europe		Other	
1981 Census						
Recent Immigrants	6.073		7.075	*	-9.773	*
Permanent Income (\$1,000)	.104	***	.103	***	.104	***
×Recent Immigrants	-.048		-.080	*	-.022	
Temporary Income (\$1,000)	.089	***	.089	***	.089	
×Recent Immigrants	.007		.052	*	.082	*
N-Cases	4297		4504		4325	
R^2	.299		.301		.302	
2001 Census						
Recent Immigrants	5.032	*	2.627		3.508	
Permanent Income (\$1,000)	.104	***	.104	***	.104	***
×Recent Immigrants	-.060	**	-.041		-.051	*
Temporary Income (\$1,000)	.059	***	.059	***	.059	***
×Recent Immigrants	-.027	*	.007		-.058	***
N-Cases	11950		11888		11886	
R^2	.296		.299		.296	

Notes: Table only includes households in owner-occupied dwellings by place of birth of recent immigrants compared to the rest of the local population. Regressions include control variables describing housing stock and household characteristics. Recent immigrants: Immigrated to Canada within 20 years before census enumeration. *p<0.05, **p<0.01, ***p<0.001

Source: Calculated using the Statistics Canada household PUMF (1981b; 2001a).

In Montreal this effect is also visible even though fewer wealthy Asian migrants have been documented to arrive: Since there were fewer wealthy migrants, the decrease in the effect of monetary earnings on housing consumption among certain immigrant groups in Montreal necessarily relates at least partly to their higher propensity to save more equity before entering into homeownership rather than purely the transfer of wealth from outside the country. However, due to the smaller size of the ownership market in Montreal the recent immigrants who are owners would inherently be wealthier than the rest of the population so that the influx of capital in de-coupling housing from labour market still serves as an adequate explanation; yet, any aggregate

effects of immigration are less visible (Figure 3.1) due to the smaller scale of immigrant flows to Montreal and fewer other inflationary pressures on the housing market.

Table 3.6 – Effect of income and immigration status on user cost of housing by place of birth, Vancouver

Vancouver CMA						
Regression Coeff.	Asia		Europe		Other	
1981 Census						
Recent Immigrants	12.862	**	4.392		19.866	**
Permanent Income (\$1,000)	0.073	***	0.072	***	0.073	***
×Recent Immigrants	-0.043		-0.019		-0.037	
Temporary Income (\$1,000)	0.04	***	0.038	***	0.039	***
×Recent Immigrants	0.002		-0.037		-0.007	
N-Cases	2,802		2,814		2,675	
R^2	0.252		0.254		0.255	
2001 Census						
Recent Immigrants	3.018	*	-1.172		4.498	
Permanent Income (\$1,000)	0.091	***	0.089	***	0.088	***
×Recent Immigrants	-0.076	***	0.006		0.005	
Temporary Income (\$1,000)	0.042	***	0.042	***	0.042	***
×Recent Immigrants	-0.044	***	0.005		-0.028	
N-Cases	7,114		6,012		5,976	
R^2	0.32		0.333		0.328	

Notes: Table only includes households in owner-occupied dwellings by place of birth of recent immigrants compared to the rest of the local population. Regressions include control variables describing housing stock and household characteristics. Recent immigrants: Immigrated to Canada within 20 years before census enumeration. *p<0.05, **p<0.01, ***p<0.001

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The commonly held assumption of successive housing careers is largely based on European immigrant experiences, and also on immigrants with lower socioeconomic status regardless of ethnicity (Hiebert et al., 2008). Between 1960 and 1980, European and other migrants were commonly working in manual or trades occupations. The migrants used their ability to excel in the local labour market to eventually move up the housing ladder. It was their locally earned income that supported their housing

consumption. This effect is evident in Montreal where recent immigrants of European or Other origins even allocated a higher share of their monetary income to housing than the rest of the population in 1981, but this affect disappeared in 2001 for European immigrants and reversed for those of Other origins. The new story, particularly in Vancouver, is one based on Asian migration where income and housing demand correspond to a lesser extent for recent migrants who are increasingly arriving with wealth and continue to earn income outside the country. Again, obviously immigrant experiences have always been and remain varied, but the aggregate picture shows a decoupling of housing from local labour markets for recent Asian immigrants. Interestingly, for the rest of the population (and also immigrants from European and Other origins) the magnitude of the beta coefficients for the income variables increased from 1981 to 2001. In other words, with the exception of Asian migrants, income has become more important in explaining housing consumption.

3.4 Neighbourhood Transition

Computing a simple Pearson correlation between changes in average household income and dwelling value at the census tract level from 1981 to 2001 reveals a positive correlation of 0.334 in Vancouver and 0.443 in Montreal. Given the multitude of factors acting on dwelling value, this admittedly modest correlation nonetheless indicates that changes in neighbourhood housing values are linked to changes in socioeconomic status as predicted by the models of neighbourhood transition discussed above. The correlation increases to 0.442 in Vancouver and 0.503 in Montreal when only the census tracts with lower than CMA average concentrations of recent immigrants are

considered; it decreases to 0.260 in Vancouver and 0.406 in Montreal when computed for the census tracts with above-average concentrations of recent immigrants. The correlations suggest a de-coupling of housing from local labour markets at the neighbourhood scale too but evidently this effect is more pronounced in Vancouver. The analysis below examines this observation in greater detail using the census tract data. First, however, it is necessary to establish in more general terms the changes in the characteristics of the housing stock and households across the CMA zones.

3.4.1 Changing housing stock characteristics

All households, including immigrants, are making decisions about housing within changing cities and housing markets (Hiebert, 1999). Thus, it is important to analyze the housing consumption in the context of the characteristics of the housing stock. There are both commonalities and differences between how the societal changes discussed in Chapter Two materialized in the housing stock in Montreal and Vancouver. The historical differences as well as the contemporary societal transformations occurring since the late 1970s and early 80s are reflected in the changing characteristics of the housing stock. Table 3.7 shows the changes by the CMA zones—inner city, old suburbs, new suburbs and exurbs. The increases in the number of units are highest in the new suburbs and indicate that suburbanization continues to be an important dimension of urban growth in the post-Fordist period in Vancouver and Montreal. However, clearly visible is the large increase in the number of units in Vancouver's

inner city, at over 68,000 units from 1981 to 2006 it is more than double the increase in Montreal⁴¹.

Table 3.7 – Changing housing stock characteristics

	Montreal		Vancouver	
	2006	2006-1981	2006	2006-1981
<i>Average dwelling value (\$1,000)</i>				
Inner city	342.733	163.169	614.330	181.096
Old suburbs	261.368	90.443	584.822	148.776
New suburbs	222.827	90.694	451.057	83.760
Exurbs	287.300	125.306	610.051	183.521
<i>Average gross rent</i>				
Inner city	735.882	76.172	1018.754	93.462
Old suburbs	692.615	-36.484	986.673	.786
New suburbs	725.064	-38.186	950.777	-67.942
Exurbs	701.933	40.779	1151.129	279.271
<i>Value of owned dwellings per square km</i>				
Inner city	364.653	254.491	750.456	432.816
Old suburbs	131.362	67.375	221.720	106.779
New suburbs	39.469	30.586	133.866	92.475
Exurbs	13.480	8.307	9.781	6.741
<i>Value of rental buildings per square km</i>				
Inner city	532.885	54.618	366.585	126.737
Old suburbs	101.721	6.012	52.586	8.501
New suburbs	9.323	4.280	22.410	10.779
Exurbs	1.279	-.325	.859	.544
<i>Proportion of dwellings owner-occupied</i>				
Inner city	.271	.095	.463	.045
Old suburbs	.464	.045	.642	.043
New suburbs	.777	.057	.761	.047
Exurbs	.869	.100	.844	.012
<i>Proportion of dwellings single-detached</i>				
Inner city	.014	-.010	.165	-.263
Old suburbs	.240	-.013	.376	-.208
New suburbs	.583	-.038	.422	-.259
Exurbs	.858	.076	.713	-.167

(Continued on next page)

⁴¹ The population density within the “built-up city” increased by 25.1 percent in Vancouver from 1971 to 2006, whereas Montreal saw a decline of 32.8 percent (Filion et al., 2010, p. 545). Between 1991 and 2001 the population within two-kilometers of the downtown increased by 28.2 percent in Vancouver and also increased in Montreal by 6.1 percent (Filion & Gad, 2006).

Figure 3.7 (continued from previous page)
Changing housing stock characteristics

	Montreal		Vancouver	
	2006	2006-1981	2006	2006-1981
<i>Proportion of high-rise apartments (5 stories+)</i>				
Inner city	.153	.005	.276	.097
Old suburbs	.092	.007	.125	.028
New suburbs	.036	.007	.045	.017
Exurbs	.000	-.001	.004	.003
<i>Average number of rooms per dwelling</i>				
Inner city	4.524	.035	4.903	-.125
Old suburbs	5.317	.163	6.191	.066
New suburbs	6.566	.459	6.689	-.062
Exurbs	7.437	.898	7.762	.512
<i>Dwelling density (units per square km)</i>				
Inner city	3927.834	443.759	2640.722	885.374
Old suburbs	1084.266	189.998	590.236	150.240
New suburbs	227.860	134.536	389.825	232.100
Exurbs	54.023	12.471	18.995	10.430
<i>Number of dwelling units</i>				
Inner city	273770	30930	204920	68705
Old suburbs	716700	125589	265665	67623
New suburbs	439725	259627	319890	190461
Exurbs	6580	1519	28985	15915

Source: Calculated using Statistics Canada (1981a; 2006a) census tract data.

Revitalization and revalorization of the inner city is thus evident in both metropolitan areas, the value of dwellings and rents increasing most in the inner cities both in absolute terms and on a per area basis (Skaburskis & Moos, 2008). Rents actually decreased in real terms in Montreal's old and new suburbs and in Vancouver's new suburbs. The decline in real rents in these areas is likely related to the declining incomes of renters who are dispersing due to rising housing costs in the inner city (Bunting et al., 2004)—the rental stock increasingly consisting of relatively lower quality units such as basement apartments. There have also been changes in the tenure composition, both metropolitan areas seeing increases in homeownership. The increases are highest in Montreal's inner city but as mentioned in previous chapters ownership

rates remain substantially lower in Montreal than in other Canadian cities. However, it is particularly in Montreal's inner city where ownership rates are low, whereas in the new suburbs and exurbs ownership rates actually exceed those in Vancouver. Increases in homeownership in Montreal occurred often through the conversion of duplexes, two or three story attached buildings historically often co-occupied by tenants and the owner of the building (Germain & Rose, 2000). In Vancouver, it is the growing condominium market that contributes to homeownership increases in the inner city (Harris, 2011). The loss of the older stock built before 1946 points to the revitalization of the inner city in Montreal and Vancouver.

The most notable difference between the two metropolitan areas in terms of these select housing characteristics are the decline in the proportion of single-family dwellings and number of rooms and related increases in high-rise apartments and dwelling densities in Vancouver. These changes relate to the increasing intensification of the inner city but point to the general increase in higher density development across the metropolitan area in large part associated with growth management policies (Tomalty, 1997) and rising cost of housing (Skaburskis & Moos, 2008). Montreal's inner city continues to be characterized, however, by lower proportions of single-family dwellings and higher dwelling densities than Vancouver's. Just over one percent of the inner city stock in Montreal is in the form of single-family dwellings so that suburbanization is particularly differentiated from central areas by the availability of a different housing type. In Vancouver, single-family dwellings still constitute almost 17 percent of the inner city housing stock but the increases in land values in central areas also means that most of this stock is in higher income and wealthy neighbourhoods

where housing costs are high. Notable is that the new suburbs in Vancouver have actually higher dwelling densities than those in Montreal. In part, these higher densities are due to the concentric circles combining the low-density suburban areas with areas near the suburban growth centers where there is a presence of high-rise apartments and other higher density housing units. The higher suburban densities, however, also reflect an increasing proportion of row and semi-detached housing in Vancouver.

Table 3.8 shows the outcome of the pca including select variables measuring changes in the housing market from 1981 to 2006. Akin to factorial analysis used heavily in study of the urban social ecology, pca is a useful technique to reveal how several variables are mutually correlated in that it reduces the original set of variables into uncorrelated components (Ley, 1988; Wyly, 1999; Meligrana & Skaburskis, 2005). However, where factorial analysis aims to reveal “*underlying, but unobservable structures in the data*”, pca simply explains “*the variance-covariance structure through a few linear combinations of the original variables*” where a large proportion of the variance can be explained by the “*first one, two or three components*” (Johnson & Wichern, 1992, pp. 356, 359, 396). Components with Eigenvalues above one are retained, as is common practice (Andrey & Jones, 2008). In this case, pca is a means of revealing in what ways housing market changes occurred as a combination of cost and stock characteristics, and then to relate the components to the spatial structure of the metropolitan areas using linear regression analysis to study the geography of the changes. In the Montreal case, the first component scores highly on the variables measuring changes in the value of the owner-occupied housing stock and the increase in the proportion of owned and single-family dwellings. In Vancouver, the first component

points to the increases in the per area values of owner-occupied and rental housing and the increases in homeownership.

Table 3.8 – Principal component analysis of housing stock characteristics

Montreal	Component scores		
Change 2006-1981	First	Second	Third
Dwelling value	.479	-.109	.028
Gross rent	.256	.602	-.094
Dwelling value per area	.531	.030	.047
Gross rent per area	.226	.632	-.114
Proportion owned dwellings	.458	-.187	.449
Proportion single-family dwellings	.355	-.381	-.080
Number of units	-.189	.211	.876
Eigenvalue	2.229	1.334	1.028
Proportion	.318	.191	.147
N-cases	643		
Vancouver	Component scores		
Change 2006-1981	First	Second	Third
Dwelling value	.095	.501	.490
Gross rent	.188	.565	-.016
Dwelling value per area	.578	-.015	.266
Gross rent per area	.533	-.152	.329
Proportion owned dwellings	.456	-.010	-.495
Proportion single-family dwellings	.275	.273	-.577
Number of units	.234	-.576	.052
Eigenvalue	2.231	1.542	1.415
Proportion	.319	.220	.202
N-cases	245		

Source: Calculated using Statistics Canada (1981a; 2006a) census tract data.

Table 3.9 shows the standardized beta coefficients of a series of regressions that relate the components to independent variables measuring distance to the central business district, distance to rapid transit stations, walkability, categorical variables the distinguish the inner city from the suburbs and exurbs, and the changes in dwelling density. The negative relationship between the first component and the distance variables and the dummy variables differentiating the outer areas from the inner city as

well as the positive relationships with walkability means that higher scores in the first component occur in the central areas in both Montreal and Vancouver. In Montreal, these findings point to the increases in dwelling values in central areas as well as the increasing ownership components. In Vancouver, the first component points squarely at the increasing condominium stock in the inner city that is associated with increasing home ownership and higher per area housing costs and rents. Most interestingly, however, is that in Vancouver the change in density is the best predictor of the first component among the variables measuring the spatial structure, with an r-squared of 0.706 and a standardized beta value of 0.841 for the density variable (as compared to an r-squared of 0.065 and a beta 0.258 for the density variable in Montreal). It highlights the homeownership and rising housing cost components associated with densification of the Vancouver metropolitan area.

The second component in Montreal shows a positive relationship with changes in rents and a negative relationship with changes in the proportion of single-family dwellings. In Vancouver, the second component is positively associated with changes in the total value of dwellings and rents and negatively associated with changes in the number of units. The regressions show that in Montreal the second component occurs in the inner city and new suburbs and areas experiencing increases in dwelling densities. In Vancouver, the second component is associated with proximity to the central business district and negatively associated with areas in the new suburbs and those experiencing increases in dwelling densities. The component evidently points to the increases in the cost of housing in remaining lower density areas in transit accessible and central locations. Finally, the third component in Montreal shows high scores

associated with changes in owned units and the number of dwelling units added. The third component in Vancouver again points to areas experiencing increases in dwelling values and the per area value of the rental stock, and is negatively associated with changes in homeownership and single-family dwellings.

Table 3.9 – Beta regression coefficients with housing stock changes as the dependent variable

Montreal	First		Second		Third	
Distance to centre	-1.484	***	-.101		.160	
Distance to centre^2	1.033	***	.158		.165	
R-squared	.378		.002		.100	
Distance to transit	-.797	***	-.046		.355	***
Distance to transit^2	.436	***	.120		-.088	
R-squared	.205		.004		.075	
Walkability	.515	***	.041		-.284	***
R-squared	.264		.000		.079	
Old suburbs	-.628	***	-.219	***	-.054	
New suburbs	-.513	***	-.005		.602	***
Exurbs	-.098	**	-.109	**	.002	
R-squared	.373		.050			
Change in dwelling density (2006-1981)	.258	***	.343	***	.206	***
R-squared	.065		.116		.041	
Vancouver	First		Second		Third	
Distance to centre	-1.183	***	-.573	**	-.503	*
Distance to centre^2	1.006	***	.353		.259	
R-squared	.140		.060		.065	
Distance to transit	-.524	**	.079		-.102	
Distance to transit^2	.425	*	-.062		.025	
R-squared	.027		.007		.002	
Walkability	.406	***	-.052		-.013	
R-squared	.162		.001		.004	
Old suburbs	-.390	***	.032		-.315	***
New suburbs	-.283	***	-.329	***	-.406	***
Exurbs	-.129	*	.054		-.149	*
R-squared	.091		.116		.105	
Change in dwelling density (2006-1981)	.841	***	-.343	***	.205	**
R-squared	.706		.114		.038	

Notes: Linear regression outputs of principal component scores (Table 3.7) as dependent variables and measures of the metropolitan spatial structure as independents. Standardized beta coefficients shown. Polynomials of variables were included when it improved model fit. ‘Inner city’ is the base for the regression using the CMA zones as independent variables.

Source: Calculated using Statistics Canada (1981a; 2006a) census tract data.

The regressions place the third component measuring changes in owned units and unit growth in Montreal into the new suburbs and areas away from transit and high walkability. In Vancouver, the third component again points to increases in housing costs in the inner city and areas experiencing increases in density but it is not associated with proximity to transit. It points to tracts in the southwest of the inner city that have maintained higher single-family dwelling stock and ownership levels. Overall, the results show that households entering housing markets, whether they are immigrants or young adults, are facing a housing market context where the inner cities have seen significant revitalization but evidently suburban growth continues to be an important component of urban change. Clearly, there are evident differences in the spatial dimensions of housing costs between Montreal and Vancouver that would influence where households locate based on their incomes. Importantly, since the 1980s densification, associated with higher prices, has emerged as a particularly dominant factor of housing market change in Vancouver.

3.4.2 Dwelling values and neighbourhood change

Table 3.10 first considers the relationships between changes in dwelling value and the presence of recent immigrants descriptively. The data show that in Vancouver's old and new suburbs, higher absolute increases in dwelling value occurred in tracts with lower relative proportions of recent immigrants. But these tracts also had higher increases in income, matching our theoretical expectations of changes in a neighbourhood's socioeconomic status mirroring its housing outcomes. However, in the inner city the tracts with higher relative proportions of recent immigrants display higher

increases in dwelling value than the tracts with lower shares of recent immigrants, yet the former exhibits lower increases in household income. The findings suggest that the de-coupling of housing from income parameters materializes primarily in Vancouver's inner city. In Montreal, an effect of immigration on changes in dwelling values is not evidently discernable. Increases in dwelling values in the inner city are matched by increases in incomes that are similar in scale in the tracts with above and below average proportions of recent immigrants. In the new suburbs, the increases in dwelling values and incomes are lower in the recent immigrant neighbourhoods. Only in Montreal's old suburbs is there a higher increase in dwelling values in the recent immigrant neighbourhoods and the change in household income, although positive, is small in magnitude. The effects of immigration on ownership markets are more evident in Vancouver, with more wealthy migrants and a larger ownership market.

It should be taken into account, however, that immigrants in Vancouver could have moved into neighbourhoods that are already experiencing value increases simply due to other factors. In other words, a multivariate test is needed. The results of the regression model examining changes in tract dwelling value as a function of stock and income characteristics are shown in Table 3.11. Included in the model are 1981 dwelling value, household income, and the proportion of the stock built before 1946. The distance variable places the tract in the larger CMA context based on the neoclassical economic assumption that value, and its increase over time, still depends on accessibility to the CBD (Alonso, 1964; Skaburskis & Moos, 2008). Distance is only a crude measure of accessibility and does not change over time with transport improvements or changes in activity patterns (MacLennan, 1977). The model holds

constant the initial tract conditions and introduces variables of neighbourhood change: age of stock, number of owned units, share of single-family dwellings, and household income.

Table 3.10 – Change in census tracts by proportion of recent immigrants

Montreal CMA	Tracts with Prop. Of Recent Immigrants in 2001	
	≤ 1.2×CMA Mean	> 1.2×CMA Mean
Inner City	n=102	n=118
Proportion of Recent Immigrants	.091	.383
Change in Household Income (\$1,000)	4.729	5.090
Change in Dwelling Value (\$1,000)	36.136	32.250
Old Suburbs	n=208	n=135
Proportion of Recent Immigrants	.073	.362
Change in Household Income (\$1,000)	-2.481	.397
Change in Dwelling Value (\$1,000)	-.539	2.774
New Suburbs	n=81	n=10
Proportion of Recent Immigrants	.031	.324
Change in Household Income (\$1,000)	8.381	2.365
Change in Dwelling Value (\$1,000)	10.319	2.793
<hr/>		
Vancouver CMA	Tracts with Prop. Of Recent Immigrants in 2001	
	≤ 1.2×CMA Mean	> 1.2×CMA Mean
Inner City	n=26	n=35
Proportion of Recent Immigrants	.188	.446
Change in Household Income (\$1,000)	14.398	3.186
Change in Dwelling Value (\$1,000)	-53.269	-18.221
Old Suburbs	n=73	n=33
Proportion of Recent Immigrants	.179	.423
Change in Household Income (\$1,000)	4.618	-.675
Change in Dwelling Value (\$1,000)	-50.266	-51.883
New Suburbs	n=54	n=17
Proportion of Recent Immigrants	.141	.375
Change in Household Income (\$1,000)	7.063	-5.472
Change in Dwelling Value (\$1,000)	-68.336	-101.769

Notes: All dollar values adjusted for inflation to \$2001 using the Bank of Canada consumer price index. Recent immigrants: Immigrated to Canada between 1981 and 2001.

Source: Calculated using Statistics Canada census tract data (1981a; 2001b). Modified and reproduced with permission from Urban Geography, Vol. 31, No. 6, pp. 724-749.

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Table 3.11 – Change in dwelling value as a function of census tract characteristics, 1981-2001

Montreal CMA	Coeff.	Beta	
Dwelling value 1981 (\$1,000)	-.444	-.719	***
Distance to the center	-1.181	-.209	***
Household income 1981 (\$1,000)	.768	.324	***
Change in income 1981-2001 (\$1,000)	2.065	.690	***
Inner city immigrant tracts	6.604	.054	
x Change in income 1981-2001 (\$1,000)	-.112	-.017	
Old suburbs immigrant tracts	8.744	.077	*
x Change in income 1981-2001 (\$1,000)	-1.079	-.232	***
New suburbs immigrant tracts	3.851	.010	
x Change in income 1981-2001 (\$1,000)	-.541	-.019	
Change in owned units 1981-2001	-.006	-.095	**
Change in proportion single-family dwellings 1981-2001	44.658	.052	
Proportion of dwellings built pre-1946 in 1981	37.336	.238	***
Change in proportion dwellings built pre-1946 1981-2001	88.783	.213	***
Constant	41.433		***
R-Squared	.508		
N-Cases	648		
Vancouver CMA	Coeff.	Beta	
Dwelling value 1981 (\$1,000)	-.532	-1.040	***
Distance to the center	-.740	-.130	*
Household income 1981 (\$1,000)	2.589	.805	***
Change in income 1981-2001 (\$1,000)	2.347	.482	***
Inner city immigrant tracts	41.353	.227	***
x Change in income 1981-2001 (\$1,000)	-1.429	-.123	*
Old suburbs immigrant tracts	37.107	.193	***
x Change in income 1981-2001 (\$1,000)	-.602	-.033	
New suburbs immigrant tracts	-6.006	-.024	
x Change in income 1981-2001 (\$1,000)	-2.275	-.078	
Change in owned units 1981-2001	-.004	-.083	
Change in proportion single-family dwellings 1981-2001	21.794	.041	
Proportion of dwellings built pre-1946 in 1981	143.587	.431	***
Change in proportion dwellings built pre-1946 1981-2001	51.463	.079	
Constant	-47.128		***
R-Squared	.511		
N-Cases	244		

Notes: Immigrant census tracts is a 0/1 dummy variable where 1 = [(proportion of recent immigrants in tract) / (mean CMA proportion of recent immigrants)] > 1.2. Recent immigrants: Immigrated to Canada within 20 years before census enumeration. *p<0.05, **p<0.01, ***p<0.001. The Vancouver results differ slightly from previously published results due to refinements in variable definitions.

Source: Calculated using the Statistics Canada census tract data (1981a; 2001b). Modified and reproduced with permission from Urban Geography, Vol. 31, No. 6, pp. 724-749.

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The regression holds constant impacts on value from redevelopment (i.e., loss of the older stock), but not changes arising from renovations, changes in housing size or quality, or local bylaws and regulations that can affect value differently across the city (Mark & Goldberg, 1985; Bourne & Bunting, 1993). Finally, three dummy variables identify the location of census tracts with proportions of recent immigrants in the 2001 census, 1.2 times that of the CMA average⁴². The dummy variables might also be picking up other effects on price not captured by the controls.

The effects of the housing stock variables are similar between the two metropolitan areas. The coefficient for 1981 dwelling value is negative, suggesting some cyclicity in local housing investment over time (Beauregard, 2005). Neighbourhoods with higher proportions of pre-1946 stock in 1981, and those that retained higher proportions of this stock, saw larger increases in dwelling value, consistent with prior findings (Skaburskis & Moos, 2008). The coefficient for the distance variable confirms the negative relationship between distance from the CBD and value gains. The distance decay effect is larger in Montreal as evident by the larger size of the coefficient than in Vancouver, and the larger beta value also suggests that centrality explains more of the changes in dwelling values between 1981 and 2001 in Montreal. The 1981 household income variable shows a positive coefficient. This is consistent with findings regarding wealth accumulation in high-income areas (Ley et al., 2001). The change in income is also positively related with value increases, in line with models of neighbourhood transition that suggest value changes occur with income shifts.

⁴² Sensitivity analysis revealed that altering the categories does not alter the overall conclusions; neither does including the proportion of recent immigrants as a continuous variable. The use of dummy variables facilitates the interpretation of its interaction with the variables describing CMA zones and change in household income simultaneously.

The larger size of the beta coefficient for this variable in Montreal suggests that the change in income is a better predictor of changing dwelling values than in Vancouver that has been thought to be more influenced by global real estate investments.

In Vancouver, the case study neighbourhood dummy variables suggest positive price gains for locations with high concentrations of recent immigrants, but only in the inner city and the old suburbs. The interaction term between the variable identifying tracts with high proportions of recent immigrants and household income in the inner city shows a negative coefficient that is statistically significant. The results are consistent with the flow of wealthy migrants into Vancouver's inner-city neighbourhoods, entering directly into ownership markets with equity or income derived from foreign sources. There are also additional value gains in recent immigrant neighbourhoods in the old suburbs, but there the interaction term with income does not point to a de-coupling of housing markets from socioeconomic characteristics of the neighbourhood. The potential for foreign equity to have influenced Vancouver's housing market is most evident in the inner city where price gains have been most marked.

In Montreal, the case study neighbourhood dummy variables or their interaction with the income changes do not display statistically significant coefficients in the inner city or the new suburbs. In the old suburbs, however, there is a positive effect associated with the presence of recent immigrants, and the income changes in these neighbourhoods explain less of the changes in dwelling values than is the case for the entire metropolitan area. It is in Montreal's old suburbs where dwelling values and incomes have declined since 1981 and thus the immigrant population, which is

generally less wealthy than in Vancouver, has been able to buy into ownership markets. Despite effects due to immigration, comparison of beta coefficients would suggest that income remains the most informative predictor of changes in neighbourhood dwelling value in both metropolitan areas.

3.5 Discussion

This chapter positioned immigrants as agents of the globalization process that can shape local housing markets. It also asked about the spatiality of the changes in the housing context within which immigrants, and the young adults analyzed in subsequent chapters, make decisions about housing. The analysis points to densification and increases in dwelling values and rents in higher density and central areas as a key factor shaping the housing context in Vancouver that is different from the past and from current conditions in Montreal. The analysis also used data from the 1981 and 2001 Statistics Canada census to investigate the changing relationship between income and housing demand (measured by the user cost of housing) in a multivariate framework as a growing share of recent immigrants to Vancouver arrived with established wealth. The analysis revealed that recent immigrants consumed more housing than similar non-immigrant households, but that was already occurring at the time of the 1981 census, and that this is occurring in Montreal as well where there were fewer wealthy migrants.

One pertinent finding is that the positive relationship between income and housing demand is mediated by recent immigrant status, which was not the case in Vancouver in 1981. The results can be attributed to the shifting profile of immigrants arriving in Vancouver. In the post-1990 period, immigrants, particularly from Asia,

increasingly arrived with established wealth and many were known to continue earning income outside the country. However, since immigrants' housing consumption is also less tied to their local labour market earnings in Montreal, there appears to be a general "*immigration effect*" at play whereby immigrants purchase housing with greater equity (Hiebert et al., 2008). At the census tract level, the presence of recent immigrants was positively associated with higher dwelling value appreciation even after other factors that affect dwelling value change were taken into account. In Vancouver, this effect is visible in the inner city and old suburbs, but not in the new suburbs, whereas in Montreal the effect is present only in the old suburbs. While there may also be effects from non-immigrant investors, the distinctive character of recent immigrant flows plays an important part in disconnecting Vancouver's housing from local labour markets.

However, it must be remembered that for many immigrants "*paying for housing is a major struggle*" (Hiebert et al., 2008, p. 31). This chapter did not examine effects on rental markets or impacts on affordability. The focus on owners also overlooks the difficulties of those unable to attain ownership. Even though the potential for upward pressures on price can be inferred in Vancouver, care needs to be taken that immigrants do not become scapegoats for the city's housing affordability crunch. Immigration occurred concurrently with other factors of housing market restructuring, notably the retraction of the welfare state. Furthermore, Vancouver could also be somewhat exceptional in terms of housing market effects associated with wealthy and skilled migrants. The findings here point to one particular way that globalization processes influence housing markets. Globalization, and the (neoliberal) institutional restructuring that facilitate it, results in new types of labour flows that alter the relationships that help

explain housing consumption and neighbourhood transition. Local labour market indicators become less useful in analyzing housing markets in gateway cities where large numbers of migrants arrive with foreign equity as is the case in Vancouver.

Even in Montreal immigrants allocate a lower share of their income toward housing despite having fewer wealthy migrants. But ownership markets constitute a smaller proportion of the overall housing market in Montreal and there are fewer pressures on price. Thus, immigration is not at the aggregate scale related to dwelling price increases in Montreal yet immigrants who are owners would necessarily be those with relatively higher equity, which would explain their ability here too to allocate lower shares of their income toward housing. The presence of this effect in the old suburbs where prices have declined suggests, however, that immigrants are not buying into expensive ownership markets to the same extent as they are in Vancouver where there has been a high influx of wealthy Asian migrants.

The analysis in this chapter also permits insight into the relationship between household and housing variables on housing consumption and neighbourhood change in more general terms that provide important insight for the analysis of young adults' housing decisions. At the household scale, the findings point to the continuing importance of household characteristics that change over the life-course, such as size and the presence of children, on housing consumption but evidently these relationships are being transformed by immigration in that some immigrants reside in larger households and have more income earners present. The findings also show that the positive effect of income on housing consumption, and changes in neighbourhood dwelling values, have increased over time. The finding suggests greater inequality

among owners but also increasing difficulty to attain homeownership for low-income households. It takes more income than in the past to attain similar levels of housing consumption.

The finding for the income variables also indicates that households, with the exception of recent immigrants, are allocating a larger share of their income towards housing than in the past, and the beta values show that the effect of the income variable continues to be one of the strongest determinants of changing dwelling values at the neighbourhood scale. Interpreted in another way, the findings also indicate that households experiencing stagnant or declining incomes would face increasing affordability burdens, which is an important change in the context facing the young adult households. Thus, the changes in the labour market and household composition are of great importance in influencing the ways households consume housing, and the effect is likely to be particularly felt by households just entering the housing market such as young adults. The next chapter turns to the labour market characteristics of the young adults, and helps to build expectations as to how their changing incomes and household characteristics shape their location and housing decisions within the changing context of the housing market.

Chapter Four: The Changing Metropolitan Economies and the Young Adult Labour Force

The restructuring of the economy and the governance context are leaving today's young adults with a very different set of labour market institutions than those available to young adults in the late 1970s and early 1980s (McDaniel, 1997; Corak, 1998a; Clavert, 2010). Labour market conditions today are more “*precarious*” (Vosko, 2006), characterized by an increasing prevalence in outsourcing, short-term contract work and part-time employment with a diminished role for organized labour and the welfare state under neo-liberalism (Heisz et al., 2005; Peck et al., 2005; Rutherford, 2006). McDaniel (2004) argues that the systems that helped elevate a large proportion of people in previous cohorts into advantageous housing and labour market positions are being dismantled and privatized. She suggests that the young adults today face less secure employment opportunities than the jobs still held by some segments of the older cohorts and compete in a setting where redistribution occurs increasingly on a generational basis (from parents to children) rather than on a societal level (e.g., housing assistance, income redistribution)—an argument supported by empirical evidence of growing “*generational transmission of economic status*” in Canada (Fortin & Lefebvre, 1998, p. 51). The changes emphasize the highly “*generationed*” character of society, which “*may be an important but overlooked dimension of social structure and a basis of inequality*” (McDaniel, 2004, p. 29).

One empirical question raised by this literature is whether the restructuring of the economy and welfare state are providing young adults with the same rewards in the labour market as those of the past. Thus, having established the transformations in the

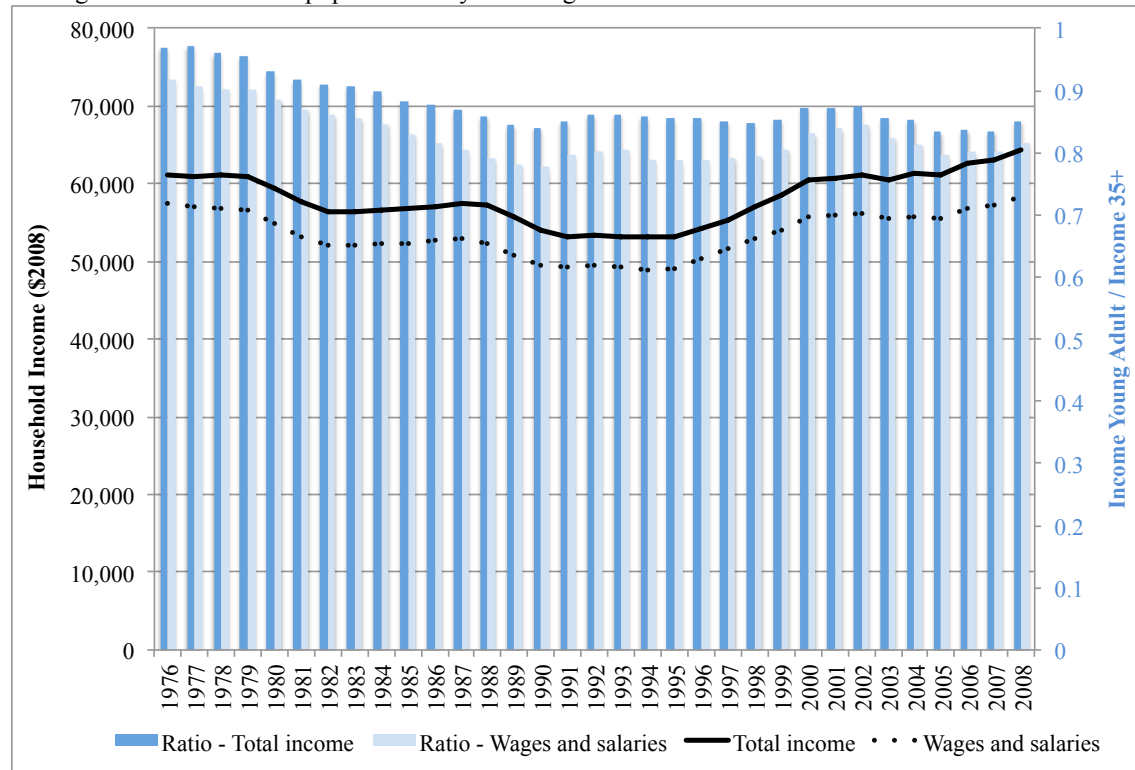
societal and housing market context within which location and housing decisions are made in the previous chapters, the thesis now moves to ask about the changes in the characteristics of the young adult labour force. The changing labour characteristics are particularly relevant in this study of residential patterns since the neo-classical economic theories relate labour market outcomes directly to households' "*differing ability to compete for spatial locations*" and housing (Fossett, 2005, p. 481). The changes in labour market characteristics also speak to the outcomes of the altered structures within which young adults operate, thus providing insight into how individual level variables vary over time as structures are remade. Young adults are facing a labour market with increasing educational requirements yet worsening employment security. Thus, not only are young adults spending more on housing than in the past, and particularly in Vancouver facing higher housing costs, but their job prospects have seemingly worsened. The changes influence their ability to afford housing, and would be especially hard-felt by those who are unable to access post-secondary education.

At the national scale, young adults have seen their real household incomes decline since the late 1970s but rebound after the 1990s recession so that incomes are higher in the 2000s than in the early 1980s (Figure 4.1). Young adults' incomes are generally lower than those of the population 35 years of age and older, which is not surprising since income rises with age due to experience attained in the job markets. However, also observable is a steady decline in the difference in the income of young adults and that of the older population, hinting at systemic changes.⁴³ The increasing

⁴³ Differences in the number of earners do not appear to be behind the changes in income. The number of earners is similar in young adult households as compared to the older population. The percentage of households with one earner decreased between 1981 and 2001 from about 35 percent to 14 and 10 percent

income gap comes about through a combination of changes related to rising educational attainment, the aging of the population and the restructuring of labour markets.

Figure 4.1 – Young adult household income in Canada 1976-2008
Average and relative to the population 35 years of age and older



Notes: Inflation adjusted (\$2008) household income for households with a maintainer 25 to 34 years of age. Three-year running averages shown. Ratio divides household income of young adults by the household income of households with maintainers 35 years of age and older.

Source: Calculated using data from the Survey of Consumer Finance (1976-1993) and the Survey of Labour and Income Dynamics (1993-2008) available through Statistics Canada's (2008) analysis series.

As Boudarbat, Lemieux & Riddell (2010) explain, citing Mincer (1974), because the financial “*returns to education*” are generally increasing with “*experience*”, comparing young adults to an increasingly better educated and larger cohort of older workers would make average returns of older workers “*appear to grow*” without any real

in Montreal and Vancouver respectively. In both CMAs, approximately 80 percent of young adult households had two earners in 2001, an increase of 20 percent since 1981.

changes in the returns for a worker “*with a given level of experience*” (p. 66). But because the analysis of wages and salaries in Canada still reveals a growing income gap even after changing characteristics are taken into account (Boudarbat et al., 2010), it has been argued that the “*generational income gap*” has likely increased due to the restructuring that grew less secure, non-unionized jobs and employment in smaller- and medium-sized businesses that pay lower wages (Myles et al., 1993). While numerous secure and well-paid jobs were lost as a result of restructuring, observers suggest the long-term effects are more visible among the young as some jobs only become phased out through retirement. For instance, decreases in unionization rates between 1981 and 2004 are more visible among young workers (Morissette, Schellenberg & Johnson, 2005). The changes introduce challenges into housing markets as the young now have little choice but to compete in declining labour market conditions with an older generation that has relatively higher and more secure earnings than in the past. The changes would make it increasingly difficult to enter housing markets where prices have been increasing and older homeowners have accumulated equity when costs were lower.

The objective of the analysis in this chapter is to measure the impact of restructuring on the incomes of the young adult cohort within the context of the metropolitan-specific labour markets of Montreal and Vancouver. There are several precedents in terms of measuring the impacts of restructuring on inequality and the income distribution in Canadian cities and neighbourhoods (e.g., MacLachlan & Sawada, 1997; Bourne, 1993; Myles, Picot & Pyper, 2000; Walks, 2001; Heisz, 2007; Kershaw, 2011). There have also been national studies that provide insight on income

trends of different age cohorts (e.g., Myles et al., 1993; Boudarbat et al., 2010). Comparisons of people in similar age groups, or cohorts, over time have proven particularly useful since they allow insight into the question, “*am I better off, or worse off, than people like me were at the same age, in the previous generation?*” to gauge changes in “*living standards*” (Osberg, 2003, p. 132). The chapter builds on Walks’ (2011a, p. 125) previous examinations of the general “*trends in labour market inequalities*” to consider the specific changes in the characteristics and income distribution of young adults in two metropolitan areas where the processes of restructuring unfolded in different ways.

4.1 The Young Adult Labour Force

There have been numerous studies of post-Fordist restructuring, female labour market participation, and immigration, which are important factors of change in the Canadian metropolitan economies (HRSDC, 2008; Walks, 2011a). The intent here is therefore not to repeat a full analysis of Montreal’s and Vancouver’s changing economies. Rather the discussion deals with the changes in the young adult labour force in the context of the larger transformations occurring in the two cities as a short introduction and backdrop to the subsequent analysis of the income dimension. The changes in the occupational and industry profiles of the young adult labour force reflect the transitions toward post-Fordism and services occurring in the Canadian economy (Table 4.1)⁴⁴ as the “*economic restructuring and the shift to service-sector and high-*

⁴⁴ Additional outputs from this analysis are published in Barnes et al. (2011).

tech industries and new export markets have tended to favour the larger metropolitan areas” (Bourne, 2007a, p. 3).

Table 4.1 – Characteristics of the young adult labour force

	Montreal		Vancouver	
	1981	2006	1981	2006
<i>Occupation</i>				
Managerial	.166	.172	.153	.187
Health	.057	.177	.067	.155
Social sciences, arts, culture	.116	.188	.101	.163
Sales and services	.168	.190	.185	.218
Clerical	.224	.110	.227	.116
Manual	.264	.156	.254	.144
Primary sector	.004	.007	.013	.017
	Chi2(6) = 1.1e+03***		Chi2(6) = 485.2256***	
<i>Industry</i>				
Core industries	.435	.238	.419	.199
Customer services	.130	.318	.153	.339
Business services	.435	.445	.428	.462
	Chi2(2) = 1.0e+03***		Chi2(2) = 588.8358***	
<i>Educational Attainment</i>				
Less than high school	.197	.073	.182	.059
High school diploma	.199	.144	.127	.229
College or trades	.416	.431	.495	.351
University degree	.188	.352	.197	.362
	Chi2(3) = 887.3461***		Chi2(3) = 657.5395***	
<i>Gender</i>				
Female	.418	.505	.440	.515
	Chi2(1) = 115.5651***		Chi2(1) = 44.9424***	
<i>Marital Status</i>				
Divorced	.037	.030	.040	.026
Now Married	.667	.279	.621	.488
Separated	.029	.014	.055	.022
Never Married	.267	.676	.283	.464
Widowed	.001	.001	.002	.001
	Chi2(4) = 2.6e+03***		Chi2(4) = 307.8915***	

(Continued on next page)

Table 4.1 (continued from previous page)
 Characteristics of the Young Adult Labour Force

	Montreal		Vancouver	
	1981	2006	1981	2006
<i>Household Type</i>				
Couple, no kids	.254	.289	.244	.305
Couple, kids	.475	.349	.399	.265
Lone parent	.064	.048	.062	.034
Person living alone	.140	.186	.157	.176
Non-family, 1+ persons	.051	.107	.097	.113
Multiple families	.015	.021	.041	.107
	Chi2(5) = 393.0179***		Chi2(5) = 289.3104***	
<i>Place of Birth</i>				
Canada	.806	.763	.691	.633
USA	.005	.006	.024	.011
South and Central America	.035	.052	.014	.021
Europe	.101	.060	.132	.071
Africa	.021	.047	.011	.010
Asia and Oceania	.033	.073	.128	.254
	Chi2(5) = 320.1533***		Chi2(5) = 272.5652***	

Notes: Includes young adults 25 to 34 years of age in the labour force. ***p<0.0001, **p<0.01, *p<0.05.

Source: Statistics Canada data (1981c; 2006b) for the census metropolitan areas.

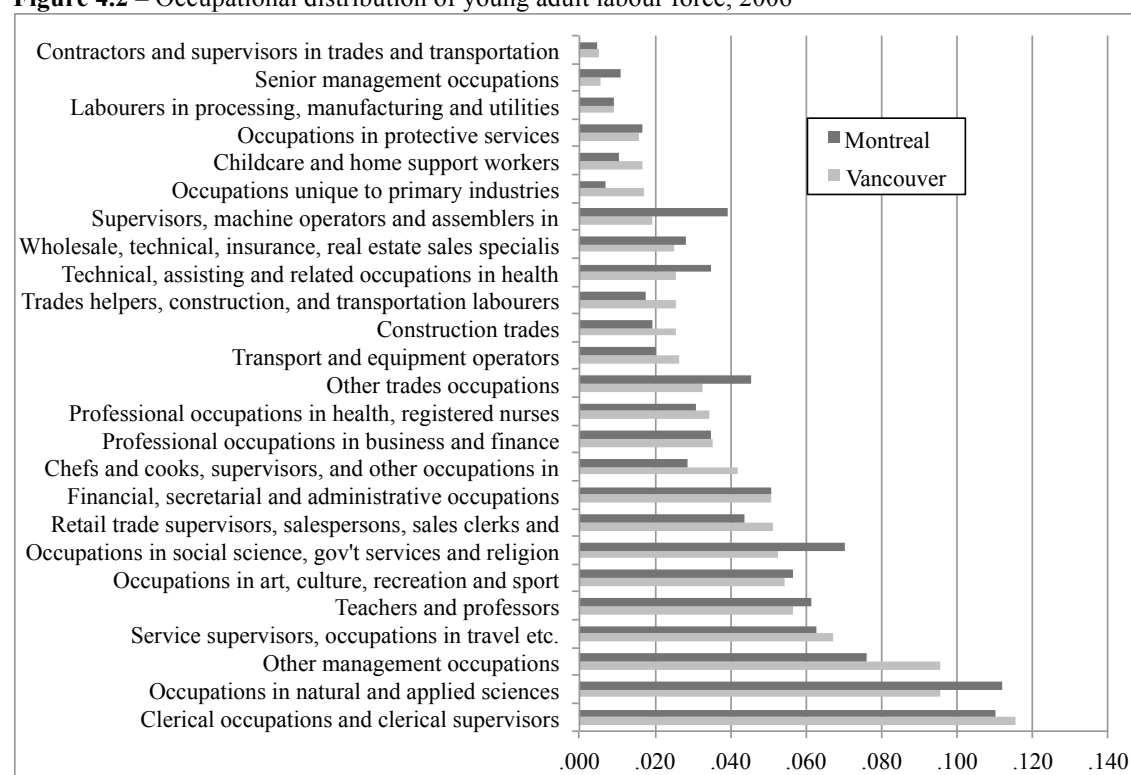
The largest changes occurring in both metropolitan areas in terms of the magnitude of young adult employment are the growth of the health sector and the decline of clerical workers. Also predominant are the decline in the manual occupations and the increase in managerial, sales and services and social sciences, arts and culture occupations—the growth of the “*service sector, of course, a defining outcome of restructuring*” (Hutton, 1998, p. 22).⁴⁵

Young adult workers in core industries declined by almost twenty percent in Montreal and Vancouver but most of the increase occurred in customer services

⁴⁵ Occupational categories defined in footnote no. 26 above. Industry categories are based on McLafferty & Preston (1996) that group industries according to their main function in the economy: Core industries are those primarily engaged in production of goods, resource extraction or agriculture. The business and customer service industries are differentiated by their main clientele.

whereas business services were already the largest industry category among young adults in 1981. By 2006, nine out of the top 10 occupations occupied by young adults in Montreal are service sector occupations and all top ten occupational categories in Vancouver are in the service sector (Figure 4.2). The top ten categories employ almost 60 percent of young adults. The comparison of the metropolitan occupational and industry profiles also shows that while Montreal and Vancouver both saw growth in the service sector, the composition of the young adult labour force in 2006 still shows the unique character of the two urban economies (Figure 4.2 & 4.3).

Figure 4.2 – Occupational distribution of young adult labour force, 2006



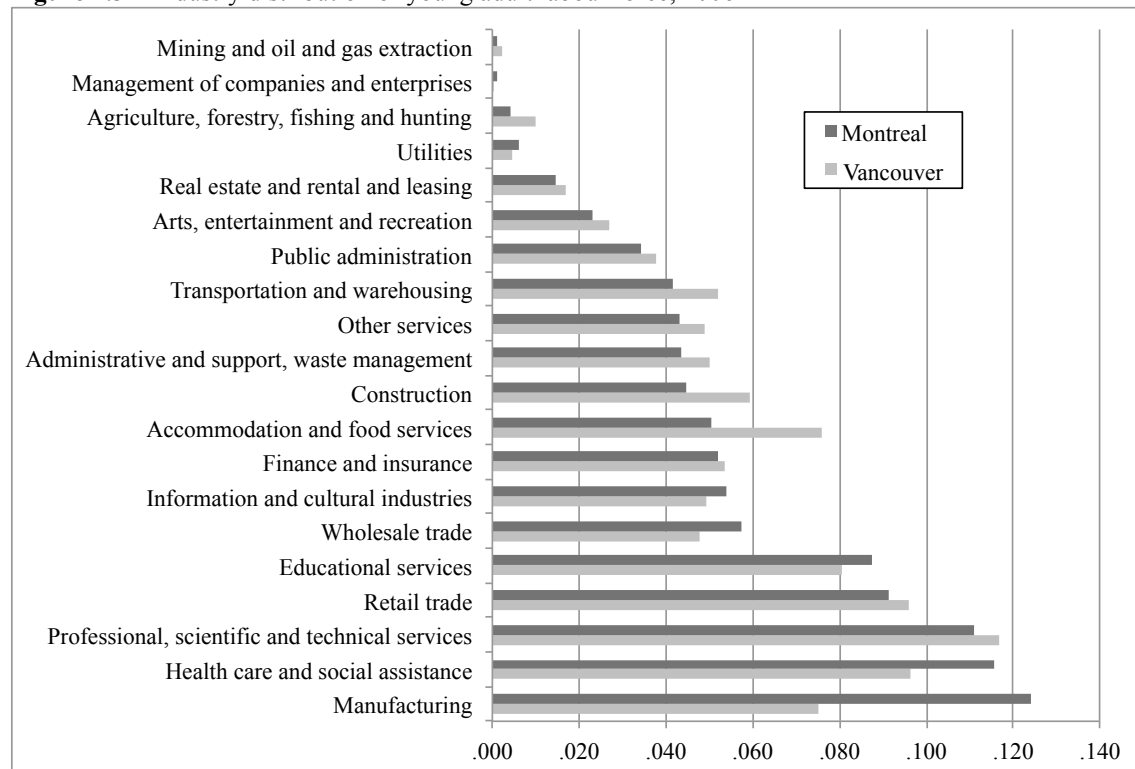
Source: Calculated using Statistics Canada PUMFS (2006b) for the census metropolitan areas.

A larger share of young adults remains employed in manufacturing, social sciences and government services, natural and applied sciences and the trades in Montreal, whereas

in Vancouver a larger share is working in the primary industries, construction, the retail sector, general management and accommodation and food services. But in many other categories differences between the two profiles are small.

Germain & Rose (2000) explain, citing Lamonde & Martineau (1992), that Montreal remains “*a manufacturing stronghold*” when compared to other North American metropolitan areas as it underwent a process of “*conversion*” toward less “*labour-intensive*” sectors rather than full “*de-industrialization*” (p. 131). As a result, there has been growth in the manufacturing aspects of the “*high technology sector*” (p. 133), and the manufacturing sector, which still includes ‘traditional’ industries in “*textiles, clothing, oil refining, food and beverages*”, comprises “*about 6.5 percent of all jobs*” in the metropolitan area (Shearmur & Rantisi, 2011, p. 179).

Figure 4.3 – Industry distribution of young adult labour force, 2006



Source: Calculated using Statistics Canada PUMFS (2006b) for the census metropolitan areas.

Re-emphasis is needed, however, of the negative impact restructuring has had on Montreal's economy in terms of job losses and stagnant growth during the 1980s and 1990s that led to high unemployment (Coffey, 1994). From 1981 to 2006, the young adult unemployment rate increased from 6.9 to 8.3 percent in Montreal. By comparison, the rate went from 4.6 to 5.1 percent in Vancouver, which has been regarded as one of Canada's highest growth cities (Hutton, 2004).⁴⁶ Swanstrom (1993), citing Levine (1990), points to public sector expansion as one of the factors contributing to economic growth and middle-class expansion in the 1960s and 1970s in Quebec. The importance of the public sector is visible among young adults in the higher share working in health care and social assistance in Montreal.

Vancouver "*has a relatively underdeveloped manufacturing sector*" having largely "*bypassed the classic "industrial city" development phase*" and public sector employment is concentrated more heavily in the provincial capital, although the health sector has also become an important component in the urban economy (Hutton, 2004, p. 9; 2010). Vancouver reflects more clearly the polarized post-Fordist employment structure with a high percentage of the young adult labour force in accommodation and food services as well as professional, scientific and technical service industries (Hutton, 2004). Vancouver became "*recognized as one of the world's most advanced metropolitan areas*" in terms of the urban policies that strategically promote service sector expansion since the 1980s, whereas Montreal did not officially promote the service sector in policy documents until a 1993 Task Force report spelled out the importance of arts and culture to the city's economic development (Pichette, 1993;

⁴⁶ The difference between census years is different from zero at $p < 0.01$ ($\chi^2 = 11.105$) in Montreal but not in Vancouver ($\chi^2 = 1.018$, $p > 0.05$).

Coffey, 1994, p. 102; Hutton, 1998). The situation in Montreal has changed since then as the city is increasingly marketing the vibrancy of its urban life and presence of consumption amenities to attract tourism and cultural industries (Levine, 2003; Darel, 2004).

Some observers have argued that reversal of economic decline, or stagnation, in Quebec depended on increasing educational attainment to support employment growth in the new economy. Educational attainment has traditionally been much lower in Quebec than in the rest of Canada, particularly among Francophones, until a restructuring of the system in the 1960s slowly began to reverse the trend (OECD, 2004; Parent, 2009). The percentage of young adults with a university degree increased from about 20 to 36 percent from 1981 to 2006 in Vancouver, and only slightly less than that in Montreal. In Vancouver, there has also been an increase in the percentage of those with only a high school diploma while those with college and trades certificates declined. In Montreal, the percentage of those with a high school diploma declined while those with college and trades certificates increased. However, this is in part due to the unique status of college education in Quebec (Boothby & Drewes, 2004). College (CEGEP) in Quebec is mandatory prior to university enrollment and generally begins at age 17 or 18. Educational levels among young adults in Montreal are now only slightly below those in Vancouver, which has among the highest average levels of educational attainment in Canada.

The increase in educational attainment was also facilitated by growing female labour market participation and decline in childbearing (De Wit & Ravanera 1998; Table 4.1). Advances in contraceptive technologies and the social liberation movements

of the 1960s is associated with a decline of traditional values and growing secularization, occurring alongside declining fertility rates and increasing university enrollment and labour market participation among women (Giddens, 1990, 1991; Rose & Villeneuve, 2006; Gauntlett, 2002). Important implications of the changes have been a dramatic decline in marriage rates, or delay in marriage, declining household size and the growth of non-family households (Cheal, 1993; Le Bourdais & Lapierre-Adamcyk, 2004), trends visible among young adults in Montreal and Vancouver (Table 4.1). Marriage rates are substantially lower in Montreal than in Vancouver. One explanation is that lower marriage rates are the result of a “*rejection of Catholicism*” in Quebec, where the Catholic Church played a much larger role than in the rest of Canada in civil society prior to modernization and secularization of the state in the 1960s (Sancton, 1985; Le Bourdais & Lapierre-Adamcyk, 2004; Pollard & Wu, 1998, p. 350; Gauvreau, 2008). However, living as a couple, with or without kids, continues to be the most common household arrangement for young adults in Montreal and Vancouver. Frequently emphasized in the literature is that reasons for living together have become increasingly based on less permanent concepts such as love or sexual attraction, or even utilitarian reasons such as managing expenditures, thus reducing the permanency of relationships and introducing greater diversity of housing arrangements as households form and dissolve more frequently (Giddens, 1992; Cheal, 1993; Le Bourdais & Lapierre-Adamcyk, 2004; Rose & Villeneuve, 2006; Root, 2010).

Also visible in the young adult labour force is the increasing immigrant flow into Canada’s major cities. Immigrants alter the labour force composition in complex ways relating to changes in the structure of households, increasing labour supply and

skills composition (Chapter Three). The percentage of young adults born in Canada remains higher in Montreal than in Vancouver. There is a larger shift toward Asian migrants in Vancouver consistent with overall immigrant flows (Haan, 2005). It should also be noted that the percentage of young adults born in Canada is higher than for the population as a whole, which is likely explained by the higher average age of immigrants at time of arrival (Schaafsma & Sweetman, 2001). The shift from European to Asian immigrants is particularly notable among young adults in Vancouver where Asian migrants are the largest immigrant group (Table 4.1). Montreal has a larger share of immigrants from African countries than Vancouver, which relates to migration from French-speaking countries (Chapter Three).

4.2 The Income Distribution

One common inference drawn from the restructuring-induced changes in the labour force is their potential to polarize the income distribution by increasing the share of both low and high income earners at the expense of the traditional, blue-collar middle-class (Sassen, 1991; Filion, 2001; Walks, 2001). Analysis of income trends in the Canadian context reveals that the workers in higher-order service occupations benefit the most as “*talent is rewarded*” while those employed in lower-level service and manual occupations and recent immigrants experienced employment insecurity and declining wages (Walks, 2011a). The inequalities are “*accentuated*” by the decline in the welfare state under neo-liberalism (Bunting et al., 2004, p. 364) and the way “*demographic shifts*” and economic changes “*intersected*” to produce a “*greater diversity of household types*” delineated by the number of earners, gender, ethnicity, life

stages and lifestyles (Rose & Villeneuve, 2006, p. 2). The outcome is, as Rose & Villeneuve discuss, a greater potential for inequality as households are more differentiated by their earnings potential, and there are also increased “*risks of dissolution*” (Root, 2010), which reduce the stability of earnings since household formation is less permanent. However, decreases in household size also mean that income is shared with fewer people so that the “*effective income*” does not decline as much as changes in average incomes would suggest (Osberg, 2003). Yet larger households can also, of course, share a number of fixed costs such as heating or rent.

In any case, the changes in the young adult labour force speak to the potential for polarization. The changes in the occupational and industry structure create the potential for a shift toward both the low and high ends of the income distribution. The data on educational attainment also support the impression of increasing social polarization as those with a high school education would find it increasingly difficult to gain employment other than in lower-paying service sector jobs. Especially in Vancouver there is a declining population with college and trades education that traditionally constituted a large share of the middle-class. Education is particularly consequential for the income distribution as earnings not only increase with educational attainment but also the “*returns to education*” in Canada have increased since the 1980s (Boudarbat et al., 2010). The increasing returns are related to the economic restructuring toward a knowledge and service-oriented economy:

“...in a service economy, individuals’ success is more dependent on their skill levels than is the case in manufacturing industries. High-productivity, and thus high-paying, occupations in the service sector are those that demand greater skill levels, while in manufacturing labour productivity is often a function of the capital employed. In

services, it is the skills of the employees that most often determine their value to the firm.” (Wesson, 2007, p. 63)

The changes are spurred by neo-liberalization and globalization that worked to remake the political economy according to the doctrines of the free-market, perfect competition and laissez-faire governance (Hackworth, 2005; Walks, 2011a). This contrasts with the conditions under Keynesianism where the assumption was that domestic consumption by the masses “*was the handmaiden for maintaining profitability in industrial production (Fordism)*”, which “*spun the social contract of union-driven wage increases and economic growth*” (Martin, 1998, p. 8). While educational attainment certainly long paid a premium in the labour market, neo-liberalization brought to the forefront the principles of classical liberal thought where compensation is increasingly based on the skill-level of the individual worker as opposed to the means necessary to purchase food, shelter and clothing (Hahnel, 2002; Hackworth, 2005). The premise of equal opportunity clashes with structural constraints, such as gender or race, to produce unequal outcomes that may well have little to do with differing individual abilities (Oden, 2010). The polarizing effect of education and occupational status on the income distribution is further exacerbated by the fact that even in Canada where there is a relatively high degree of “*educational mobility*”, the educational and occupational attainment of young adults remain positively correlated with those of the parents (De Broucker & Lavalley, 1998, p. 132).

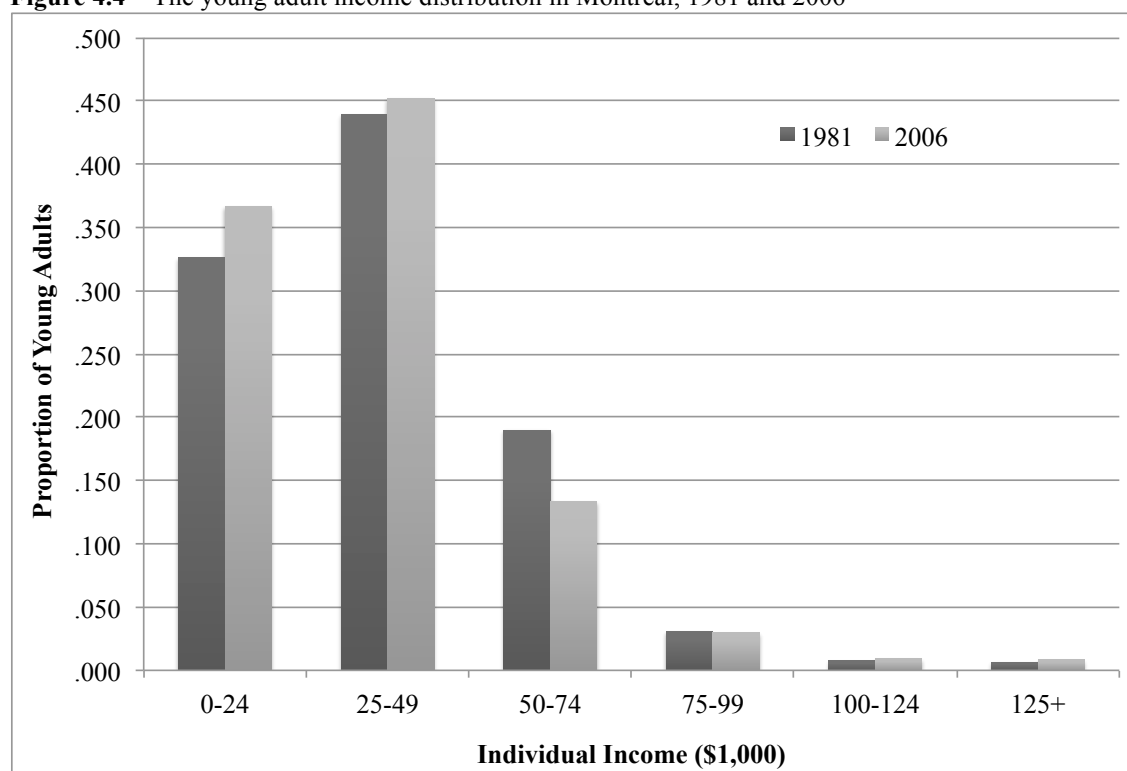
Further altering the earnings structure is the increasing immigration flow. While in the global cities literature immigration is at times automatically equated with low-income status, it is important to remember that in the Canadian context, through a

combination of multiculturalism and neo-liberalism, there has been a shift toward a set of immigration policies that favour better educated and wealthy migrants arriving under the points' system (Mitchell, 2004). This results in a wide socio-economic spectrum of immigrants ranging from refugees and temporary labourers to professionals, business entrepreneurs and "*millionaire migrants*" (Ley, 2010; Walks, 2011a). Yet nevertheless, as Walks (2011a) explains, citing Mok (2009), the earnings of recent immigrants and visible minorities relative to the rest of the population have been declining since the 1980s, which he suggests may arise from these groups being "*under-represented*" in quaternary sector and managerial occupations or systematic racial discrimination in labour markets (p. 141). Also influential are perhaps, as discussed earlier, the barriers to the acceptance of foreign credentials in Canada and instances of unreported income earned outside the country (Chapter Three).

The distribution of young adults' individual incomes has changed between 1981 and 2006 in Montreal and Vancouver, supporting the theory of the negative effect of restructuring on earnings (Figure 4.4 & Figure 4.5). The figures suggest that the growth at the bottom of the income distribution is at the expense of the middle but that the increase at the top end is decidedly small in magnitude so that "*proletarianization*" rather than "*polarization*" might be a more apt description of the changes (Hamnett, 1994). Although the increase in the number of young adults pursuing post-secondary education would likely play a role in shaping these changes as the increase in educational attainment delays earnings. Comparison of the income distribution between the two metropolitan areas also indicates how the impacts of restructuring are spatially differentiated (Bourne, 2007a). The growth in social inequality is "*felt particularly*

strongly in...the most ‘global’ cities” such as Vancouver with a post-Fordist employment structure and a large influx of immigrants (Hutton, 2008; Walks, 2011a, p. 138). In contrast, Montreal was hit hard by the decline in the manufacturing sector but its “*lack of true ‘global city’ status in economic terms*” and “*the ‘social safety net’*” has generally meant a “*relative lack of extremes*” within its social structure despite higher historic poverty levels and lower incomes compared to other major metropolitan areas (Germain & Rose, 2000, p. 5).

Figure 4.4 – The young adult income distribution in Montreal, 1981 and 2006



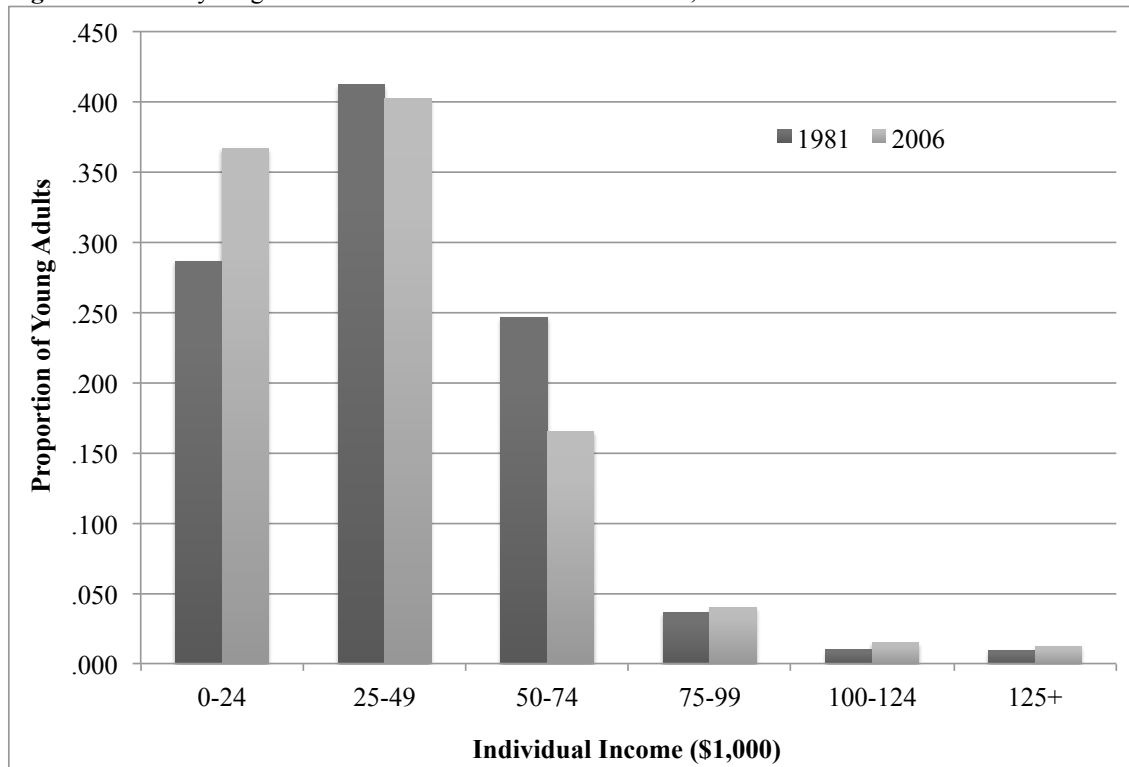
Notes: Includes individual pre-tax income from all sources for the labour force 25 to 34 years of age in the metropolitan areas. Dollar value adjusted for inflation using Bank of Canada rates (\$2006).

Source: Calculated using Statistics Canada PUMFS (1981c; 2006b).

While in 1981 the percentage of young adults earning less than \$25,000 was higher in Montreal than in Vancouver, the increase of young adults in this income group

was twice as high in Vancouver so that by 2006 the percentage in the lowest income category was the same in both metropolitan areas. The percentage of those earning less than \$25,000, increased by about 8 percent from 29 in 1981 to 37 percent in 2006 in Vancouver as compared to a 4 percent increase from 33 to 37 percent in Montreal. Average income remains higher in Vancouver because of a higher percentage of young adults earning between \$50,000 and \$125,000. The percentage of young adults earning between \$25,000 and \$50,000 declined over time in Vancouver, whereas this group increased in Montreal. The largest decline occurred in the \$50,000 to \$75,000 income group, a change larger in magnitude in Vancouver that indicates a shrinking ‘middle’.

Figure 4.5 – The young adult income distribution in Vancouver, 1981 and 2006



Notes: Includes individual pre-tax income from all sources for the labour force 25 to 34 years of age in the metropolitan areas. Dollar value adjusted for inflation using Bank of Canada rates (\$2006).

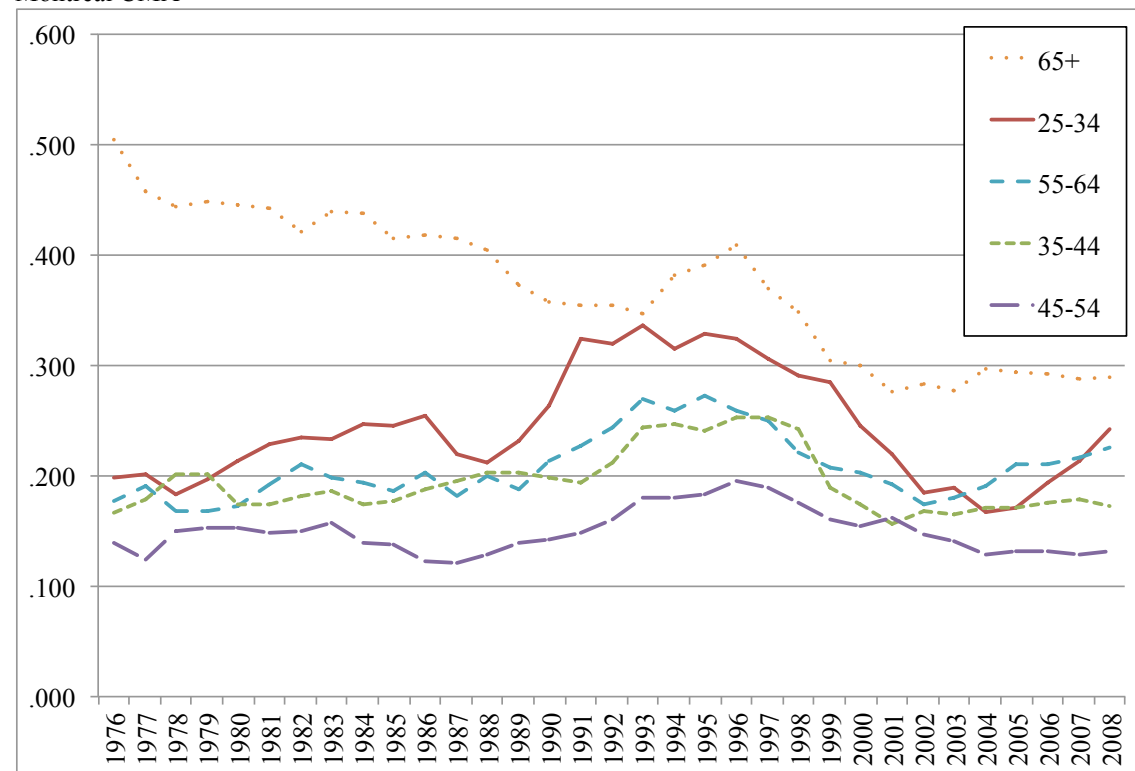
Source: Calculated using Statistics Canada PUMFS (1981c; 2006b).

A comparison of the percentage of persons below Statistics Canada's low-income cut-off (LICO)—a measure of economic hardship that compares income to the metropolitan-specific cost of living—shows that low income remains a much larger issue in Montreal than in Vancouver despite the growth in the percentage of earners in the bottom end of the income distribution in the latter (also see Barnes et al., 2011). The percentage of the young adult labour force below Statistics Canada's low-income cut off is lower in Vancouver (17 percent) than in Montreal (20 percent) in the 2006 individual PUMFS but this variable is not available in the 1981 individual PUMF. In the household PUMFS, the percentage of young adults below the low-income cut off is 14 and 21 percent in Montreal and 13 and 17 percent in Vancouver in 1981 and 2001 respectively. Montreal has always been a city divided by class driven in part by rural-urban migration of labourers, which intersect with ethnicity and language (Leonard & Leveille, 1986). Vancouver too was historically divided by class structures arising from the resource sector but in both metropolitan areas the low-income dimension has been complicated by the growth of the "*new poverty*" among lone parents, youth, the "*working poor*" and "*permanently unemployed*" (Seguin & Germain, 2000; McGee, 2001; Barnes et al., 2011; Walks, 2011a).

Figures 4.6 and 4.7 show the percentage of all persons below the LICO by the age of their primary household maintainer in Montreal and Vancouver. Visually striking is the decrease in the percentage below the LICO for those 65 years of age and older. The decline is due to the implementation of guaranteed income supplements and old age security through Federal legislation that helped to dramatically lower poverty among the elderly (McDaniel, 1997). Some have argued that "*the virtual abolition of extreme*

poverty among elderly through government transfers should be regarded as a major success of Canadian social policy” (Kroeger, 1998, viii). However, as the Figures show the percentage below the LICO is still higher for those 65 years of age and older than any other age group.

Figure 4.6 – Proportion of persons in families below the LICO by the age of the primary maintainer, Montreal CMA



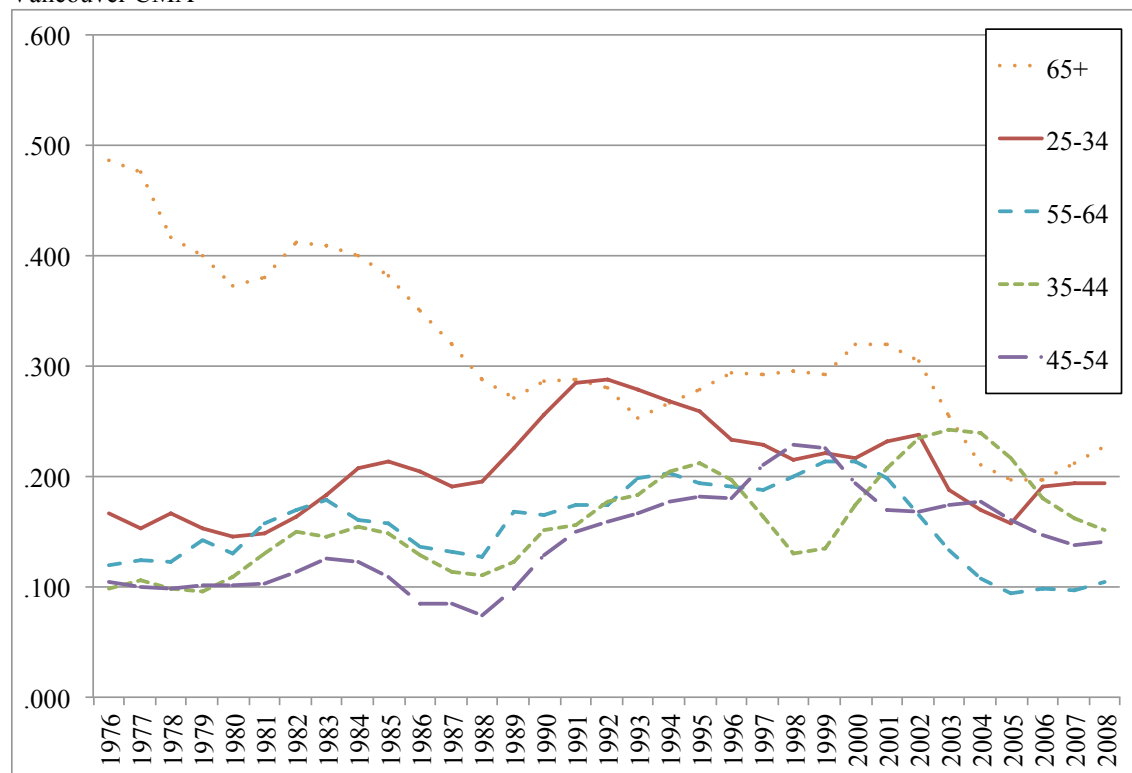
Notes: Before-tax low-income cut-offs (LICO). Three-year running averages shown.

Source: Calculated using data from the Survey of Consumer Finance (1976-1993) and the Survey of Labour and Income Dynamics (1993-2008) available through Statistics Canada's (2008) analysis series.

The rate dropped in Vancouver in the early 2000s to about 20 percent but remained consistent at 30 percent in Montreal. The percentage below the LICO increased during the 1990s but did not return to pre-recession levels in Vancouver for all age groups except those 55 to 64. In Montreal, the percentage below the LICO dropped below pre-recession levels for those 35 to 44 and 45 to 64 years of age. For the

young adult group (25 to 34) and the 55 to 64 year olds, the percentage below the LICO began to increase in early 2000s in Montreal. The higher LICO among young adults than the rest of the population, and the higher increase during the recession, points to the greater vulnerability of those entering the labour market (Myles et al., 1993; Corak, 1998a; Schrammel, 1998).

Figure 4.7 – Proportion of persons in families below the LICO by the age of the primary maintainer, Vancouver CMA



Notes: Before-tax low-income cut-offs (LICO). Three-year running averages shown.

Source: Calculated using data from the Survey of Consumer Finance (1976-1993) and the Survey of Labour and Income Dynamics (1993-2008) available through Statistics Canada's (2008) analysis series.

The increase in the low-income population and the relative stability of the share of higher income earners suggest potential for increasing inequality in the income distribution. Table 4.2 measures income inequality using the standard Gini coefficient for the labour force 15 years of age and older. The Gini coefficient indicates greater

inequality in Vancouver than in Montreal. The coefficient is larger in 2006 than in 1981 in both metropolitan areas but it increased more in Vancouver, reflective of the city's post-Fordist occupational structure. The table also includes Gini coefficients for 2006 calculated excluding immigrants, managerial occupations and those with a university degree. The fact that the coefficient does not decrease substantially, or down to the 1981 level, when immigrants or those in managerial occupations are excluded is indication that these two factors, commonly thought to contribute in important ways to growing inequality, are not sufficient explanations of the trends. In Montreal, the Gini coefficient does actually decline below the 1981 level when those with a university education are excluded from the calculation. In Vancouver, excluding the university educated also results in a decline in the Gini, more so than when immigrants or managers are excluded, but not below the 1981 level. The trends point to the importance of education in shaping income inequality, especially in Montreal.

Table 4.2 – Measuring inequality using Gini coefficients

Population	Montreal		Vancouver	
	1981	2006	1981	2006
15 years of age and older	.397	.438	.401	.470
Excluding immigrants		.421		.451
Excluding managerial occupations		.411		.441
Excluding university educated		.387		.431
Age Groups				
25-34	.328	.355	.327	.385
35-44	.356	.417	.361	.453
45-54	.370	.441	.367	.475
55-64	.378	.466	.372	.500
65 and over	.378	.538	.381	.552

Source: Calculated using Statistics Canada PUMF (1981c; 2006b).

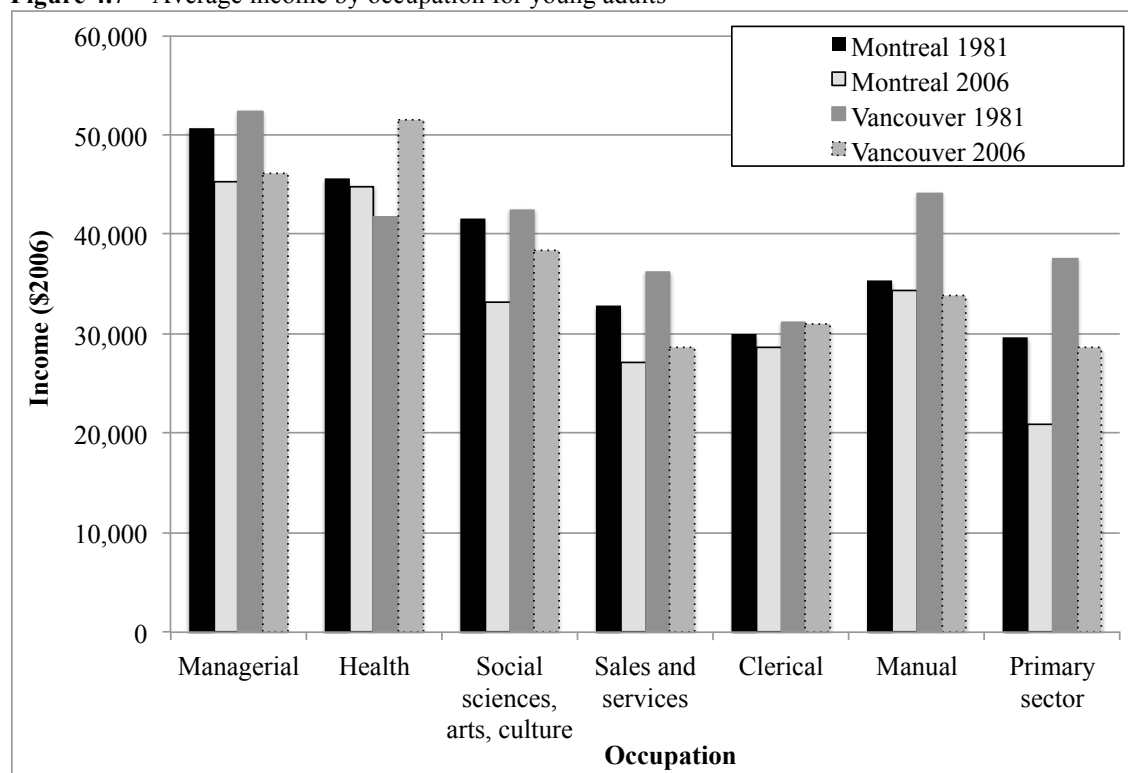
Table 4.2 also shows the Gini coefficient by age group. With the exception of young adults in 1981, intra-age group inequality as measured by the Gini is higher in Vancouver than in Montreal. Inequality is, however, larger in 2006 than in 1981 in all age groups in both metropolitan areas. Among young adults, the increase over time in the Gini is smaller in Montreal than in Vancouver, confirming the assumption that inequality would be more pronounced in the metropolitan area where the occupational structure and educational attainment appear to be more polarized. It is also interesting to note that the Gini coefficient increases with age. The increase in intra-cohort inequality as cohorts grow older arises from the fact that the “*returns to education*” increase with experience in the labour market so that incomes diverge by educational attainment as workers age (Boudarbat et al., 2010). Significantly, the difference in the Gini coefficient between younger and older generations is substantially larger in magnitude in 2006 than in 1981. The trend fits with the finding of “*increasing returns*” to educational attainment since the 1980s so that the effect of aging on the income distribution becomes more pronounced. The findings are of great importance in that they suggest small increases in inequality among young adults, coupled with a polarization in educational attainment, can potentially magnify into much larger social inequalities in the future. The changes likely manifest in housing markets and the urban socio-spatial structure as explored in subsequent chapters.

4.3 Generational Income Gap

The average real income of young adults is lower in 2006 than in 1981 in all the occupational categories in Montreal, and in Vancouver incomes are only higher in 2006

for those in health occupations (Figure 4.7). The difference between census years is largest for those working in manual occupations in Vancouver where real incomes are \$10,367 lower in 2006, compared to a difference between the census years for those in manual occupations in Montreal of only \$991. Because real incomes increased for the rest of the population in both metropolitan areas, the income gap between the young adults and the workers 35 years of age and older increased. When considered by occupation, it is not unexpected that the income gap between young adults and the rest of the labour force is higher in occupations where there are generally more opportunities for career advancement over time such as managerial, health and social science occupations.

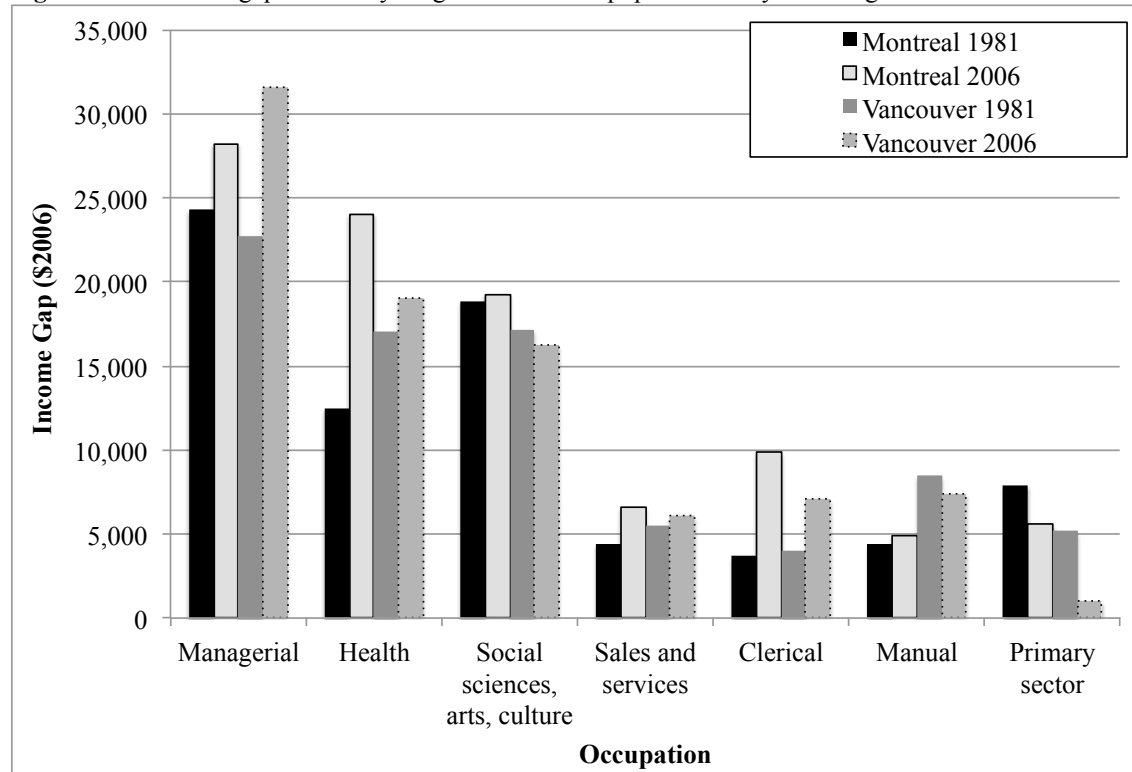
Figure 4.7 – Average income by occupation for young adults



Source: Calculated using Statistics Canada PUMF (1981c; 2006b).

However, the overall expansion of the income gap, and also for several occupational categories, suggests structural changes in the labour market are behind the increased earnings inequality between generations. The income gap contracted for those in social science, art and culture and manual occupations in Vancouver and those in primary sector occupations in Montreal and Vancouver (Figure 4.8) but this occurred because incomes declined somewhat less for young adults than the older workers, whose incomes in these occupational categories also decreased over time.

Figure 4.8 – Income gap between young adults and the population 35 years of age and older



Source: Calculated using Statistics Canada PUMF (1981c; 2006b).

The increase in the income gap for those in social science, arts and culture and manual occupations in Montreal is relatively small in magnitude. The income gap increased the most in terms of magnitude for those in health and clerical occupations in Montreal and

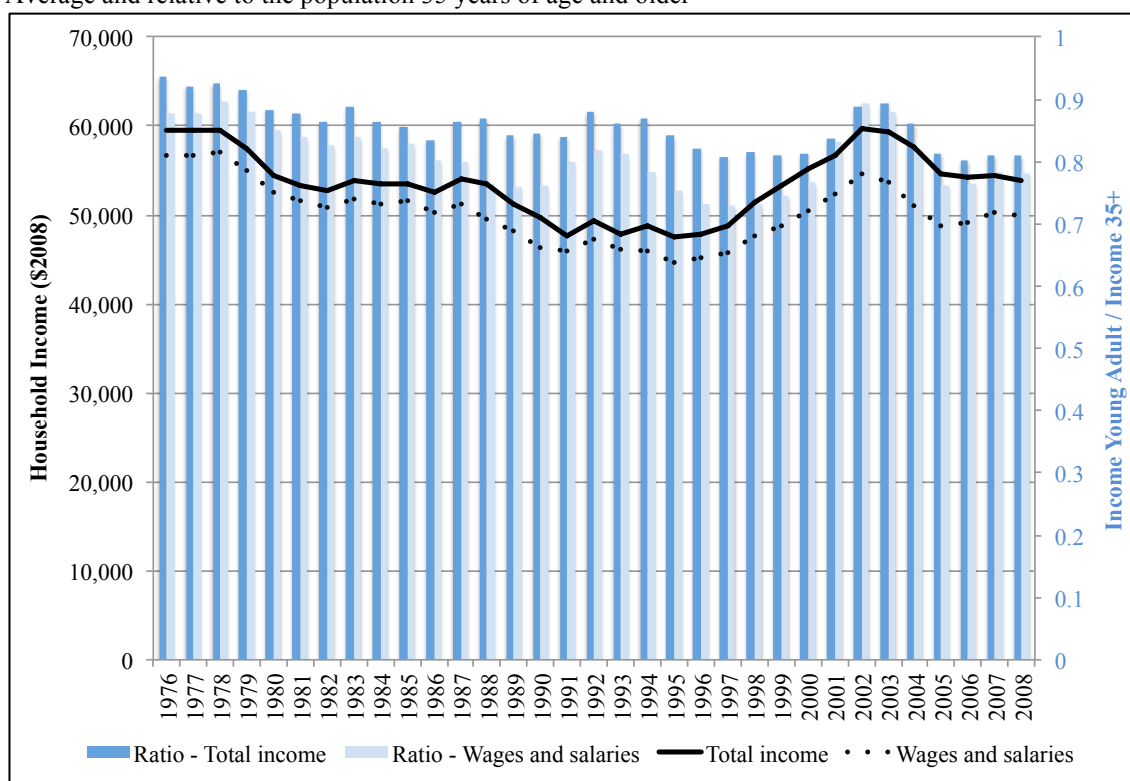
for those in managerial and clerical occupations in Vancouver. The clerical occupations provided, particularly women, a source of stable and generally well-paid office employment during the growth of the corporate office sector in the 1970s. These jobs began to disappear due to the restructuring of the economy and increasing office automation.

The yearly household-level data from 1976 to 2008 also show how the findings from the point-data in the census fit into larger temporal trends (Figures 4.9 & 4.10). The data show a decline of real incomes into the 1990s recession followed by a rebound into the early 2000s and subsequent drop leading into the most recent recession triggered by the housing market collapse in the US. In Vancouver, incomes remained steady in the 2000s but continued to decline in Montreal. The decline in real incomes during the 1990s is more pronounced in Vancouver, which is often characterized as a ‘boom and bust economy’. In the household data, incomes are also lower in the 2001 and 2006 data than in 1981, but when considered as a three-year running average to reveal broader patterns than those influenced by annual variations, the data suggest that incomes appear to have returned to pre-1990s recession levels in Montreal and Vancouver by the 2000s.

But certainly the findings do not suggest that there has been any sort of substantial increase in the welfare of young adults as measured by income levels. Incomes for the population 35 years of age and older have fared better over this time period, thus increasing the generational income (and wage) gap. At the household level, the generational gap in total income appears to have increased more in Vancouver than in Montreal. In the late 1970s, young adults’ total household income in Montreal was

about 90 percent that of the older population. By the early 2000s, that figure decreased to roughly 80 percent, although values approached 90 percent in the period between 2002 and 2004 during which the Canadian economy experienced growth. In Vancouver, young adults' incomes started in the range of 90 percent as well in the late 1970s, although values were generally a bit lower than in Montreal. However, after a spike in the late 1990s, young adults' incomes dropped to less than 70 percent that of the older population by 2006.

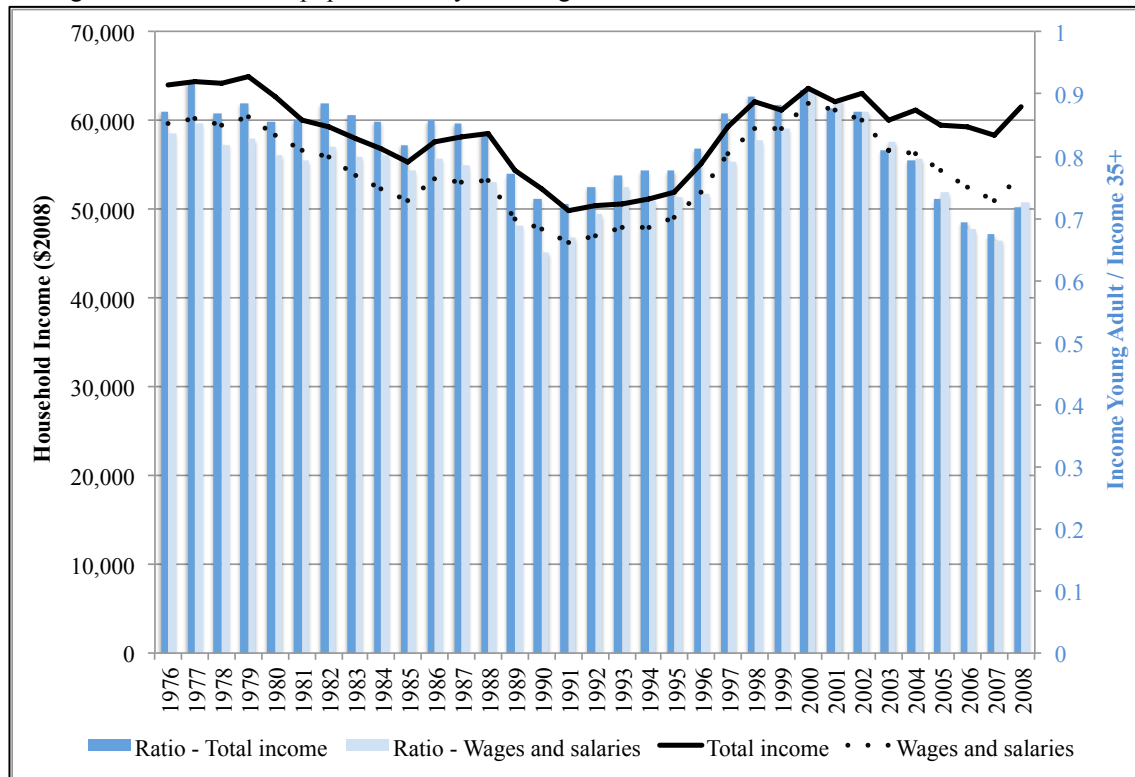
Figure 4.9 – Young adult household income in Montreal 1976-2008
Average and relative to the population 35 years of age and older



Notes: Inflation adjusted (\$2008) household income for households with a maintainer 25 to 34 years of age. Three-year running averages shown. Ratio divides household income of young adults by the household income of households with maintainers 35 years of age and older.

Source: Calculated using data from the Survey of Consumer Finance (1976-1993) and the Survey of Labour and Income Dynamics (1993-2008) available through Statistics Canada's (2008) analysis series.

Figure 4.10 – Young adult household income in Vancouver 1976-2008
Average and relative to the population 35 years of age and older



Notes: Inflation adjusted (\$2008) household income for households with a maintainer 25 to 34 years of age. Three-year running averages shown. Ratio divides household income of young adults by the household income of households with maintainers 35 years of age and older.

Source: Calculated using data from the Survey of Consumer Finance (1976-1993) and the Survey of Labour and Income Dynamics (1993-2008) available through Statistics Canada's (2008) analysis series.

The trends show young adults' greater vulnerability to economic cycles (Schrammel, 1998), and the larger decrease of young adults' incomes in Vancouver than in Montreal where the retention of provincial welfare policies, "*in spite of cut-backs*", and higher unionization rates than in other provinces perhaps shelter young adults more from the effects of restructuring (Germain & Rose, 2000, p. 5; HRSDC, 2011). The small- and medium-sized businesses, which commonly offer lower pay and less employment security than larger firms (Myles et al., 1993), also constitute a large share of the Vancouver metropolitan area enterprise structure (Hutton, 2008). In combination with the increasing educational attainment in Montreal, the trends

contribute to a narrowing of the difference in young adults' income between the two metropolitan areas from 1981 to 2006. But overall, the average income remains lower in Montreal due to persisting lower economic growth and higher unemployment.

To some extent it is also noteworthy that the real individual incomes have not declined more in Montreal and Vancouver given the emphasis on the negative effects of restructuring on economic welfare since the late 1970s in the urban literature. But the effects are arguably more directly reflected in the growing income inequality, as measured by the Gini coefficient above, and also in increases in employment insecurities and part-time work (Fuller & Vosko, 2008). These effects are difficult to capture in average income trends. Young adults are generally earning less or about the same in real terms as in the past in Montreal and Vancouver. In comparison to the national trends that show increasing real incomes the findings point to the specific effects of restructuring on metropolitan labour markets. Earning comparatively less than the older population puts young adults at a disadvantage in the housing market. The analysis in the next section tests whether this effect holds when household characteristics are taken into account.

4.3.1 Income determinants

A linear regression model is constructed to examine whether the gap in individual income prevails for the Montreal and Vancouver data and whether it increased between the 1981 and 2006 censuses. The comparison uses individual incomes because they most directly relate to labour market changes. The inclusion of worker characteristics in the models allows insight on how restructuring is impacting

the determinants of income. According to the literature on urban restructuring, higher-order occupations should become more important determinants of earnings over time whereas immigration status would have a reverse effect—although as discussed before, lower reported earnings are not necessarily indication of lower income or wealth among immigrants to Canada (Chapter Three). Two separate models are constructed; one includes workers of all ages and the other only young adults. The first model allows an explicit test of whether young adults' incomes declined over time. The second model permits analysis of temporal changes in the determinants of income for young adults.⁴⁷

The use of a multivariate approach to ask about temporal changes in income determinants makes a useful contribution to the literature on urban restructuring that often only describes changes in incomes between occupational or immigrant groups using averages (e.g., Walks, 2001; 2011a). This also includes Sassen's (1991) work that demonstrates changes in the size and earnings of occupational groups—an inherently ill-suited method to validate the influence of occupational restructuring on earnings because the research design gives no opportunity to assess comparatively several different factors that may be associated with changes in the income distribution, such as education, hours worked, increases in female labour participation or changes in the age structure of the population as discussed above. The analysis that follows cannot speak to the changes in the 'shape' of the income distribution *per se* but it can reveal changes in the determinants of income over time.

⁴⁷ While one model including interaction effects could yield insight into both of these questions, the use of two models produces results that are more intuitive to interpret than a single model that includes multiple interaction effects for the temporal and age variables.

Table 4.3 displays the result of the regression analysis of total individual income as determined by the workers' labour market characteristics summarized in the section above. Included are variables describing the workers' sex, place of birth, educational attainment, hours worked, and occupation. The regression model in the left-hand column includes the employed labour force 25 years of age and older with positive incomes. A zero/one dummy variable is included to analyze the difference in income between young adults (25 to 34 years of age) and the rest of the population 35 years of age and older. As in previous chapters, the analysis combines the 1981 and 2006 individual PUMFS and includes a variable for census year to detect temporal changes. The model also combines observations for the two metropolitan areas. There were no changes in overall conclusions when the analysis was conducted for Montreal and Vancouver separately, although there are differences in the magnitude of coefficients by metropolitan area that are mentioned below. The model includes a dummy variable to account for the overall differences in income between Montreal and Vancouver. The regression model shown in the right-hand column of Table 4.3 includes only the young adults but is otherwise the same as the model shown on the left.

As demonstrated by the variable measuring census year, the real income decreased from 1981 to 2006 for young adults but remained consistent for the rest of the population when the characteristics of the labour force are taken into account. The variable denoting young adults indicates that the generational income gap remains when educational attainment and other differences between the younger and older workers are held constant.

Table 4.3 – Income as a function of labour force characteristics, Montreal and Vancouver CMA

	All Workers 25 and older			Workers 25-34 Years of Age		
	Coeff.	Beta		Coeff.	Beta	
Year 2006 = 1	-1339	-.014		-7508	-.133	***
25-34 Years of age = 1	-12265	-.123	***			
25-34 * Year	-4865	-.038	***			
Female = 1	-19821	-.208	***	-13836	-.244	***
Female * Year	3894	.036	***	7091	.108	***
Health	-851	-.005		1634	.018	
Social sciences, culture, art	-10357	-.071	***	-5968	-.074	***
Sales and services	-18507	-.157	***	-11323	-.155	***
Clerical	-15847	-.118	***	-9842	-.130	***
Manual	-17041	-.150	***	-9383	-.134	***
Primary	-22278	-.048	***	-15374	-.048	***
Health * Year	-5049	-.029	**	-652	-.006	
Social sciences * Year	-10345	-.058	***	-5360	-.054	***
Sales * Year	-6613	-.043	***	-1677	-.017	
Clerical * Year	-5497	-.027	***	-1943	-.016	
Manual * Year	-8431	-.051	***	-17	.000	
Primary * Year	-11854	-.019	**	-3835	-.009	
Less than high school	-6432	-.054	***	-4679	-.055	***
College or trades	1644	.017	*	339	.006	
University degree	17440	.158	***	8262	.130	***
Less than high school * Year	2223	.010		1044	.007	
College * Year	831	.007		2842	.040	**
University * Year	4195	.033	**	3341	.045	**
Hours worked	292	.091	***	237	.122	***
Hours worked * Year	117	.053	***	9	.007	
USA	-376	-.001		-2831	-.010	
South and Central America	-9592	-.035	***	-10941	-.068	***
Europe	-2633	-.019	***	-1131	-.011	
Africa	-7069	-.023	***	-5169	-.028	**
Asia and Oceania	-11517	-.075	***	-7808	-.082	***
USA * Year	-5750	-.009		-7541	-.016	*
South * Year	-5535	-.016	**	-612	-.003	
Europe * Year	-3340	-.015	**	-6533	-.040	***
Africa * Year	-8493	-.023	***	-9547	-.040	***
Asia * Year	-7001	-.040	***	-2742	-.024	*
Vancouver = 1	4917	.050	***	3127	.053	***
Vancouver * Year	-566	-.005		-272	-.004	
Constant	58163		***	42465		***
N-Cases	64,008			21,671		
Adjusted R-Squared	.184			.159		

Notes: Pre-tax (\$2006) income. Base is the Montreal labour force in 1981, 35 years of age and older, managerial occupations, high school educated, born in Canada. ***p<0.0001, **p<0.01, *p<0.05.

Source: Calculated using Statistics Canada PUMFS (1981c; 2006b).

The interaction effect with the dummy variable measuring census year indicates that the gap is higher in the 2006 than in the 1981 data. Importantly, the coefficient of this variable is higher in Vancouver than in Montreal (model not shown), suggesting that the generational income gap is higher in the former. The analysis also shows that incomes are higher in Vancouver than in Montreal holding other factors constant, which suggests that the differences in earnings arise from structural economic conditions, not solely differences in the composition of the labour force. The analysis shows that being female, born outside of Canada and working fewer hours are negatively associated with income whereas higher educational attainment and occupational status are positively associated with income. The analysis also shows that while gender inequalities have declined over time they are still very much present today among all workers and the young adults who are only just entering the labour market. It points to deeply engrained structural inequalities. The interaction effects between the education and census year variables suggest that the positive income effects of a university degree are higher in the 2006 data. The finding is consistent with Boudarbat et al. (2010) who find increasing “*returns to education*” over time for university degrees relative to obtaining a high school diploma.

The occupational categories show that with the exception of health occupations those in managerial occupations earn more income and that this effect increased over time. This confirms that Walks’ (2011a) finding of growing income inequality between managerial and other occupations across the five largest Canadian metropolitan areas holds in Vancouver and Montreal even when other differences between workers are taken into account. The regression that includes only the young adults shows, however,

that the temporal changes are only different from zero at a statistically significant level for the social sciences, arts and culture occupations among younger workers. This may be in part because the analysis does not fully account for differences in the labour market experience among young adults that may be confounded with occupation. Clearly distinguished from the incomes of managers are those of workers in sales and service, clerical and manual occupations pointing to the importance of the occupational polarization theorized in the literature. But while the magnitude of the standardized (beta) regression coefficients indicates that occupation is an important income determinant, university education, gender and age all have large beta values that point to the importance of these factors in structuring workers' incomes.

4.4 Discussion

The analysis of the young adult characteristics reveals the transitions associated with post-Fordist and global restructuring that alter the composition of the labour force and changes in the households. We see increases in service sector employment, immigration, female labour force participation, and educational attainment with declines in marriage rates, child bearing and household size that vary with the particular circumstances of the metropolitan economies. The changes in the income distribution point to the potential for greater inequality. Young adults' incomes are lower in the more recent census data than in the past at the individual and household level despite increases in the average number of earners. But the analysis of the time-series data shows the fluctuations in household earnings with economic cycles, and despite a decline associated with the 1990s recession, there is relative stability in earnings over

the 20 to 30 year time frame. However, since real incomes have increased for the population as a whole, young adults are on average now earning relatively less than in the past as compared to the population 35 years of age and older. This effect holds even when other characteristics are taken into consideration in a multivariate model. Age is arguably a proxy for the restructuring of the labour market that results in quite different conditions for the young adults in 2006 from those in the early 1980s. The differences over time point to changes in employment conditions not accounted for in the regression such as the growth in less secure and lower paid employment arising from neo-liberal and post-Fordist restructuring.

As Myles et al. (1993) argue, income “*polarization*” is the result of “*changes in the organization of production*” and is “*taking place between generations*” not occupations (p. 192). However, as the results of the regression show, occupational restructuring, which has been assigned importance in the literature on social differentiation at least since Sassen’s polarization hypothesis, does appear to still play a determining role in the changing income distribution. Workers in higher order occupations are earning relatively more today than in the past. The presence of a growing generational income gap in Montreal and Vancouver even when occupational and other labour market characteristics are taken into account points to the influence of post-Fordist labour market restructuring that reduces the number of well-paid jobs. The generational income gap is larger in magnitude in Vancouver, which would support the notion that the relatively greater degree of neo-liberalization of the welfare state in British Columbia has had a negative impact on young adults’ earnings. Yet, analysis of income trends in Canada shows that the “*tax-transfer system reduced income inequality*

as much in 2004 as it did in 1989” and that “*rising inequality*” was due to growing inequalities in market earnings (Heisz, 2007, p. 26). The findings suggest that neo-liberalization of employment relations, which results in the loss of benefits and employment security, and the polarization in the occupational structure, rather than changes to state redistributive mechanisms, help explain changing income trends of young adults during this period. Of course, there have since been several changes to the federal tax system that could have regressive effects.

The Gini coefficients point to the high degree of inequality within the young adult cohort and that this trend is higher in the 2006 data than in 1981. The effects are larger in Vancouver than in Montreal. The increases in inequalities, and higher relative increases in earnings by occupation, are of concern both for present and future generations. As Helliwell (1998) notes:

“It is necessary to recognize...the strong linkages between equity within and between generations. Many of the programs that affect distribution within generations also affect distribution from one generation to another, and policies that balance one set of books may worsen the other.” (p. 145)

Thus, the findings of inequality and unequal growth in earnings have import in the context of inter-generational equity (Corak, 1998a). The inter-generational inequalities are further reinforced by the fact that only some young adults are able to draw on their parents’ equity to help finance entry into ownership markets but the extent of this effect is difficult to assess here. The concept of inter-generational equity surfaces in sustainability debates at least since the Brundtland Commission focused upon it with its definition of sustainable development (Wheeler & Beatley, 2009; WECD, 1987). An

aspiration to protect the rights of future generations is also reflected in the United Nations Agenda 21 by way of a declaration to “*develop and implement strategies that give young people everywhere a real chance to find decent and productive work*” (reproduced in Wheeler & Beatley, 2009, p. 78). While the focus is often on the environmental aspects of inter-generational equity, the economic welfare of future generations has been a motivation behind policies that focus on balancing budgets and debt repayment (Corak, 1998b; Ruggeri, Zou & Garrett, 2005). Perhaps often overlooked in the public policy discourses is the way that restructuring and neo-liberalization of the labour market could leave future generations with lower income prospects and greater income inequality in a context where there are fewer institutional mechanisms to deal with the redistributive issues (McDaniel, 2004).

Of interest therefore in the context of the questions posed in this thesis is the relative importance of the income determinants in addition to the anticipated effects of occupation and immigration that have become more important sources of income differentiation: The findings point to the increasing importance of educational attainment in determining earnings, a variable that is not always explicitly considered in the literature on economic restructuring. The changes suggest that in the context of an emerging knowledge and service-based economy, education may become an increasingly important factor of social differentiation (Hall, 1996; Boothby & Drewes, 2004). Educational attainment is of course correlated with occupational variables but its explicit consideration reveals how knowledge and training, which have become of relatively greater value in the post-Fordist context, relate to earnings. The potential inequality implications of changes in the returns to education in combination with a

more polarized distribution of educational attainment are particularly worrisome due to ways the effects are compounded over time:

“...access to and success in post-secondary education [in Canada] is significantly on the rise for individuals whose parents have themselves attained post-secondary education, while the situation of respondents whose parents’ education did not go beyond high school has not improved, and indeed may have deteriorated”
(De Broucker & Lavalley, 1998, p. 132)

Also of importance is the gender dimension that evidently plays a continuing role in shaping social differentiation. Its effects are likely multiplied by the way gender intersects with occupational variables, for instance the larger share of men working in managerial occupations where income gains have been the highest. Increases in female labour participation rates since the late 1970s therefore surely explain one component of increasing income inequalities at the individual and household level due to the growth in female-headed households and the way *“marriage partners tend to be at similar points in their gender earnings distribution”* (McLachlan & Sawada, 1997, p. 387). Previous literature has explored the ways gender, immigration, occupation (as a proxy for class) and also lifestyles and household arrangement produce new forms of socio-spatial differentiation (Rose & Villeneuve, 2006). It is evident in the analysis here that there have been changes in the labour market since the early 1980s that alter the relative rewards of several of these variables.

The changing earnings structure has important implications for the housing and locations households can afford (Walks, 2011a). Thus it is critical to consider that since young adults’ earnings are relatively lower than those of the rest of the population, young adults’ residential locations are potentially implicated in the increasing socio-

spatial differentiation being found in Canadian cities (Townshend & Walker, 2002). Yet, analysis of growing socio-spatial inequalities has not traditionally taken into account the age composition of households. The analysis clearly shows that generational income gaps exist in individual and household earnings, and that young adult incomes have remained stagnant since the early 1980s, and incomes are lower in the 2001 and 2006 census than in 1981 in Montreal and Vancouver. The next chapter turns to the question of the changing residential location patterns to analyze in more detail how the young adult population, and their changing characteristics, factor into the changing residential ecology of the two metropolitan areas; and how the increasing labour market inequalities materialize in changing residential spatial patterns.

Chapter Five: The Young Adult Residential Ecology

The analysis in this chapter deals with how the socio-economic restructuring that led to decreases in households size and relative income of young adults (Chapter Four), as well as the changes in the occupational composition and structure of the city arising from post-Fordist restructuring and neo-liberalization (Chapter Two), have reshaped the residential ecology of young adults and the neighbourhood characteristics where they reside. The chapter reveals how the changes in the young adult labour force materialize in urban social space, grounded in the structural theories that see the spatial division of the population reflect and reinforce the social divisions by class, gender and also life-cycle stage (Massey, 1980; Wyly, 1999; Walks, 2001). There is little question that there have been significant shifts in the residential ecology of cities as a result of contemporary restructuring—gentrification has returned high income earners to the central city, the immigrant landscape is becoming increasingly suburbanized and the growing diversity of lifestyles and household arrangements are contributing to greater complexity in the spatial arrangement of the population (Townshend & Walker, 2010).

While Dear & Flusty (2002) depict the emerging urban form as a “*a collage of landscapes that have pre-empted the historical importance of the city core*”, many observers have noted the continuing albeit reduced importance of the central city (Murdie & Teixeira, 2006, p. 161). Of interest in the context of this thesis is the question of how the young adult dimension fits into this “*collage of landscapes*”. Young adults are finding themselves making decisions about residential locations and housing with lower relative incomes than in the past but a larger supply of smaller dwelling units, amenities and transit in central areas.

The analysis in this chapter first describes the changes in the residential ecology, and then uses multivariate regression models that analyze whether the particular urban housing market context in each of the two metropolitan areas contributes to structural differences in location patterns over time using dummy variables. The models control for the changes in the household level variables that the neo-classical economic models associated with housing consumption. In line with the research questions set out in Chapter One, the analysis in this chapter considers the changing location patterns of the young adults; and constructs specific statistical models that distinguish between the individual and metropolitan context-specific variables, consistent with the theory of structuration used here as a conceptual umbrella to bring together insights from neo-classical and structural theories.

The analysis can also speak to the objective of the thesis as to whether changes in young adults' location is conducive to attaining sustainability objectives such as centrality, proximity to amenities and alternative transport modes. The objective to distinguish between the household and contextual factors contributing to changes in residential location remain important in this chapter. The young adults' early stage in their housing and labour market trajectories, and smaller household size, obviously shapes their decisions about location (van Diepen & Musterd, 2009). As Wyly (1999) notes, households in their early life stages may be more likely to make "*choices*" that "*maximize the use value of the neighbourhood*", which includes the entertainment and lifestyle amenities. As households transition into later life-cycle stages, Wyly suggests, their decisions are increasingly made "*to maximize the exchange value of the house*",

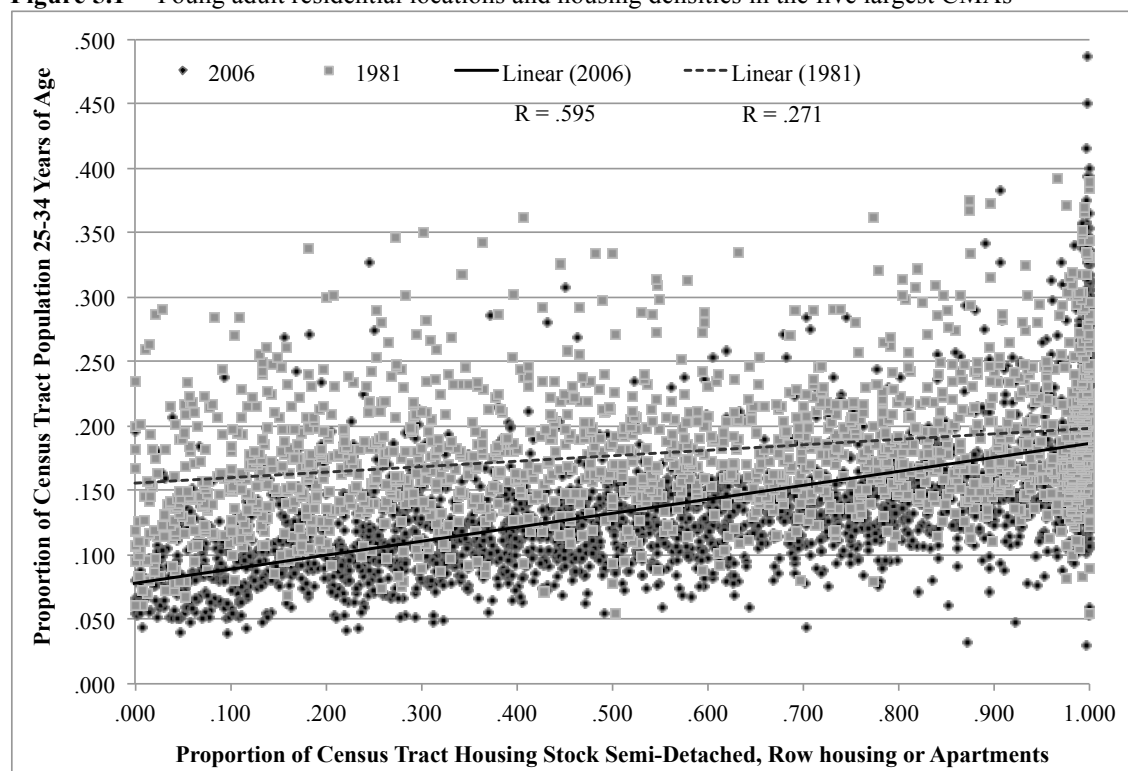
which may mean “*enduring high debt loads and commuting costs in order to accumulate equity*” (p. 315).

The changes in the housing context have also altered the decision-making in that neo-liberal ideologies could influence households to place greater value on the “*exchange value*” of their housing and location decisions earlier in their life-cycle (Leitner, 1990; Lerner, 2000; Beer et al., 2011). The increasing stock of small, central city condominiums may permit young adults to enter the ownership market even in a context of rising prices (Kern, 2010). At the same time, the declining relative incomes of young adults and the increases in income inequality within and between cohorts could make access to ownership markets more difficult for a larger share of young adults, increasing the importance of rental markets in the early life-cycle stages. Either way, the combination of the changes in context and the young adults’ labour force and household characteristics would suggest an increasing tendency to reside centrally, in the higher-density housing stock.

Figure 5.1 shows the aggregate change in the spatial distribution of young adults in the five largest CMAs, which speaks directly to shifts in location and housing decisions toward higher density neighbourhoods since the 1980s. The increase in the correlation between the proportion of young adults in census tracts and the proportion of higher density housing is revealing of the changes in housing context associated with gentrification and changes in household composition that would contribute to centralization of young adults in all major cities (and therefore decrease the share living in single-family dwellings). Also notable, however, is the large number of tracts with substantial proportions of the higher density housing stock in both census years—it

points to the way single-family dwelling occupancy is distinctly related to the older life-cycle stages (Moos & Skaburskis, 2008). But since the 1980s as young adults saw a decline in household size and a delay in child bearing and family formation, the relationship between young adults and neighbourhood housing stock characteristics becomes more pronounced. The figure points to a reshaping of the young adult residential ecology in a context of post-Fordist and neo-liberal urban restructuring that the analysis here explores in greater detail for Montreal and Vancouver.

Figure 5.1 – Young adult residential locations and housing densities in the five largest CMAs



Source: Statistics Canada census tract data (2006a) for the Toronto, Montreal, Vancouver, Ottawa and Calgary census metropolitan areas (CMAs).

What follows first in this chapter is a descriptive account of the changes in the residential location patterns of young adults in 1981 and 2006, and the socio-economic, housing stock, urban accessibility and commute characteristics of neighbourhoods

where young adults tend to reside. An index of centralization is used to analyze the young adult location patterns in the most recent census in relation to the rest of the population as well as in relation to the young adult cohorts in the past. Multivariate tools are then used to analyze the changing factors associated with residential location patterns to discern the influence of the individual and household characteristics shaping housing profiles from the broader structural factors shaping the changes in residential location patterns in line with the theories guiding this research as set forth in Chapter One.

5.1 Changing Aggregate Location Patterns

Much of the academic evidence of young adult residential location appears to come from gentrification studies, which provide important insight on the characteristics of the young central city quaternary sector workers but by virtue of the focus on the central city reveal little about the location of the young adult population as a whole (Allen, 2008). Vanderbeck (2007, p. 200) in his *“review of how geographers have approached issues of intergenerational relationships”* finds little existing generalizable evidence of the spatial patterning of age groups. As Vanderbeck notes, citing Pain (2001, p. 149), the gap is in part due to a broader shift in the discipline of geography from analyzing *“spatial patterns”* to qualitative investigations of *“spatial constructions”*. He finds that most of the existing research on age geographies was conducted in the 1970s and 1980s (for example, Massey, 1980). Although he arguably overlooks the literature on residential differentiation that does consider the age dimension (Meligrana & Skaburskis, 2005; Seguin, Apparicio & Negron, 2008; Townshend & Walker, 2010).

Findings from the previous studies suggest that the influence of age on the residential ecology relates to life-cycle stage. Young adults locate in the central city as well as the outer suburban areas corresponding with family and social status (Davies & Murdie, 1993). On the one hand, the growing diversity of life courses, no longer following as rigidly a linear trajectory of life-cycle stages (Rose & Villeneuve, 2006), may mean that age has actually become less important in defining residential location. On the other hand, the growing segregation of age groups in education, the division of labour and consumption practices seem to suggest growing importance of age in delineating the residential ecology (Hagestad & Uhlenberg, 2006). Certainly in the two CMAs studied here, segregation as measured by the coefficient of localization increases in value from 0.081 in 1981 to 0.127 in 2006 in Montreal and from 0.106 to 0.137 in Vancouver.⁴⁸ A young resident of a downtown Vancouver apartment who commented on the nature of his residential location decision in a newspaper interview is illustrative of the increasing segregation:

“My friends are here, my girlfriend is here, my work is here...for this period in my life...it just seems that everything I want is right downtown. It’s like a campus for young...grown-ups.” (Gold, 2007:)

The increases in educational attainment and the delay of child bearing that, as Chatterton & Hollands (2002) argue, have resulted in a *“prolonging of the young adult phase”*, and manifest in the city center through the pursuit of consumption, leisure and popular culture in *“youth identity formation”*. Analysis of location quotients, which

⁴⁸ The values range from 0 to 1. Zero indicates an equal concentration of young adults in all census tracts. As values approach 1, segregation of young adults from the rest of the population increases (Walks, 2001). Of course, the usual caution that residential segregation does not speak to the level of social or economic segregation applies.

measure the proportion of young adults in each census tract in relation to the proportion of young adults in the entire CMA, show an overall shift in location patterns of young adults over the twenty-five year period toward the central city (Figures 5.2 & 5.3).

The density of the central city is especially conducive to the provision and consumption of entertainment services that cater to the young adult population (Bunting & Filion, 1988), such as the entertainment districts along St. Catharines Street in Montreal or Granville Street in Vancouver. As others have argued, proximity to consumption amenities and other young adults have become more important factor in young adults' residential location decisions (Townshend & Walker, 2010). Chatterton (1999) discusses *"the ways in which the activities of, and entertainment provision for, certain groups...are enhancing the long-standing processes of regulation and compartmentalization of city centre space"*, highlighting the corporate gains from creating *"exclusive environments"* for *"distinctive consumption groups"* (p. 133). However, also a factor here is the reduction in household size, the delay in child rearing and the decrease in earnings of young adults that decrease young adults' demand for housing space, thus accentuating centralization since smaller dwellings tend to be located in the central city. Following the assumptions in the neo-classical theory (Alonso, 1964), higher housing prices would also shift the young residential ecology toward areas where there is smaller housing and also more rental stock.

Figure 5.2 – Location quotients of young adults in the Montreal CMA, 1981 and 2006



Source: Calculated using Statistics Canada census tract data (1981a; 2006a).

Figure 5.3 – Location quotient of young adults in the Vancouver CMA, 1981 and 2006



Source: Calculated using Statistics Canada census tract data (1981a; 2006a).

Central locations mesh with emerging environmental ideals, which depict the suburbs as resource inefficient and the central city as conducive to more sustainable consumption practices (Chapter Two). Central locations provide access to transit, which young adults may increasingly desire for environmental reasons, or also because of their lower incomes and greater dislike of commuting as compared to older generations (Turcotte, 2008a; d). Notably, there were already concentrations of young adults (aged 25-34) in the inner city of both Montreal and Vancouver in 1981 (Figures 5.4 & 5.5).

Figure 5.4 – Location quotients of young adults in Montreal’s inner city, 1981 and 2006



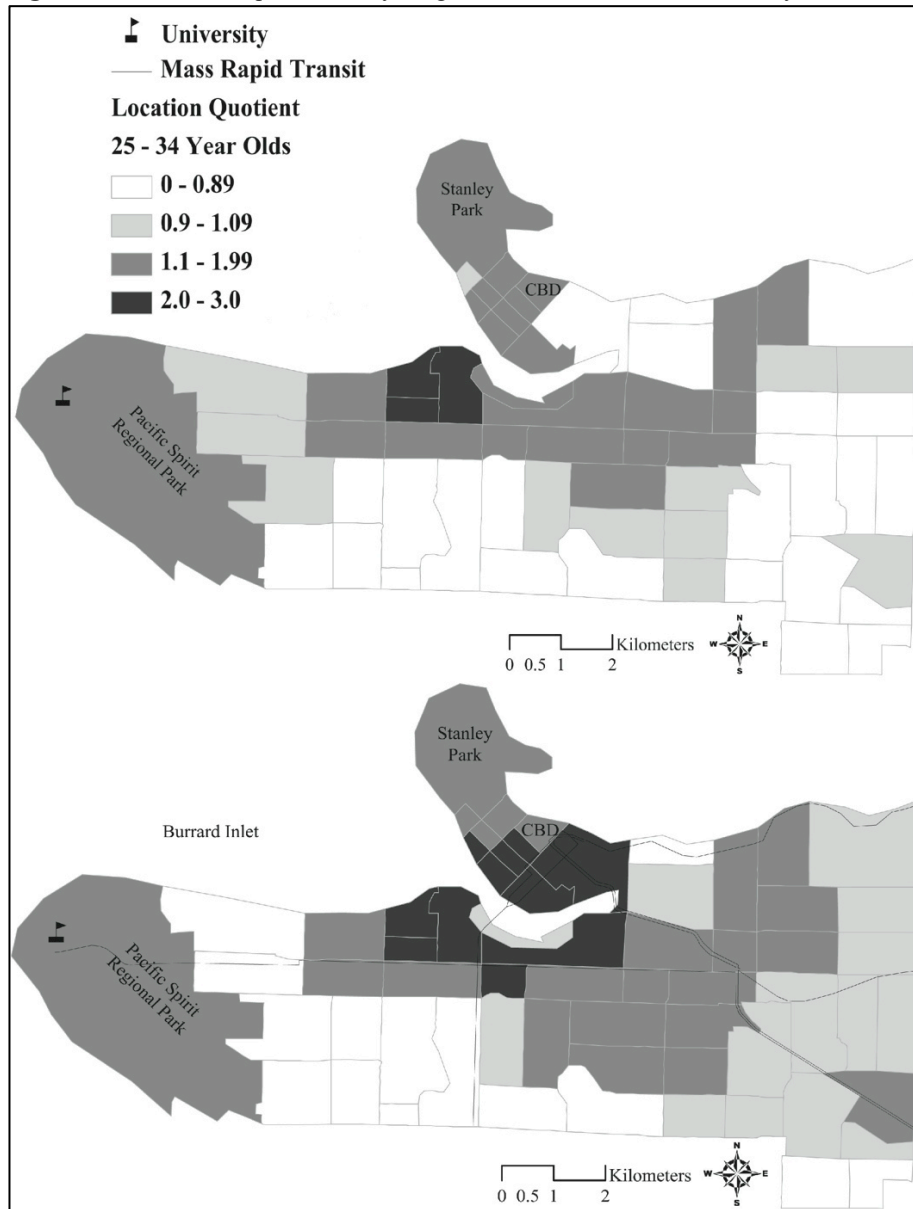
Notes: Only main university campus locations shown. N/A: Census data suppressed or unavailable. Inner city definition based on development period of housing stock (see Chapter Three).

Source: Calculated using Statistics Canada census tract data (1981a; 2006a).

However, the residential patterning of young adults shows evident concentrations in the suburban areas. Consistent with the factorial analysis of the social ecology, there were pockets of concentrations of young adults at various distances from the centre,

following a concentric ring pattern that is most visible in Montreal (Davis, 1984). The high concentrations in the central city in 1981 are in the tracts that gentrified in the 1960s and 1970s (Ley, 1996), for instance in the vicinity of Montreal's large educational institutions, such as McGill and in Vancouver's Kitsilano neighbourhood.

Figure 5.5 – Location quotients of young adults in Vancouver's inner city, 1981 and 2006



Notes: Only main university campus locations shown. N/A: Census data suppressed or unavailable. Inner city definition based on development period of housing stock (see Chapter Three).

Source: Calculated using Statistics Canada census tract data (1981a; 2006a).

Young adults are also concentrated near other post-secondary institutions such as Université de Montréal north-west of Mount Royal and in Vancouver on the west side of the inner city (University of British Columbia) and the eastern part of Burnaby (Simon Fraser University). Murdie & Teixeira (2006) find, in their review of Canadian factorial ecology studies, that areas with high proportions of young adults in other cities are *“located close to downtown but also in the vicinity of major educational and medical institutions”* (p. 160-161). In Vancouver, high concentrations are also found in the CBD’s West End where a large share of the housing stock has been renter-occupied high-rises since the 1950s. In Montreal, a tract southwest of Vieux Montreal shows the highest concentration but this tract has a small residential population and was largely industrial in 1981.

In 2006, the location quotients are above one in most of the tracts across the inner city of Montreal (and large parts of the old suburbs) with location quotients greater than two in and around the gentrified-Plateau Mont Royal, and more recently gentrifying neighbourhoods such as Little Italy and Mile End (Rantisi & Leslie, 2010). The spatial distribution of young adults roughly follows the Metro lines, with increases in concentration particularly visible in the west and east ends of the inner city, as well as along the Metro line running north to Laval and the Blue Line at Côte-des-Neiges and Université de Montréal. Most of these inner city tracts are near major shopping and entertainment destinations, such as Saint-Denis and Saint-Laurent streets in the Plateau, Saint-Catharines street in the downtown or Chemin de la Côte-des-Neiges west of Université de Montréal that have trendy restaurants, patios, cafés, designer clothing

stores and access to the Metro (Figure 5.6). The tracts where young adults are concentrated contain higher density housing, such as walk-up and high-rise apartments.

The high location quotients in the suburbs of Montreal have mostly disappeared by 2006, although some pockets of higher concentrations remain such as on the south shore in and around Longueuil that has emerged as an important employment centre (Shearmur, 2006). With the exception of one tract in the north-east, the higher concentrations in the suburbs and exurbs roughly correspond with the presence of the commuter trains. In fact, resumption of commuter train service to the north and south shores in 1997 and 2000 respectively (the south shore line was further extended to Mont-Saint-Hilaire in 2002) is believed to have spurred higher-density residential developments in those areas. For example, Les Cochères de la Gare in the Town of Sainte-Thérèse, on the north shore, and Village de la Gare in the Town of Mont-Saint-Hilaire, on the south shore, were among the first of several higher density, suburban residential developments close to commuter transit stations with service to downtown Montreal (CMHC, 2007b; 2007c).⁴⁹ Growing traffic congestion on the major highways, particularly the bridges connecting the north and south shores to the Island of Montreal, arguably contributed to renewed demand for commuter rails among suburban residents, who became particularly vocal after temporary rail service was extended to Sainte-Thérèse during renovation of a major bridge in 1997 (for example Sijpkens, 1992).

⁴⁹ A survey of thirty Village de la Gare residents found that forty-seven percent of respondents chose their residential location because of proximity to transit. Forty-four percent actually use transit to get to work as compared to twenty-one percent in the Montreal CMA. Thirty-three percent noted proximity to nature, ten percent proximity to work and only three percent the price of the unit as their “*main reason*” for residing in Ville de la Gare (CMHC, 2007c).

Figure 5.6 – Amenities and housing in Montreal neighbourhoods with high shares of young adults



Notes: Top: Pedestrian mall with apartments above ground floor retail near Rue Prince Arthur and Boulevard Saint Laurent on the south end of the Plateau du Mont-Royal neighbourhood (April, 2008). Bottom: Different types of high density housing near Rue Milton and Rue Hutchison on the east end of the Downtown neighbourhood by McGill University (July, 2009).

In Vancouver, the highest concentrations in 2006 are found in the downtown where new housing development occurred since the 1980s in the form of condominium

apartments (Figure 5.7). The only tract with less than average CMA proportion of young adults in the downtown is in the Downtown Eastside that has long been characterized by an older, low-income population (Ley & Smith, 2000). Increases in the concentration of young adults occurred in the eastern part of the inner city and along the SkyTrain into the suburbs and new suburbs. In fact, the distribution in 2006 generally follows a single sector stretching from the inner city along a high density transit corridor extending from the downtown to the south-eastern part of the CMA. Although there are a number of tracts with location quotients above one at least two or more kilometers away from rapid transit stations in south-west Surrey and also Langley.

As in Montreal, high concentrations of young adults in Vancouver occur in and around amenity and entertainment hubs such as along Robson Street in the downtown and Fourth Avenue and West Broadway in Kitsilano in the west side of the inner city. Location quotients are also high in the regional town centers that experienced redevelopment of the housing stock at higher densities near the transit stops, particularly high-rise apartments such as at Lonsdale Quay in North Vancouver, New Westminister and Burnaby at Metrotown but also in parts where low-rise multi-family units and single-family dwellings are more common, such as Coquitlam and Port Coquitlam and Whalley. Thus, the overall changes in residential ecology in the two cities point toward increasing concentration in the downtown but in Vancouver this concentration also appears to have become decentralized.

Figure 5.7 – New housing developments in Vancouver neighbourhoods with high shares of young adults



Notes: Top: Low-rise condominium apartment building above ground floor retail at West 4th Avenue and Bayswater Street in the Kitsilano neighbourhood (June, 2010). Bottom: High-rise condominium apartment towers near the waterfront, retail strip and SkyTrain in New Westminster (Left: Columbia Street and Begbie Street. Right: Carnarvon Street and Quayside Drive.) (April, 2010).

Correlation coefficients confirm the trends visible in the maps that centralization is less pronounced in Vancouver where inner city housing prices, and densities, have increased more than in Montreal (Table 5.1; Skaburskis & Moos, 2008). Table 5.1 shows the correlation coefficients of the location quotients with variables measuring distance to the centre, walkability, distance to rapid transit and descriptors of the housing stock and socio-economic characteristics of the census tracts. Correlation coefficients show mostly moderate (0.4 to 0.6) and some strong (>0.7) associations, and there are also changes in the correlations between census years of over 0.4 that signify shifts in the attributes associated with the residential location patterns. The negative correlation between distance to the downtown shows that the proportion of young adults declines with distance from the centre.

As mentioned before, the lower size of the correlation with the distance variable in Vancouver is explained in part by housing costs. Remarks by Bob Rennie, a well-known Vancouver real estate agent, in a newspaper interview are informative in this regard:

“In Vancouver, however, prices downtown are creeping so high that many young adults are shifting their searches to the east side and the suburb of Burnaby, places that won’t require them to take bridges or freeways to get into the core...The problem that we have is there is very little developable land in downtown Vancouver.” (Gold, 2007)

One key informant noted that Vancouver’s downtown is much more built out and prices are relatively higher than in Montreal where there are still former industrial lands and empty lots that can accommodate new development in the inner city. The protection of low-density inner city neighbourhoods in Vancouver also pushes new development into the growth centers.

Table 5.1 – Correlation coefficients for proportion of population 25 to 34 years of age

CMA Year	Vancouver		Montreal	
	1981	2006	1981	2006
<i>Amenity/Accessibility</i>				
Walkability Index	.437	.657	.093 [†]	.660
Prop. Built <1946	-.040 [†]	.135 [†]	.011 [†]	.631
Population Density	.450	.697	.135	.607
Distance to CBD	-.133 [†]	-.384	.031 [†]	-.545
Distance to Transit ⁵⁰	-.210	-.421	.161	-.363
<i>Commuting</i>				
Automobile		-.773		-.765
Public Transit		.590		.596
Bicycle		.391		.686
Walking		.649		.569
Same CSD		.472		.524
<i>Housing</i>				
Average Dwelling Value	-.381	-.383	-.173	-.123 [†]
Value Per KM ²	-.110 [†]	.408	-.248	.290
Gross Rent	-.265	-.353	.015 [†]	-.091 [†]
Rent Per KM ²	.495	.665	.315	.618
Number of Rooms	-.553	-.747	-.203	-.654
Household Size	-.499	-.661	-.177	-.582
Prop. Owners	-.539	-.741	-.123	-.649
<i>Demography</i>				
Prop. Non-Family	.521	.724	.210	.747
Prop. University Degrees	.012 [†]	.233	-.079 [†]	.311
Number of Children	-.531	-.652	-.215	-.510
Household Income	-.508	-.436	-.250	-.413
Prop. Immigrants	.010 [†]	.091 [†]	.095 [†]	.072 [†]
<i>Occupation</i>				
Managerial	-.253	-.245	-.074 [†]	-.297
Health	.121 [†]	.230	.032 [†]	.038 [†]
Social Sciences, Arts, Culture	.008 [†]	.255	.113	.570
Sales and Services	-.103 [†]	.064 [†]	-.025 [†]	-.016 [†]
Clerical	.344	-.042 [†]	-.075 [†]	-.278
Manual	.034 [†]	-.074 [†]	.014 [†]	-.265
Primary	-.126 [†]	-.207	.078 [†]	-.192

Notes: [†] p>0.01. Montreal and Vancouver CMAs according to 1981 boundaries.

Source: Calculated using Statistics Canada census tract data (1981a; 2006a).

⁵⁰ In Montreal, distance to transit is based on the system existing in the specific census year (see Chapter Two). Since no rapid transit existed in 1981 in Vancouver, the 2006 distances are used. Using 1981 distances with 2006 data in Montreal increases the correlation but does not change overall conclusions.

In contrast, the housing stock is of higher density across Montreal's inner city and in the old suburbs. But the north and south shores are dominated by low-density suburbs, which would have become less suitable for the smaller young adult households. Another factor in the changing residential ecology is growing traffic congestion that is arguably contributing to greater demand for inner city locations in both metropolitan areas that are generally associated with shorter commutes, particularly for the quaternary sector workers (Ley, 1996). Congestion arising from commuter traffic that restricts access to the downtown may be worse in Montreal where employment remains more centralized than in Vancouver (Shearmur & Coffey, 2002).

The correlation coefficients also show that in both CMAs, the young adult location pattern is increasingly associated with higher per area dwelling values and rents and less associated with higher total housing prices and rents, which matches their smaller household size and lower incomes that would place them in the denser areas where although land values are highest per area the total cost of housing is lower due to the small size of the units. Because higher density housing in Vancouver was more recently developed in concert with transit infrastructure there is a stronger relationship than in Montreal between proximity to transit and the presence of young adults who occupy the higher density housing stock. The correlation with the housing stock variables are also in line with anecdotal evidence from newspaper stories that suggest the young adult residential ecology is becoming increasingly centralized into neighbourhoods containing higher-density dwellings: "*Young trendy workforce provides built in [inner city] condo market,*" writes one journalist in regards to housing market trends in Canadian cities (Belford, 2008). Another cites Brad Lamb—a large

Canadian condominium developer—who points to changes in how young adults perceive the central city:

“Twenty years ago, the condo lifestyle in any city...was looked down upon by the generation of people that sort of drove the economy back then — the people who came from the single-family home, suburban lifestyle...The unique factor today is [young] people are completely committed and comfortable buying condos. When I started selling condos in 1988, young people had their parents on their shoulder, saying, ‘You don’t want to buy a condo. They’re a very risky investment.’ Well, young people today know better. They know it’s no riskier than buying a single-family home.” (cited in Gold, 2007)

The director of environmental affairs at the Canadian Home Builders’ Association, David Foster, suggests there are changes in social norms that would also indicate a trend toward increasing centralization:

“In the 1980s, we were in an expansive mode. People said, ‘How big a house can I get on this lot?’ ...They were inwardly directed...and they wanted anonymity, to just close the front door and live inside the house. But that burned itself out, and now they want to reconnect with their neighbours in a safe way. That’s one of the big attractions of condos, connecting with life on the street.” (cited in Langston, 2008)

The desire for housing space seemingly replaced by an emphasis on “*life on the street*” speaks to the increasing value placed on the amenity component of the young quaternary sector workers documented in the literature to show preferences for inner city living due to the urban amenities since the onset of gentrification (Mills, 1989; Ley, 1996; Kern, 2010; Quastel et al., under review). “*Proximity to work, an efficient public transit system, access to nearby grocery stores, recreation and entertainment facilities*” are frequently cited attributes of “*buyers drawn to an urban lifestyle*” in newspaper

reports (Arrais, 2009; also see Nasser, 2009)—these speak directly to the factors the urban literature has long linked to gentrification (Caulfield, 1994; Ley, 1996). Although, as Danyluk & Ley (2007) find, public transit usage is actually lower in the more upscale gentrifying neighbourhoods in Montreal, Toronto and Vancouver than in the rest of the central cities. Their work suggests that centralization is not in and of itself in the absence of a left liberal ideology conducive to more sustainable transport modes.

For young adults as a whole, however, there is an evident relationship between their residential location and lower proportions of workers commuting to work by car and higher proportions commuting by alternative modes of transport. The correlation between young adults and proximity to transit also reversed in sign from 1981 to 2006, and is higher in Vancouver than in Montreal. The correlations are stronger in Vancouver for walking to work than in Montreal where the correlation between young adults and public transit and cycling are more pronounced. In Montreal, the correlation coefficient is also larger for the proportion working in the same census sub-division as their place of residence. But in both metropolitan areas the correlations point toward the kind of residential location and commute patterns that are in line with emerging sustainability ideals. In terms of amenities, the walkability index is a proxy for the amenity component of urban environments.

It shows a dramatic change in Montreal, the correlation between young adults and walkability of the urban environment almost zero in 1981 and increasing to over 0.6 by 2006. The correlation for walkability is almost as high in Vancouver but Vancouver's young adults were already more likely to locate in higher density, walkable areas in 1981 than they were in Montreal—which is consistent with the

findings from the location quotients. Correlations between the presence of young adults and immigration, university degrees and the occupational variables are generally weak indicating that young age is a separate dimension of the residential ecology (Townshend & Walker, 2010). The absence of any correlation with the presence of immigrants relates to the older average age of immigrants coming to Canada as well as their higher propensity to reside in single-family dwellings (Chapter Three).

Select occupational variables do reveal changes over time, and in combination with the other variables describing household characteristics point to interesting differences in the way that urban post-Fordist restructuring is reshaping neighbourhoods. Many young adults, especially women, entered the labour force in clerical occupations in the 1970s, and this is still discernable in the positive correlation coefficient at the neighbourhood scale in Vancouver in 1981. In the 2006 data, the correlations with clerical occupations disappeared but young adults' locations are increasingly associated with the presence of the growing quaternary sector occupations, and this trend is much more pronounced in Montreal. The correlation between young adults and non-family households and the absence of children increased over time, again the trend being much stronger in Montreal. The correlation coefficients also show an evident relationship between the presence of young adults and the rental housing stock. At the tract level the findings suggest young adults' shifting residential ecology toward neighbourhoods containing rental housing, which can simply be an outcome of increasing centrality or a simultaneous shift in tenure. To answer the question regarding tenure, the analysis turns to household level data in the next chapter. But for the purposes of this chapter, the increase in the correlations at the tract level show evident shifts in the way the changes

in household characteristics of young adults analyzed in Chapter Four are materializing in distinct neighbourhood-level spatial differentiations that are favouring centrality.

5.2 Relative Centralization

It is useful to ‘test’ the results of the descriptive analysis above with a measure of centralization that can take into account the overall changes in the spatial distribution of the total population. An index of relative centralization is used here for this purpose. The index is usually used in segregation research to compare the cumulative proportions of minority versus majority populations relative to the central city (Massey, Denton & Phua, 1996; Apparicio, Petkevitch & Charron, 2008)⁵¹. The index “*represents the relative share of one group’s population that would have to change their residence to match the centralization distribution of the other group*” (McKibben & Faust, 2004, p. 121). The index of relative centralization can be modified to compare the distribution of two populations in proximity to any locational attribute not just the central business district. Relative ‘centralization’ is thus calculated here in relation to the distance to the centre, distance to the rapid transit stops, the walkability index, population density and share of the rental housing stock. The index ranges in magnitude from zero to one, with positive values indicating greater centralization and negative values indicating a less centralized distribution than the base population.

⁵¹ Index of relative centralization = $\sum_{i=1}^N (x_{i-1}y_i) - \sum_{i=1}^N (x_iy_{i-1})$

‘N’ are the number of census tracts sorted by increasing distance from the spatial reference point (e.g., CBD), x_i and y_i are the cumulative proportions of the populations being compared by census tract, i . In segregation research x usually refers to the minority population and y to the majority. (McKibben & Faust, 2004; Iceland, Weinberg & Steinmetz, 2002).

When calculated for the young adult population in comparison to the rest of the population in 1981 and 2006, the index measures the proportion of the young adult population that would need to move in order to have a similar spatial distribution as the rest of the population (Table 5.2). In 1981, the indices are less than 0.02 in magnitude in Montreal indicating that fewer than two percent of the young adult population would need to move in order to have the same spatial distribution as the rest of the population. The indices are somewhat larger in magnitude in Vancouver and positive in direction indicating that young adults were closer to the center, transit, walkable neighbourhoods, higher population density and higher proportions of rental housing stock than the rest of the population. The index is largest for the rental housing stock (0.095) and walkability (0.076) and smallest for distance to the downtown (0.039).

Table 5.2 – Indices of relative centralization

	Distance to downtown	Distance to transit	Walkability index	Population density	Proportion rental
Montreal CMA					
25-34 / Rest 1981	-.015	-.030	-.004	-.018	.009
25-34 / Rest 2006	.160	.139	.162	.130	.148
25-34 2006 / 25-34 1981	.021	.031	.013	.000	.007
Rest 2006 / Rest 1981	-.167	-.135	-.165	-.151	-.152
Vancouver CMA					
25-34 / Rest 1981	.039	.053	.076	.062	.095
25-34 / Rest 2006	.127	.147	.152	.158	.177
25-34 2006 / 25-34 1981	-.015	.034	.027	.024	.029
Rest 2006 / Rest 1981	-.118	-.067	-.059	-.063	-.060

Notes: Montreal and Vancouver census metropolitan areas (CMAs) according to 1981 boundaries.

Source: Statistics Canada census tract data (1981a; 2006a).

By 2006, the indices comparing the young adults to the rest of the population are positive and exceed 0.1 in both CMAs, pointing to the changes in the residential ecology that place young adults closer to the center, transit and more walkable, higher density tracts with larger shares of rental housing than the rest of the population. The

index is largest in the case of Vancouver in relation to the presence of rental housing (0.177) and population density (0.158), whereas in Montreal the indices are larger in magnitude for walkability (0.162) and distance to downtown (0.160).

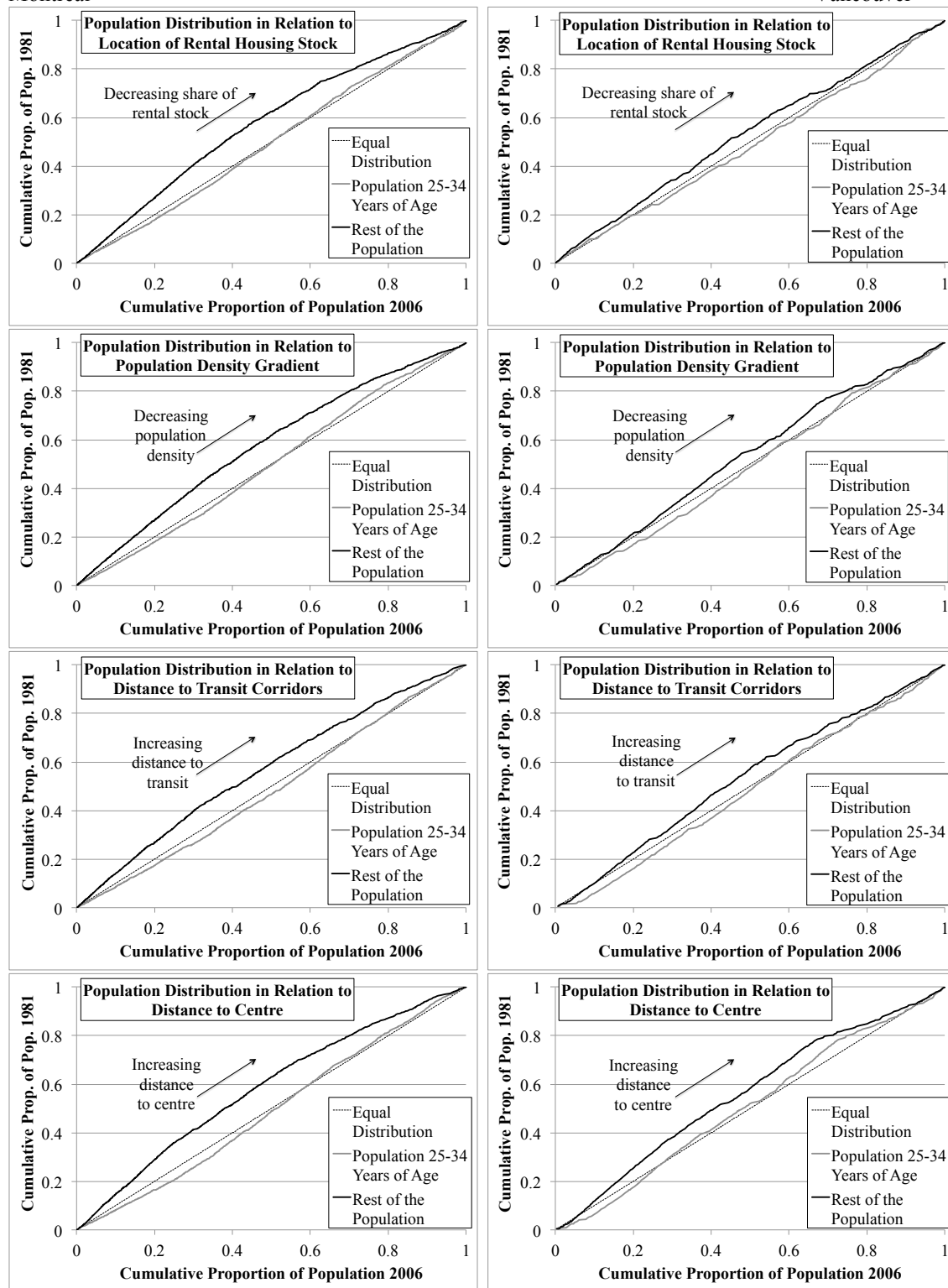
The indices that compare the young adults between census years in Montreal is below 0.04 but still show a small increase in centralization, with the exception of density where the index is negative but also small in magnitude. In Vancouver the indices are also positive but small in magnitude except for the one calculated in relation to the downtown where the negative sign suggests young adults are actually more decentralized in 2006 as compared to their location in 1981. Therefore, it is important to note that centralization of young adults arises in part from the decentralization of the rest of the population over time. It should be kept in mind that the CMA boundaries are kept constant at their 1981 boundaries in this analysis. Thus, the results here are likely an underestimate of decentralization trends.

Figure 5.8 graphs the cumulative proportions of the young adult and the rest of the population in different census years, which are used to calculate the index of relative centralization shown in Table 5.2. Visual analysis of the relative centralization is useful since the index combines a range of values that can point to centralization and decentralization at different points in the distribution (Seyfried, 1963). The findings here point to similar overall results as those found by the aggregate indices but do reveal some nuances. The grey-colored line in the figure compares the spatial distribution of young adults in 1981 to 2006 by comparing changes in the cumulative proportions of young adults with increasing distance from different spatial reference points. The black-colored line compares the spatial distribution in the same way for the rest of the

population. The dotted line indicates what the distribution would look like if the young adult populations, or the rest of the population, were distributed the same in 1981 and 2006. A distribution below the dotted line indicates that in 2006 the population is distributed more centrally in relation to the spatial reference point than in 1981 whereas a distribution above the dotted line indicates the reverse.

Thus striking is the visual comparison of the changing distribution of the rest of the population between the two metropolitan areas that evidently points to the greater extent of decentralization that has occurred in Montreal than in Vancouver. In both metropolitan areas, the population 35 and older has generally become more dispersed between 1981 and 2006 in relation to the location of rental housing, higher density, transit corridors and central areas. In Montreal, the distribution shows a clear bulge that points to suburbanization. But in the Vancouver case there is also indication of increasing centralization in proximity to the center and the transit corridors, changes that are missed in the aggregate indices, although even here the changes are slight in comparison to the overall tendency toward decentralization that has occurred over time. In contrast, the comparison of young adults between 1981 and 2006 shows that their distribution has become more centralized and a larger share resides in proximity to rapid transit stops. However, in Montreal the distribution of young adults remained similar in the outer parts of the CMA whereas in Vancouver the share of young adults increased both at the center and in outer areas as already seen by the analysis of location quotients.

Figure 5.8 – Relative centralization of the population
Montreal



Notes: Census metropolitan area (CMA) adjusted to 1981 boundaries.

Source: Statistics Canada census tract data (1981a; 2006a) for the Montreal and Vancouver CMAs.

The increasing centralization of young adults speaks to Ley's (1996) argument that central city living, which re-emerged as a counter-cultural trend in the wake of post-Fordist and post-industrial restructuring in the 1960s, indeed "*has become a proven commodity*" (p. 110). One Vancouver realtor, comparing trends today to what she used to see twenty years ago, suggested in conversation that "*the move then was out...the move now is in*". However, the indices above show that the "*move in*" has been small in magnitude when young adults today are compared to young adults in the past. Also, for the total population, decentralization has been the dominant trend, which contributes to the relatively higher centralization of young adults in terms of measurement.

5.3 A Regression Model of Residential Location

The analysis above reveals that compared to the rest of the population, which has decentralized, young adults have become more centralized and are locating closer to rapid transit in 2006 than in 1981. Given the simultaneous decreases in household size and income (Chapter Four), it raises the question as to what extent the changes in residential ecology are driven by changes in household characteristics. Examining the correlates of young adults' location patterns in a multivariate framework can shed some insight into this issue. The following presents the results of a regression equation with the proportion of young adults in census tracts as a function of urban spatial, housing and socio-economic characteristics of the tracts.

The overall finding in Vancouver is one of decentralized concentration as young adults are making decisions about housing with lower incomes than in the past that sees

them locate in higher density housing and closer to transit but because of the increasing cost of housing in the centre, this concentration is extending outward from the downtown along the transit lines. The characteristics of the households are the most important explanatory factors of location in both metropolitan areas. But in Montreal, where centralization is the dominant story, this trend is accounted for fully by changing demography and household characteristics. Yet it is still the density of the built form, rather than proximity to transit and the downtown, that explains the changing the residential ecology of young adults in Montreal.

5.3.1 Model specifications

The intent of the analysis is to construct a model of residential location that incorporates insights from neo-classical economic and structural theories regarding the factors shaping the urban residential landscape, accommodated under the theory of structuration that considers households making decisions within a specific context. Following the neo-classical economic theories, young adults would locate in tracts with housing characteristics that fit their demographic housing profiles. Since the model is constructed at the census tract scale, the models use tract average housing and household characteristics. Following structural theories, the models include dummy variables for the metropolitan areas and intra-urban spatial variables such as distance to the downtown, distance to transit, housing density and walkability. Since the models account for the young adults' housing profiles, and are constructed for 1981 and 2001, they help analyze whether there are structural shifts in location patterns not accounted

for by the changing household characteristics of young adults. The changing household location patterns would contribute to an altered urban context for future cohorts.

There are at least two methodological challenges to constructing a regression model of residential location: First, the housing and socio-economic variables suffer from high multicollinearity due to the close association between housing types and the characteristics of the household. Second, the spatial nature of the census tract data will make it prone to spatial autocorrelation when used in regression analysis (Dubin, 1998). The challenges are fortunately not insurmountable. They can be addressed by using principal component analysis (pca) to combine variables suffering from multicollinearity and applying spatial regression analysis techniques. Pca is used here as a tool to reduce the number of variables. The variables describing the tract housing stock measure the proportion of rental dwellings, dwellings built before 1946, single-family housing, average number of rooms, dwelling value and gross rent.

The variables describing the tract socio-economic composition measure the proportion of non-family households, families with children, immigrants, average household size and average household income. Table 5.3 shows the results from the pca that includes variables describing the socio-economic and housing characteristics of the census tracts in 1981 and 2006 for the Montreal and Vancouver CMAs. As before, components with Eigenvalues above one are retained (Chapter Two).⁵² The components appear to capture similar dimensions in both census years and cities. Although there are

⁵² In the 1981 data for Montreal, only two components have Eigenvalues above one. The third component was retained anyway to have a consistent number of components for each year in the subsequent regression analysis.

some important differences, suggesting that there is both “*continuity and change*” (Wyly, 1999).

As revealed by the magnitude of component scores, the first component captures tracts that can be described ‘suburban’ as characterized by the negative association with the rental stock and non-family households and positive association with single-family dwellings, large number of rooms and household size. The second component relates to central areas as evident by the positive association with high dwelling values and gross rents. The proportion of the housing stock built before 1946 is also positively associated with this dimension in Vancouver in both years but in Montreal only in 2006 suggesting that the older areas of the city more recently appreciated in price than in Vancouver. The third component in Vancouver scores highly on the variable measuring the proportion of immigrants and also to a lesser extent the proportion of the older housing stock—an association that decreases over time. In Montreal, the third component measures different aspects in the two census years. In 1981, the component points to the location of the older housing stock, and it is negatively associated with the proportion of immigrants. In 2006, the third component shows high associations with the location of immigrants, larger household size and number of children.

Tables 5.4 and 5.5 show the results of the regression analysis conducted separately for each census year and CMA. The first is a linear model, and includes tests for multicollinearity and spatial autocorrelation. Included are variables measuring the distance to the downtown, distance to transit corridors, the walkability index, population density and the three components from the pca. Variance inflation factors (VIF) are calculated, which is a common estimate of the extent of “*multi-collinearity of the i th*

independent variable with the other independent variables in a regression model”—

VIFs higher than 4 to 10 signaling potential issues depending on the source consulted (see O’Brien, 2007, p. 673).

Table 5.3 – Principal components (unrotated)

Montreal CMA						
	2006			1981		
	P1	P2	P3	P1	P2	P3
Rental units	-.399	.083	.227	-.393	.051	-.093
Single-family dwellings	.385	-.181	-.218	.364	-.104	.163
Number of rooms	.417	.041	-.190	.384	.076	.257
Dwelling value	.103	.616	.031	.095	.569	.082
Gross rent	.083	.450	-.103	.143	.494	.094
Built before 1946	-.215	.363	-.206	-.237	-.050	.639
Non-family households	-.412	.133	-.070	-.374	.148	.217
Presence of children	.285	-.016	.488	.303	-.236	-.110
Immigrants	-.056	.220	.611	-.070	.416	-.569
Household size	.347	.043	.395	.382	-.170	-.175
Household income	.285	.421	-.196	.313	.362	.248
Eigenvalue	5.095	2.123	1.846	5.745	2.315	.922
Proportion	.463	.193	.168	.522	.210	.084
	N (645)			N (647)		
Vancouver CMA						
	2006			1981		
	P1	P2	P3	P1	P2	P3
Rental units	-.371	.118	.212	-.370	.023	-.023
Single-family dwellings	.377	.003	-.217	.372	-.059	.213
Number of rooms	.401	-.043	-.121	.389	-.037	-.037
Dwelling value	.239	.449	.286	.178	.564	-.206
Gross rent	.221	.460	-.032	.149	.453	-.255
Built before 1946	.008	.407	.349	-.051	.445	.521
Non-family households	-.377	.230	-.026	-.386	.192	-.026
Presence of children	.327	-.291	.255	.335	-.138	.288
Immigrants	-.034	-.199	.759	-.086	.289	.615
Household size	.350	-.259	.218	.382	-.160	.174
Household income	.283	.401	.006	.321	.330	-.286
Eigenvalue	5.880	2.312	1.277	6.084	1.750	1.226
Proportion	.535	.210	.116	.553	.159	.111
	N (245)			N (245)		

Notes: Montreal and Vancouver census metropolitan areas (CMAs) according to 1981 boundaries.

Source: Statistics Canada census tract data (1981a; 2006a).

Table 5.4 – Linear and spatial regression of young adult residential location in Montreal

2006	Linear Model			VIF	Spatial Error Model		Spatial Lag Model	
	Coef.	Beta			Coef.		Coef.	
Distance downtown	.0005	.062		3.320	.003	***	.002	***
Distance to transit	-.0002	-.014		1.630	-.001		-.001	
Walkability	.001	.182	***	3.500	.0001		-.00001	
Population density	.003	.247	***	1.880	.001	*	.001	**
P1	-.015	-.512	***	3.730	-.010	***	-.011	***
P2	.001	.023		1.840	-.005	***	-.004	**
P3	-.008	-.161	***	1.200	-.004	***	-.004	***
CONSTANT	.104		***	mean (2.44)	.028	***	.042	***
Adjusted R ²	.642				.157		.736	
N-Cases	643				643		643	

1981	Linear Model			VIF	Spatial Error Model		Spatial Lag Model	
	Coef.	Beta			Coef.		Coef.	
Distance downtown	.002	.339	***	2.870	.001	**	.001	***
Distance to transit	.002	.225	***	1.620	.002	***	.002	***
Walkability	.0001	.074		3.320	.0002		.0002	
Population density	.0004	.069		1.820	.001		.001	
P1	-.007	-.450	***	2.930	-.007	***	-.008	***
P2	.003	.099	*	1.180	.003	**	.003	**
P3	-.003	-.082	*	1.010	-.003		-.003	
CONSTANT	.139		***	mean (2.11)	.148	***	.148	***
Adjusted R ²	.138				.139		.149	
N-Cases	643				643		643	

Notes: Population density in 1000/km². Montreal census metropolitan area (CMA) according to 1981 boundaries. Proportion of tract population 25 to 34 years of age is the dependent variable. Non-standardized (coef.) and standardized (beta) coefficients are shown. ***p<0.0001; **p<0.01; p<0.05. 2006: Lambda / rho = 0.0001** (spatial models), Moran's I = 1.085 and Lagrange multiplier = 206.736*** (linear model). 1981: Lambda / rho = -0.00001 (spatial models), Moran's I = 1.107 and Lagrange multiplier = 1.469 (linear model).

Source: Statistics Canada census tract data (1981a; 2006a).

Table 5.5 – Linear and spatial regression of young adult residential location in Vancouver

2006	Linear Model			VIF	Spatial Error Model		Spatial Lag Model	
	Coef.	Beta			Coef.		Coef.	
Distance downtown	.016	.031		3.46	.215 ***		.164 ***	
Distance to transit	-.002	-.160 **		1.94	-.002 **		-.001 **	
Walkability	.016	.064		2.82	.012		.008	
Population density	.004	.293 ***		2.02	.002 *		.002 *	
P1	-.012	-.497 ***		2.55	-.010 ***		-.010 ***	
P2	.002	.050		1.65	.002		.002	
P3	-.001	-.023		2.02	-.003		-.002	
CONSTANT	.118		***	mean (2.35)	.027		.043 *	
Adjusted R ²	.679				.386		.716	
N-Cases	245				245			
1981	Linear Model			VIF	Spatial Error Model		Spatial Lag Model	
	Coef.	Beta			Coef.		Coef.	
Distance downtown	.014	.029		3.36	-.052		.029	
Distance to transit	.000	-.041		1.82	-.001		.000	
Walkability	.024	.098		2.78	.026		.023	
Population density	.003	.203 **		1.66	.004 **		.003 **	
P1	-.009	-.394 ***		2.45	-.009 ***		-.009 ***	
P2	-.008	-.190 **		1.91	-.008 **		-.008 **	
P3	-.005	-.106 *		1.18	-.004		-.005 *	
CONSTANT	.162		***	mean (2.17)	.201 ***		.153 ***	
Adjusted R ²	.388				.385		.405	
N-Cases	245				245		245	

Notes: Population density in 1000/km². Vancouver census metropolitan area (CMA) according to 1981 boundaries. Proportion of tract population 25 to 34 years of age is the dependent variable. Non-standardized (coef.) and standardized (beta) coefficients are shown. ***p<0.0001; **p<0.01; *p<0.05.

2006: Lambda / rho = 0.0003** (spatial error) 0.0002*** (spatial lag), Moran's I = 1.554 and Lagrange multiplier = 23.452*** (linear model). 1981: Lambda / rho = -0.0001 (spatial error) 0.00002 (spatial lag), Moran's I = 1.511 and Lagrange multiplier = 0.099 (linear model).

Source: Statistics Canada census tract data (1981a; 2006a).

Moran's I and the Robust Lagrangre Multiplier are used as standard tests of spatial autocorrelation (Baltagi et al., 2007). The literature observes that there are two types of spatial autocorrelation, spatial lag and spatial error. Spatial lag is present if observations are not independent and spatial error occurs when the error terms are correlated—these are problematic since spatial error produces inefficient coefficients and spatial lag results in inefficient and biased coefficients (Messner et al., 1999; Choumert & Cormier, 2011). The test for Moran's I ($H_0=0$) is not found to be significant in any of the models, indicating absence of spatial error in the models. The test for the Lagrangre Multiplier ($H_0=0$) are significant for the 2006 data in both CMAs, pointing to the presence of spatial lag in those models.

The spatial weights method is used to estimate the spatial lag and spatial error models in STATA (Dubin, 1998; Muller, 2005). Weights are based on the cartographic distance based on x-y coordinates. The spatial lag models improve model fit as indicated by the increase in r-squared for the 2006 estimates. None of the spatial models are significant ($p>0.05$ for Lambda/ρ) for the 1981 estimates. The dramatic changes in the magnitude and statistical significance of regression coefficients when moving from a linear to a spatial model may be attributed to "*spatial clustering*" of census data that biases the coefficients by having seemingly more independent observations with similar attributes in the center (Lembo, n.d.). Spatial clustering is more apparent in the 2006 data (Figures 5.2 and 5.3), which could help explain why spatial autocorrelations was not found to be an issue in the 1981 estimates. Findings here are interpreted for the spatial lag models for 2006 and the linear models in 1981.

5.3.2 Model outcomes

The coefficients for the principal components that control for the census tract housing profiles, through a combination of housing and socio-economic characteristics, are generally as expected given the analysis of correlations and spatial trends above. In 1981, the residential location of young adults in both CMAs is negatively associated with the first component identifying larger housing and households. In Montreal, the second component denoting higher cost housing has a positive association with the presence of young adults in 1981. The third component that contains high component scores for older dwellings shows a negative association with the presence of young adults. The components detect the presence of young adults both in the central and outer parts of the CMA in 1981. In Vancouver, the findings are similar in that the location of young adults has a negative relationship with the presence of larger homes and the older dwelling stock but here there is also a negative association with high cost housing. By 2006, the coefficients for the principal components no longer point toward a dual trend of central and suburban locations in Montreal. The presence of young adults shows a negative association with the larger, higher cost housing stock and the immigrant landscape, which has become more suburban. In Vancouver, only the first component shows a coefficient different from zero at a statistically significant level in 2006. It shows a negative association between the residential location of young adults and the larger, owned housing stock.

Of note are the changes in the coefficients for the variable measuring the distance from the center. In 1981, the results suggest the proportion of young adults in Montreal increases with distance from the center, whereas in Vancouver the distance

variable does not produce coefficients that differ from zero at a statistically significant level. By 2006, the distance variable shows a positive association with the location of young adults in both CMAs. However, the results also indicate that there is a positive association with density, which was already present in the 1981 data for Vancouver but not Montreal. In Vancouver, notable is also the negative association with the variable measuring proximity to rapid transit. Also notable is that the first principal component that describes household size and characteristics remains the most important factor distinguishing young adults' residential location from that of the rest of the population, as evident by the high beta values in the linear models. It evidently points to the importance of the household demography in shaping the residential ecology (Townshend & Walker, 2010). All three principal components describing the housing and socio-economic characteristics continue to play a more important role in describing the residential ecology of young adults in Montreal in both years; in Vancouver the first component became the sole distinguishing factor by 2006.

Once the housing and socio-economic variables are taken into account, the findings for Vancouver demonstrate that proximity to transit and density have become new explanatory factors in the young adult residential location but that this distribution is also becoming simultaneously decentralized. This fits the descriptive analysis of location quotients above that shows high concentrations along the transit corridors extending from the central city into the suburbs. The positive association with distance from the center by 2006 points to a continuing trend of decentralization that is being stemmed only by changing demographics rather than households of similar size and composition opting for more central and denser residential locations (Champion, 2001;

Skaburskis, 2006b). However, the changes in the coefficients for the density variables in both CMAs, and for proximity to transit in Vancouver, do point to societal shifts in the young adult residential location pattern independent of the changes in household composition. Thus, young adults in Montreal and Vancouver today are more likely to reside in high-density neighbourhoods than in 1981, and in the case of Vancouver also closer to transit. In both metropolitan areas, the association between the young adult location and density relates to changes in the housing context besides the shifts in the household-level profiles.

5.4 Discussion

An important finding established in this chapter is the increasing concentration of young adults in higher density neighbourhoods, while the pattern of increasing centralization is explained by changing household profiles. In Vancouver, the concentration of young adults is higher along transit corridors today than in the past even when the effects of household level factors are taken into consideration. Thus, the analysis establishes changes in the residential ecology that are the result of restructuring in the housing market context. In Montreal and Vancouver, housing market observers point to the substantial growth in inner city amenities and also the housing stock, which were not available in the same form or quantity in the 1970s and early 1980s. Escalating housing prices are already more of a push factor in Vancouver in the 1980s than in Montreal where de-industrialization induced central city decline is contributing to decentralization. Public transit coverage and frequency have increased substantially across both metropolitan areas but service is still highest in the central cities. Coupled

with the decrease in household size and rising housing prices, the changes have made the central cities more appealing but particularly in the case of Vancouver also relatively more affordable compared to the suburbs for young adults by increasing the supply of smaller housing units.⁵³ Because urban restructuring has increased the cost of housing, the distance variables do not in this analysis indicate increasing centralization over time but rather point to decentralized concentration into high-density neighbourhoods, and this effect is stronger in Vancouver. Interpreted in the context of the findings from previous chapters that show decreasing incomes and worsening labour market conditions, as well as rising housing costs, the changing residential ecology is a reflection of a societal context where larger housing units as well as centrality that traditionally provided affordable units for smaller households are becoming more difficult to afford.

Evidently, the young adult dimension is playing a role in the intensification of land uses and housing, which is an effect visible even when income and household characteristics are taken into account in the multivariate models. As Kern (2010) notes, citing Ley (1996) and Bourne & Rose (2001):

“In one sense, intensification is an attempt to capitalize on the demographic effects of urban restructuring, which has produced an increasingly polarized labor force based on both low-wage, deskilled, service-sector labor, and highly professionalized labor in the advanced tertiary and quaternary sectors...” (p. 664)

⁵³ A TD Canada Trust Bank (2010) survey of Canadian condominium buyers in major cities finds affordability to be an important factor in deciding to buy a condominium over other housing options. Affordability is the largest reason for those buying a condominium in Vancouver (45% of respondents), and the second largest in Montreal (18%) after lower maintenance requirements (40%).

Central city restructuring in the post-Fordist period is shaped by increasing concentration of young adults into high-density and amenity neighbourhoods, which speaks to the age, or life-cycle stage, dimension as an important aspect of urban restructuring separate from class, gender or immigration (Rose & Villeneuve, 2006). The demographic factor intersects evidently in inner city neighbourhoods in the way that young, childless, non-family households are living consumption-oriented lifestyles:

“This demographic and the associated lifestyle have both a spatial and economic footprint. They are clustered predominantly in central-city apartments, often in close proximity to urban nightlife and in areas with high densities of singles” (Townshend & Walker, 2010, p. 143).

The amenity and consumption-oriented lifestyles are often used to link young adults in central city neighbourhoods to gentrification. However, the association with rental housing also suggests that young adults’ role in the restructuring of central city housing market goes beyond that accounted for by gentrification alone. Demographic components, and especially household size and income, emerge as more important correlates of the young adult residential ecology, than say quaternary sector occupations or university education. It is in part young adults’ early stage in the life-cycle, and their tendency to favour what Wyly (1999) has referred to as the “*use value*” of neighbourhoods, that apparently concentrates young adults into high-density areas across the occupational and educational spectrum.

One particularly prominent outcome of the changes in the occupational division of the labour force has been increasing segregation at the neighbourhood scale (Walks, 2001) and more generally “[s]trengthened structural-spatial divisions” (Murdie & Teixeira, 2006, p. 162; Marcuse & van Kempen, 2000). The models indicate that young

adult status, or life-cycle stage more generally, is becoming a more important factor in delineating the urban residential ecology, and is therefore adding to these spatial divisions (Murdie & Teixeira, 2006). The r-squared values are decisively lower in 1981 than in 2006, which shows that the residential location of young adults was more difficult to predict in 1981 using variables describing the socio-economic and housing characteristics of neighbourhoods. The findings evidently reveal that the restructured housing context with higher prices and more emphasis placed on urban amenity components, and perhaps emerging environmental urban planning ideals, are indeed shifting young adults' location patterns into higher density neighbourhoods. But as revealed by the relative size of the coefficients, the effect of density is twice as large in Vancouver than in Montreal, which is not surprising given the higher housing costs and increases in density over time in the former (Chapter Three).

The changes in location patterns observed in Montreal and Vancouver are connected to fundamental restructuring of households, family formation, and are taking place in a central city context reshaped by the forces of post-Fordist and neo-liberal restructuring. Therefore, the extended young adult phase, and the more explicitly defined young adult life stage in terms of consumption and education, is evidently reflected in urban social space that is becoming more segregated by lifestyles (Chatterton & Hollands, 2002). The central city lifestyle coincides with, although it is of course not exclusive to, the young adult life-cycle stage (van Diepen & Musterd, 2009). The trends of increasing concentrations of young adults in central cities have raised questions regarding the sustainability implications if the more accessible places in terms of transit and amenities become predominantly a space for entertainment and young

adult life-styles (Bromley, Tallon & Thomas, 2005). Townshend & Walker (2010) refer to the growing presence of young adults in central cities as the spatial dimension of the “*Bridget Jones effect*”—they use the example of the fictional movie character, Bridget Jones, to describe how single young adults are locating centrally as part of a larger lifestyle related to consumption preferences such as eating out, but also establishing networks of friends in similar life stages.

The comparison of linear and spatial regression models reveals how the spatial concentration of young adults in one neighbourhood is partly explained by proximity to other neighbourhoods with young adults. The spatial lag models control for this effect, and reveal that the young adult residential locations have been restructured in that they are more likely to locate in higher density neighbourhoods in Montreal and Vancouver, and also near transit in the latter. But the effect of the spatial lag is important in itself in that it points to the ways neighbourhood changes are obviously not independent of the changes in surrounding areas—the gentrification literature has, for instance, found that proximity to higher status neighbourhoods is an important predictor of gentrification (Ley, 1996). Since a number of the attributes associated with the young adult location are outcomes of urban agglomerations, such as density, amenity or walkability, it is not a surprise that proximity to a neighbourhood with young adults is one of the determining factors of young adult locations in adjacent neighbourhoods. In other words, the young adult ecology is shaped by where young adults are already living.

This chapter has linked the changes in the young adult residential ecology to urban restructuring, and distinguished the impacts of changing household profiles from the broader contextual changes on location patterns. The young adult residential

location is evidently associated with higher density housing and proximity to transit, and also low automobile commuting patterns. This suggests that young adults' location patterns today are more aligned with the sustainability objectives in urban planning than in the past. In fact, the location may even be motivated by "*green ideology*" which, at least in the US case, is associated with "*green travel behaviour*" and living "*in communities with high population densities and proximity to city centres and rail stations*" (Kahn & Morris, 2009, p. 389). The models also evidently reveal, however, the strong association between young adults and the presence of non-family households and the absence of children. The findings are likely related to the higher density housing and cost of housing in locations where young adults are concentrated but raise important questions regarding the accessibility of high-density and –amenity locations, and therefore more sustainable commutes, for larger households.

However, the patterns at the census tract scale can not speak directly to the changes in housing consumption and commuting patterns—are young adults locating in higher density housing than in the past? Has this resulted in shifts toward more sustainable commuting patterns? And do differences between Montreal and Vancouver in the determinants of shorter and less-automobile oriented commutes and housing decisions reflect the differences in the restructuring of the housing market context? The analysis in the subsequent chapter turns to the household level data to systematically explore how the factors determining housing type, tenure and the commute have changed for young adults over time in the two metropolitan areas. It relates explicitly the changes to the differences in the cost of housing.

Chapter Six: The Housing and Commuting Decisions of Young Adults

“Where else can you live five minutes from downtown in a five-room flat for \$500 a month? In Vancouver, \$500,000 will buy you a five-room condo in a forest of 50-storey high-rises. In Montreal, \$500,000 will buy you half of Westmount. And rents haven’t really risen much since Rome fell...In Vancouver, earn less than \$30,000 a year and the closest you can afford to live is Chilliwack – halfway to Alberta...The average Vancouverite spends 55 minutes commuting each way every day... In Montreal, we don’t spend much time commuting because we hardly have any traffic. Half the city is unemployed and the rest can’t afford parking.” (Freed, 1995, A2)

The commentary above—although evidently exaggerated and written during a time when Montreal’s economy was experiencing lingering long-term decline due to deindustrialization and the more immediate impacts of the 1990s recession—raises a number of issues directly pertinent to the analysis in this chapter. It highlights the trade-offs between housing and commute costs shaping residential location as theorized in the neo-classical models of residential location (Kauko, 2001; Lipman, 2006), and points to the contextual differences between Montreal and Vancouver, such as price gradients and rent levels within which young adults operate. The higher housing expenditures in the Vancouver context as compared to Montreal, for households with similar characteristics, as revealed in Chapter Two suggests that the cost of housing may be a more important constraining factor in housing and location decisions for young adults in Vancouver than in Montreal. Because of the lower incomes, affordability of housing is also an issue in Montreal. However, in Vancouver a much larger share of even higher income households are paying more than 30 percent of their income toward shelter costs—a common measure of affordability (Table 6.1; Moore & Skaburskis, 2004). Whether or not higher income households ‘overspend’ on housing, viewing it as an

investment, or face actual affordability burdens cannot be answered fully here. But as noted before, higher spending on housing necessarily means making trade-offs. The concentration of young adults into central, higher density neighbourhoods accessible by transit observed in the previous chapter—a conclusion that holds in Vancouver even when household characteristics are taken into account—suggests that young adults may indeed be trading-off the higher housing costs for a reduced commute, as theorized by Alonso (1964).

Table 6.1 – Proportion of households spending more than 30% of income on shelter costs by household income

	All age groups				25 to 34 year olds	
	Montreal		Vancouver		Montreal	Vancouver
	Owners	Renters	Owners	Renters	Owners	Owners
All households	0.166	0.377	0.271	0.438	0.203	0.385
Under \$10,000	0.972	0.933	0.976	0.934	0.987	0.982
\$10,000 to \$19,999	0.676	0.824	0.677	0.824	0.899	0.854
\$20,000 to \$29,999	0.450	0.462	0.486	0.718	0.795	0.786
\$30,000 to \$39,999	0.358	0.139	0.431	0.398	0.669	0.728
\$40,000 to \$49,999	0.255	0.052	0.390	0.194	0.440	0.616
\$50,000 to \$59,999	0.151	0.024	0.335	0.130	0.229	0.507
\$60,000 to \$69,999	0.085	0.017	0.270	0.078	0.105	0.404
\$70,000 to \$79,999	0.050	0.007	0.204	0.051	0.056	0.291
\$80,000 to \$89,999	0.030	0.005	0.150	0.033	0.038	0.212
\$90,000 to \$99,999	0.020	0.003	0.116	0.023	0.020	0.168
\$100,000 and over	0.008	0.004	0.037	0.007	0.007	0.058

Notes: Shelter costs are owner's major payments or gross rent.

Source: Statistics Canada data (2006c; d) for the census metropolitan areas.

Importantly, urban restructuring also increased the amenity component in central cities, and played an important role in attracting the growing segment of quaternary sector workers through gentrification (Ley, 1996). Workers who are paying more for housing are also gaining access to urban amenities (Meligrana & Skaburskis, 2005), which in turn may even structure the commute as workers decide upon a residential

location based on residential amenities not just proximity to work (Kim, Horner & Marans, 2005). Growing downtown condominium markets have “*redefined*” the “*benefits of proximity*” “*as the ability of the middle class to access and remake urban space in its own image*” (Kern, 2010, p. 675). For the young adult population as a whole, however, the higher spending on housing, and changing residential ecology, suggest a more general shift toward higher density housing options than what can be accounted for by the influx of higher income earners into the central city alone. It is now often theorized that central city gentrification has had the de facto effect of longer commutes for low-income households and the working class (Quastel, 2009):

“It is a matter of common experience that a growth-driven hot housing market produces expensive housing.... A Vancouverite trying to make a living as a cleaner or receptionist in one of the downtown glass towers may be forced to choose between a long commute he or she cannot afford and a residence in a decaying central neighborhood. Others, unable to pay for housing, may find themselves homeless.” (Leo & Anderson, 2006, p. 177).

However, for some segments of the population, higher density, especially rental, housing likely still remains an affordability option in the central city; and this may be particularly the case for the young adults who have lower incomes and smaller household sizes than the rest of the population. The trade-offs between housing and commute costs are complicated by the question of tenure in that the rental market may play an increasingly pivotal role in accommodating lower income households (Beer, 2006), such as the young adults (Chapter Four), in central areas, unable to afford homeownership in expensive markets such as Vancouver (Turcotte, 2008b). Therefore, the outcome for the young adult residential ecology of central city “*embourgeoisement*”

(Ley, 1996; Kern, 2010) is not necessarily dispersion but central co-location of low and higher income earners, which would be one contributing factor to increasing polarization of inner city neighbourhoods by income (Walks, 2011a). The element of dispersion, as described by Leo & Anderson (2006) above, arguably comes into play with changes in household size due to family formation (van Diepen & Musterd, 2009). As the household grows in size, the higher income earners who can afford to purchase larger central city housing units can remain. Those who cannot afford it disperse into the suburbs; or the lowest income earners accept lower quality housing centrally, face greater affordability burdens or some eventually default into homelessness (Bunting et al., 2004; Walks, 2010).⁵⁴ While this thesis cannot deal with all these dimensions of changing housing outcomes, there remains an important gap in knowledge that the analysis in this chapter hopes to address: There have simply not been systematic temporal comparisons of young adults' housing and commuting decisions in relation to the changing conditions to allow conclusions on the aggregate effects.

As one key informant noted, there is a perception that young adults are increasingly moving into small condominium apartments but this appears to be based in large part on information from the ownership market, such as realtors' perceptions or the growth of high-rise towers in the downtown that visually dwarf any changes that may be occurring more inconspicuously elsewhere. Furthermore, even if the expectations of growing condominium occupancy pan out, there remains the question as to what extent this is related to the changes in household characteristics as opposed to

⁵⁴ Johnson (2011) estimates that with the exception of the highest income quartile, young adults (defined 18 to 29) cannot afford (spending less than 30 percent on housing) "*purpose built rental units*" in the GVRD, thus commonly sharing with roommates rather than living alone (p. 7).

other changes in context. The research on gentrification has certainly found that centralization occurs as an amalgam of changing household characteristics and cultural and economic transitions that raise the appeal of inner city living (Ley, 1988). The following provides an empirical facet to the questions of the demographic element behind changing housing decisions by tracking young adults' changing decisions regarding housing type, tenure and the commute in Montreal and Vancouver. First, trends are explored descriptively to show the ramifications for young adults' housing decisions and the commute in relation to the specific housing cost structures of the two metropolitan areas.⁵⁵ Second, multivariate models are developed to isolate the effects of difference in housing context versus household characteristics on housing and commuting decisions. As in Chapter Five, the models aim to detect the presence of structural effects in young adults' decisions. The focus in this chapter is on housing and commute distance and mode. The analysis provides a quantitative look at the ways "*the ability to take advantage of urban amenities...condominium ownership*" and shorter, less auto-oriented commutes are "*connected to sites of privilege, including class status, education [and] family status*" for young adults in the two metropolitan areas (Kern, 2010, p. 375). Dummy variables and interaction effects are used to analyze whether the different housing market contexts in Montreal and Vancouver, and the changes over time, result in structural differences in housing and commuting patterns after controlling for the individual level characteristics that the neo-classical economic and transportation

⁵⁵ The analysis is conducted for households with a primary household maintainer between the ages of 25 and 34 in the labour force using primarily the 1981 and 2001 PUMFS, and the 2006 census when data availability permits. This approach puts aside the questions of household formation and age of departure from the parental home, which as discussed in Chapter Two are acknowledged to be important implications of the changing housing context (Skaburskis, 1994; Lauster, 2010; Yelowitz, 2006).

literatures associate with specific housing and commute decisions. The changing characteristics of young adults analyzed in Chapter Four would indicate a shift toward higher density living and shorter, less automobile-oriented commuting patterns. Appealing both the neo-classical and structural theories informing this research, the question investigated in this chapter is about the presence and nature of structural differences between the metropolitan areas and among social groups at the intra-metropolitan scale. Structuration theory again guides the development of statistical models where individual level variables are expected to differ depending on the structural context. The chapter analyzes empirically the nature of these relationships in light of the changes in housing context, and their differences between Montreal and Vancouver, as explored in Chapters Two and Three.

6.1 Housing Type and Tenure

There have been large shifts in the housing types of young adults in Vancouver between 1981 and 2006 toward higher density, multiple-dwellings as would be expected given their greater expenditure on housing and changing residential ecology (Table 6.2; Chapters Two and Five). These shifts contrast noticeably with the trends in Montreal where there has been relative stability in the percentage living in single-family dwellings and the modest increase in multiple-dwelling occupancy. The divergent housing decisions of young adults reflect the unique character of the existing housing supply in the two metropolitan housing markets; particularly since the percentage of new built housing generally comprises a small percentage of the total housing stock (Bourne, 1981). The supply of housing in Montreal has historically included a larger

share of multiple-dwellings. It has not experienced the expansion in condominium market of the scale present in Vancouver since 1981 and, at least not until more recently, the regional policies aimed at intensification (Filion & Bunting, 2010). The high share of multiple-dwellings is not too surprising in and of itself given the young adults' early stage in the housing and labour markets and their smaller household size (McLeod & Ellis, 1983; Thomas, 2005; Bailey, 2009). Remarkable, however, is the dramatic decline from almost 50 percent in 1981 to 18 percent in 2006 of young adults residing in single-detached houses in Vancouver.

Table 6.2 – Households with a maintainer 25 to 34 years of age by housing type

	Montreal			Vancouver		
	1981	2001	2006	1981	2001	2006
Single-detached house	.224	.220	.215	.496	.256	.181
Apartment, five or more stories	.094	.068	.065	.086	.151	.182
Other Multiple-Dwellings	.680	.710	.718	.411	.589	.634
Semi-detached house		.037	.035		.024	.016
Row house		.031	.023		.079	.085
Apartment, duplex		.036	.085		.131	.154
Apartment, fewer than five stories		.602	.571		.352	.378
Other single-attached house		.004	.004		.002	.001
Movable dwelling	.002	.002	.002	.007	.005	.003

Source: Statistics Canada household PUMFS (1981b; 2001a) and Statistics Canada topic-based tabulations (2006c; d) for the Montreal and Vancouver census metropolitan areas.

The percentage residing in apartment buildings with more than five stories increased by about 10 percent in Vancouver but declined by about 3 percent in Montreal, reflecting the growth of Vancouver's high-rise apartment towers. Mortgage helper suites in the basement of single-family housing, or renting a floor of a single-family dwelling, have also become more common in Vancouver spurred by the increase in housing costs and declining rental vacancy rates (MCAWS, 2005; Metro Vancouver,

2011).⁵⁶ These units are counted as apartments in duplexes in the census but would account for more in this category in Vancouver than in Montreal where stacked duplexes are common. An interesting aspect of the mortgage helper suites is that they have become a selling point in the market for single-detached housing in Vancouver, thus reshaping housing decisions of owners. One senior realtor contacted as part of this research noted that his younger clients now commonly consider the desirability of the location to potential tenants when purchasing a home, for instance proximity to transit, post-secondary institutions and other amenities, something he does not recall occurring in the 1980s.

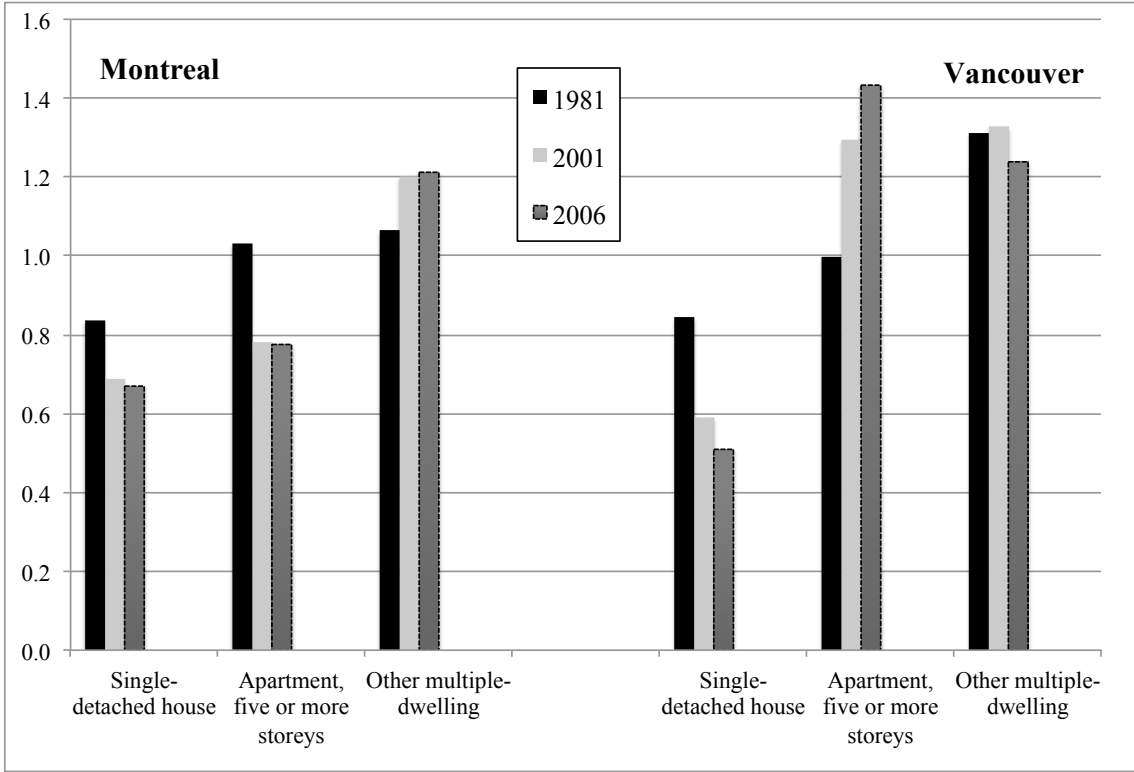
Also a useful measure of changing housing decisions is the comparison of young adults to the total market. Figure 6.1 shows the percentage of young adult households by housing type as a ratio of all households in the metropolitan areas. The values below one indicate that a lower percentage of young adults reside in a particular housing type than all the households combined. The comparison shows that the young are increasingly overrepresented in Vancouver's increasing high-rise housing stock.

The percentage of all households residing in single-detached houses declined, from about 59 percent in 1981 to 35 percent in 2006, but less so for the total population than for the young adults. By 2006, the percentage of young adults in high-rise apartments is over 40 percent higher for young adults than for all households in total. In contrast, in Montreal young adults have become more likely than the rest of the

⁵⁶ The observations on secondary suites are informed by Pablo Mendez's research. He is currently conducting work on informal housing markets and the legality of basement suites in Vancouver as part of his PhD thesis in the Department of Geography at the University of British Columbia. He notes that exact figures of the number of basement suites are difficult to obtain, especially because of their historic illegality.

households to reside in the low-rise multiple-dwellings but less likely in the high-rise apartments. Since the percentage of young adults in single-detached houses remained almost constant over time, the decline in the ratio from 1981 to 2006 in Montreal is the result of an increase in all households residing in single-family dwellings (from 27 percent in 1981 to 32 percent in 2006). In both metropolitan areas, young adults have become increasingly less likely than the rest of the households to reside in single-family dwellings.

Figure 6.1 – Households with a maintainer 25 to 34 years of age by housing type relative to all households

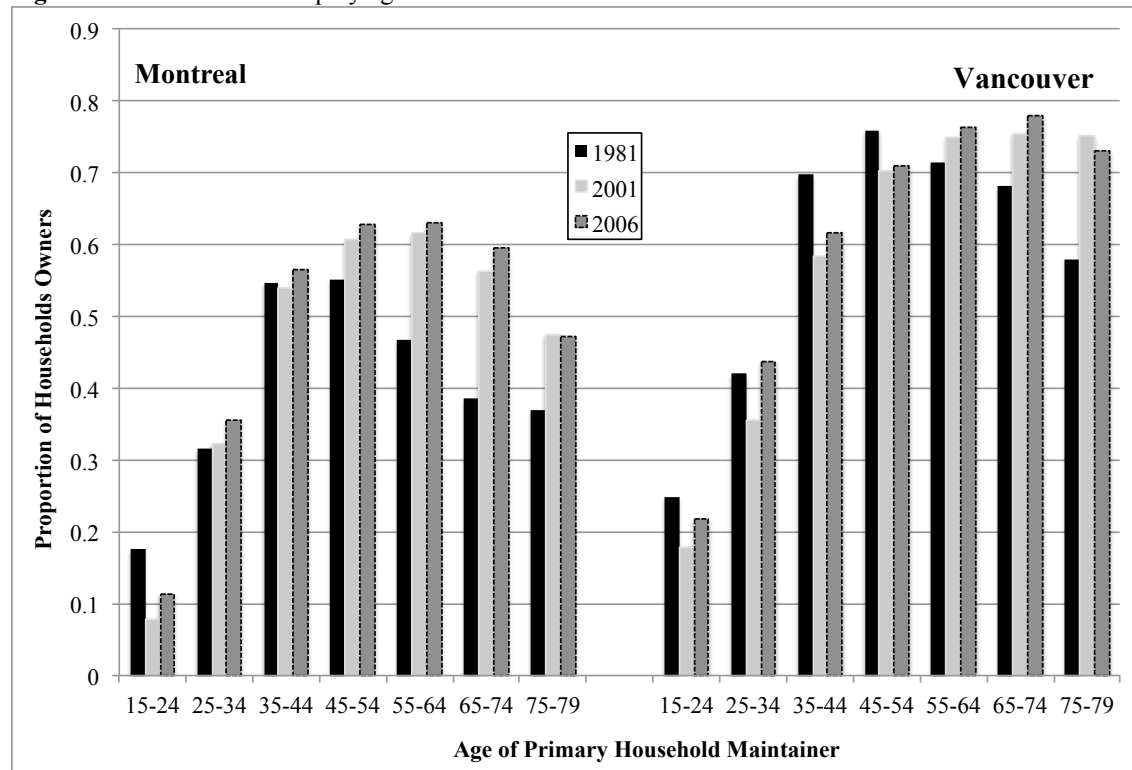


Notes: Ratios greater than 1 indicate that the housing type is more common for 25 to 34 year olds than for all the households combined, while ratios below 1 indicate the reverse.
Source: Statistics Canada household PUMFS (1981b; 2001a) and Statistics Canada topic-based tabulations (2006c; d) for the Montreal and Vancouver census metropolitan areas.

The changes in housing types are also associated with tenure shifts as households become priced out of ownership markets; and housing tenure is closely

linked to housing type and location (Chapter Three; Metro Vancouver, 2011). Figure 6.3 illustrates the changes in home ownership rates by age group of the household maintainer from 1981 to 2006.

Figure 6.2 – Homeownership by age of household maintainer



Source: Statistics Canada household PUMFS (1981b; 2001a) and Statistics Canada topic-based tabulations (2006c; d) for the Montreal and Vancouver census metropolitan areas.

Notably, ownership rates increased for the young adults in both CMAs despite their declining real incomes (Chapter Four; Turcotte, 2008b). Homeownership rates declined in Vancouver between 1981 and 2001 for those in age groups under 55 years of age. The higher rates in 1981 are perhaps the result of the 1980s housing bubble that drew households into the ownership markets due to prospects of price gains or fears of being priced out (Skaburskis, 1988). Ownership rates were at their lowest in the 1990s since the 1970s due to the recession but declining interest rates, low rental vacancy rates and

favourable conditions for construction that boosted supply increased homeownership rates again from 1991 to 2001 but not surpassing the 1980s level until 2006 (Statistics Canada, 2005c; Rea, MacKay & LaVasseur 2008; GVRD, 1998; Turcotte, 2008b).

An important difference between Montreal and Vancouver in terms of the tenure changes over time is that gains in ownership occurred largely through single-family dwelling ownership in Montreal whereas in Vancouver the gains were mainly through multiple-dwellings: A change that evidently reflect the divergent urban development patterns (Chapter Two). Although ownership rates remain lower in Montreal than in Vancouver—and than in the rest of Canada—the tenure shifts point to the break-down of some of the structures that help to maintain a large rental housing market in the central city in Montreal (Choko & Harris, 1990). The rental market is slowly giving way to pressures for conversion arising from gentrification. Yet still the largest share of rental units is on the Island of Montreal. Owner-occupied housing remains in the form of single-family dwellings in the suburban areas on the north and south shores that are behind the aggregate increases in ownership rates (Rose et al., 2006). As noted before, the low-density suburbs grew in a context of Fordist urban expansion, and also following the Quiet Revolution, in that it offered opportunities for homeownership, which in the central city were until then largely restricted to elite neighbourhoods (Germain & Rose, 2000).

The growth in condominium markets in Vancouver has weakened but certainly not eliminated the traditional cultural link between home-ownership and ideals of suburban, single-family homes (Blomley, 2004; Ronald, 2008). Yet the “*private ownership dimension*” of condominiums is “*significant*” in that Canadian “*macro-level*

economic and political policies” still “*favor homeownership, and the ideals and expectations of housing consumers*” (Kern, 2010, p. 660). While for the young adults, home ownership remains more associated with single-detached housing than multiple-dwellings in both metropolitan areas, the percentage of young adults in single-detached houses who are owners is almost 20 percent lower in Vancouver where the condominium market has been such an important factor of urban change (Table 6.3; Harris, 2011). One key informant noted that the condominium apartment has become the new bungalow that used to be the stereotypical starter home for the baby boomers.⁵⁷ The homeownership rates are almost 20 percent higher in Vancouver for the multiple-dwellings since a large share of this stock are condominium apartments that are “*dominated by younger households*” (Rea et al., 2008, p. 17).

However, it is important to note that in 2006 over 55 percent of young adults in Vancouver and 65 percent in Montreal are renters. In so far the increase in higher density housing forms are an expansion of homeownership ideals to the central city (Kern, 2010), the data on housing tenure and type here indicate not only that a large share of young adults are not, or not yet, able to participate in the homeownership market but also that rental markets may provide one way to access the proximity benefits and amenities of central cities in the context of rising costs.⁵⁸

⁵⁷ Conversation with key contact, May 2009: Senior real estate agent.

⁵⁸ For instance, 47 percent of the Vancouver metropolitan area’s rental housing is located in the City of Vancouver (and electoral area A) and another 15 percent is in Burnaby and New Westminster (Metro Vancouver, 2011).

Table 6.3 – Proportion of households with a maintainer 25 to 34 years of age who are homeowners by dwelling type

Dwelling Type	Montreal	Vancouver
Single-detached house	.939	.754
Apartment, five or more storeys	.138	.331
Other Multiple-Dwellings	.200	.378
Semi-detached house	.857	.508
Row house	.741	.739
Apartment, duplex	.258	.364
Apartment, fewer than five storeys	.129	.298
Other single-attached house	.251	.226
Movable dwelling	.800	.468
All dwelling types	.356	.438

Source: Statistics Canada topic-based tabulations (2006c; d) for the Montreal and Vancouver census metropolitan areas.

The globalization and neo-liberalization of housing markets has also meant that a growing share of the condominium stock is investor-owned (Chapter Three).⁵⁹ Thus expansion of ownership markets to the central city in Vancouver does not necessarily mean a one-to-one increase in owners. Instead, the growth of rented condominiums, and also basement suites, would arguably produce a more fine-grained geography of tenure than in the past. This kind of geography has traditionally existed in Montreal in the form of the co-location of owners and renters in the city's large stock of duplexes (Germain & Rose, 2000). As is the case in Montreal (Choko & Harris, 1990), the property relations between owners and renters create deeply engrained structures that become difficult to change (Wyly et al., 2009). Hence, the developing tenure patterns among young adults in Vancouver can have long-term implications in terms of access to homeownership. The changes have especially important implications for wealth distributions as rising prices reduce the ability to attain homeownership for low-income

⁵⁹ Thirty-five percent of the City of Vancouver's condominium apartments were estimated to be owned by investors in 2009 (City Spaces Consulting, 2009; Campbell, 2009).

earners (Hulchanski & Shapcott, 2004); and renters have been shown to have greater difficulty in achieving similar levels of wealth as owners, thus further reinforcing the inequalities (Somerville, Qiang & Teller 2007).

6.2 Housing and the Commute

Following Alonso (1964), young adults whose incomes are lower than in the past would be increasingly drawn to the higher density housing stock in the central city available at a lower total cost (higher per area), thus making trade-offs at the margin between housing size, location, the commute and also urban amenities (Meligrana & Skaburskis, 2005). However, given the differences in the housing contexts, the trade-offs would be qualitatively different in Montreal where housing costs have not escalated as rapidly. The outcome for commute patterns has been an increase in the percentage of young adults driving a car to work in Montreal, compared to a decrease in Vancouver where public transit, walking and biking to work increased (Table 6.4). But overall the changes in commuting distance and mode over time are relatively small in magnitude as are the differences between metropolitan areas. The increased concentration of young adults into higher density neighbourhoods (Chapter Five) and multiple-dwellings has likely contributed to the increase in the proportion of young adults commuting less than 5 kilometers to work from 1981 to 2006 (Table 6.4).

Findings from the sustainability and transportation literature show an evidently positive association between higher density housing types, or neighbourhoods, and the possibility of shorter commutes using modes other than an automobile (Newman & Kenworthy, 1999; Ewing et al., 2008). However, the total percentage of young adults

driving to work in 2006 remains slightly higher in Vancouver than in Montreal despite the stronger relationship between the young adult location and the density of the built form in the former (Chapter Five). This likely relates to the higher incomes in Vancouver, which are known to be associated with higher automobile use and ownership (Kenworthy, 2006).

Table 6.4 – Young adults’ changing commuting distance and mode

	Montreal		Vancouver	
	2006	1981-2006	2006	1981-2006
<i>Distance</i>				
<5 km	.320	.041	.383	.045
5-10 km	.258	-.026	.248	-.028
10-20km	.264	.036	.245	.017
20+ km	.158	-.051	.125	-.034
<i>Mode</i>				
Automobile	.672	.061	.682	-.048
Public transit	.247		.208	
Bicycle	.023		.024	
Walking	.059		.087	

Notes: Modes other than automobile not shown in 1981 due to small sample size. Automobile includes drivers and passengers. Commute distances in 1981 are only available in miles, introducing error due to conversion and re-categorization.

Source: Calculated using Statistics Canada data (1981d; 2006b).

Also higher in Montreal is young adults’ use of public transit compared to the higher rates of walking to work in Vancouver. Montreal’s young adults are centralized in and around the parts of the inner city where transit is quite frequent but also a higher percentage travels further distance to work than do in Vancouver, which would make walking more feasible for a larger share of young adults in the latter (Table 6.4). The milder climate may also play a role in the higher rate of walking to work in Vancouver. The shorter commute distances in Vancouver may relate in part to the smaller size of the metropolitan area and the relatively greater dispersion of jobs in secondary nodes,

which has been theorized to produce better housing-jobs balance (Guiliano & Small, 1993), as compared to Montreal where jobs are relatively more centralized (Shearmur & Coffey, 2002).

Another interpretation is that in the context of Vancouver's high entry costs into the housing market, longer commutes become less of an option for a larger number of households as costs do not decline sufficiently with distance to allow households to enter the market—a condition Elvin Wyly refers to as “*Alonso on steroids*”. Table 6.5 shows the relationship between commuting distance and the share of income allocated to housing.

Table 6.5 – Young adults' housing costs by the length of the commute, 2006

Commuting Distance	Housing costs / household income		Housing costs / room	
	Montreal	Vancouver	Montreal	Vancouver
<5 km	.331	.405	2310	3470
5 – 9.9 km	.276	.400	2190	3169
10 – 14.9 km	.268	.343	2179	3097
15 – 19.9 km	.245	.304	2151	3213
20 – 24.9 km	.272	.272	2166	2908
25 – 29.9 km	.204	.273	2108	2880
>30 km	.216	.331	2197	2792

Notes: Housing costs include annual owner's major payments for housing and gross rent. Number of rooms includes all living spaces in a residential dwelling, including kitchen, living room, bedroom and bathroom.

Source: Calculated using Statistics Canada census data (2006b).

Note that even when enduring a commute between 15 and 19 kilometers, young adults in Vancouver allocated on average 30 percent of their income toward housing. Housing costs as a share of household income are lower for commutes between 20 and 30 kilometers but increase again for longer commuting distances. Within a 5-kilometer commute distance from work, young adults spend more than 40 percent of their income

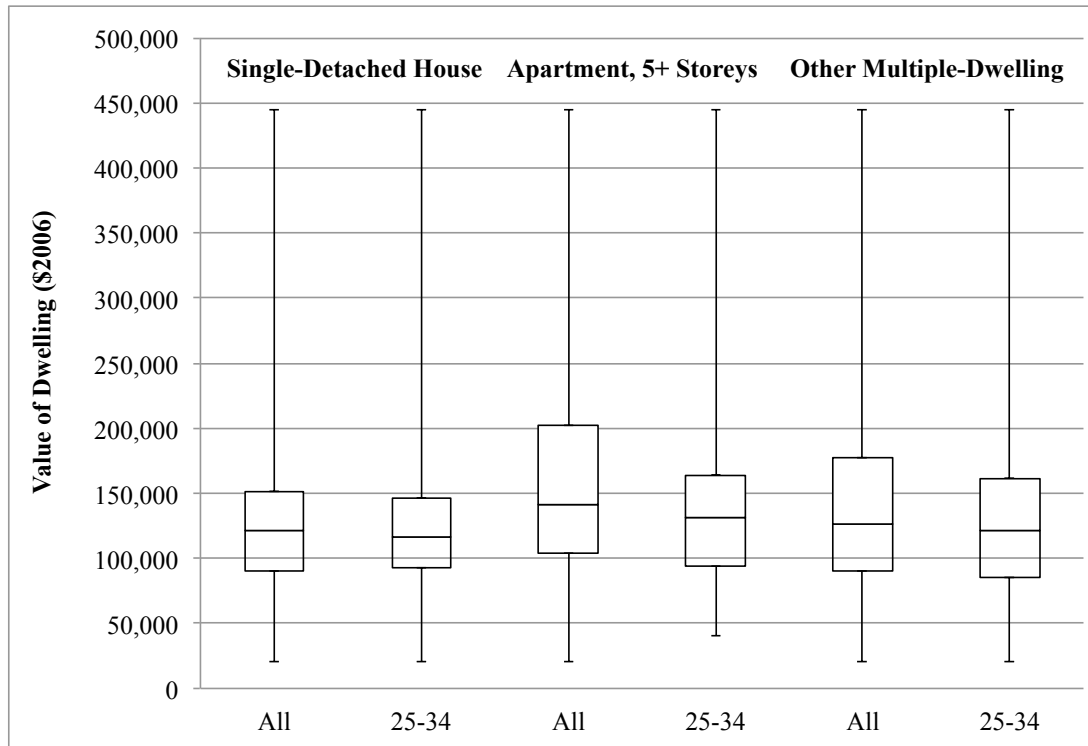
on housing. In Montreal, households allocate less than 30 percent of their income on housing when they live more than 5 kilometers from their work, and even within 5 kilometers of work households spend only slightly more than 30 percent.

Table 6.5 also shows how much young adult households spend on average for housing per number of rooms by the distance of their commute. The fact that the amount households spend for housing on a per room basis is higher for those commuting over 30 kilometers to work than for those living within 5 kilometers from their jobs in Montreal speaks to the substantially higher cost of housing in Vancouver. Longer commutes do decrease housing costs per room more in Vancouver than in Montreal. In Vancouver, those commuting over 30 kilometers spend just under \$700 less per room than those whose commuting distance is only 5 kilometers or less. In Montreal, the difference between these two groups of commuters is about \$100. However, it must be remembered that the same data also show that the size of housing generally increases with longer commutes (not included in table), which means longer commutes still come with higher total housing costs even if households pay less per room. This has implications particularly for the young adult households that tend to be smaller in size. In other words, longer commutes are associated with much higher costs per room and total housing costs in Vancouver than in Montreal, which suggests that fewer options exist for the accessibility versus housing cost trade-offs in the former. One real estate agent noted in conversation that comparatively lower cost housing is becoming available in Burnaby and New Westminster along the transit corridors where there has been an increase in high-rise condominium developments but argued that cost per area remains too high to see large gains in terms of housing space.

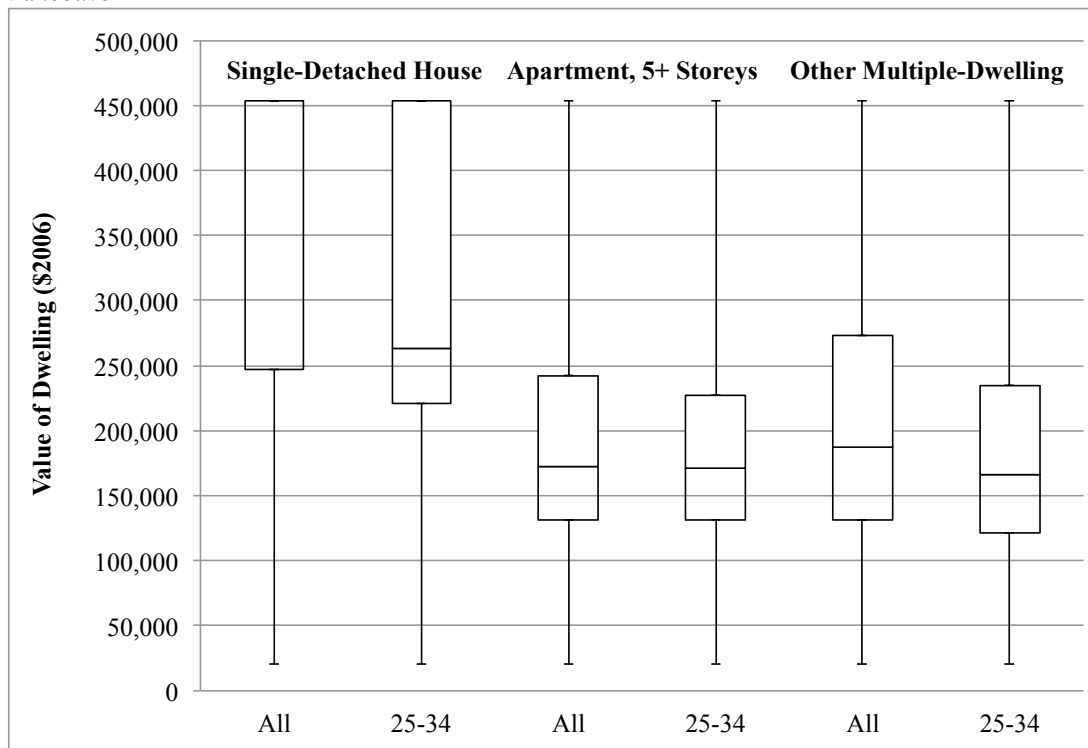
The relative difference in total housing values and rents between different dwelling types in Montreal versus Vancouver adds to the difficulty of trading-off housing space for accessibility, and helps explain the higher increase in the percentage of young adults living in multiple-dwellings in Vancouver. Figures 6.2 and 6.3 show the range of housing costs in each metropolitan area, and those of housing occupied by young adults, using box-plots. Interestingly, the ranges of values are quite similar between young adults and the population as a whole. This suggests that dwelling type is an important factor in allowing young adults to enter the housing market at different price points. Note that the values of dwellings or rents are much more consistent across dwelling types in Montreal than in Vancouver where the values and rents of single-detached houses exceed those of other dwelling types.⁶⁰ Part of the issue identified here is the relative indivisibility of housing in consumption (Bourne, 1981; Pozdena, 1988)—housing is not available in ‘one unit’ increments so that trade-offs between housing and the commute come in ‘bundles’ and households decide among dwelling types, not space per se.

⁶⁰ Differences would be larger were the data not top-coded. Dwelling values are top-coded in the PUMFS at \$450,000 (values in Figure 6.2 are slightly higher due to the inflation adjustments). The values are top-coded in the micro-data files by Statistics Canada to protect privacy of respondents. The maximum value is arguably too low in markets such as Vancouver where the median selling price of single-detached houses was more than \$500,000 in 2006 (Metro Vancouver, 2011). Due to the data restriction, the maximum, 3rd quartile and median value of single-family dwellings are all the same in Vancouver.

Figure 6.3 – Distribution of dwelling values by housing type and age of maintainer
Montreal



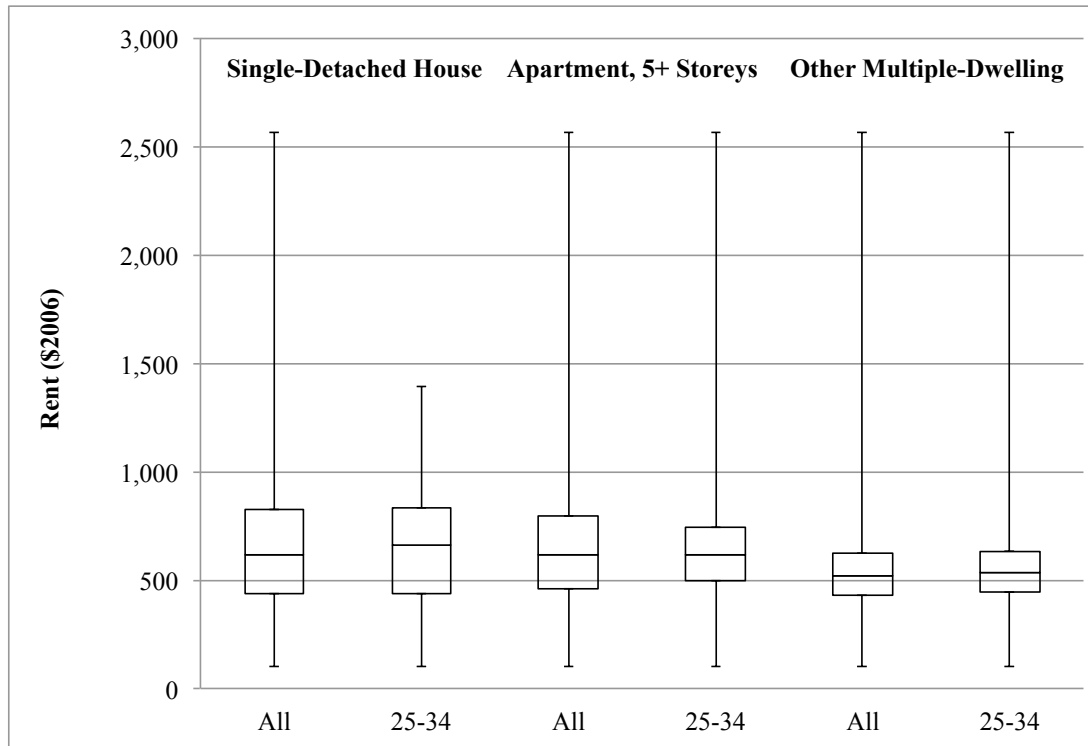
Vancouver



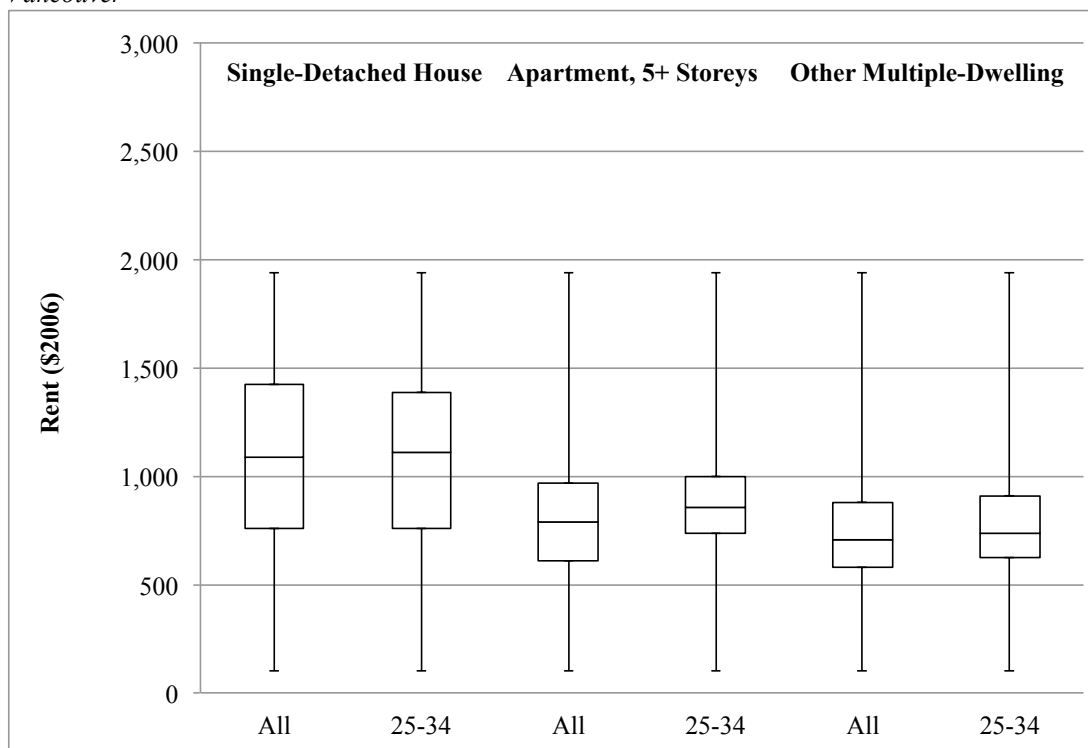
Notes: Maximum, 3rd quartile, median, 1st quartile and minimum of dwelling values and rents by housing type for all households and those with a maintainer 25 to 34 years of age.

Source: Statistics Canada PUMFS (2001a) for the census metropolitan areas.

Figure 6.4 – Distribution of gross rent by dwelling type and age of maintainer
Montreal



Vancouver



Notes: Maximum, 3rd quartile, median, 1st quartile and minimum of dwelling values and rents by housing type for all households and those with a maintainer 25 to 34 years of age.

Source: Statistics Canada PUMFS (2001a) for the census metropolitan areas.

Therefore, the relative difference in price and rent between dwelling types as well as the housing cost associated with different commuting distances help explain the changes in housing consumption that saw shifts toward higher density dwellings in Vancouver but not in Montreal. The increases in price associated with densification in Vancouver along with the growing segment of smaller households, and young adults declining incomes, would contribute to the increases in affordability burdens and housing expenditures even at higher income levels (c.f., Lee et al., 2008; Chapters Three & Four). However, the discussion thus far has made several empirical assertions regarding the influence of the contextual differences between Montreal and Vancouver on housing and commuting decisions of young adults that benefit from multivariate analysis. The analysis has taken for granted that young adult households are residing in higher density, multiple-dwelling units as a result of differences in the housing context as opposed to differences in the characteristics of households themselves. The next section thus provides a multivariate analysis of the determinants of housing type to hold constant other factors such as changing household characteristics that influence dwelling type and tenure. Assertions about shorter and less auto-oriented commutes in Vancouver than Montreal also require multivariate treatment for similar reasons.

6.3 The Changing Determinants of Housing Type and Tenure

When the household characteristics are taken into account in the case of the housing data, the shift in Montreal is toward single-detached housing, whereas in Vancouver there is an increase in the tendency for multiple-dwelling occupancy. The finding in Montreal that young adults have an increasingly higher propensity to reside

in single-detached housing once household characteristics are taken into account lends support to a common argument, as one of the key informants noted, that lower incomes in Montreal work to sustain the high-density central city rental market. In Vancouver, the context of rising land values, growth management legislation and a growing stock of multiple-dwellings, especially high-rise condominium apartments, are arguably working to shift young adults' housing decisions toward higher density housing options. In Montreal, where land supply has been relatively more abundant, land values relatively lower and the central city experienced more decline following de-industrialization, the analysis suggests that the multiple-dwelling occupancy in the central city is attributable in large part to household characteristics. The findings also point to the negative relationship between some household characteristics such as the presence of children and larger household and multiple-dwelling occupancy. It points to the congruence between demographic changes toward smaller household sizes and central city housing market intensification (Champion, 2001). The findings also indicate the potential for exclusion of larger households from accessing higher density in central areas (Jarvis, 2005; Kern, 2010), and inability as of yet of intensification strategies to accommodate, on a large scale, different kinds of households, especially families with children, in higher density housing (Bromley et al., 2005). The following describes the multivariate model and its findings in greater detail.

6.3.1 Multinomial logistic regression

The analysis uses multinomial logistic models to analyze housing type and tenure as a function of household characteristics.⁶¹ The models are constructed using the PUMFS data for households with a household maintainer 25 to 34 years of age currently in the labour force. Following Cho (1997), multinomial logistic models are used with a dependent variable that has four mutually exclusive categories—(1) own a single-family dwelling; (2) rent a single-family dwelling; (3) own unit in a multiple-dwelling; (4) rent a unit in a multiple-dwelling.⁶² Using the database described in Chapter Three (Moos & Skaburskis, 2010), the models combine data from both census years (1981 and 2001) and utilize a variable for census year to reveal how housing decisions change over time in Montreal and Vancouver while holding constant the differences in households' characteristics.⁶³

⁶¹ The multinomial logistic model is widely used across the social sciences “*for analyzing unordered categorical response variables*” (Powers & Xie, 2000, p. 224). The model uses an iterative maximum likelihood estimation to determine how the probability of being in a category of the dependent variable changes with values of the independent variables. The probabilities are computed in relation to a base category of the dependent variable but the categories themselves are assumed to have “*no natural ordering*” (“Stata Annotated Output”, 2011).

⁶² Ideally, each combination of multiple-dwelling types and tenure would be included as a separate category, as done for instance by Skaburskis (1999) in his analysis of the influence of age, household size and price levels in determining housing type and tenure across all areas of Canada. As this thesis only considers young adults in two specific metropolitan areas, using more than four housing categories reduces the robustness of the model as the number of observations becomes quite small and the number of parameter estimates increases (c.f., Williams, 2010). The two-way distinction between housing types is still useful, however, as there is often quite an explicit contrast in terms of attributes associated with single-detached housing versus multiple-dwellings such as housing size, privacy, proximity to amenities, transit availability, and in Vancouver, cost.

⁶³ The analysis of housing type and tenure is an extension of earlier work using a binary logistic model to analyze single-family dwelling occupancy of home-based workers (Moos & Skaburskis, 2008). The discussion of the dependent variables draws on literature analyzed as part of the previous research.

6.3.2 Household characteristics

The independent variables included in the regressions are the place of birth and gender of the household maintainer, household size, the presence of children and household income (Table 6.6). The number of variables is restricted by the difficulty of finding comparable variables across census years and also to ensure robustness in the multinomial models where the inclusion of every variable results in the estimate of four additional parameters. The place of birth variable aims to capture the differences in housing preferences among immigrant groups and the locally born population. The immigration literature documents a preference toward home ownership among immigrants—although it should be noted that the “*immigrant home-ownership advantage*” traditionally observed in Canada appears to be declining (Haan, 2005; Chapter Three).

Table 6.6 – Summary of variables used in multinomial regression of housing type and tenure

	Montreal		Vancouver	
	1981	2001	1981	2001
Place of Birth: Canada	.810	.811	.727	.681
USA	.006	.008	.024	.014
Europe	.100	.054	.129	.079
Asia	.033	.051	.105	.173
Other	.052	.077	.015	.053
Female==1	.294	.423	.316	.391
Children Present==1	.481	.400	.398	.325
Household Size	2.677	2.346	2.630	2.391
Permanent Income (000s)	54.839	51.140	63.817	55.088
Monetary Income (000s)	7.099	9.070	9.981	13.067

Notes: Dollar values adjusted to \$2006 using Bank of Canada rates (2010).

Source: Statistics Canada household PUMFS (1981b; 2001a) for the Montreal and Vancouver census metropolitan areas.

The gender variable captures the effect of inequalities that may structure women’s housing decisions differently than men’s, although gender inequities in

housing that arise from the labour market are also captured by the income variables (Smith, 1990; Skaburskis, 1997). Some observers have noted an increasing tendency of young female professionals to purchase high-density housing in central locations, either living alone or in dual-income households, which would point to a positive association with multiple-dwelling ownership (Kern, 2010). However, women living alone are still generally more likely to rent which may come about due to their lower incomes that reduce the ability to build equity. The variables measuring household size and the presence of children are expected to be positively associated with single-detached dwelling occupancy because of the larger size of these dwellings and their locations in residential neighbourhoods (McLeod & Ellis, 1983). However, because the presence of children (and larger household size) is also associated with greater household expenditures on other goods and services, these characteristics may also decrease households' potential for owning single-detached houses that require more of household income allocated toward housing than the rental or multiple-dwelling options (Ho & Chiu, 2002).

The summary of the data shows the increasing percentage of female household maintainers, the decreases in household size and the presence of children and the changes associated with immigration, trends already discussed in Chapter Four. As is done in Chapters Two and Three, the household income is divided into permanent and monetary incomes. The decreases in permanent income are consistent with expectations regarding shifts toward the market for rental housing and multiple-dwellings. The inflation adjusted permanent incomes are higher in Vancouver than in Montreal but

declined over time in both metropolitan areas. The monetary incomes increased from 1981 to 2001 and relates to the increase in dual earner households.

6.3.3 Multinomial logistic regression results

The following discusses the outputs from the regression analysis of the housing decisions of young adults as a function of household characteristics for Montreal and Vancouver. The set of models shown in Table 6.7 combine the census data from 1981 and 2001. Single-family dwelling ownership is the base category. A dummy variable for census year is included to test for changes in housing decisions in the two metropolitan areas over time. Interaction effects between the independent variables and census year did not produce statistically significant coefficients and are therefore not shown. The findings are consistent with the analysis at the tract level in that the centralization of young adults into areas with higher density housing in Montreal appears to be a consequence of changing household characteristics. Contrary, in Vancouver there is still evidence of a tendency to reside in higher density housing than in the past even after household characteristics are taken into account.

The STATA statistical software reports the regression coefficients as relative risk ratios for multinomial logistic models. Although slightly different in terms of mathematical specification, relative risk ratios appear to be generally interpreted as odds ratios that are the probability of an event occurring relative to it not occurring for one group divided by the probability of an event occurring relative to it not occurring for a second group (Zhang & Yu, 1998; Gutierrez, 2005; “Stata Annotated Output”, 2010).

Table 6.7 – Multinomial logistic regression of housing type and tenure

	Montreal		Vancouver	
	Relative Risk-Ratio		Relative Risk-Ratio	
<i>Rent Single-Detached House</i>				
Place of Birth: USA	2.601		1.326	
Europe	1.362		.416	**
Asia	.349		.433	***
Other	1.921		.520	
Female==1	1.450		1.173	
Child Present==1	.597		.314	***
Household Size	1.043		1.309	***
Permanent Income (000s)	.967	***	.970	***
Monetary Income (000s)	.970	***	.982	***
Year==2001	.924		1.299	
<i>Own Multiple-Dwelling</i>				
Place of Birth: USA	.948		.583	
Europe	3.030	***	.855	
Asia	2.315	**	1.648	**
Other	3.563	***	1.657	
Female==1	1.117		1.004	
Child Present==1	.649	**	.570	**
Household Size	.911		.802	**
Permanent Income (000s)	1.003		.997	
Monetary Income (000s)	.995	**	.994	**
Year==2001	.997		7.292	***
<i>Rent Multiple-Dwelling</i>				
Place of Birth: USA	1.203		1.939	
Europe	2.733	***	1.272	
Asia	4.374	***	1.107	
Other	6.953	***	2.977	***
Female==1	1.448	***	1.083	
Child Present==1	.392	***	.354	***
Household Size	.696	***	.646	***
Permanent Income (000s)	.977	***	.979	***
Monetary Income (000s)	.972	***	.974	***
Year==2001	.638	***	2.613	***
Log likelihood	-5,059.372		-3,118.233	
LR Chi-Squared (30)	1,560.320	***	1,046.970	***
N-Cases	5,530		2,831	

Notes: Includes households with a maintainer 25 to 34 years of age in the labour force. Base category is own single-detached house. Base of the independent variables is place of birth in Canada, male maintainer, no children present and 1981 census year. ***p<0.0001; **p<0.01; *p<0.05.

Source: Statistics Canada household PUMFS (1981b; 2001a).

In general, the ratios below one indicate a lower likelihood of being in the category of the dependent variable versus the base with increases in the independent variable. The ratios above one indicate a higher likelihood of being in the category with increases in the independent variable. For instance, a ratio of 0.967 for the permanent income variable indicates that if permanent income were to increase for a household by one thousand dollars the odds of renting a single-family dwelling as compared to owning a single-family dwelling would change by a factor of 0.967 holding the other variables constant. The ratio for the variable indicating census year in Vancouver is particularly remarkable in that it suggests that the odds of a young adult owning a multiple-dwelling relative to a single-detached house increases by 7.292 from 1981 to 2001 holding household characteristics constant. The ratio of residing in a rented multiple-dwelling increases by 2.613 while the difference between census years is not statistically significant for rented single-family dwellings.

In Montreal, however, the ratio for census year is only statistically significant for the category identifying rented multiple-dwellings, indicating a decline in the odds ratio of a young adult to occupy rented multiple-dwellings by a factor of 0.638 relative to owning a single-detached house. The ratios for the incomes variables show that renting and multiple-dwelling occupancy decrease as income rises as compared to single-family dwelling ownership. The decision between tenure types is evidently shaped by long-term income prospects. It is interesting that in the case of the owned multiple-dwellings, however, the odds ratio for the variable measuring permanent income is not statistically significant in either of the two metropolitan areas. The findings would suggest that the decision to own a multiple-dwelling is motivated by

lower monetary earnings than what is required to enter the single-family housing market. This fits with the increase in multiple-dwelling occupancy since 1981 in Vancouver. Income is an important determinant of dwelling type and tenure regardless of context, but the higher relative cost difference between dwelling types shapes housing decision differently in Vancouver than in Montreal.

The remaining variables included in the models to account for the household characteristics portray somewhat unexpected results (Table 6.7). For instance, gender is not in these models a distinguishing factor of housing type and tenure with the exception of the rented multiple-dwellings in Montreal where the odds ratio is greater than one. It indicates a greater likelihood of women renting a multiple-dwelling as compared to owning a single-detached house. The gender variable, however, does also factor into housing decisions through the permanent income variable, which suggests that the gender differences in housing decisions arise in large part through the inequities in the labour market that result in lower long-term income prospects for women. The place of birth variables do not distinguish between renting or owning a single-detached house in Montreal; and there is no distinction in the housing decisions between young adults born in the USA versus Canada in either metropolitan area. In Montreal, households with a maintainer born in the Asian, European or Other category are more likely to occupy a unit in a multiple-dwelling as compared to the reference category. In Vancouver, households with maintainers born in Asian and Europe are less likely to reside in rented single-family dwellings. Maintainers born in Asia are also more likely

to reside in owned multiple-dwelling, and maintainers in the Other category are more likely to rent a unit in a multiple-dwelling.⁶⁴

The presence of children is associated with higher likelihood of single-detached homeownership. Although in Montreal there is no statistically significant difference between renting versus owning a single-detached house in the presence of children. This may be explained by the presence of a larger rental market in Montreal so that the decision about certain dwelling types traditionally perceived more suitable for raising children is not linked to tenure as it is in Vancouver. As expected, the variable measuring household size indicates that larger households are less likely to reside in the multiple-dwellings as compared to single-detached houses. But larger households are more likely to reside in rented single-detached houses as compared to owner-occupied single-detached houses, which may point to the higher consumption expenditures of larger households that could make it more difficult to attain homeownership. The strong relationship between household size, presence of children and lower density housing forms points squarely at one of the challenges faced by sustainability policies that aim to increase the supply of higher density housing (Quastel et al., under review). As one former senior housing policy official noted⁶⁵:

“The moment you start addressing [affordability] through density, yes there will be some families that will go live in a high density neighbourhood, but the moment you look to density for affordability, yes there is a marginal area that will make it more

⁶⁴ Inclusion of a dummy variable that indicates the first official language spoken by the primary maintainer in Montreal shows relative risk ratios below one for maintainers whose first language is French in the two categories identifying units in multiple-dwellings. The findings fit the trends of suburbanization of the Francophone Montrealers into the suburbs on the north and south shores where there are more single-detached houses than on the Island, which is increasingly becoming more multilingual due to immigration (Germain & Rose, 2000).

⁶⁵ Conversation with key contact, January 30, 2008.

affordable, but if you are looking at this for a large number of people, no, and the more you go up in density, you start taking [demographic] groups in and out of the market...you are no longer realistically talking about the same demographic group.”

The evident links between household characteristics and housing decisions speak to the way changes in the urban form, particularly in Vancouver’s inner city, that saw increases in condominium towers and other higher density housing options are linked to urban socio-economic transitions (Champion, 2001). Clearly, access to higher-density, owned housing is restricted by income, education and occupation (Kern, 2010). Yet the rental market does appear to have played a role in facilitating more centralized residential location patterns among young adults than is sometimes accounted for in arguments that seemingly portray the inner city almost purely dominated by expensive ownership markets. The links between socio-economic change and housing costs, as will be shown below, reappear in the question of factors influencing young adults’ commuting distances.

6.4 Commute Distance and Mode

The multivariate analysis of commute distance and mode uses the 2006 Statistics Canada PUMFS including the young adult labour force. The intent is to explore how variables relating to the workers’ income, occupation, education, gender, immigration status, presence of children, household type and cost of housing (owner’s major payments or gross rent spent per room) relate to commuting characteristics in Montreal and Vancouver. There are two principal questions this analysis hopes to answer. First, the descriptive tables show that young adults’ commuting distance would tend to be longer in Montreal and a higher proportion travel to work by automobile than

in Vancouver—therefore, in line with the objective of the thesis to ask about the importance of context, the analysis aims to distinguish between the effects of demographic and contextual factors resulting in these metropolitan differences in young adults' commutes. Second, as discussed in Chapter Two the changes in Vancouver's housing market are often assumed to make it more difficult for lower income workers, and larger households with children, to reside in proximity to work or access non-automotive transit modes (Lee et al., 2008)—but do young adults' with certain demographic characteristics have systematically longer and more auto-oriented commutes in Vancouver than in Montreal where housing price inflation has been less severe?

6.4.1 Factors influencing the journey-to-work

As Shearmur (2006) discusses, the transport literature generally sees the individual workers' and the households' characteristics as well as the structural characteristics of cities as determinants of the distance travelled to the place of work and the mode used (Giuliano & Small, 1993; Vandersmissen et al., 2003; Hanson & Giuliano, 2004; Horner, 2004). Higher income, education and occupational status are generally associated with longer commutes as workers are assumed to travel further for higher paying employment (Simpson, 1987; Shearmur, 2006). The factors also relate to the residential geographies of cities by social class that saw the decentralization of the middle and upper classes in the post-war years into low-density, auto-oriented suburban areas, which particularly in the US led to cases of spatial mismatch between the location of low-income households in central cities and the suburbanization of employment

(Johnson, 1967; Massey, 1995; McLafferty & Preston, 1996; Chapple, 2006). The growing presence of immigrants in the suburbs contributes to increases in transit use, and also commute distances in areas outside the inner city, since immigrants tend to be heavier transit users than the Canadian born population even when income differences are taken into account (Heisz & Schellenberg, 2004).

Centralization of higher income earners through gentrification does not necessarily lead to a one-to-one decrease in automobile use as studies relying purely on predictors of the built environment commonly assume (Jarvis, 2003). As Danyluk & Ley (2007) have shown for Montreal, Toronto and Vancouver, transit use in gentrifying neighbourhoods is lower than in the rest of the inner city while walking and cycling are more common. The presence of children and larger household size generally tend to be associated with longer commuting distances and higher automobile use (Jarvis, 2005; Shearmur, 2006). These factors relate also to the residential ecology of cities in that larger households and families status have since the post-war years been associated with suburban residential locations (Murdie & Teixeira, 2006). The share of families with children in central areas has been increasing, especially in Vancouver, but the difficulty in finding and affording dwellings large enough to accommodate families has been identified as a challenge (Gray, 2006; Lee et al., 2008). Thus, the cost of housing on a per area basis is expected to contribute to longer commutes, as theorized by Alonso (1964). Also, women's increasing presence in the paid labour force has introduced greater complexity into residential location of dual-income households who have been found to substitute longer commuting distance by one spouse with a shorter commute by the other (Singell & Lillydahl, 1986; Plaut, 2006). Men still tend to have longer

commutes than women, which has been related to the continuing gendered nature of domestic household activities that sees women reduce their journey-to-work to balance paid and domestic work (Madden, 1981; Hanson & Pratt, 1988; Wyly, 1998; Jarvis, 2005).

The question of commuting time is, of course, also relevant in that it is likely more important than distance per se in influencing residential location (Vandersmissen et al., 2003). But as Shearmur (2006) notes, distance is still an important variable that relates closely to commuting time and mode. As Shearmur explains, the commute mode is influenced by commute distance in that there is generally a positive relationship between longer commutes and automobile use, although this relationship is mediated by income in that lower income households tend to take transit even for longer distances. Automobile use, and ownership, is also strongly related to income (Newman & Kenworthy, 1999). Walking and taking transit to work remain associated with lower income workers although these modes are increasingly becoming associated with higher income earners, especially when distances are short or transit is in the form of commuter rail (Garrett & Taylor, 1999; Plaut, 2004). Cycling occurs over longer distances than walking to work, and incomes of those cycling tend to be higher than of those that walk or take transit; and in North American, men are more likely to cycle than women (Horner, 2004; Shearmur, 2006).

6.4.2 Ordered logistic regression of commute distance

Since commute distances are only available as categorical variables in the 2006 PUMF, an ordered logistic regression is used (Table 6.8). This method is akin to binary

logistic regression but it includes several outcome categories that are ordered from lowest to highest in magnitude (Powers & Xie, 2000). The resulting coefficients reveal the propensity of workers being in categories with shorter versus longer commuting distances. The model includes the young adult labour force with individual workers as the unit of observation. The independent variables describe the characteristics of the worker and households. Included is a dummy variable that distinguishes the Montreal from the Vancouver metropolitan area. As in earlier models, the metropolitan dummy variable is included as an interaction with the variables describing the characteristics of the worker. The effects of occupational status, education, income, presence of children, household status and gender are as expected. The important finding for the purposes of this thesis is that the dummy variable denoting the metropolitan area does not show a statistically significant difference between young adults' commuting distances in Montreal versus Vancouver. In other words, the higher proportion of young adults with shorter commutes in Vancouver than in Montreal is explained by the differences in the characteristics of the young adult labour force and the cost of housing. The cost of housing on a per room basis shows a negative and statistically significant coefficient, indicating that young adults trade-off higher housing costs for shorter commute distances. But the strength of this effect is no different in Montreal than in Vancouver. Therefore, it is the absolute differences in costs that help explain the difference in commute distances between the CMAs.

Table 6.8 – Ordered logistic regression results of young adults' commuting distance

Variables	Coeff.	
Income (\$1000)	.015	***
Income^2 (\$1000)	-3.E-08	***
Health	.093	
Social sciences, arts, culture	-.171	*
Sales and services	-.195	*
Clerical	.039	
Manual	.201	*
Primary sector	-.859	
Vancouver	-.224	
Health*Vancouver	-.161	
Social sciences, arts, culture*Vancouver	.124	
Sales and services*Vancouver	.192	
Clerical*Vancouver	.186	
Manual*Vancouver	.178	
Primary sector*Vancouver	1.832	**
Immigrant	-.418	***
Immigrant*Vancouver	.265	**
Child present	.243	***
High school	.135	
College or trades	.256	**
University degree	.031	
Male	.158	***
Non-family	-.492	***
Housing cost per room	-7.E-05	**
Housing cost per room * Vancouver	-3.E-05	
LR Chi^2	803.500	***
Log likelihood	-14395.054	
Cut 1	-.385	
Cut 2	.737	
Cut 3	1.513	
Cut 4	2.192	
Cut 5	2.819	
Cut 6	3.421	
N-cases	8823	

Notes: Base for the regression are the young adults in Montreal, managerial occupations, non-immigrants, less than high school education, no children present, female and in multiple-person households.

***p<0.0001, **p<0.01, *p<0.05. Categories for commuting distance are <5km, 5-9.9km, 10-14.9km, 15-19.9km, 20-24.9km, 25-29.9km, >30km.

Source: Calculated using Statistics Canada data (2006b).

Importantly also, the occupational variables show that those working in social sciences, arts and cultural sector and sales and service occupations tend to have shorter commuting distances and that immigrants have shorter commutes as compared to the base. Therefore, it is Vancouver's young adult labour force that includes a higher share immigrants and workers in occupations characteristic of the post-Fordist economy that contribute to the shorter commuting distances (Chapter Four).

The findings point to the important links between the changes in the socio-economic composition of the labour force and changing commute characteristics in cities. It suggests that changes in built form that led to increasing densification in Vancouver are not linearly related to 'more sustainable' commuting patterns but rather facilitators of processes of urban restructuring that have made the inner city increasingly attractive to young, non-family households in service sector occupations (Champion, 2001; Quastel, 2009; Kern, 2010). It brings to the forefront the question "*sustainable for whom*" (Marcuse, 1998) as shorter commutes are defined by the cost of housing in a context where housing costs are on the rise. A Vancouver resident who provided input in a public consultation process over proposed planning strategies aimed at densification in the city evidently captured this sentiment⁶⁶:

"Myself and my business partner who also works...in a high level position make a substantial amount of money every year (in the \$200,000 range)...We each got married and now want to start families and have a space of our own...it has become quite impossible for us to be able to live in our city and own separate property that would sustain a family without...commuting from far away to work every day. In our income bracket, it's crazy that this is a problem. We are further gentrifying our neighbourhoods every year that these real estate prices get higher...I want nurses and policemen to be

⁶⁶ City of Vancouver "Public feedback received for revised ecodensity charter and initial actions, May 13/08 onwards" retrieved from <http://vancouver.ca/commsvcs/ecocity/>

able to buy and live in my residential neighbourhood. There should be housing options for everyone in order to build a stronger society that isn't segregated."

The fact that higher housing costs are associated with central locations and shorter commutes are an evident issue for urban sustainability strategies (Gurran, 2008; Dale & Newmann, 2009; Quastel, 2009). On the one hand, the constraining of urban expansion is obviously motivated by the objective to reduce the housing consumption. Land becomes more scarce, and thus its price rises which reduces the amount households can consume (Skaburskis & Moos, 2010). Paying more for housing is thus perhaps an inherent quality of urban sustainability in a market economy (Marcuse, 1998; Gurran, 2008). On the other hand, there is the inevitable reality of increasingly inequality in the income distribution (Chapter Four), permitting some households to continue consuming larger amounts of land, and housing, despite the rise in price.

This point relates directly to Harvey's (1973/2008) comment cited in the first chapter of this thesis that some households will be better able to adjust to societal changes, which further contributes to inequalities. Evidently the cost of housing is a limiting factor of shorter commuting distances. But is also important to note that at the metropolitan scale, income is still positively associated with longer commutes. Therefore, in addition to providing lower cost housing in proximity to work, an important challenge for sustainability policy, as a number of observers have noted, will be to deal with the positive association between income and commuting distance in a context of an increasingly "*mobile*" society (Pooley, Turnbull & Adams, 2005).

The regression also provides evidence that immigrants and those working in primary sector occupations have relatively longer commutes as compared to the base in

Vancouver then they do in Montreal. The interaction effect with the dummy variable for the metropolitan area shows that the while immigrants still have shorter commutes than the Canadian born population in Vancouver, the difference is smaller than in Montreal even after income and other characteristics are taken into account. The effect points to the more dispersed location patterns of immigrants into the suburbs of Vancouver. In Montreal immigrants are relatively more concentrated on the Island where there is a larger share of the metropolitan area's employment (Chapter Two).

The SkyTrain is commonly thought to serve a large immigrant population who travel long distance to work from Vancouver's suburbs. The findings here certainly indicate that immigrants have longer commutes than otherwise similar workers in Vancouver than they do in Montreal. As to the workers in primary sector occupations, in Vancouver they would tend to have longer commuting distances than the managerial workers that are the base category whereas there is no statistically significant difference for primary sector workers in Montreal. Primary sector occupations have become largely decentralized in Vancouver (Hutton, 2010) and some of these jobs are increasingly filled by low-wage immigrant labourers that commute from urban areas. Some of these workers are known to be chauffeured by the employer in buses to do agricultural work; and the deplorable, unsafe conditions of some these buses have received press in the past (for examples, see J4MW, 2011). The trends point to the increasing marginalization of one segment of low-income workers in the post-Fordist economy as it materializes in the commute.

6.4.3 Multinomial regression of commuting mode

A multinomial regression is used to analyze the factors associated with different commuting modes of young adults in the two metropolitan areas (Table 6.9). It is the same as the model used earlier in the chapter to analyze housing decisions. Commuting modes are divided into four categories: Automobile (including driving alone or as a passenger), public transit, cycling and walking. The model uses the same independent variables as those included in the analyses of commute distance. Commuting by automobile is the base category. The results show a clear relationship between income and commuting mode. Higher income workers are more likely to commute to work by automobile (Table 6.9). The occupational variables show clerical workers to be more likely to travel to work by public transit than the base whereas the manual and primary sector workers are less likely to take transit or walk to work.

The findings point to a connection between the blue-collar suburban lifestyle where the automobile continues to play a large role as compared to those in the increasing quaternary sector occupations, for instance the social science, arts and cultural occupations shown here to be more likely to cycle to work. The finding is consistent with Danyluk & Ley's (2007) analysis at the neighbourhood scale that found those in gentrifying neighbourhoods, measured by the concentration of well-educated quaternary sector workers, to be more likely to cycle to work. Interestingly, however, at the metropolitan scale university education is associated with a higher likelihood to take transit to work.

Table 6.9 – Multinomial logistic regression of young adults' commuting mode, 2006

Public transit	Coef.	
Income (\$1000)	-.013	***
Health	-.106	
Social sciences, arts, culture	-.047	
Sales and services	-.114	
Clerical	.307	**
Manual	-.921	***
Primary sector	-1.494	***
Immigrant	.969	***
Vancouver	-.075	
Immigrant*Vancouver	-.558	***
Children present	-.592	***
Children present*Vancouver	-.049	
High school	.009	
College or trades	.135	
University degree	.459	***
Male	-.193	**
Non-family household	.568	***
Housing cost per room	1.E-05	
Constant	-.773	***
Bicycle		
Income (\$1000)	-.013	***
Health	.405	
Social sciences, arts, culture	.800	**
Sales and services	.260	
Clerical	.216	
Manual	-.348	
Primary sector	.106	
Immigrant	.278	
Vancouver	.300	
Immigrant*Vancouver	-.469	
Children present	-.553	*
Children present*Vancouver	-.619	
High school	-.227	
College or trades	-.076	
University degree	.497	
Male	.764	***
Non-family household	.485	**
Housing cost per room	2.E-05	
Constant	-3.857	***

(continued on the next page)

Table 6.9 (continued from previous page)
Multinomial logistic regression of young adults' commuting mode, 2006

Walking	Coef.	
Income (\$1000)	-.020	***
Health	-.378	
Social sciences, arts, culture	-.048	
Sales and services	.126	
Clerical	-.139	
Manual	-1.283	***
Primary sector	-2.537	*
Immigrant	.515	***
Vancouver	.470	***
Immigrant*Vancouver	-.458	*
Children present	-.315	*
Children present*Vancouver	-.883	***
High school	-.104	
College or trades	-.259	
University degree	.226	
Male	-.128	
Non-family household	.814	***
Housing cost per room	1.E-04	***
Constant	-2.066	***
LR Chi^2	1549.860	***
Log likelihood	-7822.145	
N-cases	9816	

Notes: Base is young adults commuting by automobile, Montreal, managerial occupations, non-immigrants, less than high school education, no children present, female and multiple-person households.

***p<0.0001, **p<0.01, *p<0.05.

Source: Calculated using Statistics Canada census data (2006b).

The findings are also relevant in regards to Quastel's (2009) assertion that

“the idea of the poor rendered homeless so that urban professionals can feel altruistic about riding their bicycles to work is obscene, but not far from the “sustainable” class conflicts” (p. 719).

The data provide empirical substantiation that housing costs are the factor distinguishing between those driving versus walking to work, but not cycling. The coefficient shows a positive and statistically significant relationship between the cost of

housing per room and walking to work as compared to driving. However, the cost of housing does not distinguish those taking transit or cycling to work from automobile drivers. In one sense, the higher cost of housing associated with walking to work as compared to driving is an outcome of the shifting “*meanings of public and private*” as the central city, which offers “*interconnectivity*” through its network of public spaces, is “*fast becoming a very expensive place to live*” (Kern, 2010, p. 375).

The ability to easily walk places is in essence an externality of agglomeration economies in cities that in the past was reaped primarily by low-income residents—walking was even seen as a lower class activity (Solnit, 2001; Amato, 2004). But ‘walking’ has also, as Solnit argues about the “*street*” more generally, long been the “*classic cry of urban revolution, for the streets are where people become public and where their power resides*” (p. 176). ‘Walking off the job’ into the public realm as a form of protest is, of course, the classic symbol of worker resistance to oppressive conditions. However, just as neo-liberalization has declined the power of unions, the rise in private, central city real estate price appreciation is arguably eliminating the “*social mobility*” created by public spaces where in the recent past “*everyone [could] mingle*” because of a relative “*lack of compartments and distinctions*” (Solnit, 2001, p. 176). The high cost of private property in central area could effectively remove the public element, or accessibility, of being able to easily walk to work (Kern, 2010).

The magnitude of the effect of the cost of housing does not differ between Montreal and Vancouver—any exclusionary effect in Vancouver is due to the higher absolute cost of housing, not because the relationship between housing and the commute is qualitatively different in Montreal. However, there are evident differences

between the two metropolitan areas in terms of the relationship between immigrants, the presence of children and commuting mode. Immigrants are more likely to take transit or walk to work than the Canadian born population. But the difference between immigrants and non-immigrants is smaller in Vancouver than in Montreal. As in the case of commute distance above, the finding relates to the greater degree of suburbanization of immigrants in Vancouver. The presence of children is associated with a lower likelihood to take transit, cycle or walk to work as compared to driving in both metropolitan areas. The finding relates to the residential ecology of metropolitan areas where in the post-war years, families with children were increasingly likely to locate in suburban areas where it is generally more difficult to travel without the use of an automobile (Newman & Kenworthy, 1999; Amato, 2004).

It is important to note that the presence of children in young adult households continues to be associated with longer and more automobile-oriented commutes despite the highly centralized residential ecology of young adults as a whole as this points to the importance of life-cycle stages in shaping location and commuting decisions. As van Diepen & Musterd (2009) note: *“Household structure and urbanity are indisputably related to each other”* (p. 344). The non-family households are more likely to take transit, cycle or walk as opposed to drive to work (also see Jarvis, 2001). In terms of metropolitan differences, the negative effect of the presence of children on the likelihood of taking transit or walking to work is stronger in Vancouver than in Montreal. This points to the strong association between densification and price appreciation in Vancouver that would make it more difficult to find housing for families with children in central locations where densification has been highest (Chapter Three).

6.5 Discussion

The findings in this chapter point to differences in the housing context, such as the higher share of income allocated to housing in Vancouver than in Montreal and the restructuring that created different stock and affordability conditions in the two CMAs (Chapters Two & Three). In Vancouver there has been an evident shift toward higher density dwelling types. These are relatively lower priced as compared to single-family dwellings in the CMA. Since a much higher percentage of young adults already resided in rented multiple-dwellings in Montreal, it is not surprising that there were fewer shifts in housing decisions in a context where young adults' incomes are relatively lower and housing expenditures have risen. Furthermore, because the relative difference in value and rent among dwelling types is more even in Montreal than in Vancouver, there is a shift toward single-detached homes in the former when the income differences are taken into account. The divergent findings on changing housing decisions reveal the important impact of housing costs, and the outcome on the structure of cities as households decide on smaller, multiple-dwellings in the context of rising costs (Skaburskis, 2001).

The trends also link to the changes at the neighbourhood scale that revealed a stronger connection in Vancouver between concentrations of young adults in higher density housing in proximity to transit when the household profiles were taken into account. In Montreal, centralization into higher-density housing appears to be more of a demographic effect. In Vancouver there is evidence of a structural shift toward higher density housing even when changes in income and other household variables influencing housing decisions are taken into account. Importantly, however, the data point not toward a deviation from the dominant homeownership model—on the

contrary, young adults are more likely to own condominium apartments than in the past in Vancouver and more likely to own single-family dwellings in Montreal. It remains to be seen whether the continuing effects of neo-liberalization may challenge the traditional model of homeownership since employment insecurities and globalization raise residential mobility that could make renting more attractive due to its lower transaction costs.⁶⁷

As in the previous chapter, the findings also point to the continuing importance of life-cycle stage in shaping the housing decisions, which ultimately bear influence on the residential location and the commute. It indicates the difficulties, as others have noted, in permitting families in higher density settings to shift their commute modes (Bromley et al., 2005). The trend suggests not only a social class bias in urban sustainability strategies promoting densification without provision for affordable housing (Quastel, 2009) but also an evident demographic bias (Champion, 2001; Kern, 2010). In fact, the association between higher income earners and their longer commutes and higher automobile use persists in both metropolitan areas. And it is the per room cost of housing that is associated with shorter and less auto-oriented commutes—that is to say that the demographic bias is made up of two separate but interrelated effects consisting of a ‘household-composition bias’, relating to factors such as the presence of children and number of persons, and an ‘income bias’ that relates directly to earnings. Certainly income, and location, class and lifestyle, are not separate

⁶⁷ While the housing literature has long linked housing tenure and mobility, I was reminded of this point when I came across Thomas’s (2010) on-line commentary outlining Richard Florida’s argument as to the benefits of renting in a context of labour market flexibility.

from household demographics (Mills, 1989) but the results do point to independent effects on the commute.

In general, young adult households, which tend to be smaller in size and have fewer children, have been able to access central city housing markets in a way Alonso historically theorized about low-income households. That is to reside centrally by paying more per area of housing but saving on the commute. If the densification of Vancouver's inner city is seen as a successful model for future urban sustainability as is often suggested in the planning community (Quastel et al., under review), then it would seem what is also implicitly being promoted is a future city consisting of young, non-family households without children—a future that is in the aggregate naturally unsustainable (Hall, 1996; Rotberg, 2008). The issue of household composition has thus played an evident role in shaping earnings (Chapter Four), the residential ecology (Chapter Five) and housing and commute decisions of young adults. The findings point to the important effect of household structure, which relates to life-cycle stage although admittedly in increasingly less predictable ways (Rose & Villeneuve, 2006), in shaping urban inequalities. Certainly the income inequalities arising from occupational restructuring and their spatial manifestations in urban housing markets have been well established:

“When the real estate market determines access to space, managers and those with high and rising incomes are able to outbid others for housing and location, thereby displacing low-income households from desirable neighbourhoods, driving up housing values, and contributing to greater neighbourhood segregation.” (Walks, 2010, p. 177)

These processes are expected to become exaggerated in the future as today's young cohorts are growing older in a context where educational and occupational status is more highly rewarded in the labour market (Chapter Four) and households have to spend relatively more on housing (Chapter Two). The shorter and less auto-oriented commutes will be accessible to non-family households who can trade-off the shorter commute for higher housing costs since they require less space.

At the same time, it is important to remember as noted above that higher income earners continue to have longer, more auto-oriented commutes, which as Danyluk & Ley (2007) remind us is even the case in inner city gentrifying neighbourhoods. The findings in this thesis reaffirm the powerful effect of income on consumption patterns (Weiss, 2000). Notably, the effect of income has increased when comparing housing expenditures over time (Chapters Two & Three). Although for housing type the income effect is strong, it has not increased over time. Changes in young adults' decision regarding housing type, however, are directly related to their labour market prospects, which are becoming more uneven and increasingly shaped by educational attainment.

Chapter Seven: Conclusions – Growing Just, Sustainably?

The primary aim of this final chapter is to bring together important empirical findings from the analysis throughout this thesis, and to relate these findings to overarching conclusions in regards to the question posed at the outset. In light of the changing sectoral conditions described in this thesis, however, the conclusions are also a reminder of sorts of the need to pay attention to the social justice and sustainability questions that are sure to shape our cities for young adults in the years to come (Marcuse, 1998). The smaller cohort of young adults today have lower incomes and employment prospects than that baby-boomers of the past—Easterlin’s suggestion that (1987) “*demography is destiny*”, which assumes smaller birth cohorts would have better economic prospects, does not appear to materialize. Rampant neo-liberalization and global economic restructuring have altered the context in which Easterlin’s assertions were made (Pambel & Peters, 1995). And in fact the income gap between younger and older cohorts has increased so that the smaller cohort of today’s young adults is also relatively worse off than the previous cohorts were compared to older generations.

Walks (2010) argues that “*Canadian cities are at a crossroads*” (p. 186) where globalization, neo-liberalization, post-Fordism and demographic changes have intersected to produce increases in poverty and inequality. He calls for a renewed focus on redistributive policies that would even out some of the relatively higher gains the restructured labour market pays those with higher occupational and educational attainment than in the past (Chapter Four). As the thesis has shown, one of the main questions in addressing the issue will be how to deal with the issue of growing labour

market inequalities arising from differences in educational and occupational attainment but also household composition and size that clearly emerge as key factors shaping young adults' housing location and commuting patterns. Larger households face higher costs when locating in central locations that are accessible by transit as costs per area are higher there.

The question of household size is tremendously pertinent in regards to sustainability policy that aims to reduce the amount of land consumed through higher density housing (Filion & Bunting, 2010). Whether more sustainable locations and commuting patterns that rely on higher density, and hence produce higher priced housing on a per area basis (Gurran, 2008; Skaburskis & Moos, 2010), are justly distributed across households with various incomes, and also of diverse sizes, will depend on the degree of intervention in labour and housing markets (Burton, 2000). Redistribution through the income tax system helps level some of the inequities produced in the labour market but they do not deal with the inequities in the housing markets where decisions are made by households of different sizes and compositions (Bourne, 1981). As several observers have noted, spousal relationships are more likely formed by individuals in similar income brackets than was the case in the past, which exacerbates income inequalities at the household level (Rose & Villeneuve, 2006; Townshend & Walker, 2010; Walks, 2010). Therefore, the findings suggest that redistributive policy needs to revisit the question of a family-wage, which compensates on the basis of households' needs rather than purely on the rewards of individuals' skills-sets determined by competition in the market (Hackworth, 2007; Oden, 2010).

In the case of the two metropolitan areas, young adults today are facing a context where land is increasingly made more scarce by sustainability policies while at the same time neo-liberalism is increasing competition in housing and labour markets (Kipfer & Keil, 2002; Gurran, 2008). The outcomes are greater income inequality within and between cohorts, and housing and location patterns where income is a more important distinguishing factor than in the past. These changes have had greater influence in Vancouver than in Montreal where neo-liberalism and the development of a post-Fordist labour force have been more prevalent. The difference in context helps explain the relatively lower cost of housing and greater access to central city housing markets and shorter, less auto-oriented commuting patterns by the larger households with children in Montreal than in Vancouver.

While Montreal continues to struggle with high unemployment and low income growth, the city is in some sense better positioned than Vancouver to retain affordability of central locations, and shorter, less auto-oriented commuting patterns, for households of varying incomes and sizes (Seguin & Germain, 2000). Montreal benefits from the retention of government funding to build affordable, non-market housing, which Hulchanski & Shapcott (2004) argue is the only sure way to guarantee affordability. In contrast, Vancouver is struggling, as one key informant noted, to address affordability questions in a context of a large privately- (investor) owned high-priced real estate market where governments have eliminated so many of their capacities to intervene due to neo-liberalization (also see Blomley, 2004; Kern, 2010; Quastel et al., under

review).⁶⁸ But then again, higher prices do appear to result in reductions in housing consumption (Skaburskis, 2006b), which is one eventual goal of urban sustainability policy. The conclusion is that Montreal with its relatively cheaper single-family dwellings will face greater difficulties than Vancouver in stemming the sprawling, low-density urban development patterns that sustainability policies aim to redress.

The first section that follows in this chapter reviews the characteristics of the metropolitan specific housing and labour markets as they have emerged since the early 1980s. The discussion speaks to the first research question that asked how the conditions of urban development have altered the urban housing context in Montreal and Vancouver. One theme that emerges is that although Vancouver and Montreal are specific examples—and to some extent quite different—both metropolitan areas exhibit changes that reflect broader processes of restructuring occurring elsewhere. The chapter then turns in more detail to the question of how changes in the housing, location and commute decisions of young adults are reflective of urban restructuring. Part of this restructuring is reflected in the changing household and labour market characteristics of young adults themselves who saw their occupational profiles shift toward the service sector and their incomes decline in relative terms. The restructuring also plays out in that young adults face a higher priced market and a larger supply of smaller, centrally located housing. The aim of the chapter is in part to consider what the changes imply for the sustainability of the commute and residential location patterns; and to discuss the relevance of the findings in the context of current debates on environmental

⁶⁸ Conversation with key contact, December 9, 2008: Former senior politician.

sustainability and social equity. The chapter also points to limitations in the thesis and identifies opportunities for future research directions.

7.1 Contours of Post-Fordist Housing and Labour Markets

As was stated at the outset of this thesis, the broad impact of post-Fordist and neo-liberal restructuring on Canadian (and other nations') urban housing and labour markets has been relatively well-documented in the past (Ley, 1996; Bourne & Rose, 2001; Blomley, 2004; Beer, 2006; Skaburskis & Moos, 2008; Walks, 2010):

Gentrification of the central city, reduction in government support for housing, growing labour market insecurities and income polarization arising from changes in the occupational structure are contributing to a more competitive, costlier and segregated housing market, particularly in the central city. The focus on Montreal and Vancouver in this thesis permits insight into how the changes have played out in two metropolitan areas where restructuring has occurred in different ways. On the one hand, the findings suggest that differences between the two metropolitan areas are a matter of degree. In Vancouver where there has been heightened emphasis on neo-liberalization and a more pronounced shift toward a post-Fordist occupational structure, households spend more on housing and face higher affordability burdens than similar households in Montreal.

On the other hand, the findings also point to fundamental differences in the way the urban structure and housing context developed in the two cities. Montreal was perhaps at its peak as a city during the Fordist period, its heavy manufacturing base supporting an expanding middle-class locating in suburban areas—although seeing recent growth in the new economy sectors, the city continues to struggle in terms of economic growth (Germain & Rose, 2000). In contrast, Vancouver developed as a

regional service centre for the resource economy. Despite being a gateway city for Pacific trade and immigrant flows, Vancouver's global connections remain limited in the sense of having head offices or a financial sector yet its labour force and urban economy are archetypical of the new economy as it emerged since the 1980s (McGee, 2001; Hutton, 2008; Barnes et al., 2011).

The urban context in Montreal is perhaps aptly described as post-Fordist in a "*Fordist spatial canvass*" (Kesteloot, 2000), displaying gentrification in a declining industrial inner city, surrounded by expanding suburbs (Germain & Rose, 2000). This is an urban form that reflects elements of both the traditional Keynesian-welfare state in terms of housing and labour market policy, as well as the emerging quaternary sector. Increasing also is the urban entrepreneurialism to market the central city as a space for consumption and private real estate. However, the Fordist period was also unmistakably different in Montreal in that rental housing played, and continues to play, a much larger role than in any other North American city (Choko & Harris, 1990).

In Vancouver, the housing context is unmistakably characterized by central city condominiums that have become symbols of neo-liberal urbanism, and are an extension of the home-ownership ideals to the central city (Kern, 2010; Harris, 2011). Higher density housing forms also extend into the suburban areas along transit lines, which are outcomes in part of proactive regional planning policies and also higher housing costs (Newman & Kenworthy, 1999; Harcourt & Cameron, 2007). Sustainability ideals thus played a role here in shaping the urban form but important are of course the neo-liberalization of policy that shifted attention to the housing market as a means to attract foreign capital (Mitchell, 2004) and the post-Fordist restructuring, facilitated by local

planning policies, that transformed the inner city from industrial to residential spaces (Hutton, 2004).

The societal changes are also visible in the changes in the composition and characteristics of households that alter the housing context through changing decisions about housing consumption. For instance, the growing presence of immigrants in Canadian cities contributes to aggregate increases in demand that in the case of Vancouver is linked to aggregate price increases (Ley & Tutchener, 2001). The analysis of immigrants in Vancouver and Montreal who are homeowners as compared to the rest of the population also revealed important changes in how households allocate income toward housing. The strengthening of the relationship between permanent income and housing expenditure (also see Chapter Two), and also housing consumption (Chapter Three), are a direct proof of the ways housing markets in the post-Fordist city have increasingly regressive effects as has been previously noted (Walks, 2010). Higher income earners are able to spend more of their income toward housing to maximize the “*use*” and “*exchange value*” of their housing locations at the same time (Wyly, 1999). Lower income households are increasingly struggling with affordability issues as those buying real estate for price gains push up prices for those who struggle to find adequate shelter (Bunting et al., 2004).

The analysis also revealed that the increasing segments of immigrants who arrive with large amounts of equity disconnect local housing from labour markets. In the ownership market, immigrants allocate less of their income on housing than do the local population in both metropolitan areas. In part this reflects the influx of immigrants arriving with equity but it also points to immigrants’ higher tendency to save (Mendez

et al., 2006; Hiebert et al., 2008). This difference between immigrants' and non-immigrants' propensity to save certainly warrants further investigation in a context where household debt levels are reaching new highs and housing markets are inflated by increasing debt to earnings ratios (Walks, 2011b). But the findings here also suggest caution since cities with a large influx of wealthy immigrants could see debt to earnings ratios 'artificially inflated' as immigrants arrive with foreign equity or continue to earn (unreported) income outside the country (Chapter Three). Some immigrants can afford 'more housing' than their locally earned income suggests.

Immigration has played a larger role in Vancouver's growth and changing social composition than in Montreal, which makes aggregate effects on ownership markets less notable in the latter. As housing markets become increasingly shaped by global immigrant flows, unevenness between places that receive immigrants and those that do not will grow (Bourne, 2007a; Filion & Bunting, 2006). The theme of increasing unevenness also aptly describes several other changes in the housing context: For instance, increasing difference over time in housing expenditure required to attain similar housing in large versus small urban areas; increasing difference in housing affordability burdens between high and low income earners and renters and owners; and as discussed further below, increasing difference between generations.

Overall, at the metropolitan scale the number of cases is too small in this analysis to end with any sort of typology of how restructuring impacts urban housing markets with different histories and socio-economic conditions. But certainly the comparison of Montreal and Vancouver does allow some tentative conclusion in terms of processes. That is, the way restructuring impacts household housing, location and

commute decisions is an outcome of the degree to which the urban housing market context is shaped by neo-liberalization, post-Fordist restructuring and regional planning policy. As others have noted (Shearmur, 2006), the context of the city is not “*secondary*” to location and commute decisions (contra Alonso, 1964; MacLennan, 1977). The particularities of how the changes play out at the household-level are further explored through the lens of young adults who because of their early stage in housing and labour markets are a good indicator of the impacts in a specific context (Myles et al., 1993).

7.2 Young Adults’ Housing, Location and Commuting Decisions

The overarching finding is that young adults’ changing household and occupational profiles reflect larger societal trends. As others have suggested (Calvert, 2010; Beer et al., 2011), housing is impacted by the way household size is declining, child bearing is delayed and the occupational structure is shifting toward the service sector. But there are nuanced differences between the two metropolitan areas reflective of the local context. For instance, young adults remain more likely to be found in the manufacturing sector in Montreal whereas Vancouver’s young adults are more likely to be employed in tourism and hospitality sector occupations. The quaternary sector occupations have increased in both metropolitan areas. Interesting also is the level of similarity found between the two metropolitan areas in terms of the changing income distributions. Young adults in Montreal and Vancouver experienced increases in intra-cohort income inequality and an expanding wage gap between younger and older cohorts. Education and occupational status have become more important determinants of young adults’ earnings, which are expected to contribute to increasing income

inequality in the future. The changes alter the young adults' housing, location and commuting decisions, which are also shaped by the changes in the urban structure and housing context.

The important role of education in shaping young adults' income distributions warrants re-emphasis (Chapter Four). Educational attainment has increased but at the same time education has become a more important determinant of earnings. Someone with a university degree is earning relatively more today than in the past as compared to someone with a secondary school diploma. Education can therefore be expected to become a more important determinant of social differentiation. This is especially because, as noted earlier, small differences in earnings among young adults can translate into larger differences in the future as the returns to education increase with experience in the labour market. More young adults today than in the 1980s, or at any time before that in fact, are able to pursue a university education but commonly overlooked in the present context are those who are not able to access the educational opportunities:

“It is a parody picture, perhaps: the educational system provides a way out, and is immeasurably richer than [in the past]. But not enough of a parody to leave anyone feeling comfortable: too many of the young people of the city – whether the city is London or Paris or Amsterdam, New York or Chicago or Los Angeles – are alienated from the educational process and are effectively withdrawn both from it, and thus from the informational economy to which it provides the one essential key.” (Hall, 1996, p. 422).

The findings show that the two Canadian metropolitan areas studied in this thesis can be added to Hall's list of cities where education is defining earnings. The educational dimension of increasing income inequality has received less attention than occupational

restructuring but it is certainly a factor that warrants further consideration in future research, especially the role of education in shaping the social ecology and housing markets of cities. Differences in educational attainment are not only excluding some from the “*informational economy*” as Hall suggests but also influence housing markets through changes in earnings with implications for the social geography of cities. Both educational attainment and housing ownership are known to have lasting intergenerational consequences—the literature reviewed in this thesis shows these effects have even become stronger over time (Chapter Four). Any achievements toward greater universality in access to housing and education—causes at the forefront of social justice debates in the 1960s and 1970s—are seemingly being reversed by neo-liberalization and socio-economic restructuring (Leitner, Peck & Sheppard, 2007; Hackworth, 2007).

The linkages between changes in context, in household level earnings and in housing consumption also speak to the conceptual dimension of the thesis in how young adults make decisions in different contexts. Captured by the theory of structuration, the changes in the economy and governance structure have reshaped the earnings structure, which in turn alters housing decisions and eventually reshapes the housing context over time. At any given moment in time—as analyzed by static census data—young adults are making decisions within a specific structuring context. A main task of the thesis was therefore to disentangle the household factors from the structural context in a given time and place. An important conclusion here is that the characteristics of the households are important determinants of housing, location and commute decisions. Yet at the same time there are key differences between Vancouver and Montreal, and over time, which

evidently point to the impact of the restructured context on young adults' decisions. We conclude from empirical estimation that besides the characteristics of individual workers, the larger contextual questions of how socio-economic restructuring shapes different cities and their housing markets ought to be included in research on changing residential location and commuting patterns (Pratt, 1996; Jarvis, 2005).

The changes in housing decisions toward the higher density locations appear to reflect in part the increasing levels of income required to acquire housing in a context of urban neo-liberalization. As noted earlier, households make trade-offs between “*use*” and “*exchange*” value of a specific housing type and location (Wyly, 1999)—the context has changed in a way so that those with higher earnings can purchase houses in locations (i.e., central city condominiums) that allow them to maximize both of these components of housing. Others are restricted to rent, disperse to the suburbs or reside in lower quality (and often overcrowded) housing spaces (Blomley, 2004; Rotberg, 2008; Kern, 2010; Beer et al., 2011).

The findings do, however, point to the importance of household level factors stressed in the neo-classical accounts. Household size, composition, gender and earnings structure shape in large part the decisions about housing, location and the commute of young adults. However, the link between demography and particular housing decisions are only relevant within the specific structures that worked to create these relationships. Individual, demographic characteristics have become ‘better’ predictors of household decisions since 1981—this can be explained by the changes in context where neo-liberalization is creating a system where rewards are increasingly determined on the basis of individual characteristics (Hackworth, 2007; Lee et al., 2008;

Walks, 2010); and the social ecology of cities is more rigidly defined by lifestyles, ethnicity, class and also life-cycle stage (Vanderbeck, 2007; Townshend & Walker, 2010).

The other important conclusion to draw from the relationship between household characteristics and housing decisions is in regards to the social equity dimension of urban sustainability. The question “*sustainability for whom*” (Marcuse, 1998) has commonly been interpreted in the “*eco-gentrification*” debate (Quastel, 2009) to imply that high-income earners will move downtown and close to transit to reduce their commutes and housing consumption. While some degree of “*eco-gentrification*” is undeniable from the findings here (e.g., decrease in proportion commuting by car among quaternary sector workers), the strong positive association between income and single-family dwelling occupancy, more dispersed locations and longer, more auto-oriented commuting patterns suggests the potential for an alternative, perhaps simultaneous, trend of decentralization arising from the increase in densification of cities (e.g., Preville, 2011).

The higher density downtowns that now are broadly occupied by the middle-classes may well once again see disappearance of higher income earners as housing costs increase in central cities to a point where even higher income earners face ‘affordability’ concerns (Chapter Five), and perhaps the growth of condominium markets contributes to a loss of the downtown’s “*counter cultural*” appeal (Hall, 1996; Ley, 1996; Lloyd, 2006). Dispersal by the higher income earners may occur not to the immediate suburbs, which have now claimed a reputation for being unsustainable, but to the medium-sized and small cities and towns surrounding large metropolitan areas (cf.

Ley, 2007). It is here where workers in professional and managerial occupations have been reported to find ‘affordable’ real estate on waterfront locations as a recent news article describes (Preville, 2011). The changes appear to have been enabled in part by more flexible work arrangements and the higher relative earnings of those in managerial and professional occupations that enable them to work reduced hours (c.f. Moos & Skaburskis, 2009).

“According to the [Statistics Canada] data, people aged 25 to 44 were most likely to move out [of the City of Toronto], and between 2001 and 2006 some 95,700 of them did. We’re more likely to leave if our household income is between \$70,000 and \$100,000 (after tax), if we hold a post-secondary degree or if we recently became parents. Which only makes sense: six figures makes you rich if you’re childless, but quickly drops you down to middle-class if you’re raising a family. The only people who fit the demographic and are likely to continue living the downtown life are arts professionals and university profs. Otherwise, Toronto is losing many of its young, middle-income, professional, two-parent families.” (Preville, 2011).

The long-term result may very well be that the higher income earners find themselves once again commuting from the suburban fringe into the ‘congested’ inner city, a residential ecology reminiscent of the industrial city (Marcuse & van Kempen, 2000). The commute may, however, only be once or twice a week due to the more flexible work schedules (Preville, 2011). The questions of how changing work arrangements, and their intersection with class, gender and life-cycle stage, factor into location decisions and commute patterns require further analysis.

In addition, the thesis makes an important conceptual contribution regarding the age dimension of urban social space. Evidently, age is a separate dimension of the residential ecology but it has not traditionally received explicit treatment. It is by now well established that societal changes are contributing to heightened socio-spatial

fragmentation along gender, class and ethnic lines. Clearly, alongside these factors age needs to be included as an important aspect of socio-spatial segmentation in the urban landscape. Increased spatial segregation of age cohorts is an indication of a growing fragmentation of the city into distinct consumption groups, which is an outcome of the marketization of housing and amenities to different lifestyle groups. As discussed in Chapter Two, age segregation has increased in recent years in part due to the heightened pace of societal change that would increase the differences in values, norms and beliefs among cohorts.

While spatial residential segregation cannot in itself speak to the degree of social segregation, the extension of the young adult life cycle stage, and its manifestation in the high-amenity areas of the city, suggest ‘social distance’ between cohorts that can lead to challenges in social interaction. An example of this is the workplace where cohorts face greater exposure to other age groups than in the residential and consumption spaces. The growing literature on generational change, and the challenges of finding common ground between generations, speak to larger societal challenges of ‘how to live together’ and foster mutual understanding in a metropolitan context where difference, be it age, class, gender or ethnicity, are producing stronger socio-spatial delineations. While the spatially segregated city is in part built on an acceptance of difference, such as multiculturalism (Ley, 2007), social commentators and policy-makers ought to ask more explicitly about what we are losing if we increasingly mingle only with people like ourselves. In fact, it may be more difficult over time to maintain values such as mutual acceptance in a context where social groups are increasingly segregated.

The research also has important implications for the current debate on sustainability and housing affordability in growing cities. While housing affordability has been a component of urban sustainability policies such as Smart Growth since the 1990s, the concern over loss of agricultural land and negative environmental effects of sprawl have been the dominant drivers of the movement. In Vancouver, the metropolitan area where urban sustainability has been a predominant objective in urban planning policy, gains in housing densities and proximity to transit among young adults have indeed been attained. However, it is evident from the research here that these gains have come at a cost in terms of housing affordability—clearly, the young adults face a more expensive housing market context in Vancouver. It is also apparent that in Vancouver, immigrants, larger households and those with children have longer and more auto-oriented commutes than their counterparts in Montreal, which speaks to the structuring effect of the expensive, high-density housing market near transit in Vancouver.

The overarching lesson for policy is certainly that intervention in the housing market can be justified on affordability grounds as a growing share of young adults are facing affordability burdens. However, such an agenda also requires consideration of housing suitability—housing of adequate size for different households—a component of housing policy that only in recent years appears to have returned to policy discussions. Twenty to thirty years of neo-liberal restructuring have resulted in a more competitive urban housing market context where housing in highly accessible locations is built at high-densities according to economic theories of ‘highest and best use’. The outcome as seen in Vancouver’s urban landscape are high-rise condominium towers with small

units that would rarely make them suitable to larger households with children.

Households with children moving into the central city would tend to be those with above average incomes. Housing policy lessons can be learned from Montreal where relatively affordable rental apartments with three or four bedrooms can still be found in the downtown and near transit. The stock is a legacy of government intervention in housing in the 1960s and 1970s, which to some extent also exists in Vancouver's West End. But this stock has been maintained to a greater degree in Montreal due to continued support by the province and the city toward affordable housing.

Social commentators in the press are increasingly pointing to the negative effects of high housing prices and rents on labour force retention, some even suggesting that Vancouver is at risk of losing its young adults to cities with lower housing costs. Housing policy may thus once again become centre stage, even in a context of laissez-faire governance, as 'neo-liberal governments' are recognizing the impacts expensive housing markets have on economic competitiveness and the efficiency of local transportation systems. Housing policy justified on efficiency as opposed to equity grounds, however, is more likely to be targeted at middle-income earners and high-paid professionals. Certainly, housing affordability has become a concern even at higher income levels in Vancouver but in a context where filtering is not generally a reliable means of maintaining an affordable housing stock due to gentrification (Skaburskis, 2006a), addressing affordability by providing stock or income supplements to middle and higher income earners could even further deteriorate the housing situation of those already worst off. As discussed further below by drawing on Harvey's consideration of

how competition shapes cities, housing provision on equity grounds necessarily has to involve reduced competition in the market.

7.2.1 A “smart growth” generation?

“With a taste for urban living as well as an appetite for public transportation and a strong green streak, Generation Y could very well be the first smart growth generation.”
John McIlwain, Urban Land Institute (cited in Broberg, 2010, p. 5).

The differences between young adults in Montreal and Vancouver in terms of the changing housing and location decisions is an important finding in regards to the urban planning policies that are aiming to increase the density of the built form for sustainability reasons. The attainment of sustainability goals in planning is commonly measured by changing densities and forms of aggregate development patterns, an approach that as Skaburskis (2006b) argues, ignores the demand side of how households move through life-cycle stages (also see Bromley et al., 2005; Fiedler & Addie, 2008). Higher density housing, as Skaburskis shows in his case study of residents in a New Urbanist development in Toronto, adds an additional option to entering the housing market in a smaller unit, potentially leading to more sprawl as households upgrade to larger housing in the future. Although the analysis here does not follow households as they move through life-cycle stages, it also provides insight into the “*demand side*” of sustainability in that it asks whether young adults’ housing decisions are shifting toward higher density options as compared to earlier generations when changing household characteristics are taken into account (Skaburskis, 2006b).

Thus, in extending Skaburskis (2006b) argument to the metropolitan scale, the findings here would indicate some success in terms of attaining the sustainability goals of young adults' increasing tendency to reside in higher density census tracts than in the past in Montreal and in Vancouver. However, only in Vancouver is there a shift toward the transit corridors when household characteristics of the tracts are taken into account. Furthermore, at the household scale the shift is evidently away from single-family dwellings toward multiple-dwellings in Vancouver but not in Montreal. Therefore, the comparison of young adult cohorts in two different time periods in Montreal and Vancouver reveals the success of regional growth management policies in the latter— young adults are locating more densely and closer to transit than in the past even when income differences that determine affordability are taken into account. However, the comparison also suggests that young adults in Vancouver will eventually have comparatively lower equity than their counterparts in the early 1980s because they are, holding other factors constant, more likely to be renters or own a multiple dwelling that is lower in total value.

The changes will make it less likely that they can follow the footsteps of earlier cohorts in terms of attaining similar levels of single-family dwelling ownership in the long term (also see Calvert, 2010; Beer et al., 2011). The reverse may be said about Montreal. Furthermore, while Skaburskis (2006b) suggests that “*in the long run*” it is “*demand-side pressures that forge the shape of cities*” (p. 233), the analysis here evidently demonstrated that contextual factors, after household characteristics are taken into account, hold explanatory power in terms of young adults' housing, location and commute decisions—that is to say that young adults are realizing their housing demands

within pre-determined structures but we might expect that their actions will in concert alter the housing context, creating new structures for the future (Giddens, 1984; Pratt, 1996). At the same time, since recent neo-liberal restructuring has created a context where changing housing types and styles are marketed to particular lifestyle groups one might expect an increasingly stronger relationship between individual characteristics and housing (cf. Weiss, 2000)—again, it is the changes in context that would make demand-side variables become more closely aligned with housing outcomes (Fiedler & Addie, 2008). In other words, it should be of little surprise that household level variables have become better predictors of the residential ecology (Chapter Five) when neo-liberalization is reshaping the context to make it fit its ideological assumptions of the supremacy of competition and individuality (Larner, 2000; Lee et al., 2008). These variables factor into the assumptions underlying the neo-classical theories of housing and the commute. Thus, following Harvey (1973/2008), as cited in Lee et al. (2008, p. 49), the resolution to the urban inequities,

“is to eliminate those mechanisms which serve to generate the theory. The mechanism in this case is very simple—competitive bidding for the use of the land.” (p. 137)

Also interesting are the differences in terms of the commuting distances and modes between Montreal and Vancouver that are to some extent fewer than we might expect between cities on almost opposite ends of a continent with different income levels, climates and urban structures. There has been a shift toward shorter and less auto-oriented commuting patterns in both metropolitan areas as the research that links density and centrality to more sustainable transport patterns would predict from the

changing location patterns of young adults (Ewing et al., 2008). In 2006, however, there are no overall differences in commuting patterns between Montreal and Vancouver when the characteristics of the commuters are taken into account. For instance, differences in the size of the quaternary sector, which is associated with shorter and less auto-intensive commutes, explain the metropolitan differences. Evidently, however, larger households with children, and immigrants, have relatively longer commutes and are more likely to travel by automobile in Vancouver than in Montreal. These relate to the differences in how the housing context has changed over time. In Vancouver, the locations that are most walkable and accessible by transit are those that have seen the highest increases in densities as well as housing prices and rents (Chapter Three), which would make it more difficult for the larger households to find housing there. Future research that deals more explicitly with questions of commuting time, and commuting patterns generally for different intra-urban locations, can shed more light on how the urban context is shaping commuting patterns differently in the two cities.

The findings here do suggest that today's young adults may be showing signs of the coming of "*smart growth*" inspired location decisions that would continue to reshape the housing context (Broberg, 2010; Filion & Bunting, 2010). This finding is more evident in Vancouver, which necessarily raises the question again of housing costs. Does higher density living inherently need to come at a higher price? In a competitive market framework, the answer would be yes. And arguably the intent has in fact been to raise prices of land, formerly used inefficiently due to price distortions arising from government investments in infrastructure and other factors facilitating suburbanization at low densities (Tomalty, 1997; Skaburskis & Moos, 2010). The shift toward neo-

liberal policies, post-Fordist occupational restructuring and changing household arrangements exacerbate the effects in housing markets by resulting in a more uneven income distribution and higher share of low-income earners. There is more (global) competition and less government support for those unable to pay market price for housing in a context where supply is being constrained and housing is to be built near amenities, such as transit, known to come at higher costs from several decades of urban economic research. Addressing the affordability and social equity dimensions of sustainability policy in a context of higher priced housing markets and constrained land availability will thus require a reexamination of how to balance the investment and shelter components of housing (Bourne, 1981). Access to adequate housing is part of the United Nations Charter of universal human rights that Canada signed but ensuring universal access is at odds with neo-liberalization that has heightened the competitive dimension of housing markets and increased inequality in labour markets that also shape housing outcomes (Blomley, 2004; Hulchanski & Shapcott, 2004; Hackworth, 2007).

Besides affordability concerns, another plausible implication of higher housing prices is a decline in household formation and size (Skaburskis, 1994; Lauster, 2010). In other words, not only are non-family households without children more likely to reside in higher density housing but the increasing density of cities and their higher priced housing could be a disincentive to childbearing, which further reinforces existing societal trends of changes in household arrangement and delay in family formation among young adults (Champion, 2001). The trends offer a Malthusian solution of sorts to growing sustainability concerns in that they stem population growth that Malthus

theorized as the main determinant of unsustainable resource consumptions (Wheeler & Beatley, 2009). The argument of population overshoot as a cause of environmental degradation has several critiques of course but here most pertinent seems to be a normative question as to whether as a society it is desirable to aspire to a kind of urban future that appears to discourage child bearing due to high housing costs. The findings in this thesis do indicate that in a higher-density city, family formation and child bearing could become a luxury available only to high income earners who can afford to own or rent housing with enough rooms to accommodate the larger households. The overcrowding among low-income, especially immigrant, households is an alternative outcome (Jakubec, 2004). Therefore, in terms of Rawls' notion of distributive justice (Chapter One), housing, location and the commute are increasingly less equally accessible to larger households and those with children, and this effect is stronger in Vancouver. The question that remains is of course whether the rights of individuals actually extend to the household level (Burton, 2000). It is evidently household characteristics, besides income, that shape the decisions young adults' are able to make in the altered housing market context.

7.4 Limitations

There are always limitations that constrain conclusions—more variables and more refined geographical data collected at more frequent intervals would permit more detailed analysis of young adults' household-level decisions at the intra-urban scale. More qualitative data of households' decisions would reduce the need to make assumptions about motivations behind changing decisions; and focusing on one specific

aspect of the changes for young adults would permit asking more detailed or nuanced questions regarding specific elements of housing and commute decisions. However, any lack of specificity in terms of theoretical or empirical treatment is an inherent outcome of an interdisciplinary study that scans a vast array of literature to arrive at an integrated picture. In fact, the marrying of research on economic restructuring, housing market changes, labour restructuring, commuting, cohort effects and urban sustainability is an important contribution of this research. The quantitative research attempting to unravel context encounters similar limitations as those found even in qualitative studies in the extent they can “*allow[e] for contextual richness*” while at the same time “*unearthing casual mechanisms*” at different scales (Pierre, 2005, p. 456, as cited in Boudreau et al., 2007). Two conceptual limitations that require further treatment in future research relate to how the quantitative methodology treats the demographic variables and the estimation of long-term income based on past predictions as discussed below.

It is important to acknowledge that while it is statistically possible to isolate household characteristics, in actuality household arrangements arise within the context of larger societal transformations and cannot simply be assumed to conform over time to a prior expectation of housing life cycles that follow those of earlier generations (Rose & Villeneuve, 2006; van Diepen and Musterd, 2009). As pointed out earlier, the changing characteristics of households are in and of themselves revealing changing structural conditions as well as the connections among “*life modes*”, “*the meaning of home*”, “*lifestyles*” and preferences that impact location and housing decisions (Aero, 2006). Decisions about household arrangements and child bearing are influenced by tighter housing market conditions, uncertain economic conditions and the desire for an

urban lifestyle (van Diepen & Musterd, 2009; Lauster, 2010). If the tendency to reside in high-density, multiple-dwellings in central areas is not 'just' seen as a reflection of changing demography (contra Alonso, 1964) but part of a larger process of societal restructuring, then the household level characteristics are actually endogenous to the changes in housing decisions being observed. Therefore, there are obvious limitations to using multivariate models that treat household characteristics as exogenous in housing decisions when working under theoretical assumptions of structuration where the characteristics of households are both a reflection of structuring conditions as well as a foundation for subsequent structures.

The calculation of income prospects does to some extent acknowledge that earnings are a function of labour market factors. This thus introduces more explicit consideration of the endogeneity of household characteristics in housing consumption (Moos & Skaburskis, 2008). The strong associations between housing type, tenure, expenditure and the permanent income variable are important in that they suggest that young adults' housing decisions are directly linked to the factors that determine long-term income prospects such as occupation, gender, number of earners in a household and education. These are the variables that are strong indicators of contemporary urban change. They are indicators of structural changes. However, since the permanent income variables are estimates of labour market prospects based on how individuals with given characteristics fared in the past, there is of course no guarantee that these same set of parameters will determine long-term income potential in the future.

There is an increasing recognition that due to rising educational attainment, the earnings expectations of someone holding a university degree will no longer be the

same as it was for someone entering the labour market when post-Fordist restructuring was just beginning to take hold. Certainly, as shown in Chapter Four, education has become a more important determinant of earnings among young adults. However, young adults with similar educational attainment or in similar occupations are earning relatively less today. The implication of this limitation is potentially large. If the earnings potential associated with educational attainment is actually lower than expected, because the expectations were based on historic outcomes and may not pan out to have as high a pay-off as in the past, young adults' future earnings and their ability to afford housing would be more severely restricted than the findings indicate in this thesis.

It can be inferred from the multivariate models relating permanent and monetary incomes to housing decisions that shifts toward multiple-dwellings and rental markets would be much stronger should the expected earnings be lower than they were in the past. In other words, continuity of recent economic decline in the years following the most recent recession has likely lowered long-term expectations of labour market growth and earnings. This has perhaps also introduced new caution about the potential gains from real estate markets that could show up in more recent data as a reduction in the amount of income allocated to housing and as increased levels of inequality (Beer, 2006; c.f. Wyly et al., 2009). In some sense, the findings in this thesis are a baseline of sorts to which future analysis of young adults in the 'post-mortgage-induced' housing crisis can be compared.

7.3.1 Challenges for the future

“It isn’t that younger Canadians find the world in which we live inherently unfair. But the bar of success is much higher than it was for our parents and grandparents, and the margin of error is much smaller. If, like the average Canadian undergraduate in my generation, you graduate from university with \$25,000 in student debt, were required by the banks to start paying it off in six months, and found that the only job your degree qualifies you for was an entry level barista at the local Starbucks, you might prefer to take that long walk off a short ledge and take your chances in one of Canada’s supposedly under-funded hospitals”. (Fawcett, 2007)

There is little question that the standard of living for many people in Canada has continued to increase over the past twenty to thirty years. Some young adults today are able to pursue opportunities, and consume products, unimaginable to previous generations. A comparison of cohorts opens the door to somewhat self-serving arguments over the level of ‘hard work’ required by one generation versus another to attain a particular standard of living—but petty arguments over ‘who worked harder’ is not the intent of this thesis. Many young adults in generations past and present have worked hard for their accomplishments. Is the *“bar of success”* set higher today? We may not be able to fully answer that question. But it is certainly evident from the findings in this thesis that the rules by which we have organized our housing and labour markets have been rewritten, which exposes young adults today to very different kinds of conditions.⁶⁹ In Montreal and Vancouver the rules have been rewritten in a way that labour markets are less secure and pay relatively less than in the past for similar kinds of jobs. Yet at the same time, housing costs are higher and more income is required to

⁶⁹ The news coverage on the changing conditions faced by young adults grew dramatically in the final stages of writing this thesis due in part to the Occupy Wall Street movement (e.g., Kershaw, October 18, 2011).

attain a similar kind of housing status as those of previous cohorts. Inequality has increased.

Some social commentators have labeled today's generation of young adults as having an exaggerated sense of entitlement (Twenge, 2006; Fawcett, 2007; Mason, 2011).⁷⁰ The many conveniences and opportunities modern life is offering today have perhaps, it is argued in these debates, overshadowed the difficulties faced by generations before us, reducing appreciation for what we have today. It has created entitlement for things seen as luxury to previous cohorts. In a context of continually high levels of poverty around the globe and environmental degradation arising from resource extraction, tapering our sense of entitlement for consumption products is perhaps advice today's young adults ought to take more seriously.

However, if a stronger sense of entitlement is at all a desire by young adults to receive the same pay as someone did for a similar job twenty years ago, to have access to similar kinds of housing opportunities, to see similar (or even lower) levels of social inequality than in the past or to have a natural environment of equal quality as the one our parents inherited from theirs, then entitled, this young author argues, we shall be! In fact, the entitlement of present and future generations to jobs, social equality and environmental protection is at the heart of the sustainability debate. Yet obviously entitlement is not enough to address growing social inequality and environmental sustainability concerns: Will today's young adults stand up to the injustices that social

⁷⁰ For further reading on generational change, see for example (book information abbreviated for brevity): R. Alsop's (2008) *The trophy kids grow up*, L. Chamberlain's (2008) *Slackonomics: Generation X in the age of creative destruction*, E. Cheung's (2007) *Baby boomers, generation X and social cycles*, S. Craig and S. Bennette's (1997) *After the boom: The politics of generation x*, S. Cullis-Suzuki et al.'s (2007) *Notes from Canada's young activists*, E. Greenberg and K. Weber's (2008) *Generation we*, R. Huntley's (2006) *The world according to y*, and D. Tapscott's (1998) *Growing up digital*.

and environmental activists since at least the 1960s have worked hard to reverse? Will we work tirelessly for the environment and those less fortunate as some before us have done? Will we perhaps even forfeit some of our own material consumption in the name of sustainability? For our future children, I hope so.

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