Attitudes toward Urban Living, Landscape, and Growth at the Dawn of Greater Toronto's Growth Management Era

by

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AUTHOR'S DECLARATION FOR ELECTRONIC SUBMISSION OF A THESIS

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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ABSTRACT

The Greater Toronto Area (GTA) is Canada's largest metropolitan area and principal destination for international migration and investment. Over the next 25 years, the GTA is anticipated to grow by approximately 2.5 million people to a population of almost 8 million. While many view this growth as a symbol of economic prosperity, others see it as a threat to Toronto's economic, environmental and social well-being due to the dispersed, automobile-oriented way in which the city has accommodated its growth since the 1950s.

Over the last two decades, planners have focused much energy on ameliorating the shortcomings of post World War II urbanization by developing policy measures such as Smart Growth, Growth Management, and New Urbanism that aim to alter the way in which cities are built and thereby effect change in the lifestyles that have precipitated from this landscape. In Ontario, the Provincial Government recently launched a Growth Management campaign for the Toronto area called *Places to Grow*. Although many have attempted to define this relationship between environment and behaviour, little attention has been given to attitudes, preferences, and behavioural tendencies of those who will be most directly affected by such policies: the general public.

This study surveys residents from six GTA neighbourhoods in order to understand their attitudes and preferences toward urban living and accommodating urban growth and thereby shed light on where support may be found for implementing *Places to Grow*. Academic literature suggests that residents generally oppose changes to the physical landscape that do not conform to prevailing cultural values and attitudes. The results of this work indicate that people generally support development that is in keeping with the landscape to which they are habituated. Given that most

Torontonians live a suburban lifestyle and that most of Toronto's growth occurs in the suburbs, municipalities may be challenged to implement *Places to Grow* which stands to impact the suburban landscape more than other areas of the region. If *Places to Grow* is to be successful, planners must have a better understanding of residents' preferences and motivations in order to attract and maintain their interest in community development throughout the entire planning process.

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DEDICATION

To Braeden, Sloane and Norah,

You have taught me the true meaning of life.

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CHAPTER 1: INTRODUCTION

1.1 Context

In recent years the Greater Toronto Area (GTA)[1] has experienced a tremendous amount of urban growth as a result of its position as Canada's principal magnet for people, investment, and jobs. For those unfamiliar with the city, one can quickly gather a sense of the magnitude of Toronto's[2] growth by travelling in and around the city. Along the city's edge, swaths of fields are being transformed into seas of homes, industrial parks and commercial districts. Suburban downtowns such as the Mississauga City Centre, North York City Centre, and Scarborough City Centre have undergone a metamorphosis as condominium towers sprout from the landscape while Toronto's downtown skyline, once dominated by office towers, is now making way for a surge of residential high-rise buildings with cranes dotting the sky.

Compared to other Canadian cities, Toronto's absolute growth is unparalleled. Since 1981, no Canadian city has posted an average annual absolute change in population greater than Toronto (see Table 1.1 on the next page). In fact, between 1981 and 2001, Toronto added approximately 83,000 new residents annually – roughly 2.3 times higher than its nearest counterpart, Vancouver.

[1] The GTA is comprised of the City of Toronto and the surrounding Regional Municipalities of Durham, Halton, Peel, and York.

[2] "Toronto" for the purpose of this thesis is synonymous with the GTA unless it is prefaced by "City of" which then draws reference to the political unit that is the City of Toronto.

Table 1.1: Population Growth in Canada's Largest Cities (500,000+), 1981 - 2001

	Population 1981	Population 1991	Population 2001	Absolute Change 1981-2001	Average Annual Absolute Change 1981-2001	% Change 1981-2001
GTA	**3,417,711**	**4,235,756**	**5,081,826**	**1,664,115**	**83,206**	**48.7**
Montréal	2,828,349	3,208,970	3,426,350	598,001	29,900	21.1
Vancouver	1,268,183	1,602,590	1,986,965	718,782	35,939	56.7
Ottawa - Hull	717,978	941,814	1,063,664	345,686	17,284	48.1
Calgary	592,743	754,033	951,395	358,652	17,933	60.5
Edmonton	657,057	841,132	937,845	280,788	14,039	42.7
Québec	576,075	645,550	682,757	106,682	5,334	18.5
Winnipeg	584,842	660,450	671,274	86,432	4,322	14.8
Hamilton	542,095	599,760	662,401	120,306	6,015	22.2

(Statistics Canada, 2003; 2003b; 2003c)

In recent years, Toronto's strong population growth has also been coupled with a boom in new home construction. Between 1998 and 2005, new home starts rose to levels rivalling those reached during the housing boom of the late 1980s (Greater Toronto Homebuilder's Association, 2002).

Table 1.2: *# of Housing Starts in Large Canadian Cities (500,000 +), 1998 - 2005*

	1998	1999	2000	2001	2002	2003	2004	2005
GTA*	**27,669**	**37,367**	**41,856**	**43,578**	**47,295**	**49,382**	**45,268**	**44,530**
Montreal	10,293	12,366	12,766	13,303	20,554	24,321	28,673	25,317
Vancouver	11,878	8,677	8,203	10,862	13,197	15,626	19,430	18,914
Calgary	12,495	10,600	11,093	11,349	14,339	13,642	14,008	13,667
Edmonton	5,947	6,655	6,228	7,855	12,581	12,380	11,488	13,294
Ottawa	3,615	4,447	5,786	6,251	7,796	6,381	7,243	4,982
Quebec City	1,845	1,814	2,275	2,555	4,282	5,599	6,186	5,835
Hamilton	3,627	3,923	3,108	3,365	3,803	3,260	4,093	3,145
Winnipeg	1,575	1,772	1,317	1,473	1,821	2,430	2,489	2,586

*GTA figures comprise housing starts for the Toronto and Oshawa CMAs combined.

(Source: Canada Mortgage and Housing Corporation, 2000 - 2006)

Relative to large American cities,[3] Toronto was the sixth fastest growing metropolitan area (by absolute change) on the continent between 1991 and 2001:

Table 1.3: ***North America's Fastest Growing City Regions by Absolute Growth, 1991-2001***

Rank	Metropolitan Area	Population 1991	Population 2001	Absolute Change 1991-2001	Average Annual Absolute Change 1991-2001
1	Atlanta, GA (MSA)	3,070,898	4,278,440	1,207,542	120,754
2	Phoenix-Mesa, AZ (MSA)	2,319,206	3,389,492	1,070,286	107,029
3	Dallas, TX (PMSA)	2,762,244	3,658,119	895,875	89,588
4	Houston, TX (PMSA)	3,443,141	4,305,711	862,570	86,257
5	Chicago, IL (PMSA)	7,522,573	8,375,189	852,616	85,262
6	**Greater Toronto Area, ON**	**4,235,756**	**5,081,826**	**846,070**	**84,607**
7	New York, NY (PMSA)	8,606,404	9,381,330	774,926	77,493
8	Washington, DC-MD-VA (PMSA)	4,303,959	5,063,974	760,015	76,002
9	Los Angeles-Long Beach, CA (PMSA)	8,948,125	9,677,220	729,095	72,910
10	Las Vegas, NV-AZ (MSA)	937,261	1,653,339	716,078	71,608

(Statistics Canada, 2003c; United States Bureau of Economic Analysis, 2003)

Toronto's growth, which is primarily fuelled by international migration[4], is expected to continue for at least the next twenty to thirty years with the GTA adding approximately 100,000 new residents annually for the next ten years and then slowly declining thereafter to approximately 50,000 new residents annually by 2031 (City of Toronto Department of Development Services, 2002). Among the most recent population projections performed for the GTA, the general consensus is that by 2031, the GTA will grow by approximately 2.5 million people to a population between 7.5 and 8 million people:

[3] Using Metropolitan Statistical Areas (MSA) and Primary Metropolitan Statistical Areas (PMSA) with a 2001 population of over 1,000,000. MSAs and PMSAs are more statistically comparable to CMAs than Consolidated Metropolitan Statistical Areas (CMSA) as CMSAs can agglomerate several metropolitan areas for analysis purposes. The 2000 Census guidelines for defining MSAs, PMSAs, and CMSAs are published in the December 27, 2000 edition of the Federal Register, which is available at http://www.census.gov/population/www/estimates/00-32997.pdf (United States Office of Management and Budget, 2000).

[4] Between 1996 and 2001, almost half of all those immigrating to Canada settled in the GTA (TD Economics, 2002).

Table 1.4: *Recent GTA Population Forecasts*

	Ontario Ministry of Finance 2000	GTA Steering Committee 2000	City of Toronto 2002	Ontario Places to Grow 2005
1996	4,779,000	4,781,000	4,781,000	
2001	5,265,700	5,284,000	5,284,000	5,300,000
2006	5,712,090			
2011	6,137,560	6,260,000	6,260,000	6,320,000
2016	6,547,820			
2021	6,950,060	6,975,000	6,975,000	7,180,000
2026	7,339,010			
2031		7,450,000	7,450,000	7,960,000

(City of Toronto Department of Development Services, 2002;
Ministry of Public Infrastructure Renewal, 2005)

If these projections come to fruition, the GTA will be approximately 40 to 50% larger by 2031.

1.2 The Growth Paradox

Rapid urban growth is widely viewed as a symbol of economic prosperity and is sought by many. However, since the 1950s, concern has been growing about other, perhaps unintended, consequences of the North American urban landscape. Planners, politicians, urban theorists, environmentalists and even medical doctors are raising concerns about the environmental, social, and economic sustainability of our cities and are calling for changes in the way we build our cities and the way we live our lives. They are concerned that current patterns of development will harm our economy, our environment, our quality of live, and even our health.

Presently, Toronto, like most other North American cities, finds itself in the middle of a growing debate over its current and future urban form. In recent years, numerous studies and reports have

attempted to address the effects of continuing Toronto's current development trend which can be characterized as low-density, automobile-oriented development located on the city's periphery. In 2002, the Toronto Dominion Bank identified five major factors undermining the current quality of life in the GTA:

1. The GTA's reliance on the weak Canadian dollar as a competitive tool for international trade;

2. Severe cutbacks to Ontario's education system over the last two decades as a limit to human capital development;

3. A shift in economic and population growth from the central city to the suburbs which is leading to increased urban sprawl, automobile reliance, traffic congestion, and poor air quality throughout the region as well as a widening income gap between the poorer central city and the suburbs;

4. A lack of affordable housing in the City of Toronto which is fuelling the growth of an impoverished class; and,

5. Inadequate and under-funded hard infrastructure such as transportation networks and municipal services.

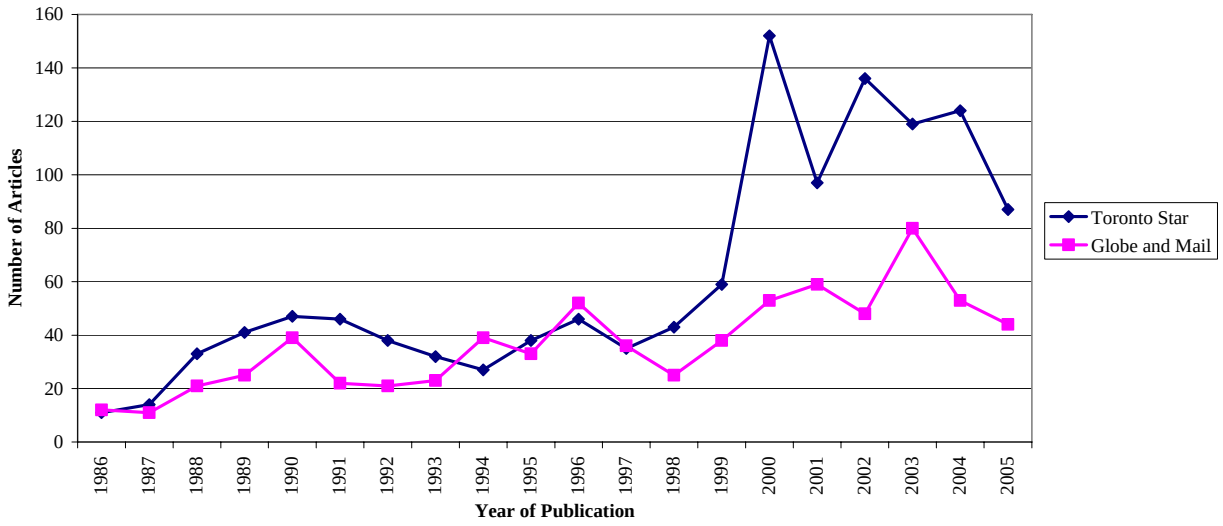
(TD Economics, 2002)

In 2003, the Toronto City Summit Alliance, a voluntary coalition of various political, business, and community institutions throughout the Toronto area, cited the continuation of current development and growth trends as a threat to the future economic prosperity of the area (Toronto City Summit Alliance, 2003). Furthermore, a survey of the business community taken by the Toronto Board of Trade revealed a growing fear that Toronto's inadequate infrastructure may soon become a serious impediment to economic growth (Hall, 2002).

This debate has also caught the attention of the Toronto media and the city's residents:

Figure 1.1:

Articles & Opinion Pieces containing the Phrase "Urban Sprawl" in two major Toronto daily newspapers, 1986 – 2005



(Dow Jones Reuters Business Interactive LLC, 2006)[5]

The Toronto Star and the *Globe and Mail* are two major daily Toronto newspapers[6]. In Figure 1.1 above, it is visible that the use of the term 'urban sprawl' – a term widely recognized as a negative descriptor of the current cityscape – has substantially increased in recent years. This trend suggests, therefore, that Torontonians have a growing awareness of, and interest in, the shortcomings of current development patterns. A recent four-part series appearing in the *Globe and Mail* (July 31, 2006 to August 3, 2006) investigating the changing nature of Canadian cities, suburbs, and their relationship with each other underscores this trend of growing public awareness (Hume, 2006; Mahoney, 2006, 2006b; Peritz, 2006).

[5] Search of online databases conducted August 12, 2006 via the University of Waterloo's Library subscription service.

[6] The Toronto Star has a weekly circulation of 2,117,500; The Globe and Mail, a circulation of 847,000 in the Toronto Market (NADbank, 2005).

To address the perceived inadequacies of contemporary urban form, many planners and urban theorists advocate reforming macro-level land use planning policies using programs such as Growth Management and Smart Growth while others seek to reform neighbourhood design using principles from a movement known as New Urbanism. In Ontario, the Province is undertaking a program called *Places to Grow* that provides legislation designed to enhance cities' ability to accommodate anticipated growth over the coming decades by improving how new communities are built and how existing communities evolve. This legislation is generally intended to create more compact communities with a greater mix of land uses and higher residential densities than Torontonians are currently accustomed. It focuses on curbing the outward spread of development onto valuable farmland and natural features, on providing a greater mix of housing opportunities for people of all socio-economic and demographic backgrounds, and on reducing reliance on personal automobiles. In short, this legislation mandates changes to the Toronto landscape that will challenge the lifestyles Torontonians currently enjoy.

1.3 The Planner's Dilemma

As of June 16, 2006, planners in the GTA are responsible for implementing policies that limit the availability of new greenfield land for development, dictate minimum residential and employment densities in both designated greenfield areas and existing urbanized areas, and ensure that a minimum percentage of all new development is located within the existing built area each year. These mandates will almost certainly elevate the price of vacant land that is currently designated for development and thus spur the provision of higher-density forms of housing such as low and high-rise apartments/condominiums, duplexes, townhouses, and semi-detached dwellings. In greenfield areas, new development will be more dense and will contain a considerably different

mix of housing than today's conventional suburbs. In existing built areas, development of vacant parcels, redevelopment of underutilized parcels, and conversion of existing buildings and uses will be required to meet housing needs and intensification targets.

In contrast to this top-down policy directive and the changes that will precipitate from it on the landscape, evidence suggests that both existing and future residents of the GTA will resist such changes when they are implemented as a development proposal. In Anglo-North American culture, home ownership is a pervasive value (Michelson, 1977). Consumers, if they have the ability to choose, most-often prefer lower-density forms of housing that have ground orientation (Metropolitan Knowledge International, 2005; Michelson, 1977). This preference often leads many to live in suburban areas where the provision of low-density housing is more feasible due to lower land and development costs (Neuman, 2005). Therefore, the current residential market suggests that consumers will not support the types of developments that will result from *Places to Grow*.

In addition to a potential lack of support in the residential marketplace, experience suggests that existing residents and homeowners in particular will resist development proposals that may effect change on the landscape. Ontario's planning process is structured to seek public participation once a development concept is almost fully prepared such that residents are provided the opportunity to react to development rather than contribute to its conception (Bedford, 2006). Fischel (2001) maintains that homeowners are most often the key opponents to change because they seek to insulate their single greatest asset from devaluation – their home. Because of their protectionist nature, homeowners generally value the stability of the existing landscape and fear the uncertainty

of change (Day, 1997). Given this, developers attempting to comply with *Places to Grow* by developing or redeveloping within the existing built area may face resistance from local residents.

1.4 Research Question and Objectives

If planners and developers are to be successful at implementing *Places to Grow*, they will need to overcome a prevailing societal preference for suburban-style living and homeowners' fear of change. Shifting societal preferences towards housing consumption may be beyond the means of planners at this time; however, planners can play a significant role in quelling people's fears about change by ensuring that citizens feel they have a stake in shaping their communities through meaningful public participation (Bedford, 2006). Unfortunately, all too often the public is either unaware of or apathetic to opportunities for participating in planning policy formation beyond their immediate neighbourhood or interest (Grant, 1989).

In the absence of widespread participation among the public in planning policy formation, planners need a means of assessing the likelihood for public support of proposed policy measures among the majority of people who are not active in the community planning process. Drawing on techniques widely used in other social sciences including Psychology (Ajzen, 2001), this thesis will study the relationship between attitudes and intended behaviour in order to gauge public support for land use reform. Specifically, given that the GTA will be challenged to accommodate approximately 2.5 million new people over the next 30 years, this thesis seeks to assess the attitudes of a group of Torontonians to determine their likelihood for, and commitment to, supporting the kinds of changes mandated by *Places to Grow* by answering the following research question:

When facing rapid population growth on a regional scale, do people's general attitudes towards urban life influence their opinion on ideal urban form, and is their opinion on ideal urban form consistent with the type(s) of urban residential development that they would support in proximity to their home?

While answering this question, this thesis will also endeavour to achieve the following objectives:

1. To understand the origins, objectives and potential implications of recent urban form debate in the academic literature;
2. To understand the origin, nature, and complications of a perceived ideological divide between urban form as sought by planning policy and the public's concept of ideal urban form;
3. Using survey results, to assess whether individuals' geographic location, demographic, and socio-economic background correlates with their general attitudes, their opinions on ideal urban form, and their willingness to support various development types;
4. To test whether an attitudinally-based taxonomy established by Forsyth (1999) of participants in a specific urban form debate can be replicated in a more general setting using survey data; and,
5. To establish a basis for understanding where support for various forms of residential development may be found.

1.5 Methodological Summary

This research applies the principles of quantitative data gathering and analysis in order to reveal relationships between attitudes and behaviour. Typically, when one wishes to investigate an aspect of human behaviour for which no data currently exists, one can either actively engage subjects

through an interactive process of question and answer, or one can passively observe, interpret, and record behaviours (Jackson, 1988). This thesis employs a structured mail-out questionnaire to elicit responses from participants and shed new light on human behaviour. The study has been patterned after a 1992 study that analysed the relationship between land use, attitudes, and travel behaviour in the San Francisco area (Kitamura et al, 1994).

Residents from six study areas in the GTA – Riverdale, York, Etobicoke, Scarborough, Mississauga and Richmond Hill – received surveys questioning their travel behaviours, their attitudes towards urban living, and their preferences on urban form. These areas were selected due to their relatively high level of public transportation use compared to their immediate surroundings and their relatively average household incomes compared to the GTA as a whole. Additionally, participant selection generally focused on owner-occupied households that had moved within the previous five years. By selecting neighbourhoods and participant households in this manner, it was hypothesized that such households may share a unique set of attitudinal traits that attracted them to neighbourhoods they perceived as facilitating their need or desire to use alternative modes of transportation such as public transit and walking. Should such attitudinal clustering happen naturally, it is assumed that these six neighbourhoods could be a logical place to encounter people with attitudes that are supportive of the kinds of landscape changes proposed by planners in general and, more specifically, required by *Places to Grow*. The collected survey responses were partitioned into groups based on shared attitudinal characteristics using Cluster Analysis and then analyzed based on subcomponents of the survey instrument in order to fulfill the objectives of this thesis.

1.6 Research Significance

This research contributes to the current debate on ideal urban form and, in particular, to the literature proposing intervention in the current North American cityscape by articulating the relationship between general attitudes and attitudes towards urban form and the implications for policy implementation. This work diverges from other work in the planning literature by assessing the degree to which attitudes on urban form are maintained when faced with a direct challenge – the prospect of urban development affecting one's personal interest.

This work also contributes to the planning profession by identifying opportunities and challenges to gathering public support for the many reforms that planners are now proposing to the North American city. Using this research as a base, planners will be better able to formulate strategies that implement urban form and lifestyle changes by targeting those attitudes that currently impede such changes.

Suggestions for further research in attitudes, behaviour and land use change will be articulated from this work. Planners, urban designers, and developers in the Greater Toronto Area should find the results of this study both timely and useful as they implement Provincially mandated land use planning reforms.

1.7 Thesis Layout

Chapter Two presents an overview of the rise of current urban form debate in North America by focusing on the growth of environmentalism, economic globalization, and critiques of late 20th century urbanization. Then attention turns to examining the current planning literature to identify

and understand those movements that propose to change the North American city and their implications for urban dwellers.

Chapter Three articulates what Toronto may look like in the future under *Places to Grow.* It also explores the public's role in implementing land use reform at the micro scale and the possible challenges this role may pose for *Places to Grow*.

Chapter Four presents the research methods used for this study and provides a detailed description of data collection methodology. In particular, the chapter presents a rationale for using a mail-out survey as its primary data collecting technique, the considerations that led to the formulation of the survey instrument, as well as the criteria employed for choosing subjects to study. The chapter also briefly describes the six study areas chosen for sampling and the process by which the survey was implemented. Finally, the chapter discusses the inherent limitations of the data collection methodology as well as those limitations that were experienced in the course of carrying out the study.

Chapter Five provides a description of and rationale for the analytical techniques used on the collected data. The results of these analyses are presented, and the significance of these results is interpreted throughout the chapter.

Finally, Chapter Six draws conclusions from the preceding data analysis and offers an interpretive explanation and discussion of these conclusions and their implications for planning. The chapter closes by providing recommendations for planners attempting to implement policies such as *Places*

to Grow that will effect landscape and lifestyle changes in their communities and outlines directions for future research.

CHAPTER 2: TOWARD AN IDEAL NORTH AMERICAN CITY

2.1 Introduction

In recent years, urban form has become a heated topic of debate in North America. Faced with deteriorating downtowns, crumbling infrastructure, increased traffic congestion, unhealthy environments, and increased pressure to consume vast tracts of open space and agricultural land, many planners, politicians, and citizens are calling for a reformation in the way we build our cities. Specifically, they cite current patterns of low-density, mono-functional, automobile-oriented development as being void of culture and character, economically unsustainable, and environmentally destructive; they also blame current development patterns for exacerbating the divide between socio-economic haves and have-nots and for contributing to the deteriorating health of North Americans in general (Bray, Vakil & Elliot, 2005; Bruegmann, 2000).

This chapter addresses the fist objective identified in the introductory chapter which is to understand the origins, objectives and potential implications of recent urban form debate in the academic literature. To meet this objective, the chapter will: (1) investigate events of the 1960s and 70s such as environmentalism and global economic transition as a precursor to contemporary planning theory; (2) examine contemporary planning literature to identify movements that propose to change our cities; and, (3) identify implications of today's proposed planning interventions for the general public.

2.2 Origins of Contemporary Urban Form Debate

Throughout the 20th century, many people have searched for the ideal urban form: Ebenezer Howard called for Garden Cities – a network of small interconnected satellite cities surrounding a larger central city whereby residents would live and work together under a form of cooperative socialism (Fishman, 1996); Le Corbusier proposed Ville Radieuse (The Radiant City) in which life would be rationally organized into skyscrapers, parks, gardens and superhighways (Calthorpe, 1986; Fishman, 1996); Frank Lloyd Wright envisioned Broadacre City, the resettling of the nation into a series of one-acre homesteads to allow people to work part time on their own farms and part time in factories/offices (Fishman, 1996; Nelson, 1995); and, Jane Jacobs advocated fostering community diversity, creating a sense of communal ownership over public space within neighbourhoods, and creating a civic duty to participate in the community planning process (Calthorpe, 1986; Dillon, 1998; Hill, 1998; Jacobs, 1961). While these proposals have been instrumental in challenging popular views of the city, contemporary movements to reform the city owe their existence, in large part, to events that occurred in the 1960s and 70s.

2.2.1 The Modern Environmental Movement

The 1960s – a decade marked by urban riots, protests against war in Vietnam, and demonstrations for free speech on college and university campuses – was a period of great turmoil and change in North America. This period coincided with first of the 'baby boomer' generation arriving into active political and public life (Hall, 2000) and has had a lasting effect on community planning.

Prior to the 1960s, the environmentalism was largely confined to a select few who chose to become members of environmental societies such as the Sierra Club (Kuzmiak, 1991). In 1962 however,

environmentalism experienced an unprecedented boost in popularity with the success of Rachel Carson's *Silent Spring* – a chronicle of chemical pesticides' havoc on the environment and the dire implications for human health. Like no one else before, Carson blended science and literature to reach an audience of unparalleled numbers (Morrone, 1992).

In the wake of *Silent Spring*, a flurry of environmental literature helped raise public awareness and support for environmental causes (Morrone, 1992). Traditional environmentalists broadened their focus from preservation and conservation to include impacts of environmental pollution on human health and environmental quality while new groups emerged with a commitment to collective action (Lukasik, 2002; Morrone, 1992). During this time, environmentalism was eagerly adopted by the baby boomers, especially those in the leftist and 'hippie' counter cultures (Hall, 2000; Spowers, 2002). By changing their own lifestyles and through protest lobbying, these people actively sought participation in the community planning process and broad political and social reform that would bring equality to environmental issues relative to those of economy and society (Hall, 2000; Spowers, 2002).

During the 1970s, environmental issues came to the forefront of public debate. The use of dichlorodiphenyltrichloroethane (DDT) as a commercial pesticide was banned, lead was removed from gasoline, and places like Love Canal, New York highlighted the problems of antiquated environmental policies (Kuzmiak, 1991). In Canada, Greenpeace was formed to fight international nuclear weapons testing and grew to fame in its fight to save endangered whale species (Spowers, 2002). Books such as the Ecologist Magazine's *Blueprint for Survival* (1972) and the Club of Rome's *Limits to Growth* (1972) painted clearer pictures of mankind's self-destructive path

(Spowers, 2002). The growth of environmentalism in the 1970s forced environmental issues into the political realm as environmental groups became better organized and more professional in their approaches (Lukasik, 2002).

During the 1980s, environmentalism faced a setback as broad public support waned. In the face of potentially devastating new environmental problems such as ozone depletion and global climate change, many people denied their existence. Others, as Spowers (2002) explains, disconnected such environmental problems from their daily lives. Instead, they placed a blind faith in the hands of science to provide technological fixes. This attitude, however, changed in the 1990s.

The 1990s saw resurgence in the popularity of environmentalism. Facing the realization that global environmental issues can have an impact on the personal level, many people decided that *they* must do something to address the problem (Lukasik, 2002). Grass roots organizations rose to meet the challenge of protecting the environment in local communities (Lukasik, 2002). International conferences such as the Rio Earth Summit of 1992 and agreements such as the Kyoto Protocol indicate that, on an international scale, nations are attempting to give environmental issues a more prominent stage in the political arena. Overall, in North America, environmental awareness and pro-environmental attitudes appeared to reach new highs:

> There can be no doubt that there is a growing consensus among the public that the environment must be considered in every decision. A recent Media General-Associated Press survey found that four out of every five Americans believes pollution threatens the quality of their lives, that 75 per cent believe current anti-pollution laws are weak, and that Americans favour the prohibition of excessive packaging.
>
> (Krupp, 1990 in Kuzmiak, 1991 p.265)

Today's planning literature and practice is fundamentally influenced by environmentalism. Since the 1960s, planning has strived for a more holistic view of the world. Struggling to maintain an appropriate balance between economic development, environmental integrity, and human needs, planning now reflects many of the principles pursued by the environmental movement including sustainability, citizen participation, and rationalizing man's place in the environment.

2.2.2 Economic Globalization

During the 1970s the global economy undertook a major transformation as global financial markets were deregulated and multinational corporations redefined themselves by moving manufacturing production and other functions to new locations around the globe (Hall, 2000; Yeates, 1998). In 1971, the collapse of the Bretton Woods International Monetary System – a system regulating exchange rates between currencies and lowering trade barriers between countries – coupled with advances in telecommunications afforded the creation of a new global economic system that enabled financial capital to freely traverse the globe, beyond national regulatory regimes (Short & Kim, 1999).

As a result of this financial deregulation and technological advancement, corporations are no longer restricted to carrying out their traditional functions in any one location but can search the globe to locate in labour and consumer markets that provide competitive business advantages. Since the 1970s, massive job losses have occurred throughout North America in the manufacturing sector, leaving many cities struggling to adapt and survive in the new economic reality. As a result, cities are now competitors on a global stage for economic growth and investment (Short & Kim, 1999; TD Economics, 2002).

Also during the 1970s, the American government commissioned a study entitled *The Costs of Sprawl* (Real Estate Research Corporation, 1974) which concluded that higher density communities were less expensive to build and operate than low-density communities and were less of a cost burden on municipalities (Bruegmann, 2000). Since that time a number of similar studies have attempted to quantify the costs associated with compact versus dispersed development including a report prepared in 1995 that concluded the cost savings for the GTA adopting a compact growth model rather than continuing its conventional growth over a 25-year period would be approximately 24.7 billion dollars (Blais, 1995).

Together with a heightened awareness of the financial costs associated with contemporary urban development and a need to compete globally for jobs and investment, cities have also faced rapid growth in their financial responsibilities as the range of services provided by local governments has expanded considerably while funding for such services remains heavily reliant on property taxes (Yeates, 1998). Consequently, municipalities are often faced with the dilemma of needing to increase property tax rates to cover their operational costs. This dilemma can be particularly problematic in older central cities where higher demands for public services, older infrastructure, and slow population growth rates as compared to outer suburban areas translate into higher taxation, service cutbacks, and potentially infrastructure deterioration – all disincentives to new investment (Yeates, 1998). Provincial and state governments recognize the need for economically competitive cities and are therefore seeking land use reform to create efficient, cost-effective cities that will attract investors from around the world. This competitive economic regime has influenced contemporary planning policy tools such as Growth Management and Smart Growth.

2.3 Contemporary Interventionist Thought on Urban Form

2.3.1 Sustainability: The Overriding Principle

During the 1970s, as modern environmentalism grew, concerns arose over an inability to reconcile the discrepancies between a Capitalist-driven consumer society "pursuing a vision of *infinite* growth" and the limited supply of resources available to fuel that growth (Spowers, 2002 p.9). In 1972, the editors of the environmental magazine *The Ecologist* released the landmark book *A Blueprint for Survival* in which they wrote, "our 'industrial way of life' is not *sustainable*" (in Basiago, 1996 p.135). Organizations such as the World Bank, the International Monetary Fund (IMF), and the United States Agency for International Development (USAID) faced sharp criticism for inadvertently promoting environmental degradation through their Third World economic development campaigns (Portney, 2003). Out of this concern and criticism grew the concept of sustainability and sustainable development.

In 1987, the United Nations World Commission on Environment and Development (WCED) defined sustainable development as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (in Berke & Conroy, 2000 p.23). This definition implies that in pursuing (economic) development one must employ a holistic, global view that is framed with a concern for social justice, environmental awareness, and inter-generational equality (Williams, Burton, & Jenks, 2000). It seeks a peaceful coexistence between economic development and environmental quality and social values (Berke & Conroy, 2000; Portney, 2003). Berke and Conroy (2000) expand on this definition by articulating that sustainable development implies a continual process of evaluating the needs of current and

emerging social and economic trends and their compatibility with the local and global environment.

Jane Jacobs has argued that modern cities are not a product of agricultural agglomerations, but rather a physical manifestation of the need to minimize the distance-based externalities of the trade economy (Stein, 1993). She asserts that urban economies grow by developing industries to replace imported goods and then, in turn, begin exporting goods once the local market is adequately served (Stein, 1993). In her view, cities are the true generators of national wealth and over time they evolve into a complex web of interactions that grows denser and more complex as the need to maintain current economic standards and stimulate new economic opportunity mounts (Stein, 1993; Steigerwald, 2001). To maintain their role as an economic engine however, cities require a constant supply of natural resources and an ever-growing concentration of knowledge and synergies between individuals.

North American cities have transformed throughout the course of the last century. Led by breakthroughs in transportation technology, cities have evolved from being densely developed, pedestrian-oriented locales to being geographically disperse masses necessitating mechanized transportation to alleviate a growing friction of distance. If you accept Jacobs' prediction of continued urbanization as a means of ensuring economic growth, then current development patterns will continue to spread their influence over the landscape unless changes are brought about in the land use planning process. Therefore, in the eyes of sustainable city proponents, urban development must change to balance the needs of continued growth with the sensitivities of the local and global environment.

Since 1987, several concepts have been formulated with the goal of improving urban sustainability:

- Neotraditional Town Planning;
- The European Community's Urban Green Paper – Urban sustainability as urban compactness and regeneration;
- Island Civilization – Urban sustainability as a global civilization of 1.5 billion people living in 500 compact cities;
- Circular Metabolism – Urban sustainability as a closed natural resource cycle;
- Sustainably Designed City – Urban sustainability as a new industrial order based upon nature's principles;
- Sustainable City Within a Sustainable Watershed – Urban sustainability holistic, diverse, fractal and evolutionary; and,
- Green Infrastructure – Urban sustainability as regenerative urban systems.

(Basiago, 1996 pp. 149-153)

While differences exist in the scale and nature of these concepts, they share several fundamental principles: a desire to harmonize land use with nature; a commitment to build liveable environments that promote sense of community; the need for transition to a place-based local economy; the desire for social and economic equity through integrated land use patterns; and, a desire for greater accountability – making polluters pay for their actions and promoting greater municipal accountability (Berke & Conroy, 2000).

Generally, proponents of sustainable development and the Sustainable Cities Movement look to implement a broad guideline for the spatial re-ordering of the city which includes "mechanisms that can be used to redress the often negative or deleterious environmental and social effects of adherence to mainstream approaches to economic development" (Guy & Marvin, 2000; Portney, 2003 p.4). They recognize that current urban forms have propagated unsustainable levels of resource use and inequitable lifestyles and that in order to achieve sustainability, shifts in

individual attitudes and behaviours are needed (Williams, Burton, & Jenks, 2000). These mechanisms can be implemented at all political levels from the local level (individuals and community groups) to the international level (United Nations).

Although no one has claimed to define an entirely sustainable urban form, much focus has been given to making cities more compact (Bourne, 2001; O'Toole, 2000; Williams, Burton & Jenks, 2000). The general belief is that compact cities minimize impacts on the natural environment by reducing automobile dependency and land consumption while improving the social environment by providing a wider range of affordable housing types and fostering human interaction through more pedestrian-friendly environments. In essence, many believe that urban form can influence human behaviour and energy use. Much work has been produced to support the notion of urban form as a determinant of human behaviour however the evidence remains mixed (see Banister, Watson, & Wood, 1997; Boarnet & Sarmieno, 1998; Bourne, 2001; Cervero & Gorham, 1995; Crane1996b; Davis & Seskin, 1997; Kitamura, Mokhtarian, & Laidet, 1997; Filion, 2001; O'Toole, 2000b).

Many concerns have been raised over the implementation of sustainable development ideals. Roseland (1992) points out, is that many of the issues being addressed have traditionally been considered separate issues and have therefore been dealt with separately (e.g. environmental protection and affordable housing). Thus, the difficulty of harmonizing the many disparate urban issues and political interests to create a sustainable city must be addressed. Portney (2003) illustrates that, while there is an implied communitarian element that is essential to the

achievement of sustainability, relatively little is being done to combat the individualistic attitudes that prevent communitarian culture from rising.

Although urban sustainability has received much attention in the recent literature, its implementation has been less widespread. In an evaluation of thirty comprehensive plans in the United States, Berke and Conroy (2000) found that all supported sustainable development to varying degrees, however, little difference existed between those plans that contained a sustainability mandate and those that did not relative to their support of sustainable principles.

Though the sustainable cities movement is not without its critics, it is clear that sustainability has become the dominant paradigm for urban planning and design (Masnavi, 2000). From the broad concept of sustainability and sustainable development, the major planning trends of the last 30 years have risen: Smart Growth, Growth Management, and New Urbanism. While these concepts differ in their application, they all seek to attain a sustainable urban form by manipulating the design and orientation of the physical landscape.

2.3.2 Smart Growth

In the wake of criticism over the current trends in urban policy and form during the early 1990s, planners, architects, and urban strategists sought new ways to plan cities that would counter the dispersed urban form that was dominating the landscape. They believed that urban dispersion was responsible for a slough of environmental and social problems and was detrimental to cities' ability to compete economically. To maintain or reclaim the economic sustainability of cities, planners proposed to change planning policy so as to channel new residential growth and make more

efficient use of existing infrastructure, to emphasize the use of public transportation, and to strengthen the protection of significant natural areas while ensuring the maintenance of economic development opportunities. This call for policy change became known as the Smart Growth Movement. In 1994, the American Planning Association sounded the formal beginning of the Smart Growth movement with its *Growing Smart* project (Lorentz & Shaw, 2000).

Smart Growth, in general, is a broad, proactive policy-planning exercise that aims to integrate environmental protection, economic vitality, social equity, and quality of life into comprehensive local or regional plans by using tools that control and direct where growth occurs as well as the form that development takes (American Planning Association, 1999; Lorentz & Shaw, 2000). Rather than being anti-growth, Smart Growth is intended to allow cities to grow in ways that maximizes economic efficiency while minimizing impacts on future generations' ability to meet their resource needs (Ward, 2002). Often initiated at Provincial or State levels, Smart Growth seeks to anticipate and guide development into areas with existing physical infrastructure through various measures including tax incentives and limited infrastructure construction. It also seeks to preserve important natural resources such as environmentally sensitive areas, watersheds, and greenspace though urban growth boundaries and restrictive zoning. To be successful, Smart Growth requires a holistic view of the urban context to which it is applied, a political will for urban reform, and participation from both the public and stakeholders from the outset to create a vision of an ideal future (Lorentz & Shaw, 2000).

To date, there is no one accepted definition of Smart Growth. Some, such as Avin and Holden (2000) and Lorentz and Shaw (2000), assert that no single definition of Smart Growth should exist.

Instead, they advocate defining Smart Growth in the context of the jurisdiction to which it is applied. In 1996, the Smart Growth Network outlined ten principles of Smart Growth in order to give some clarification to the term:

- Mix land uses;
- Take advantage of compact building design;
- Create a range of housing opportunities and choices;
- Create walkable communities;
- Foster distinctive, attractive communities with a strong sense of place;
- Preserve open space, farmland, natural beauty and critical environmental areas;
- Strengthen and direct development towards existing communities;
- Provide a variety of transport choices;
- Make development decisions predictable, fair and cost-effective; and,
- Encourage community and stakeholder collaboration in development decisions.

(in Tregoning, Agyeman, & Shenot, 2002 p.342)

In the United States, Smart Growth mandates have been initiated at the state level in Maryland, New Jersey, Oregon, Rhode Island, Tennessee, and Washington (American Planning Association, 1999). In total, up to 39 states are characterized as supportive of Smart Growth (Lorentz & Shaw, 2000). In Canada, Ontario completed the first stage of a Smart Growth initiative in 2003 (Central Ontario Smart Growth Panel, 2003).

Some planners and politicians may take offence to the term Smart Growth and interpret it as an indication that what planners have been doing to date is *dumb growth* (O'Toole, 2000b). Supporters of Smart Growth maintain that the concept is not intended to be an insult to the planners of the past, but rather a process to allow communities to make the smartest decisions possible regarding their future. The "goal is to build a consensus about a…future that fits the community's needs and resources" (Avin & Holden, 2000 p.27). Others may see Smart Growth as a reincarnation of the same planning that has been taking place throughout the latter half of the 20th

century (Lorentz & Shaw, 2000). In its defence, Smart Growth appears to be distinguishable from previous planning efforts in principle because of its increased emphasis placed on public participation.

Other criticisms of Smart Growth include the effects of containing urban development on housing prices (Nelson, 2000), the difficulties of revising current planning legislation (American Planning Association, 1999), and the limitation of personal freedoms. O-Toole (2000) asserts that state implemented Smart Growth is a form of socialism – a taboo in American democratic society. In spite of its criticisms, Smart Growth is rapidly gaining popularity as a means of moulding the city into a more ideal form (Avin & Holden, 2000; Tregoning, Agyeman & Shenot, 2002).

2.3.3 Growth Management

Growth Management is defined as "a conscious government program intended to influence the rate, amount, type, location, and/or quality of future development within a local jurisdiction" (Porter, 1997 p.10). During the 1970s, Growth Management originated from a perceived need to rationalize urban development with the environment. The two oil 'shocks' of the 1970s and the rise of the environmental movement helped raise public awareness about the potentially negative impacts of urban form and Growth Management grew as a response to these environmental concerns (Basiago, 1996; Fischel, 1990). During the 1980s, the popularity of Growth Management grew as it was seen to be a tool for combating suburban traffic problems (Fischel, 1990).

Throughout the 1990s, Growth Management was prevalent in academic literature as numerous cities and states adopted Growth Management programs. Since the 1970s, Growth Management

has evolved into a broad concept with designs to help solve the economic, environmental, and social problems associated with contemporary urban form. Contrary to popular belief, Growth Management is not created in order to limit growth, but to anticipate and accommodate the needs of development (Porter, 1997; Bourne, 2001).

From this definition, one may think that Growth Management and Smart Growth are one and the same. Indeed, the terms Growth Management and Smart Growth have often been used interchangeably in the literature. There are two key differences between Growth Management and Smart Growth, however. First, Growth Management is development oriented while Smart Growth is both development and design oriented. Second, Smart Growth actively seeks citizen participation whereas Growth Management does not (Lorentz & Shaw, 2000). Ultimately, Growth Management is the package of tools used to influence development on the ground; and because of this singular function, Growth Management has been incorporated as just one part of the Smart Growth process.

Growth Management works by influencing local government's four main regulatory tools – the comprehensive plan, zoning ordinances, subdivision regulations, and capital improvement programs – to dictate where development can occur, to ensure the efficient provision of community infrastructure, to create or maintain a desirable quality of life, and, to improve economic opportunities and social equality (Porter, 1997). Table 2.1 on the next page outlines many strategies that Growth Management employs to meet these ends.

Table 2.1: *The Tools of Growth Management*

Where to Develop	Where not to Develop	Quality of Community Life	Infrastructure Provision	Economic Opportunity and Social Equity
• Alternative zoning • Urban growth boundaries • Development policy areas • Infill and redevelopment promotion • Extra-jurisdictional controls • Growth limits • Incentive property taxation	• Land Acquisition • Conservation planning/zoning • Water quality/erosion controls • Delineation of critical areas • Mitigation of development impacts • Agricultural land protection • Watershed planning and management • Environmental threshold standards	• Design reviews • Flexible planning and design • Incentive planning and performance zoning • Historic and architectural preservation • Neighbourhood conservation and/or revitalization • Landscape ordinances • Tree/Plant conservation requirements	• Functional plans • Adequate public facility requirements • Exactions, Impact fees, and Special Districts • Transportation demand/congestion management programs • Project point or rating systems	• Economic development incentives • Economic opportunity programs • Affordable housing

(Basiago, 1996; Fischel, 1990;Gihring, 1999; Porter, 1997)

Through conscientious implementation of several Growth Management strategies, Porter (1997) maintains that community development will be supported, that a predictable development process will be established to aid development, that quality of life will be protected, and that social and economic opportunities will be improved. One must be careful, however, not to mistake Growth Management with local growth controls. While Growth Management is intended to accommodate growth, growth controls are often seen as a form of NIMBYism that are intended to preserve the quality of life in affluent localities (Baldassare & Wilson, 1996; Leo, 1998; Leo et al., 1998).

Currently, the most famous model of Growth Management in the United States is that of Portland, Oregon. Inspired by the writings of Lewis Mumford, Portland's state mandated Growth Management is hailed for reclaiming the city's waterfront, for promoting transit efficiency, and for raising residential densities while making the city's quality of life the envy of other US cities (Bourne, 2001; Daniels, 2001; Leo et al., 1998; Stephenson, 1999). Other cities that have either implemented Growth Management on a regional scale or are building support for the concept include Atlanta, Denver, Durham, Minneapolis-St.Paul, Montreal, Salt Lake City, San Jose, Toronto, and Virginia Beach (Daniels, 2001; Leo et al, 1998; Porter, 1996). Support for Growth Management has been strongest from people with agricultural, environmental, and business interests (Baldassare & Wilson, 1996; Leo et al., 1998).

Although Growth Management enjoys relatively widespread popularity, there are criticisms that such programs may be ineffective in combating the ills of contemporary urban form. Many people see Growth Management as exacerbating socio-economic segregation by raising housing prices and limiting development options, as promoting urban sprawl beyond urban growth boundaries

into exurban areas, and as a constraint to development. Levine (1999) shows that Growth Management can disproportionately affect lower-income families by displacing the construction of rental housing for more profitable developments. Furthermore, initiatives that limit the supply of developable land tend to raise existing and new house prices (Fischel, 1990; Leo et al., 1998). In Portland, Davis, Nelson, and Dueker (1994) show that the large-lot zoning used to discourage housing development beyond the urban growth boundary is actually promoting exurban sprawl – people consuming more land than they need or can even manage. Furthermore, it is argued that the large-lot zoning beyond the urban growth boundary will eventually be a constraint to urban growth as it limits the extent which the boundary can be expanded when necessary. Therefore, Growth Management, and large-lot zoning in particular, could be a problem to the city in the future.

Conversely, other critics of Growth Management feel that it currently doesn't place enough restrictions on urban growth to reach its intended goals. Bourne (2001) points out that Portland's urban growth boundary, which used a thirty-year development horizon, hardly constrains development. Phillips and Goodstein (2000) show that while approximately 65% of metropolitan Portland's growth is occurring contiguous to the urban area, the remainder of the growth is largely occurring outside the state-mandated growth boundary in neighbouring Clark County, Washington. Inside and outside of Portland's urban growth boundary, the housing market still acts as one with little price differentiation across the boundary (Jun, 2006; Phillips and Goodstein, 2000). Despite Growth Management, greenfield development in the Portland area is still characterized by a series of homogenous, poorly connected neighbourhoods (Song & Knaap, 2004) and development still spills beyond the urban growth boundary.

The shortcomings of Portland's experience could potentially be explained by Tomalty (1996) who notes that when Growth Management is imposed on lower-tier governments, stringency is often compromised for compliance. However, Razin (1998) argues that regional growth management will not work because it cannot control the true force behind urban development – a financing structure that forces municipalities to compete with each other for development – and that only a reorganization of this structure will work to curb sprawl.

Regardless of opinion on the effectiveness of Growth Management as a solution to dispersed development, its widespread adoption by states and municipalities alike is a clear indication that faith exists in the nexus between land use and sustainability/quality of life. Growth Management is seen to be, on the regional or macro scale, the preferred tool for influencing development on the ground in the quest to create an ideal urban form.

2.3.4 New Urbanism: Micro Scale Design

In 1982, architects Andres Duany and Elizabeth Plater-Zyberk designed the resort town of Seaside, Florida. Their design, at the time, offered a completely different perspective on micro-scale development standards compared to the trends of the day. Their town was carefully laid out to promote travel by foot, home exteriors and civic spaces were specifically designed promote social interaction, and streets were designed to minimize the need for automobiles (Fulton, 1996). This meticulous style of planning became known during the 1990s as New Urbanism.

New Urbanism is a planning design exercise that emphasizes controlling both the physical layout and appearance of development in order to achieve an ideal urban form. New Urbanism "began

as a reaction to conventional suburban planning as …New Urbanists [blame] the decentralized, auto-oriented suburb…for ever-increasing congestion on arterial roads, a lack of meaningful civic life, the loss of open space, limited opportunities for children and others without cars, and a general discontent among suburbanites" (Fulton, 1996 p.1). New Urbanism is characterized by developing mixed-use, pedestrian-oriented neighborhoods that enable their residents to live within a five-minute walk of a multitude of shopping, recreational, transit, and work opportunities (Fulton, 1996). New Urbanists claim that by mixing housing types and land functions at the finest grain possible, there will be a reduced need for automobile use and an increased sense of community and personal interaction (Fulton, 1996; Handy, 1991). Since the early 1980s, New Urbanism has branched into three separate but related streams: neotraditional design, pedestrian pocket design/transit villages, and urban villages (Audirac & Shermyen, 1994).

Neotraditional design or traditional neighbourhood development involves creating new communities, usually on greenfield sites at the suburban fringe. Table 2.2 on the following page outlines the principles of and techniques for creating neotraditional neighbourhoods. Examples of communities designed with neotraditional new urbanist principles include: Seaside, Florida; Celebration, Florida; Kentlands, Maryland; and, in Ontario, Big Bay Point (Innisfill), Cornell (Markham), and The Village (Niagara on the Lake) (Fulton, 1996). Because of New Urbanism's relative infancy, there are few neotraditional communities and therefore little evidence of whether their goals are being met.

Table 2.2: ***Principles and Tools of Neotraditional Town Planning***

Guidelines	Techniques	Goals
1. Mixed land uses	• Land uses: public, civic, residential, shop front, workplace (no industrial or manufacturing unless of artistic or craft nature	• People integrate through walking to daily activities; and by varying residential types, densities, values • Reduce pollution, auto use, traffic congestion • Balance jobs and residences • Form community bonds
2. Higher residential densities than standard suburbs	• Single-family detached and zero-lot-line housing; garage and accessory apartments; apartments over shop fronts • Building, lot, and town size limitations, flexible densities	• Same as above • Increased face-to-face interaction • Increased potential for public transit, thus reducing auto usage and increasing mobility for non-driving residents
3. Public squares and town centres	• Mandatory civic buildings and centralized public squares or parks • Integration of mixed uses in town centre	• Increased sense of place and community through social interaction • Socioeconomic integration and increased security through well-defined, accessible public spaces • Encouragement of democratic initiatives and public life
4. Grid street network	• Dense network of connected streets • Reduced or nonexistent street hierarchy • Small blocks • 40' wide streets (2 lanes + parking) • Reduced lateral clearance • Reduced curb radii • Short traffic signal cycles • Alleys to reduce curb cuts and provide service and utility easements	• Overall community accessibility within neighbourhood and externally • Encouragement of pedestrianism and social interaction by de-emphasizing auto use with reduced road performance standards (capacity, speed), buffering pedestrians from traffic with on street parking • Less traffic congestion on internal and external streets
5. Streetscapes and street vistas	• Requirements that define and landscape street edges, lots, and buildings must front streets; required street walls and fences, reduced curb cuts; trees planted in right-of-ways • Civic building or other public structure terminates view down street axis	• Increased social integration and sense of community by encouraging people to enter public spaces of which streets are a larger component • Street becomes a 'public room' to house social interactions
6. Vernacular or traditional architecture	• Use of vernacular/traditional materials and detail	• Increased sense of community and neighbourliness through shared perceptions of a neighbourhood on pedestrian, human scale, both intimate and familiar e.g., front porch to bridge private and public spaces
7. Limit on neighbourhood and town geographic size	• Small blocks around 2000' perimeter • Neighbourhoods delimited by 5 to 10 minute walking distance; towns range from 40 to 200 acres • Greenbelts	• Engenders a sense of community and neighbourliness by clearly delimiting neighbourhood and town boundaries and by maintaining pedestrian-scaled communities • Controls urban sprawl

(Audirac & Shermyen, 1994 p.163)

A pedestrian pocket is defined as “a simple cluster of housing, retail space and offices within a quarter-mile walking radius of a transit system” (Fulton, 1996 p.2). Credited as the brainchild of Peter Calthorpe and Daniel Solomon, pedestrian pockets follow most of the same principles as neotraditional developments except that they are built with accessibility to transit (usually light rail) in mind (Boonyanunt, 1996). Pedestrian pockets are generally built in suburban locations where commuter rail service either exists or could easily be extended. They become finite communities with few road connections to the surrounding suburbs and an intense internal grid road network to promote community interaction, pedestrian accessibility, and reduced automobile dependency. These neighbourhoods are not built to be self-sustaining; rather, they are built to be regional in focus (Audirac & Shermyen, 1994). For routine activities, people are expected to walk to the neighbourhood commercial activities people they would take transit to the regional mall, the movie theatre, or live entertainment venues, for example. A combination of pedestrian pockets on a regional scale will, according to principle, reduce automobile use and traffic congestion throughout the region. One example of a pedestrian pocket is Laguna West, California, in suburban Sacramento.

Transit villages are a variation of the pedestrian pocket. The term was first used to describe the built-up suburban communities clustered around streetcar transit stations in the pre-automobile era (Bernick & Cervero, 1997). Today, the term is applied to development that encourages people to ride transit more often in urban and/or suburban areas where fixed transit already exists (Bernick & Cervero, 1997). Like pedestrian pockets, transit villages follow many of the principles of New Urbanism including the ability to reach most neighbourhood destinations within a five minute walk, encouraging greater mixing of land uses and residential types, increased residential and

functional densities, and a civic pride focused on the local transit station and the public plaza that surrounds it. These developments often involve redevelopment of existing landscape to create a community conducive to transit use. Work is underway in the San Diego area to develop transit villages and two such developments are taking form in the San Francisco area: The Crossings complex in Mountain View, and Pleasant Hill (Bernick & Cervero, 1997; Boarnet & Compin, 1999). Together, pedestrian pockets and transit villages are often categorized as Transit Oriented Development (TOD) in the literature.

A third type of development, urban villages, occurs inside existing urban areas usually as redevelopment or infill projects (Audirac & Shermyen, 1994). Urban villages are intended to blend into the structural fabric of the greater community by conforming to the existing grid street network and by using architectural styles appropriate to the surrounding architecture (Fulton, 1996). They use similar design standards to neotraditional developments to promote pedestrianism, social interaction, and sense of community. Examples of urban villages include Battery Park City in New York City, and Harbor Town in Memphis, Tennessee (Fulton, 1996).

Many people have touted New Urbanism as the panacea for suburban sprawl (e.g. Congress for the New Urbanism, 2000; Fisher, 1993); however, New Urbanism is not without its critics. Because of the small scale of new urbanist developments, many critics believe that start-up retailing in these neighbourhoods is at a competitive disadvantage to the malls of the surrounding suburbs because a critical population mass is not immediately present. Also, critics question the feasibility of maintaining an adequate job to housing ratio because of the small scale of new urbanist developments. Specifically, critics feel that new urbanist communities are not be able to offer a

suitable range of employment opportunities for the resident population thus causing people to work outside the development (Audirac & Shermyen, 1994; Boonyanunt, 1996; Handy, 1991).

One of New Urbanism's principal claims is that it will curb automobile use and traffic congestion through physical design. Many people are critical of this claim. In 1995, Cervero and Gorham illustrated that TODs tended to have greater levels of pedestrianism and transit use than automobile oriented neighbourhoods in the San Francisco area. However, the study also concludes that transit oriented neighbourhoods have negligible effects on the overall commuting patterns of the San Francisco region. In 1996, Crane added to the debate by arguing that new urbanist developments, specifically neotraditional communities, may actually increase automobile use by providing greater accessibility to the surrounding region with its grid street network (Crane, 1996; Crane, 1996b). In 1997, Southworth examined two new urbanist developments: Kentlands, Maryland and Laguna West, California. Southworth shows that although there is an increase in pedestrian travel within the developments, travel outside of the communities still relies on automobiles.

Another obstacle facing New Urbanism is the task of integrating New Urbanism principles into municipal plans (Fulton, 1996). Municipal plans tend to enforce rigid guidelines that are hostile to New Urbanism's design principles related to street width, building setbacks, and the use of alleys for utility servicing. Furthermore, because new urbanist plans are on the neighbourhood scale, many planners question whether such plans can be extended to shape the growth of the entire metropolitan region and curb urban sprawl (Audirac & Shermyen, 1994; Fulton, 1996). TOD requires local collaboration with regional transportation planners while a network of new urbanist

developments requires coordination between each other and with the surrounding urban region (Handy, 1991).

Most critics of New Urbanism cite the lack of empirical support for the ideology's claims. Audirac & Shermyen (1994), Crane (1996b), Fulton (1996), Handy (1991), Southworth (1997), and Talen (1999) all cite lack of evidence as a serious drawback for the acceptance of New Urbanism as a planning paradigm. Handy (1991) points out that many people consider New Urbanism a reincarnation of physical determinism – a framework long discredited by planners. Talen (1999) notes that although there is a positive relationship between physical design and social interaction, there is little evidence to suggest that design can create a sense of place.

Perhaps the biggest obstacle that New Urbanism must overcome is consumer preference. Burnley, Murphy, and Jenner (1997), Filion, Bunting, and Warriner (1999), and Talen (2001) all show that consumers tend to prefer living in traditional low-density suburban environments than higher density urban environments. Although New Urbanism does not create a level of urbanism comparable to an inner city, it does produce residential densities much higher than conventional suburbs. In addition, some new urbanist principles such as the promotion of socio-economic and racial integration and the experimental architectural standards run counter to consumer tendencies (Audirac & Shermyen, 1994; Boonyanunt, 1996; Handy, 1991). Because many North Americans value privacy and autonomy over their property, design restrictions imposed by New Urbanism could deter people from buying into the concept. Furthermore, grid street networks and reduced front yard depths encroach on privacy by allowing for more traffic on residential streets and reducing the buffer between home and the street (Audirac & Shermyen, 1994; Boonyanunt, 1996).

In spite of the criticism, New Urbanism remains popular in the literature. New Urbanists feel that, by carefully planning and developing one neighbourhood at a time, they can cumulatively create an ideal metropolis that fosters social interaction, community spirit, and environmental integrity.

2.4 Complementing Interventionism: Grass Roots Action

Along with calling for a physical restructuring of the city, planners are also reaching out to the public in their efforts address the shortcomings of contemporary urban form and build better communities.

2.4.1 Healthy Cities Movement

Increasingly, today's cities are criticized for contributing to a deteriorating state of health for urban residents due to the link between urban form, lifestyle, and increased incidents of respiratory and cardiovascular disease, certain cancers, obesity, high blood pressure, diabetes, and mental disorder (Bray, Vakil & Elliot, 2005; Heart & Stroke Foundation, 2005; Ontario Medical Association, 2005). In addition to redressing the shortcomings of contemporary urban form, many planners, health care experts, and others are seeking to reaffirm the link between public health, land use, and lifestyle by recognizing that cities produce unique effects on health and that public health is best served by taking proactive/preventative action rather than by treating symptoms.

In 1986, the World Health Organization (WHO) launched the Healthy Cities project (Innes & Booher, 1993). The goal of this project is to help people improve their own physical, mental, social, economic, political, and spiritual health by encouraging them to become active participants in collaborative efforts to improve their everyday surroundings and actions (Kenzer, 2000). The

basis for the Healthy Cities movement originates from the thoughts of Thomas McKeown who postulated that the major health improvements of the 19th century were largely due to improvements in healthcare provision, not medical advancement. McKeown felt that if better provision was the key to improving public health, then public provision of healthcare would be more beneficial than state healthcare (Innes & Booher, 1993). In essence, public health would be better served if people took a proactive role in achieving their own health goals by modifying their behaviours.

Based on the principles set out in the WHO's *Ottawa Charter for Health Promotion*, Healthy Cities projects are community-based programs that seek to strategically identify and address community needs by mobilizing resources within the community. Involving collaboration between citizens, community groups, businesses, non-governmental organizations, and local, state, and sometimes even federal governments, these projects empower citizens with the responsibility of improving community health (Hancock, 1993; Kenzer, 2000; Twiss, 1997). Activities that take place as part of Healthy Cities projects include community visioning, consensus building, action plan development, neighbourhood beautification, crime prevention education, conflict management training and even the publication of healthy living magazines and operation of health clinics (Twiss, 1997). Overall, the goal of these projects is to enable people to change their own behaviours in order to create healthier communities. Therefore, the Healthy Cities movement is attempting to provide proactive, behaviour-based solutions to urban health problems.

Although there are hundreds of official Healthy City projects worldwide, few critiques of the concept exist because it lacks grounding in scholarly research and thus receives little evaluation.

Petersen (1996) asserts that the lack of scientific grounding could prove detrimental to the movement because of society's high valuation of rational science and reliance on expert opinion for solutions to socio-political problems. Peterson also questions the underlying motivations of those initiating these projects: who is really benefiting from this empowerment of the people? Perhaps it is the government who really benefits through lowered health care expenditures. For example, the Eugenics Society of the early 1900s implemented a preventative medicine program that claimed to empower citizens in matters of their own health. The reality was, in fact, much different. The Eugenics Society wanted to "improve human racial qualities by rational selection, namely the encouragement of natural increase among the well endowed and the discouragement (through contraception) of propagation of inferior and subnormal stocks" (Hebbert, 1999, p.443). Therefore, Peterson asserts that one must question who participates in these projects and what their motivations for participating are.

Others, such as Hebbert (1999) and Hynes et al. (2000) point out that the Healthy Cities movement has little consideration of urban morphology and that it should be expanded to include elements of environmental justice – consideration of the physical, social, and built environments in under-privileged neighbourhoods. These types of solutions would combine both behaviourally based and environmentally based techniques for addressing urban problems with the recognition that urban health problems are not caused by individual behaviours alone. Indeed, as Maantay (2001) shows, urban health problems are also a product of economic, social, and political practices.

Despite these criticisms, the Healthy Cities movement is growing in popularity as a tool for addressing urban health issues. This trend means that there is a growing expectation that people

should and will take more responsibility for their health and the health of their community. Similar to the increased role that the public is expected to play in the community planning process, more and more people are going to be asked to enhance their role in improving public health.

2.4.2 Safe Cities Movement

In the post World War II era, the rise of contemporary urban form coincided with wider societal socio-economic stratification and, particularly in the U.S., racial segregation as affluent households migrated from central cities to new suburban neighbourhoods leaving poorer households behind (Yeates, 1998). This process of social stratification lead to decline in many central cities as the remaining residents lacked the financial ability to invest in the maintenance of their communities or the economic clout to attract new investment to their neighbourhoods. Consequently, a culture of fear engrained itself in the urban landscape as people, fearing the potential for crime, sought to insulate themselves from those with whom they were socially and racially unfamiliar (Garland & Stokols, 2002; Low, 2001). This resulted in further proliferation of central city decline.

In 1985, a movement called Safe Cities emerged to encourage "partnerships among national governments, cities, neighbourhoods, and citizens…[with the goal of] preventing fear of crime in cities" (Wekerle & Whitzman, 1995, p.6-7) and therefore stem economic decline in urban neighbourhoods. Fear, it is believed, destroys the "most important element necessary for a successful city, the assumption that strangers on the street are potential allies rather than attackers" (Thomas & Bromley, 1996; Whitzman & Wekerle, 1997, p.3). As Garland & Stokols (2002) illustrate, urban fear typically leads to a stoppage or withdrawal of investment from potential investors who live beyond the neighbourhood boundary.

The Safe Cities movement seeks to mobilize the public and make them the key instrument in creating safe communities by using citizens' knowledge of their local environment to identify and alter settings where people fear victimization and by empowering citizens with an interest in policing their neighbourhoods. Therefore, the movement attempts to address fear by reducing opportunities for criminal activity through environmental design and by enabling people to take responsibility for the well being of their communities (Kuo & Sullivan, 2001).

Traditionally, there are two ways of addressing crime: the law and order approach and the root cause approach (Wekerle & Whitzman, 1995). The law and order approach assumes that crime and fear of crime is caused by the presence of too many criminals in society and a lax criminal justice system and typically calls for tougher laws, more policing and stiffer sentences for criminals (Wekerle & Whitzman, 1995). Conversely, the root cause approach assumes that crime is a result of social, economic, and political marginalization, and that these inequalities must be addressed to create a social order and public civility. Often, this approach focuses on initiatives such as education and job training, job creation, economic development, and youth socialization in problem neighbourhoods (de la Barra, 2000; Hynes et al., 2000; Maantay, 2001). The former approach is often criticized for creating a fortress society in which people are led to fear each other even more however, due to the magnitude and complexity of social marginalization, the latter approach is criticized for being financially impractical (Wekerle & Whitzman, 1995; Tiesdell & Oc, 1998).

The Safe Cities approach, on the other hand, focuses on the neighbourhood or community scale, asserting that many small programs making incremental changes are more productive than a few large programs making massive changes (Wekerle, 2000). Safe Cities does acknowledge, however, the occurrence of marginalization and, in fact, attempts to reach these groups most. Women, seniors, and children are most affected by fear of crime because they are most likely to perceive danger in the physical environment and to change their daily behaviour as a response (Whitzman & Wekerle, 1997). Through safety audits, focus groups, education programs, community service programs, information sharing, and small business initiatives, the Safe City approach directly seeks the participation of those groups who are most marginalized by fear of crime (Task Force on Community Safety, 1999).

While research appears to confirm that the Safe Cities' methodology and basis is successful in producing its intended results, a need remains for continuous evaluation of these projects (Kuo & Sullivan, 2001; Whitzman & Wekerle, 1997). With the growing popularity of the defensible space concept – crime prevention through environmental design and citizen empowerment – a shift has taken place to emphasize proactive solutions for crime instead of reactionary ones (Wekerle & Whitzman, 1995). Unfortunately, the movement does not seem to address what is now widely accepted as the root of urban fear: unfamiliarity between people of different race, class and ethnic backgrounds that is perpetuated by social segregation on the landscape (Garland & Stokols, 2002; Low, 2001; Maher, 2003).

2.5 Implications of Interventionist Strategies for the Public

Presently, many planners, architects, and politicians are proposing (and in some cases taking) a two-pronged approach to addressing urban dispersion and the negative consequences of the dispersed landscape. First, they seek to alter the physical form of cities by implementing top-down policies that employ the spatial-control tools of Growth Management and the micro-design principles of New Urbanism. Second, they seek to foster a bottom-up approach to community development by assigning the public with more responsibility in managing the social aspects of the community such as monitoring behaviour in public spaces. By using these approaches, planners hope to create an urban environment that is free of the environmental, economic, and social troubles that current plague our cities while providing ample economic opportunities for the future. To date, I am unaware of any examples where these two approaches have been successfully combined to produce the desired results on a metropolitan scale.

For those who feel that fundamental changes are needed to address the shortcomings of current urban form, the overriding belief is that a change in society's behaviours and values must take place. Smart Growth, Growth Management, and New Urbanism seek to challenge traditional North American values by producing new development that is significantly more dense and varied in style than consumers are typically accustomed. By creating communities that are pedestrian and transit friendly with a mosaic of uses, it is hoped that North Americans will adapt their perception of what an ideal dwelling, neighbourhood, and lifestyle should be and thus discourage dispersed forms of development. Ultimately, should these interventionist movements be successful in changing consumer attitudes and values, it is hoped that these communities will popularize

behaviours such as commuting by transit, cycling or walking and thus alleviate many of the adverse symptoms of contemporary urban form.

In an environment that is regulated by principles of Smart Growth or Growth Management, people will be forced to make decisions about the type of lifestyle they wish to have in consideration of the opportunities available to achieve their goals. Smart Growth and Growth Management are widely cited for escalating land values and housing prices in communities where they are implemented (O'Toole, 2000). As a result, low-density forms of housing become less profitable to develop and the existing stock becomes more expensive to buy. In such a situation, many people may be forced to compromise their goals in order to find housing which they are able to afford.

Ultimately, today's planning interventions require people to assume a greater responsibility for the current state of cities and for their remedy. They require people to rationalize their own behaviour in the context of the greater societal good and to redefine their ideal of urban form. For some, this may seem like an infringement on their personal freedom. For others, this rationalization is essential if we are to gather a better perspective of our place in the natural environment.

Critics of Smart Growth, Growth Management and New Urbanism feel that planners are trying to force a socialist agenda on the public by limiting personal choice and freedom:

> When smart growth planners say they want to give people choices, they mean they want to take choices away. When they say they want to relieve congestion, they mean they want to increase congestion so that people will be forced to ride mass transit. When they say they want affordable housing, they mean they want to make single family housing unaffordable so that all but the wealthiest people will live in high density housing. When they say they want

> to preserve open space for people, they mean they want to preserve it *from* people.
>
> (O'Toole, 2000b p.8)

Supporters of the sustainable urban movements, however, feel that planners are justified in attempting to implement top-down behaviour-altering policies because it is in the best interest of everyone to pursue an ultimate remedy to urban dispersion. The 1980 United States Supreme Court decision on Agins vs. City of Tuburon, gives legal legitimacy to these movements:

> it has "long…been recognized as legitimate" for local governments to discourage "the premature and unnecessary conversion of open-space land to urban uses." [Local governments are also justified in their] efforts to protect against "air, noise and water pollution, traffic congestion, destruction of scenic beauty, disturbance of the ecology and environment, hazards related to geology, fire and flood, and other demonstrated consequences of urban sprawl."
>
> (In Dowling, 2000 pp. 883-884)

Overall, the success of these movements will depend on the level of public support that is achieved. Public support is needed in the political arena where planning decisions are made in order to foster innovative policy and development, and public support is needed on the ground in people's everyday lifestyle choices in order to show planners and developers alike that sufficient demand exists for change. While public support for the environmental harmonization of cities appears to be growing, the question remains whether people will accept how planners propose to change their daily lives by restructuring the physical and social environment. This thesis attempts to answer that question by assessing a group of Torontonians' likelihood for, and commitment to, supporting the reforms proposed by today's planners.

CHAPTER 3: MANAGING RAPID GROWTH IN THE GTA

3.1 Addressing Growth in Toronto: Past and Present

Toronto has long questioned how to accommodate growth. Most often, proposed solutions have been of two types: 1) municipal political reform and, 2) the systematic channelling of urban growth.

3.1.1 Municipal Political Reform

Since the original City of Toronto was incorporated in 1834, numerous adjustments have occurred to the local political structure in hopes of coordinating urban growth. Between 1834 and 1914, the City of Toronto undertook 30 major annexations to control development (Isin & Wolfson, 1999). In the 1920s and 1930s, with suburban communities growing beyond the City's boundaries, proposals were submitted to the Ontario Legislature[7] to create a two-tiered municipal government system that could coordinate regional-level servicing across the entire urbanized area (Bow, 1995). These proposals were realized in 1954 when the Municipality of Metropolitan Toronto was created; a two-tier[8] regional government that encompassed most of the urbanized Toronto region at the time and was responsible for delivering services such as transit, water and wastewater servicing, and regional planning (Bow, 1995).

[7] The British North America Act provided provincial governments the power to be the sole incorporators of local municipal governments (Isin, 1995).

[8] Two-tier government refers to when one geographic space is governed by more than one municipal governing body - the lower tier being the City or local government and the upper tier being a Regional or Metropolitan government. Upper tier governments oversee services such as water and wastewater treatment and regional planning for a large area that may contain many lower tier governments.

In the 1970s, urban development spilled beyond Metropolitan Toronto's boundaries. Instead of expanding Metropolitan Toronto, however, the Province chose to create four new Regional Municipalities out of the surrounding counties and townships. These Regions, as they are known, were similar to Toronto's metropolitan government in that they were also a two-tier form of government responsible for the coordination and delivery of services across a wide area (they were not responsible for the provision of transit, however) (Isin & Wolfson, 1999). The Regional Municipalities of Durham, Halton, Peel, and York were to be the overseers of growth beyond Metropolitan Toronto's boundaries.

By the mid-1990s, in the wake of a crippling recession, the Provincial government sensed a public sentiment that the GTA's social and economic quality of life was under threat. Citing over-governance, an imbalanced municipal financing arrangement, and an eroding physical infrastructure as being to blame, the Province created the Task Force on the Future of the Greater Toronto Area (GTA Task Force) in 1995 to study the future of governance and taxation in the GTA (GTA Task Force, 1996). In 1996 the Task Force gave their final recommendation to the province: replace the four existing regional governments and the metropolitan government with a single Greater Toronto Council which would be comprised of representatives from the elected local municipal councils and would be responsible for services on a regional scale such as planning, economic development, expressway construction and maintenance, police, transit, water supply, wastewater treatment, and solid waste management to name a few (GTA Task Force, 1996, p. 175). The Task Force saw this Council as a means to eliminate the lack of coordination among municipalities in the GTA and an opportunity to create a framework for the proper accommodation of growth. At that time, however, a newly elected provincial government disagreed, and the GTA

Task Force's recommendation never came to be. In 1998, the province chose instead to amalgamate the six municipalities within Metropolitan Toronto into one City of Toronto citing improved municipal and fiscal efficiency and greater political accountability as the determining factors (Isin & Wolfson, 1999)[9].

3.1.2 Regional Planning Exercises

While many sought to change the GTA's political institutions in the face of rapid urbanization, others sought to plan for an ideal urban form. In the 1960s, the Province initiated a program called Design for Development which proposed to divide the province into ten regions and establish economic and development planning for each region (Isin & Wolfson, 1999). Out of this program, an area of roughly 14,000 km^2 stretching from Georgian Bay in the North, Peterborough-Northumberland in the East, Kitchener-Waterloo in the West, and Stoney Creek in the South, was designated as the Toronto-Centred Region (Isin & Wolfson, 1999).

In 1970, the provincial government released *Design for Development: Toronto-Centred Region*, a general policy statement that was intended to guide urban development in the region until approximately the year 2000 (Ministry of Treasury, Economics and Intergovernmental Affairs, 1976). The guideline attempted to reconcile urban growth with the region's physiography and its agricultural, recreational, and transportation needs by accommodating approximately 8 million people in a series of three rings. The first ring represented the existing urban communities along the Lake Ontario shoreline between Hamilton and Oshawa and would be the primary focal point for growth. The second ring consisted of a network of open spaces called the "Parkway Belt" that

[9] See Isin & Wolfson (1999) for an in-depth social, economic, and political analysis of the decision to create the amalgamated City of Toronto.

would separate developed areas and provide a link between existing natural recreation areas and a corridor for service infrastructure such as telecommunication and hydro transmission lines. The third ring, located beyond easy commuting distance of Toronto, was to serve as a secondary focal point for growth in hopes of easing development pressure in the first ring (Ministry of Treasury, Economics and Intergovernmental Affairs, 1976). Although no provincial plan for the Toronto Centred Region was ever officially implemented and support for the Design for Development program was eventually lost in the mid-1970s, one major outcome from the exercise was the formation of the four suburban regional governments mentioned earlier (Ministry of Treasury, Economics and Intergovernmental Affairs, 1976). With the Toronto-Centred Region, urban reform and political reform went hand-in-hand.

In the late 1980s, the province established the Greater Toronto Coordinating Committee (GTCC) which commissioned a study called the Greater Toronto Area Urban Structure Concepts Study. The task was to develop urban structure concepts for a projected population of just over 6 million by year 2021 and investigate the relative infrastructure requirements and capital costs associated with each in order to "form the basis for debate regarding appropriate distributions and densities of urban development in the [GTA]" (IBI Group, 1990; Wright, 2000, p. 44). The study identified three urban structure concepts: 1) spread, 2) central, and 3) nodal. The spread concept represented the continuation of current low-density development trends, the central concept envisioned accommodating the majority of population growth within the existing urban footprint, and the nodal concept focused growth in and around existing communities in a form that was more compact than the spread form but less aggressive than the central concept (IBI Group, 1990). While the study concluded that the relative costs to provide infrastructure to service these concepts

were negligible (between $74 and $79 billion dollars for each over the life of the study horizon), the nodal concept emerged as the preferred pattern. The spread concept was thought to be most commercially viable but too environmentally degrading while the central concept was regarded as most environmentally friendly but too difficult to implement as it would require significant government regulation (IBI Group, 1990b). Like the Toronto-Centred Region exercise, no official comprehensive provincial plan has arisen out of this work.

In 2001, the Province initiated a program called Smart Growth that had a broad objective of balancing economic prosperity with environmental integrity and community strength (Ontario Smart Growth, 2001). The province was delineated into Smart Growth Zones and a panel was appointed for each zone comprised of key figures from various sectors including municipal government, business, education, environmental groups, transportation organizations and the development industry that was responsible for making recommendations to the Province on how growth should unfold their respective zone (Central Ontario Smart Growth Panel, 2003). Toronto was included in the Central Ontario Smart Growth Zone, which encompassed primarily all of south-central Ontario.

In April 2003, the Central Ontario panel released their final report, *Shape the Future*, in which they made 44 recommendations on how to proceed with accommodating growth in Central Ontario (Central Ontario Smart Growth Panel, 2003). Generally, the panel recommended that growth be focused in and around existing urban areas in a similar fashion to the nodal concept described in the GTA Urban Structure Concepts Study. To implement these recommendations, the panel proposed creating a regulatory framework in three steps: First, establish a Central Ontario zone-

wide body that would act both as a facilitator for cross-jurisdictional issues such as infrastructure planning and investment and as an advisor to the province on issues such as prioritising infrastructure investment; Second, create a body within the provincial government to act as a co-ordinator between the various government ministries to ensure consistency between all government policies and legislation and the principles of Smart Growth; and, Third, ensure that all development in Ontario is legally required to adhere to the principles of Smart Growth by either altering existing legislation or creating new legislation (Central Ontario Smart Growth Panel, 2003). Similar to the Toronto-Centred Region and the GTA Task Force, the Central Ontario Smart Growth Panel recommended a combination of government reforms and urban structure changes, however, this time, at the provincial level rather than the municipal level. However, this initiative was short-lived as it was cancelled following the election of a new provincial government in fall, 2003.

3.1.3 Places to Grow

Upon its election in 2003, the provincial government began to implement a new agenda of growth and infrastructure management and land use planning reform by creating the Ministry of Public Infrastructure Renewal (MPIR) (Office of the Premier of Ontario, October 23, 2003). MPIR's mandate is to work with all Provincial ministries to broadly plan and coordinate provincial growth and the Province's investments in public infrastructure (MPIR, February 26, 2006). In 2004 and 2005 the Province's agenda to reform land use planning gained momentum as several new pieces of legislation were enacted and new land use policies were established.

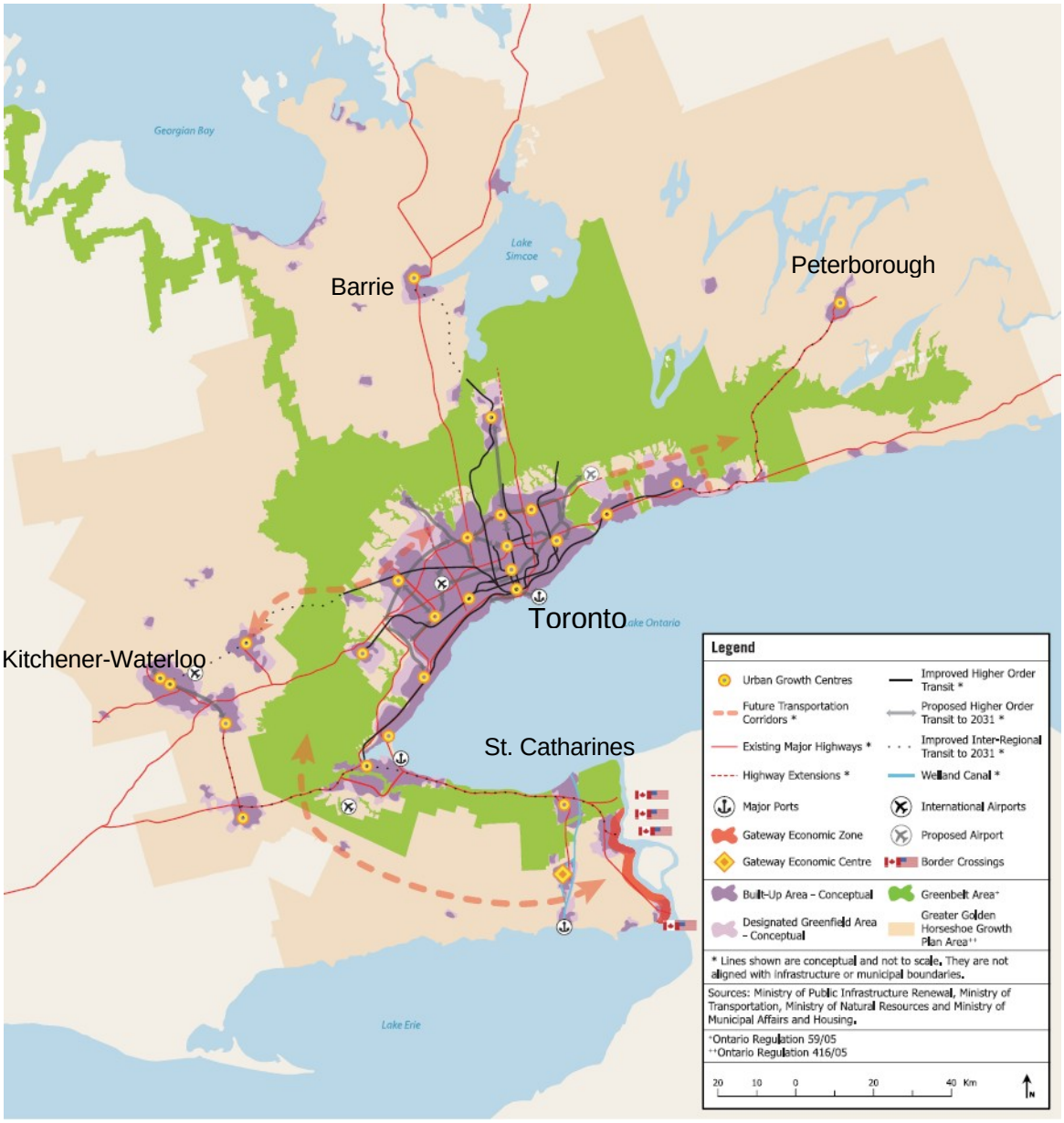
In 2004 the Province introduced *Ontario Regulation 153/04* (MOE, 2004) that changed the requirements for cleaning contaminated sites and is intended to clarify the process for redeveloping

brownfield sites. Also in 2004, the Province passed the *Strong Communities Act* (MMAH, 2004) which strengthened the requirement for implementation of Provincial Policies. In 2005, the Province released a new *Provincial Policy Statement* (MMAH, 2005) that outlines matters of Provincial interest to which all land use planning must be consistent, and established a large greenbelt around the City of Toronto and its immediate suburban communities to protect sensitive environmental features and valuable agricultural lands from the threat of urbanization. Finally, in 2005, the Province passed the *Places to Grow Act*, which enabled the government to establish growth plans for designated areas across the Province (MPIR, 2006). Once a growth plan is established for an area, all planning within that area must conform to the plan.

The first growth plan prepared by the Province came into effect on June 16, 2006 for an area called the Greater Golden Horseshoe (GGH) (MPIR, 2006). The GGH coincides almost perfectly with the former Central Ontario Smart Growth Area, encompassing most of south-central Ontario from Niagara Region to Simcoe County, and Peterborough County to Waterloo Region (see Figure 3.1). The growth plan contains policies aimed at directing growth to existing built-up areas that have sufficient infrastructure capacity to accommodate growth in order to achieve transit-supportive densities and protect agricultural lands and sensitive environmental features from future development. Specific provisions of the plan include prescribing a minimum density of 50 persons and jobs per hectare for new greenfield development, requiring an annual minimum of 40% of all new residential development be located within the existing built area by 2015, prescribing a minimum density target of 400 residents and jobs per hectare for Urban Growth Centres in the City of Toronto (200 for most other Urban Growth Centres in the GGH), and restricting the ability of municipalities to designate additional lands for urban uses (MPIR, 2006).

Figure 3.1:

Adaptation of the Places to Grow Concept for the Greater Golden Horseshoe



NOTE*: The information displayed on this map is not to scale, does not accurately reflect approved land-use and planning boundaries, and may be out of date. For more information on precise boundaries, the appropriate municipality should be consulted. For more information on Greenbelt Area boundaries, the Greenbelt Plan 2005 should be consulted. The Province of Ontario assumes no responsibility or liability for any consequence of any use made of this map.*

("Schedule 2: Places to Grow Concept" from *Places to Grow: Growth Plan for the Greater Golden Horseshoe*, Ontario Ministry of Public Infrastructure Renewal, 2006. ©Queen's Printer for Ontario, 2006. Adapted and reproduced with permission.)

The *Places to Grow Growth Plan for the Greater Golden Horseshoe, 2006* will significantly change Toronto's landscape over time as all growth anticipated for the region to 2031 will be accommodated within existing built areas and a limited amount of designated greenfield areas. The result will be an urban landscape that is more dense and diverse in uses than residents are currently accustomed. For greenfield areas, Figures 3.2 and 3.3 provide a visual representation of how our communities may look under *Places to Grow* versus low-density residential development that is common throughout the GGH.

Figure 3.2:
Greenfield Development that Approximates the Places to Grow Density Requirements, Kitchener, Ontario

Figure 3.3:
Low-Density Greenfield Development, Kitchener, Ontario

Additionally, the Growth Plan intends to make the GTA more transit supportive as it proposes a vast expansion to the region's high order transit network such as subways, light rapid transit, and heavy commuter rail to complement the increased residential and employment densities (MPIR, 2006). Presently, the Province is proposing legislation (Bill 51, *The Planning and Conservation Statute Law Amendment Act, 2005*) to amend the *Planning Act* and ensure that Ontario's planning framework provides for the implementation of growth plans and other Provincial land use planning reforms (MPIR, 2006b).

3.2 The Role(s) of the Public in Implementing *Places to Grow*

As users of urban space, people play a significant role in shaping our cities. As rational consumers, people make choices everyday that affect how our cities are built such as where to live, how to travel, and where to shop. Through analysing these choices, homebuilders, manufacturers

and retailers refine their products and services so as to capitalize on perceived demands in the consumer marketplace. Arguably, as a result of consumer research, municipal planners and councils are most often asked to approve suburban-style developments on greenfield sites because this is the lifestyle the public demands.

This section investigates the public's role in influencing urban form as a consumer of housing and as a participant in the land-use planning process as well as assesses how these roles relate to the implementation of *Places to Grow*.

3.2.1 Choosing a Home

For most people, choosing where to live is one of the most important and complex decisions they will ever make; single detached dwelling versus apartment, own versus rent, downtown versus suburbs – one is faced with a multitude of options and the task of choosing one that best suits their needs and aspirations at the time. Moreover, where one lives influences the lifestyle they have including how they travel, where they shop, and with whom they interact and form relationships. Ultimately, choosing the right home can determine how successful one is at achieving personal goals and attaining self-fulfillment. Unfortunately, little research exists that addresses the relationship between individuals' home selection process, their attitudes, and the state of the urban environment.

The process of choosing a new home begins by making a conscious decision to leave one's current dwelling. Often, this decision precipitates from significant life events such as getting married, having children, children leaving home to attend post-secondary education, and retirement

(Michelson, 1977). Over the course of a lifetime, one's priorities for housing may change significantly. No matter which stage of the lifecycle one occupies, their decision will always be based on an evaluation of the type of dwelling and neighbourhood in which they wish to live and their opportunity in the marketplace to find such housing (Dieleman & Mulder, 2002).

Generally, the type of dwelling one aspires to live in is based on need such as: the need for more space to accommodate a growing family, the need for a larger back yard for children to play in, or the need for a single level dwelling to accommodate a physical disability (Dieleman & Mulder, 2002). However, need is a multi-faceted concept that is shaped by one's prevailing cultural context, attitudes, and personal experience (Aragones, 2002; Krupat, 1985). For example, a suburban Toronto family with five members including three small children may feel crowded living in a three-bedroom townhouse whereas a similar-sized family living in similar accommodations in Hong Kong may feel over housed. Therefore, in order to understand consumers' needs, one must understand the prevailing culture in which consumers are immersed.

Michelson (1977) found in a Toronto residential study that home ownership is a pervasive cultural value. Therefore, Torontonians are apt to choose housing forms that are available for personal ownership. Additionally, Gordon and Richardson (1997; 2000), Martinson (2000), and O'Toole (2000a; 2000b) note that personal space and mobility are valued globally and that, as personal wealth increases, the preference for more personal space and mobility increases. Burnley, Murphy, and Jenner (1997), Filion, Bunting, and Warriner (1999), Metropolitan Knowledge International (2005) and Talen (2001) show that consumers tend to prefer living in traditional low-density, ground-oriented (often suburban) environments rather than higher density environments. In the

context of these cultural values, Toronto homebuilders have provided housing to satisfy consumer appetites for personal space and ground orientation since the middle of the 20th century.

Another factor influencing consumer decisions when choosing a form of dwelling is life and social aspirations. For many, housing represents a means of satisfying not only their needs, but also their life goals (Garling & Friman, 2002). In a culture such as Toronto's where homeownership is valued pervasively, those aspiring to own a large single detached dwelling often choose to purchase or rent interim forms of housing until such time as they are financially able to achieve their goal (Michelson, 1977). Furthermore, those who wish to ascend the society's social ladder may choose a dwelling that projects a message of heightened socio-economic status to the outside world through its exterior design, décor and landscaping (Aragones, 2002).

Cognitive psychologists maintain that "most of what we do, think, and feel is guided by things we already know (Reisberg, 2001, p. 20)." As people act in their physical, social, and socio-cultural environments, they continually receive information in response to their actions (Pierce & Cheney, 2004; Walters, 2000; Wapner & Demick, 2002). Over time, people integrate this information into their decision making process by adapting to the dynamic environments in which they live, by retaining information over a lifetime that assists in enhancing one's quality of life, and by integrating behaviour patterns into the lives of many that eventually endures beyond any individual lifetime to form culture (Pierce & Cheney, 2004). This process of learning is the basis of attitude and behaviour formation and therefore provides that individual attitudes and behaviours will be shaped by one's environment and daily life experience (Pierce & Cheney, 2004). Given the

prevalence of low-density, privately-owned housing in the GTA, it is no surprise that this reality has become a cultural expectation for many in Toronto.

The second key consideration for consumers when choosing a new home is the context in which the dwelling is located including its neighbourhood and its proximity/relationship to other locations of significance in the consumer's life such as work, school, and family/friends (Dieleman & Mulder, 2002). With the exception of those who have limited financial resources and are therefore restricted to living in locations that are affordable to lower income households, people evaluate potential neighbourhoods based on their personal attitudes, beliefs and lifestyle preferences rather than pure needs (Dieleman & Mulder, 2002). Since, as discussed previously, attitudes, beliefs and preferences are a product of culture and life experience, the type of neighbourhood in which one chooses to live generally reflects aspects of the prevailing culture that are most relevant to the individual at the time (Amerigo, 2002).

Overall, the single most influential factor affecting housing and neighbourhood preference is the stage of life and household structure (Metropolitan Knowledge International, 2005). At each stage of the lifecycle, individuals are influenced by some cultural values more than others. For example, North American parents value having access to green open space for their children to play in such as a fenced back yard whereas senior citizens value dwellings that are easy to maintain such as condominiums (Metropolitan Knowledge International, 2005). Generally, suburban environments, with their ground-oriented housing forms and abundance of open space, are popular among households with young children (Metropolitan Knowledge International, 2005; Michelson, 1977). On the other hand, downtown neighbourhoods are popular with highly educated households that

have few or no children and are attracted to the wide range of social, cultural, and employment opportunities that downtown living provides. Those who prefer suburban neighbourhoods are often willing to increase their commuting distance in return for more personal space and a quieter environment (Michelson, 1977).

No matter one's life stage or housing structure, housing consumers universally prefer to choose neighbourhoods that they view positively based on their previous experiences and they prefer to live in neighbourhoods where they perceive existing residents to be of a similar background – especially with regards to socio-economics (Low, 2001; Maher, 2003). When evaluating potential neighbourhoods, people read messages embedded in the environment to gather clues regarding the people who live there such as the condition of the housing exteriors, exterior décor, and the brand/condition of vehicles parked in driveways and then compare these messages to their expectations and aspirations (Amerigo, 2002; Maher, 2003). As a result of this selection process, city populations become segregated on many dimensions and neighbourhood styles that appeal to the broadest class of society – the middle class – proliferate.

3.2.1.1 The Consequences of Our Choices

As discussed, Toronto's cultural value of personal space, mobility and ground-oriented living combined with its large middle class has resulted in a low density, automobile-oriented, suburban-dominated landscape that segregates not only people of various socio-economic backgrounds, but also people from their places of work and shopping. As a result of Torontonians' housing choices in the post World War II era, a distinct lifestyle and way of thinking has evolved that serves to further promote the kinds of urban development that *Places to Grow* seeks to address.

Environmental Psychologists contend that built form acts as a system of higher order that shapes and guides our behaviour (Gallagher, 1993). Specifically, built form creates settings that both afford and restrict opportunities for human behaviour by conveying culturally specific messages about which behaviours are appropriate for any particular setting (Churchman, 2002; Lang, 1987; Rapoport, 1990). For example, long cul-de-sacs without sidewalks or trail connections tend to discourage pedestrian activity between the street and the surrounding city as they lack the facilities required to accommodate walking. Furthermore, such streets, which often contain exclusive, large homes, may deter members of the general public who are of a lower socio-economic status from entering due to the imbedded messages of class segregation that they may project. Suburban Toronto, due to its dispersion and low-density of uses, generally offers little opportunity for people to travel by means other than private automobile to complete daily tasks including commuting to work and shopping for milk.

Throughout each day, people perform systems of activities as they move them continuously from one setting to another, constantly interpreting messages and changing their behaviours accordingly (Rapoport, 1990). Often, people refine their lifestyle to a particular system of activities and settings; habituation occurs so that they become entrenched in the order that they have interpreted from their physical surroundings – one of many possible ways to behave becomes the only way to behave (Gallagher, 1993; Lang, 1994). Unfortunately, when people are immersed in settings that offer only a limited range of opportunities for behaviour such as the suburban landscape does by segregating land uses, the behaviour pattern they become entrenched in is shaped by lack of choice rather than choice. Furthermore, widespread habituation to such settings serves to entrench the dominant landscape without questioning whether it serves people's needs appropriately.

Once habituation to the surrounding environment occurs, people tend to discourage changes that are considered major or different from their expectation of how the environment should be laid out and how people should act within it (Lang, 1994). A good example of this phenomenon is depicted in Herbert Gans' 1962 book entitled *The Urban Villagers: Group and Class in the Life of Italian-Americans* where residents of an ethnic New York City neighbourhood that was scheduled for demolition and considered to be a slum by outsiders displayed their content and satisfaction with their physical and social surroundings by protesting the impending redevelopment of their neighbourhood.

In Toronto, much of the landscape has been built to accommodate consumer preferences over the last 50 years such as clearly delineating ownership and user rights of property so that people can have their own private space, allowing for unrestricted personal mobility via the automobile, and minimizing, if not eliminating, nuisances and inconveniences caused by the proximity of uses perceived as being incompatible. As a result of emphasizing property and user rights, people have moved many of their social activities from public spaces such as parks and squares to private spaces such as backyards and living rooms. The priority of maintaining a quality road transportation network above all other transportation modes has forced most people to rely on the automobile for travelling throughout the city. By emphasizing the elimination or minimization of nuisances and incompatible uses through barriers, setbacks and zoning, many people now have only a disconnected sense of the land uses that constitute their community and a restricted ability to interact with those uses. So many people have become habituated to the lifestyle provided by this

landscape that the planning policies and design standards for many municipalities often serve to replicate the dispersed landscape (Southworth & Ben-Joseph, 2003; Willson, 1995).

What is not known at this time, however, is whether this institutionalized form of development actually prevents segments of the population from achieving a lifestyle that they truly desire. One may argue that, by providing essentially a uniform housing product, Toronto homebuilders are removing consumers' ability to choose alternative lifestyles that may actually support the principles of *Places to Grow*.

3.2.1.2 Places to Grow in the Context of Our Choices

As mentioned previously, *Places to Grow* restricts communities' ability to designate new greenfield sites for accommodating growth and will require communities to intensify development in the existing urban envelope. This policy, in turn, will likely raise land prices and spur development of higher-density forms of housing such as semi-detached dwellings, townhouses, duplexes and apartment buildings as builders try to provide housing that remains affordable (and therefore marketable) to the average consumer. Accordingly, consumers looking for new low-density housing will likely find a dwindling supply to choose from. In Portland, Phillips and Goodstein (2000) show that the density of new development has increased within its urban growth boundary while urban growth has accelerated in nearby Washington State, outside of Oregon's growth management restrictions.

Also, widespread development of higher-density housing may impair consumers' ability to perceive the socio-economic differences between neighbourhoods as those aspiring to own single

family housing settle for other forms of housing due to the diminishing supply of singles. Should *Places to Grow* proliferate the development of condominiums and apartments where exterior décor is regulated and often parking is hidden from sight, consumers may also experience difficulty in reading the socio-economic clues embedded in the environment as exterior appearance becomes more standardized.

Ultimately, the planning policies and tools contained in the *Places to Grow* Growth Plan aim to:

- Create complete communities that offer more options for living, working, shopping and playing;
- Revitalize downtowns to become vibrant and convenient centres;
- Provide greater choice in housing types to meet the needs of people at all stages of life;
- Curb sprawl and protect farmlands and green spaces; and,
- Reduce traffic gridlock by improving access to a greater range of transportation choices.

(MPIR, 2006c, p.3)

Some of these objectives may be achieved in a quantifiable manner through the application of the policies contained in the Growth Plan, however, most of these objectives, such as creating more complete communities, revitalizing downtowns, and reducing traffic gridlock depend on how Torontonians react to changes occurring in their landscape. For the Growth Plan to be successful, it is implicitly assumed that residents will positively experience their changing landscape and, in doing so, adapt their attitudes, preferences, and lifestyle to embrace higher-density living, redefine their relationship with downtown, and incorporate multi-modal travel into their daily routine. As Ley (1996) points out, such embrace of higher density, urban living often does occur among graduates of inner city universities. However, should consumers perceive the changing landscape

as inhibiting their ability to achieve housing and lifestyle goals, their reaction could spur political lobbying and/or out migration from the GTA and thus threaten the Plan's existence.

3.2.2 The Public as a Participant in the Planning Process

Much of the research and consultation work that has influenced the principles, objectives and policies contained in *Places to Grow* occurred under the umbrella of Ontario Smart Growth which, as noted previously, was curtailed in 2003. Leading up to the establishment of the Growth Plan for the GGH on June 16, 2006, the Province sought public involvement on a number of occasions through the release of a Places to Grow discussion paper in July 2004, a Draft Growth Plan for the GGH in February 2005 and a Proposed Growth Plan for the GGH in November 2005 (MPIR, 2006c). During this process the Province hosted a series of public information sessions and solicited public comments via the internet; over 1000 written submissions were received during the preparation of the Growth Plan (MPIR, 2006c).

Notwithstanding the consultation that the Province received in its preparation of the Growth Plan, one must question who participated in this exercise; over 1000 written submissions received from a GGH population (2001) of approximately 7.79 million people (MPIR, 2006) would appear to indicate participation from a unique minority of people who have an interest in long term land use planning. As noted previously in this thesis, the public is often unaware of or apathetic to opportunities for participating in planning policy formation exercises that are beyond their immediate neighbourhood or interest (Grant, 1989). Therefore, the majority of GGH residents are likely unaware of the implications of *Places to Grow* and will likely remain apathetic to issues of

growth and land use planning until their lives are directly affected by such issues through the proposal of development in close proximity to their homes.

3.2.2.1 Legislated Public Consultation

In Ontario, the *Planning Act* establishes the framework for land use planning as well as the requirements for public consultation on land use planning matters. Presently, for matters such as proposed Official Plans or Official Plan amendments, Zoning By-laws or Zoning By-law amendments, subdivisions or condominiums, approval authorities (usually municipalities) are required to hold at least one public meeting in which the public can review the proposed policy, by-law, or development and provide comments to the approval authority. Typically, these meetings are held in conjunction with regular municipal council meetings and do not facilitate multi-way dialogue between the public, councillors, and development proponents as all presenters (or delegates) must speak directly to council, rather than to each other. Furthermore, by the time a required public meeting is held, much of the research and formative work has been completed for the application and thus one could perceive that little opportunity exists for the public to influence development.

Generally, notice of a public meeting must be given as follows:

- by personal service or prepaid first class mail to every owner of land within 120 metres of the area to which the proposal applies and with posting a notice at every separately assessed property in the area to which the proposal would apply; or,

- by publication in a newspaper that is of sufficiently general circulation in the area to which the proposal would apply that it would give the public reasonable notice of the public meeting.

(adapted from MMAH, 1996; 1996b; 1996c)

For site-specific applications such as plans of subdivision, condominium, or zoning by-law amendment, notice can either be given that ensures adjacent landowners are made aware of the application or it can be given to the wider community under the assumption that it will be sufficiently read and understood. For planning exercises that affect all lands in a municipality such as an Official Plan approval, notice can only feasibly be given via the local print media. As such, for community or region-wide policy planning exercises, the legislated notice requirements typically only receive attention from those citizens who either have a vested interest in the matter at hand or maintain a personal interest in municipal government and planning. This selective attention usually results in limited public participation from specific segments of the population and ignorance or indifference among the remainder.

Unfortunately, because of the way municipalities are required to give notice for planning matters, most people do not realize they have an opportunity to participate in land use planning until a development is proposed near their home. Therefore, instead of trying to help shape their overall community through 'big-picture' planning exercises, most people only become engaged in trying to influence land use decisions when their neighbourhood or personal 'sphere' is subject to change.

Under *Places to Grow*, redevelopment of underutilized parcels and neighbourhoods with more intensive forms of development represents a key means of accommodating anticipated growth. For people living in such neighbourhoods, intensification may be unwelcome and could thus face fierce public opposition despite the overarching policy support. In Toronto, one example of such a development was the proposal by Minto YE Inc. to construct two residential/commercial towers (one 54 storeys tall, the other 47) at the intersection of Yonge Street and Eglinton Avenue. Intense public opposition cited the development as being inappropriate in the context of official plan policies and for its impacts on the surrounding neighbourhood. Ultimately, the development was approved by the Ontario Municipal Board (OMB), the Provincial body responsible for hearing appeals related to land use planning matters, in 2002 as 51 and 37 storey buildings. In its decision, the Board found that the development was appropriate for the site, conformed with the Official Plan policies for the area, and was consistent with the principles of good urban design (OMB, 2002). In this case, the final decision was based on planning principles rather than popular opinion. However, in spite of policy support, public opposition often affects the shape of new development as Curic (2004) shows that developers are often willing to compromise details of their projects in order to appease the public and avoid costly delays in the planning approval process. Therefore, if municipalities are going to be successful at implementing the intensification requirements of *Places to Grow*, they will need to work with both developers and the public to produce developments that meet, as best as possible, the objectives of all stakeholders.

Fortunately, many developers, planners and municipalities recognize the importance of engaging the public to help shape their communities and so they go above and beyond the legislation by

undertaking alternative forms of consultation that attempt to give participants a greater opportunity to influence planning policy and development.

3.2.2.2 Visioning, Consensus Building, and Collaborative Planning

Public participation has long been an important principle to planning, however, public participation in practice has varied greatly in both scale and influence during the 20th century. In struggling to overcome problems of elitism, NIMBY (Not-In-My-Backyard), and apathy toward the community planning process, planners have searched for new participatory planning techniques that will engage the public and foster a sense of civic pride/ownership while being as inclusive as possible (Lee, 2002). Two techniques that have garnered much attention in recent years are visioning and consensus building.

Vision is a concept that has long been linked to planning. Shipley (1997) traces the use of the word vision in planning back to the 1930s. As it is currently understood, the term vision has been used since the early 1980s and has gained considerable popularity as a concept since the 1990s (Plein, Green, & Williams, 1998; Shipley, 1997).

In planning, a vision is "an optimistic picture of what might be achieved within a municipality or region given available capacities and resources" – a utopian ideal (Myers & Kitsuse, 1999). Visioning is the process of creating a vision. Visioning emphasizes citizen involvement in all steps of the planning process, not just the final steps; empowering citizens to be equal with the planning process, not subordinate (Benest, 1996). Visioning involves gauging the desires of diverse groups in order to create precipitate a common vision. Visioning is process oriented, emphasizes

inclusiveness, and is focused on a tangible outcome: a vision statement for guiding policy directions (Plein, Green, & Williams, 1998).

Consensus Building is planning that seeks broad community consensus on issues by promoting the involvement of citizens and all stakeholders in the deliberative process (Porter, 1997). Consensus Building is a vertical, issue-based, deliberation process where the involved parties build solutions through dialogue (Hodge, 1998). Innes and Booher (1999) show that strategies such as role-playing and bricolage (a form of scenario destruction and reconstruction) can be very successful as tools for building consensus.

Visioning and Consensus Building fall under the ideological umbrella of Collaborative Planning. Collaborative Planning seeks to make citizens and stakeholders a central part of the planning process by partnering them with planning experts. In fact, citizens are encouraged to take the lead in addressing issues (Plein, Green, & Williams, 1998). Some examples of cities that have undergone forms of Collaborative Planning include Atlanta, Georgia; Chattanooga, Tennessee; Corpus Christi, Texas; and, in Ontario, Cambridge, London, Mississauga, Port Colborne, Ottawa, and Waterloo (Helling, 1998; Lerner, 1995; Plein, Green, & Williams, 1998; Shipley, 1997).

Potential benefits of Collaborative Planning include improved planning decisions, increased municipal accountability, and enhanced civic engagement and life (Myers & Kituse, 1999; Plein, Green, & Williams, 1998). In fact, the notion of improving civic life through empowering citizens was one of the founding principles of Collaborative Planning in light of the deteriorated state of civic life in the 1980s (Shipley, 1997). Also, because Collaborative Planning tends to be informal,

there is flexibility in where such planning activities can occur; activities are no longer restricted to the imposing structures of institutionalized government buildings (Plein, Green, & Williams, 1998). Furthermore, Matejczyk (2001) shows that communities with a tendency to build consensus receive favourable attention from dispute resolution boards in cases of development disputes.

While many believe that intimate public and stakeholder involvement in planning has enormous potential, some are more sceptical. Some, such as Lee (2002) and Helling (1998) demonstrate that there is concern over the influence that such practice has on the final product. For example, in Atlanta, over 4 million dollars were spent on a Visioning project that produced no tangible output. Helling (1998) cites a lack of clear parameters in the process for this result. To address this problem, one can undertake a benchmarking procedure that establishes broad objectives and goals for community development as well as a numerical system for measuring progress in achieving those goals (Porter, 1997). Nevertheless, even when Visioning projects produce tangible mission statements, they often have little impact on the policies set in official plans (Lee, 2002; Shipley, 1997).

The literature also raises two other concerns about collaborative forms of planning: evaluating the procedure and maintaining civic engagement. Because collaborative planning is a recent development, little theory has been developed to evaluate it. For example, planners and academics have varying understandings of the term vision and therefore there are no common standards for conducting visioning exercises (Shipley, 1997). Innes and Booher (1999b) see this lack of theory as a problem. An even bigger concern to collaborative planning is creating and maintaining civic

engagement. Plein, Green, and Williams (1998) argue that the life cycle of citizen participation tends to be short because citizens are more issue-oriented than process oriented. Therefore, the greatest problem in sustaining collaborative planning is maintaining citizen participation.

Notwithstanding these concerns, planners and, in particular, developers may find it useful to incorporate collaborative planning into their regular working procedures. In light of *Places to Grow* and the changes to urban form that it mandates, the use of collaborative planning during the formative stages of development could encourage the public to proactively shape their community rather than fight projects on a case by case basis. Affording the public a greater sense of ownership over the development of their community may therefore facilitate the kinds of neighbourhoods and communities envisioned by *Places to Grow*.

3.3 Summary: Implementing Growth Management in Toronto

As of June 16, 2006, all development applications in the GTA must conform to the *Places to Grow Growth Plan for the Greater Golden Horseshoe, 2006*. The Growth Plan, which establishes minimum intensification targets for existing built areas, minimum residential and employment densities for identified growth centres and greenfield development, and restricts municipalities' ability to designate new greenfield lands for development, will have a marked impact on Toronto's landscape over the next 25 years. In the coming months and years, municipalities in the GTA will update their official plans, zoning by-laws, and development standards in order to implement the new Growth Plan. Similarly, developers are now required to ensure that their proposals adhere to the Growth Plan and approval authorities must ensure their decisions implement the Growth Plan.

As a consumer of housing and lifestyle, the public will observe over time a change in the housing and lifestyle opportunities afforded by the Toronto landscape as residential densities increase and the housing stock diversifies as a consequence of the Growth Plan. As a participant in the planning process, the public may also perceive this top-down policy regime as removing their ability to influence development within their community. Depending on one's attitudinal outlook, these changes could be viewed as an attack against one's presumed right as a citizen to enjoy and protect the lifestyle they have chosen or as a necessity for creating a Toronto that both accommodates growth and offers a high quality of life well into the future.

Ultimately, the success of *Places to Grow* will be measured by how people react to changes proposed and/or carried out on the urban landscape. Will consumers adapt their desires to accept density and diversity in the housing market? Will residents accept redevelopment and change in their neighbourhoods? The remainder of this thesis focuses on assessing a topic that has, to date, received little attention Growth Management and Smart Growth literature: how people may react to the kinds of physical changes brought about by *Places to Grow* by studying their attitudes towards accommodating growth, urban life, and pending development.

CHAPTER 4: METHODOLOGY

4.1 Introduction

So far this thesis has addressed two of the objectives identified in the introductory chapter: to understand current academic debate over urban form in the planning literature and to understand a potential ideological divide between planners' perception of ideal urban form and that of the general public. In Chapter Two we learned that growing concern over the environmental impacts of cities and an ever pressing need to maintain or enhance the economic competitiveness of cities in a global economy has given rise to a body of academic literature that advocates changing the physical landscape by means such as urban growth boundaries, minimum density requirements, and strict architectural controls, to name a few. Often, many of the changes proposed are intended to effect change in the attitudes and behaviours of the people who inhabit cities. As was illustrated in Chapter Three, however, residents tend to resist change. Homebuyers, whose residential purchases greatly influence the form of our cities, tend to have complex and culturally rooted rationale for their decisions that do not necessarily align with the ideologies of Smart Growth or Growth Management. Unfortunately, little research presently exists that examines this discord between planning ideals and personal realities.

In order to begin addressing this gap in the literature and to understand where support for various forms of residential development may lie, this chapter sets the basis for using a mail-out survey to assess the relationship between individuals' geographic context, their demographic and socio-economic background, and their opinions on ideal urban form. It also establishes a means for

testing the applicability of a previously established taxonomy of participant attitudes in an urban form debate.

In this chapter, the methodological considerations for collecting the research data are explored including: identifying and describing areas for study; describing the rationale for choosing the mail-out survey as the data collection technique; outlining the construction of the survey itself as well as its implementation and collection; and identifying limitations of the methods used.

4.2 Study Area Selection

This research was carried out under the umbrella of a larger study (see Appendix Six). As part of that study, a micro-spatial analysis of the land use, transportation patterns, and individual attitudes was required in order to delineate the effects of urban form and attitudes on travel patterns. This analysis, patterned after a 1992 study by Kitamura et. al. (1994) in the San Francisco area, sought to determine whether neighbourhoods where exhibited use of public transportation is higher than average is the product of land use alone or a combination of land use and a shared set of values and preferences among their citizens. In other words, are high transit-use neighbourhoods a function of some unique pattern of using space, or have they, for some reason, attracted a community of citizens who are more attitudinally apt to choose transit as a means of intra-city travel?

As was discussed in the previous chapter, people tend to choose where they live based on a combination of needs, preferences and goals which are influenced by their cultural values and expectations, stage of lifecycle, and opportunities in the marketplace. Therefore, if having an urban lifestyle is important to a consumer, that value may influence the consumer to live in an

urban environment should the opportunity exist. In any study of the nexus between land use, attitudes, and behaviour, it is important to seek participants who are relatively free financially to choose a dwelling anywhere within the market area so that one can explore the subjective factors influencing their housing choices rather than being limited to assessing their objective constraints; people who are free to choose where they live can give more weight to their preferences and goals when choosing a home whereas those who are constrained financially are restricted more to assessing their needs and opportunities in the marketplace to fulfill those needs.

Therefore, in order study the link between land use, attitudes and high transit use behaviour, the study sought areas where higher than average levels of transit use were exhibited while approximating the average household income for the Toronto CMA as a whole[10]. For defining study areas, local traffic zones constituted the basic unit of analysis[11]. Generally, where multiple contiguous or proximate traffic zones exhibited proportionally high transit use and average household incomes, they were aggregated together into larger neighourhood units for the purpose of the study.

To test the impact that land use has on public transportation use, the study spatially delineated the GTA into inner city, inner suburb, and outer suburb components and sought two study areas from each of these realms for investigation. Traditionally, the definition of these urban classes has been

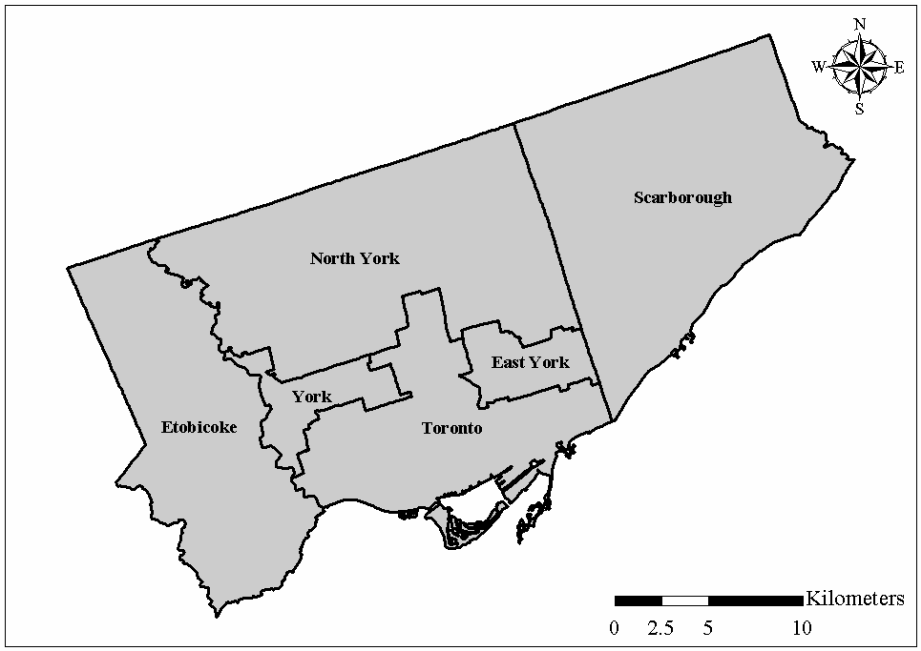
[10] In keeping household income as a constant, the study assumes that residents in such neighbourhoods are generally not constrained by housing price when it comes to choosing where to live and thus have the financial ability of choosing to live almost anywhere throughout the Toronto area as well as the ability to afford a private motor vehicle such as a car or van for transportation.

[11] Traffic zones are a geographical unit defined by area municipalities or other government bodies for the purpose of collecting observations on and modelling traffic behaviour. In the Toronto area, this data collection is generally overseen by the Toronto Area Transportation Planning Data Collection Steering Committee, a committee of representatives from the provincial transportation ministry, the GTA regional municipalities, and the Toronto and GO transit authorities (Data Management Group University of Toronto Joint Program in Transportation [JPINT], 1996).

based on a combination of housing stock age in any given neighbourhood and the pattern of development surrounding that neighbourhood (see Bunting, Filion & Priston, 2002; Ley, 2000; and McLemore, Aass & Keilhoffer, 1975). Typically, the inner city is defined as those census tracts surrounding the Central Business District (CBD) with the majority of its housing stock built before 1946; the inner suburbs as those census tracts contiguous to the inner city with the majority of its housing stock built between 1946 and 1971; and, the outer suburbs as those census tracts beyond the inner suburbs where the majority of the housing stock has been built since 1971.

In this investigation, however, a broader definition of the inner city is required to ensure that a sufficient number of traffic zones would be available for investigation. As such, the inner city has been identified as those census tracts belonging to the former cities of Toronto and York (circa 1997), the inner suburbs as the remainder of the former Metropolitan Toronto (see Figure 4.1), and

Figure 4.1:
The Former Municipalities of Metropolitan Toronto, 1997



the outer suburbs as the four surrounding regional municipalities illustrated in Figure 4.2 on page 85. While using political boundaries for delimiting these intra-urban classifications has been deemed too crude for use in other studies (see Bourne, 1989), its application here allows for more flexibility in determining suitable areas to study. Generally, this definition accounts for both the age of the housing stock as well as the spatial form and function of the urban landscape. Furthermore, this classification generally corresponds to the chronological order in which areas throughout the GTA were recognised as significant receptors of growth – spawning provincial government action to promote greater co-ordination of development (see Table 4.1).

Table 4.1:
Upper Tier GTA Municipalities incorporated by the Province to facilitate co-ordination of Development and Services

Municipality		Incorporation Date
City of Toronto		**1834 / 1998**
Municipality of Metropolitan Toronto		**1953 (Dissolved 1998)**
Toronto (C)	Etobicoke (C)	
East York (B)	Scarborough (C)	
York (C)		
Regional Municipality of Halton		**1974**
Burlington (C)	Milton (T)	
Halton Hills (T)	Oakville (T)	
Regional Municipality of Peel		**1974**
Brampton (C)	Mississauga (C)	
Caledon (T)		
Regional Municipality of York		**1971**
Aurora (T)	Newmarket (T)	
East Gwillimbury (T)	Richmond Hill (T)	
Georgina (T)	Vaughan (C)	
King (Twp)	Witchurch-Stouffville (T)	
Markham (T)		
Regional Municipality of Durham		**1974**
Ajax (T)	Pickering (C)	
Brock (Twp)	Scugog (Twp)	
Clarington (M)	Uxbridge (Twp)	
Oshawa (C)	Whitby (T)	

C - City
M - Municipality
T- Town
Twp - Township

(Isin & Wolfson, 1999)

An additional intent of applying this classification scheme is to counteract the core-area focus of transit use. Generally, transit use and service is most heavily concentrated in the inner city. Because of this concentration, difficulties arise when attempting to identify areas of high transit use in suburban areas. Relative to the dense urban core, outlying suburban areas typically exhibit very low levels of transit use (see Table 4.2). Within the suburban areas, however, there are neighbourhoods that generate higher transit ridership than others. By enabling transit use to be investigated in the context of each urban zone, it is possible to identify those neighbourhoods where transit use levels are unique from their surroundings. This isolation, in turn, allows for further testing of the relative impacts of land use and attitudes on public transportation use by maintaining urban form as a constant.

Table 4.2:

Average Modal-Split of Weekday Person Trips by Geographic Area, 1996

	Local Transit	GO Transit	Total Trips All Modes	Average % of Trips by Transit per Traffic Zone	Standard Deviation (based on Traffic Zones from each area)
Inner City	453,090	1,933	1,537,836	29.6	7.9
Inner Suburbs	558,037	13,990	2,984,945	19.2	6.6
Outer Suburbs	159,780	59,605	3,656,322	6.0	3.8
CMA	1,170,907	75,528	8,179,103	15.2	10.8

(JPINT, 1996)

Choosing areas for study began with an analysis of the transportation modal-split patterns for all traffic zones within the 1996 boundaries of the Toronto CMA. Data for this analysis originates from the 1996 edition of the Transportation Tomorrow Survey (TTS), a study done by the Data Management Group of the University of Toronto's Joint Program in Transportation (JPINT). The TTS, seeking a 5% sample of all households in the entire Golden Horseshoe area (Peterborough – Barrie – Toronto – Kitchener – Niagara Falls), surveyed a random sample of just over 115,000

households between September and December, 1996 (JPINT, 1996). Through a combination of interviews, mail-out questionnaires, telephone surveys, and participant travel diaries, the TTS gathered travel information on each household and then expanded the sample data to represent population statistics (JPINT, 1996). As a result, comprehensive data chronicling the total number of trips, modal-split, trip purpose and demographic characteristics of each traffic zone has been produced.

In 1996, the Toronto CMA was comprised of 1281 traffic zones. Of these, 991 contained valid data on the transportation patterns of households. Therefore, these 991 traffic zones were divided into the three geographic classes – inner city, inner suburbs, and outer suburbs – and were then analysed individually against their class counterparts on the basis of the proportion of all daily trips made by public transportation (local transit trips and GO transit trips). Based on the weighted mean and standard deviation calculated for each class, a Z-score was calculated for each traffic zone which allowed for an objective comparison of transit use levels.

Iterative selection of traffic zones then began based on their transit use levels and, using their corresponding census tract data, their average household income relative to the average household income for the CMA[12]. Three trials manipulated the transit use criteria while maintaining a constant average household income target of between plus and minus 0.5 standard deviations from the CMA mean. For each trial, those traffic zones that met both the transit use and income criteria were marked as suitable for further study. Table 4.3 summarizes the results of the three trials:

Table 4.3:

Number of Traffic Zones Suitable for Further Study Based on Trial Parameters*

Geographic Area		Transit Use			Income	Suitable for Further Study		
	Total Zones	Trial A	Trial B	Trial C	Constant	Trial A	Trial B	Trial C
Inner City	174	11	25	50	40	1	4	7
Inner Suburbs	220	23	37	66	121	5	7	14
Outer Suburbs	597	41	80	121	262	22	46	69

*Parameters

Trial A Transit > 1.5 σ ; Income +/− 0.5 σ

Trial B Transit > 1 σ ; Income +/− 0.5 σ

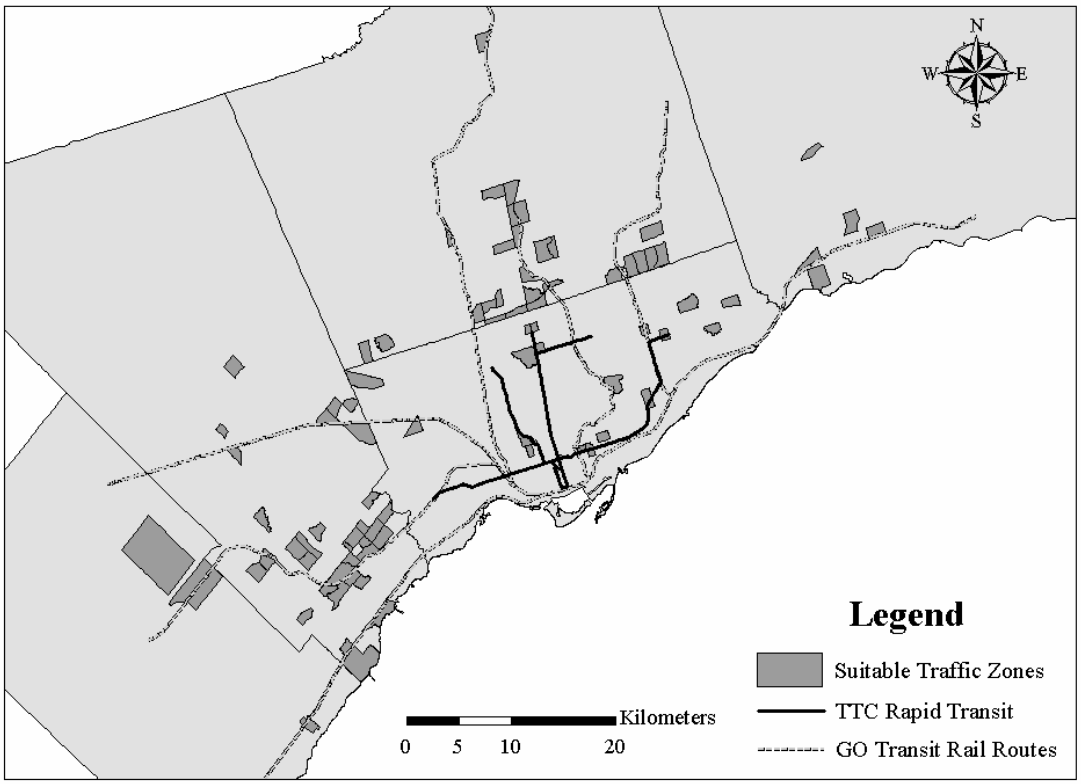
Trial C Transit > 0.5 σ ; Income +/− 0.5 σ

From Table 4.3 it is evident that traffic zones rarely exhibit both high transit use and average household income levels. This observation is particularly prevalent in the inner city and inner suburbs where, for Trial A, only 0.5% and 2.3% of all traffic zones respectively were suitable for further study. Generally, it was observed that transit use tended to be negatively related to income; that is, as household incomes increase, transit use levels decrease. Therefore, in order to have a larger number of traffic zones to choose potential study areas from, the parameters of Trial C were accepted as the initial selection criteria. Figure 4.2 on the following page illustrates the locations of the resulting suitable zones in relation to the existing fixed-rail rapid transit routes in the Toronto area.

[12] In some instances, traffic zones and census tracts do not align properly. In these cases, raw census tract figures from all corresponding tracts were aggregated together to represent the traffic zone. Weighted averages were used where figures could not be added due to the nature of the variable.

Figure 4.2:

Traffic Zones Suitable for Further Investigation and Rapid Transit Routes in the GTA



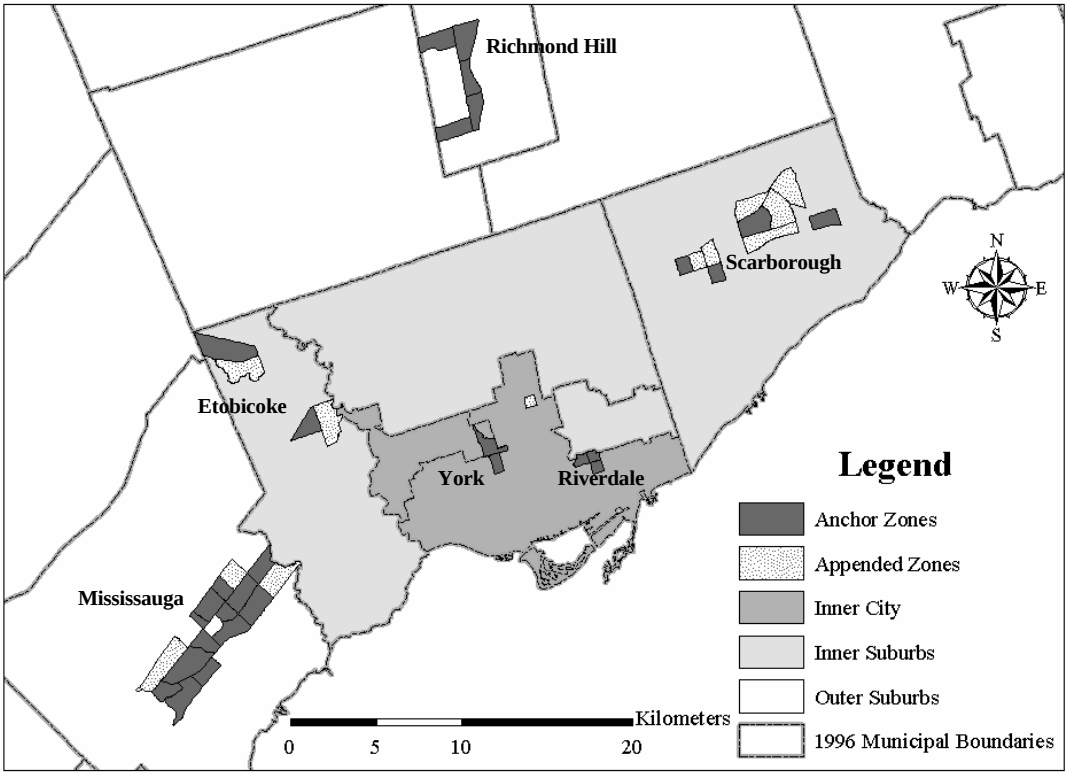
With many traffic zones identified as potential candidates for areas of investigation, the study identified four areas (two in the inner city and two in the outer suburbs) as suitable for investigation based on their degree of contiguity with other suitable zones, their proximity to a form of fixed-rail rapid transit,[13] and the degree to which the landscape of each area reflected the form and function of their respective urban zones: inner city, inner suburbs, and outer suburbs.

To compensate for the lack of spatial proximity between suitable traffic zones in the inner suburbs, traffic zones with average to slightly above average transit use (between 0 and 0.5 standard

[13] Proximity to rapid transit service was sought to ensure that all neighbourhoods surveyed had access to the two major forms of public transportation in the Toronto area – buses and fixed-rail transit.

deviations above the mean) and average household incomes were added as potential study areas. Specifically, where these traffic zones were contiguous or in close proximity to previously identified suitable traffic zones, study areas would be aggregated for further investigation. From this exercise emerged two areas within the inner suburbs that were suitable for the survey. Figure 4.3 illustrates the location of all six survey study areas and distinguishes between the *anchor* traffic zones where transit use is above average and the *appended* traffic zones where transit use is roughly average.

Figure 4.3:
Traffic Zones Chosen as Neighbourhood Components for GTA Survey



For this investigation, each study is named after either the municipality in which it is located or after the locally-known neighbourhood with which it is associated.[14] For the inner city, the two study areas are named Riverdale and York; for the inner suburbs, Etobicoke and Scarborough; and, for the outer suburbs, Mississauga and Richmond Hill.[15] As can be seen in Table 4.4, transit use in each study area is within the required parameter with the exception of Scarborough where the appended traffic zones lowered the area's average level transit use to just below the desired mark. On the following page is a brief profile of each study area.

Table 4.4:
Transit Use as a Percentage of all Weekday Person Trips in the Selected Neighbourhoods, 1996

Urban Area	Neighbourhood	% of Trips made by Transit	Z-score relative to urban area average (see Table 4.2)
Inner City	Riverdale	37%	1.0
	York	40%	1.3
Inner Suburbs	Etobicoke	23%	0.5
	Scarborough	22%	0.4
Outer Suburbs	Mississauga	11%	1.3
	Richmond Hill	10%	1.2

[14] Several municipal governments in the GTA produce maps identifying locally-known neighbourhoods. Often, these neighbourhood names also appear in commercially produced city street maps.

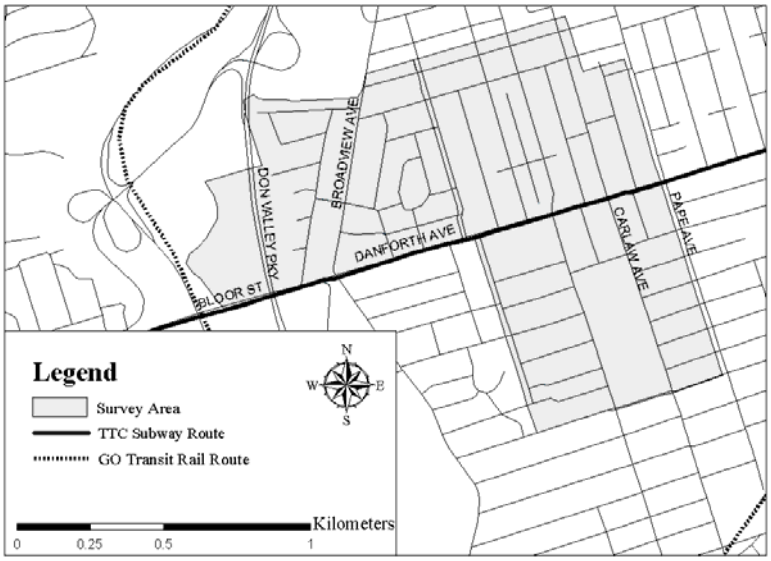
[15] Note that in Figure 4.3 there appears an additional traffic zone in the inner city. This zone, known as the Davisville Survey Neighbourhood, was intended to be surveyed as part of the inner city but, due to technical reasons discussed in Appendix 5, was omitted from the study.

4.3 Study Area Profiles[16]

4.3.1 Riverdale

Located just east of Toronto's downtown along Danforth Avenue, the Riverdale study area comprises part of three locally-known neighbourhoods: Riverdale, Playter Estates, and Toronto's famous Greektown on the Danforth (City of Toronto, 2000). Annexed by the City of Toronto in 1884, development in Riverdale accelerated in 1918 with the completion of the Prince Edward Viaduct which connected the area to downtown via Bloor Street/Danforth Avenue (Dunkelman, 1997). By 1930, the area had been completely urbanized with mostly two and three storey Victorian and Edwardian homes (Dunkelman, 1997). In recent years gentrification[17] has become a common occurrence as the area has become popular among young affluent professionals looking to live in an established neighbourhood near downtown (Dunkelman, 1997). Of the areas surveyed, Riverdale is the smallest both in terms of land area and population. In 2001, the Riverdale survey area encompassed approximately 1.4 km^2 and had a population of 11,049.

Figure 4.4:
Riverdale Study Area and Environs

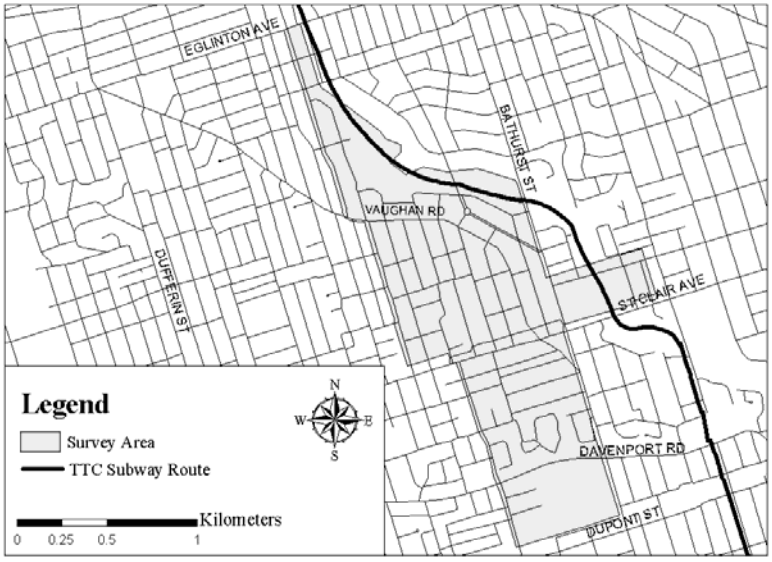


[16] See Appendices 1 and 2 for a more detailed written and statistical description of the six study areas.

[17] Gentrification is a "process involving an influx of upper- and middle-class households into an area of old homes that were previously occupied by lower-middle and low-income individuals and households" for the purpose of renovating or redeveloping the housing stock (Yeates, 1998, p. 404; Ley, 2000).

4.3.2 York

Figure 4.5:
York Study Area and Environs



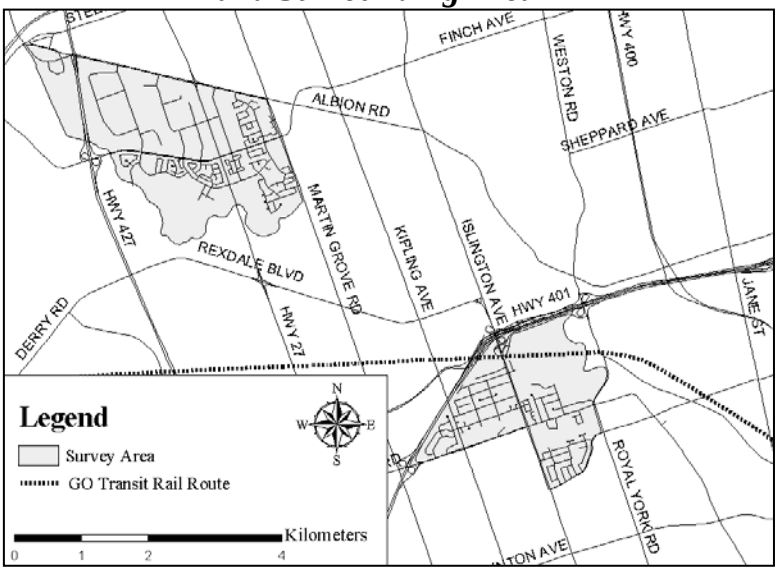
The York study area is located northwest of downtown Toronto along St. Clair Avenue West and Bathurst Street; approximately five kilometres from the heart of Toronto's financial district. Named for the former City (and Township) in which much of the neighbourhood was once located, the area is comprised of three local neighbourhoods: Humewood, Hillcrest, and Wychwood Park (City of Toronto, 2000). York is characterized by tree-lined one-way streets and cul-de-sacs that shelter the area from the bustle of the big city.

In the late 1800s, development in York arose both spontaneously and systematically as the village known as Bracondale sprouted at the intersection of Christie Street and Davenport Road and the former estates known as Humewood and Wychwood Park became subdivided under plans of subdivision. By 1930, most of the area had been completely urbanized with a wide range of single and semi-detached homes (Dunkelman, 1997). Today, the entire Wychwood Park neighbourhood has been recognized for the historical significance of both its homes and the nature of its development[18] with the distinction of being named an Ontario Heritage Conservation District (Dunkelman, 1997). As of 2001, York had an area of 1.9 km^2 and a population of 17,721.

[18] Wychwood Park is noted for being one of Toronto's earliest planned communities (Dunkelman, 1997).

4.3.3 Etobicoke

Figure 4.6:
Etobicoke Survey Neighbourhood and Surrounding Area



The Etobicoke study area is located in the northwest corner of the City of Toronto in the former inner suburban City of Etobicoke. The Etobicoke study area consists of two parts: a southern portion that is adjacent to the south side of Highway 401 and a northern portion that rests along the northern banks of the West Humber River. The southern portion of the survey area is approximately fifteen kilometres northwest of downtown while the northern portion is approximately twenty kilometres from downtown. Both areas are only minutes away from Lester B. Pearson International Airport. The Etobicoke study area is comprised of five local neighbourhoods – Humbergate, Kingsview Village, Silverstone, The Westway, and Woodbine Downs – as identified by the City of Toronto and a sixth neighbourhood, Smithfield, as identified by historical records (City of Toronto, 2000; Dunkelman, 1997). The Etobicoke area is known as one of the most culturally diverse areas in Toronto with a large Somalian community as well as many recent immigrants to Canada (Dunkelman, 1997).

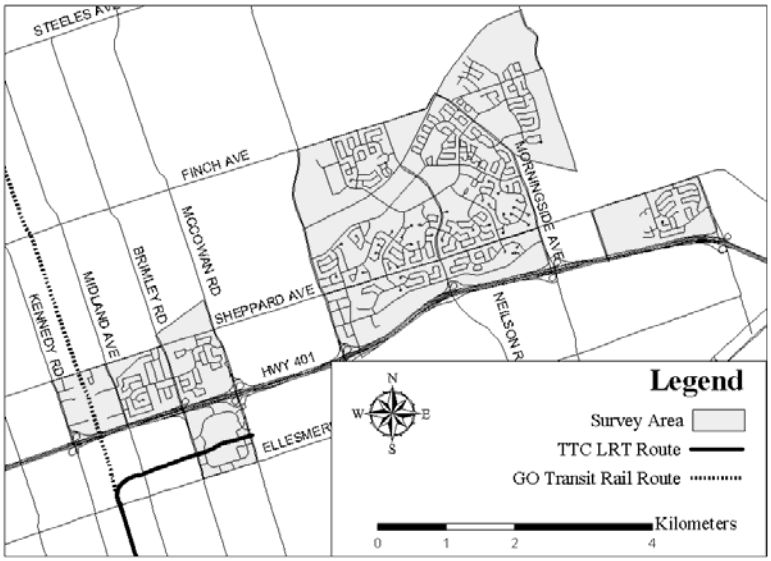
In many ways, Etobicoke is an area of extreme juxtapositions – it contains some of the most abrupt changes in land use to be found anywhere in Toronto. Highway 401, Rexdale Boulevard, and Finch Avenue generally serve as the only buffers between residential neighbourhoods and

Toronto's major industrial zone (City of Toronto, 2002). Quiet residential streets abut Toronto's busiest freeways while large high-rise apartment towers shield wide-lot single-family homes from the elements of the surrounding city. Although these differences are extreme, each land use has been carefully separated from each other to replicate the single use zoning that is so representative of suburban Toronto. With such differences, yet similarities, on the ground, it seems fitting that Etobicoke's population is growing more diverse yet more representative of the City on the whole as new immigrants settle in the area.

4.3.4 Scarborough

The Scarborough study area is located in the northeast corner of the City of Toronto in the former inner suburban City of Scarborough. Similar to the Etobicoke study area, the Scarborough study area consists of three distinct parts which are located in close proximity to each other. All three areas are generally located along the north side of Highway 401, east of Kennedy Road. The western portion of the survey area is approximately seventeen kilometres northeast of downtown, the central portion approximately twenty kilometres, and the eastern portion is approximately twenty-three kilometres from downtown. The Scarborough study area is comprised of three local neighbourhoods – Malvern, Malvern West, and Rouge (City of Toronto, 2000). Like Etobicoke, Scarborough is known as one of the most culturally diverse areas in Toronto with over

Figure 4.7:
Scarborough Study Area and Environs



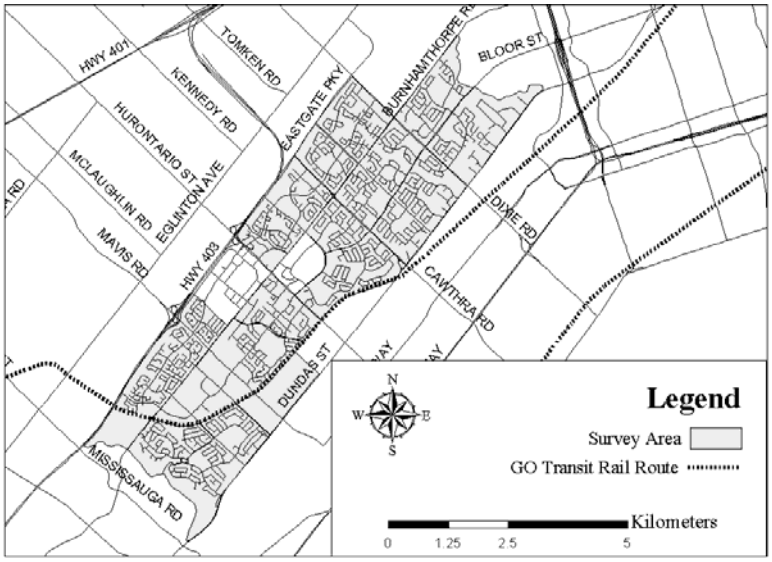
sixty different cultures currently settled in the area and more recent immigrants settling in daily (Dunkelman, 1997).

Based on Scarborough's physical age, layout, and housing stock profile, one would believe that this area is a typical outer suburb. Because of this neighbourhood's social characteristics, slow growth rates, and elevated transit use levels, however, it has much more in common with the inner suburbs than the outer suburbs. Scarborough is the largest study area in terms of physical area and the second largest in terms of population.

4.3.5 Mississauga

The Mississauga study area is comprised of a large corridor extending from the Mississauga-Toronto border to the Credit River with Highway 403 and Dundas Street delimiting its northern and southern extents respectively. Centred on Mississauga's downtown area, the heart of the Mississauga study area is approximately twenty-one kilometres west of downtown Toronto. Unlike the inner suburbs, the extent of the Mississauga study area was not determined by a lack of spatial continuity between traffic zones eligible for study, but rather by an abundance of eligible traffic zones contiguous to each other. The Mississauga study area is comprised of several local

Figure 4.8:
Mississauga Study Area and Environs



residential neighbourhoods: Applewood, Creditview, Erindale, Fairview, Mississauga Valleys, and Rathwood. In addition, the area also encompasses the Mavis-Erindale employment district and a portion of the Dixie employment district (City of Mississauga, 2003). Since the 1950s, the City of Mississauga has been one of the fastest growing municipalities in the country.

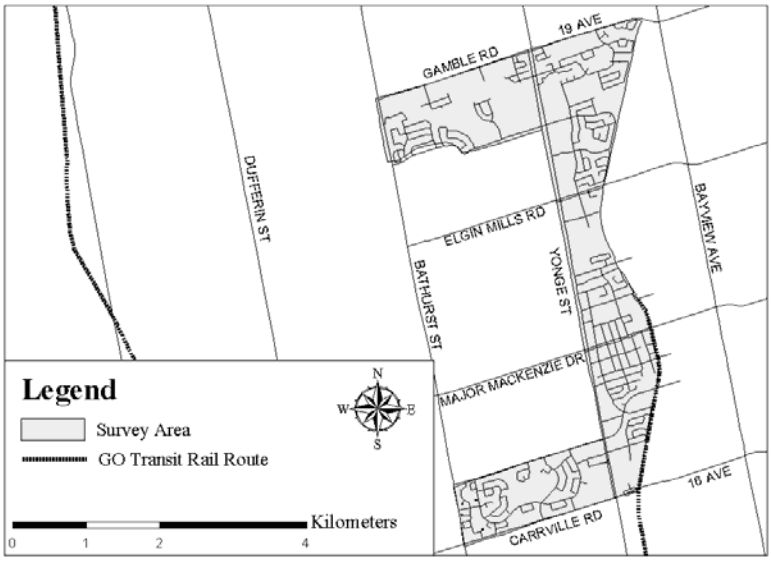
Visually, Mississauga appears in many ways to be a typical inner suburban GTA community. This, in part, may be because of the area's proximity to the former settlements that comprised Mississauga prior to amalgamation in 1968, or perhaps because the area was primarily developed during the 1960s and 1970s. Most likely, however, this resemblance is a reflection of Mississauga City Council's decision in the late 1970s to transform the City from a dormitory suburb to a major City in its own right by promoting industrial development and diversification, a balanced housing stock, and an intensified downtown area (McDonald, 1997) thereby creating a different urban landscape and attracting a different mix of residents than what the outer suburbs would otherwise exhibit. Mississauga is the second largest study area in terms of physical area and the largest in terms of population.

4.3.6 Richmond Hill

The Richmond Hill study area is generally a narrow north-south corridor bounded by Yonge Street on the west and the Canadian National Railway on the east. At its northern extent, the area is bounded by Gamble Road/19th Avenue while its southern limit is defined by Carrville Road/16th Avenue. The area hosts the Town's major shopping mall and several smaller plazas. Centred on Richmond Hill's historic core area on Yonge Street, north of Major Mackenzie Drive, the Richmond Hill study area is approximately twenty-five kilometres north of downtown Toronto.

The area comprises four local neighbourhoods – Elgin Mills, Hillsview, North Richvale, and Old Richmond Hill (Rand McNally, 2000; Dunkelman, 2003). As with the rest of the GTA, Richmond Hill has grown culturally diverse in recent decades. The Town is well known for its large, affluent Chinese community (Dunkelman, 2003).

Figure 4.9:
Richmond Hill Study Area and Environs



When considering its physical and demographic characteristics, Richmond Hill could be described as the GTA's prototypical outer suburban community. With the fastest population growth rates among the areas surveyed, however, Richmond Hill is in a state of evolution. Whether this community will grow to be something other than a typical outer suburban town remains to be seen.

4.4 The Mail-out Survey Approach

For social scientists, the survey is a fundamental means for gathering data. As noted previously, when one wishes to investigate an aspect of human behaviour for which no data currently exists, one can either actively engage subjects through an interactive process of question and answer, or one can passively observe, interpret, and record behaviours in hopes of revealing an answer to the research question (Jackson, 1988). This research has chosen to employ a mail-out survey to elicit responses from subjects in order to shed new light on their behaviour.

Among the interactive research methods, two broad techniques are recognized – interviews and questionnaires (Palys, 1997). Interviews are characterized by a direct contact between researcher and subject whereby the researcher poses questions orally and the subject responds in turn. Examples of such methods include telephone interviews, face-to-face interviews, focus group interviews, and oral history interviews. Questionnaires, on the other hand, are characterized by an indirect contact between researcher and respondent as both questions and responses are posed through an intermediary medium such as paper or electronic media. Generally, there are three types of questionnaires – the self-administered questionnaire, the group-administered questionnaire, and the mail-out questionnaire (Palys, 1997). While interviews and questionnaires are similar in their aims, there are unique advantages to each that help to distinguish the nature of investigations to which they can be applied.

For social researchers, interviews are generally preferred when data quality is of utmost importance. For qualitative researchers in particular, interviews represent one of best ways to capture and understand the essence of a respondent's personality (Palys, 1997). Interviews allow for an in-depth dialogue between researcher and respondent that can draw out responses that would otherwise be missed through other means (Jackson, 1988; Palys, 1997; Trochim, 2003). Participation rates for interviews are often as high as 80 to 90 per cent and the data produced from them are typically representative of the broader population (Jackson, 1988; Palys, 1997). Because, however, interviews are only semi-structured by nature, they are less useful for quantitative research (Palys, 1997).

Questionnaires, on the other hand, are highly structured by nature because questions are presented to the respondent in written form. This means that, as long as the questionnaire has been written properly, there should be little or no freedom for the respondent to interpret questions differently than how the researcher has intended. Uniformity in interpretation and answer style, in turn, allows for responses to be easily computer-coded and analysed (Palys, 1997). Relative to interviews, questionnaires are much cheaper and more efficient to employ because, by removing the need for interpersonal contact, they can be simultaneously distributed across great distances to vast numbers of people and can be returned very quickly (Palys, 1997; Trochim, 2003). Data collected from questionnaires, however, must be treated carefully because, due to the low response rates associated with questionnaires, response bias can compromise the ability to produce representative results (Palys, 1997). Fortunately, the structured nature of questionnaires enables them to be tested for their reliability – the consistency with which the survey's measures produce the same results across trials – and their validity – the extent to which the survey actually measures what it is intended to measure (Jackson, 1988; Palys, 1997; Trochim, 2003).

In choosing a data gathering method for this study, several criteria needed to be satisfied. First, the data collected had to be structured in a format that would support quantitative analysis which would add a scientific rigour to the study and enable the study to uncover and understand the relationships between individual attitudes and behaviours in the positivist[19] tradition. Second, the data collection had to occur simultaneously for all respondents (during the summer) in order to control for the effect that seasonal variation in weather would have on the self-reporting of travel behaviour. Third, the data collection vehicle had to be flexible enough to survey several

[19] A tradition of inquiry that seeks to discover reality by emphasizing quantitative precision in the process of gathering and analysing aggregated data (Palys, 1997).

neighbourhoods dispersed geographically throughout the metropolitan area. Fourth, and finally, the methodology selected had to be affordable and relatively cost-efficient per unit of response.

Upon considering the numerous many survey techniques available, the mail-out questionnaire was deemed to be most appropriate because it is highly structured, can be designed to support quantitative analysis, and can be mailed simultaneously to many different locations at a low relatively per-unit cost. Also, the mail-out questionnaire was chosen because it enabled the exploration of more avenues of inquiry compared to other methods such as the telephone interview. Finally, the mail-out questionnaire was ideal for this study because it is useful for investigating attitudes and opinions that are not readily observable such as attitudes towards new development (Nardi, 2003).

4.4.1 Sampling

As noted previously, this study focuses its attention on residents of two neighbourhoods in each of the inner city, inner suburbs, and outer suburbs that exhibit above average levels of transit use and average levels of household income. Within the six study areas identified, however, an additional parameter is used to refine who would be surveyed: the qualifying sample should reflect the 5-year mobility rate for households in the Toronto CMA (i.e. 45 percent of the sample should consist of households where the occupants have been living in their home for five years or less) and should be adjusted to ensure that recent movers to owner-occupied households are over-sampled relative to apartment households (Statistics Canada, 2003c). This restriction allows for a probing of the decision-making process for people who recently moved into the study areas thereby enabling testing on whether these areas attract people who purposely seek a transit-friendly lifestyle.

To create a listing of all households in the chosen survey study areas that had moved in the five years previous to the survey (1997 – 2002), the researchers decided to employ telephone listings as an enumeration tool. Because 97.8 per cent of all Canadian households are serviced by telephone (Government of Canada, 2004), it was felt that up-to-date telephone records would provide the most accurate listing of current residents in the chosen study areas[20]. ASDE Survey Sampler Inc., a professional survey sampling company in Hull, Quebec selected a random sample of residential addresses within the study areas based on whether the occupant/subscriber information for each address had changed within the previous five years. The resultant sample contained 5,210 addresses that were divided equally among the three urban zones (inner city, inner suburbs, and outer suburbs) and proportionally divided among the study areas based on their population size.

From this sample, a smaller sample of 2000 addresses was created to which questionnaires would be distributed. In the interest of surveying newly established households who had (presumably) made a long-term commitment to living in these areas by purchasing their dwellings, apartment addresses were limited to approximately 20 per cent of the sample. Because approximately 40 per cent of the GTA's population is housed in apartment dwellings, this limitation would help to ensure that the high turnover rate for apartment dwellings would not create a sample dominated by residents whose priorities for choosing a place to live may be constrained by availability of suitable rental accommodations and who offer only a limited commitment to living in any particular dwelling or neighbourhood.

[20] Such lists, however, will exclude any numbers that have been requested to be unlisted by service subscribers.

Unfortunately, address information for apartments proved to be difficult to obtain. As such, the survey was split into two phases: Phase one targeted those addresses that were thought to be owner-occupied while phase two targeted apartment properties (phase two was ultimately cancelled, however – see Appendix 5). To differentiate between owner-occupied and rental addresses, the addresses were sorted by identified unit or suite numbers and were also screened by comparing postal codes in the sample with Canada Post's Postal Code Directory (2001) to determine the addresses that represent multiple-unit buildings with a unique postal code. Based on this procedure, the sample was split into a group of potential owner-occupied addresses and a group of potential apartment addresses.[21] Of the 2000 addresses sought for a final sample, phase one accounted for 80 per cent of the sample, or 1598 addresses. Table 4.5 illustrates the distribution of the sample for each phase.

Table 4.5:

Distribution of Survey Sample among Urban areas and Survey Neighbourhoods, Phases 1 and 2

	Survey Neighbourhood	Raw Sample	Total Addresses Required	Phase 1 (owner-occupied)	Phase 2 (rental units)
Inner City	Riverdale	744	286	286	0
	York	643	247	247	0
	**Davisville*	*410*	*157*	*17*	*140*
Inner Suburbs	Etobicoke	822	316	252	63
	Scarborough	956	367	294	73
Oter Suburbs	Mississauga	924	355	284	71
	Richmond Hill	711	273	218	55
TOTAL		**5210**	**2000**	**1598**	**402**

From the list of all potential owner-occupied addresses, addresses to receive surveys were chosen randomly for each study area. With all owner-occupied households in the original sample having

[21] Unfortunately, this procedure for classifying addresses would also include condominium unit owners into the category of apartment dwellers.

an equal probability of being included in the final sample, approximately 45 per cent of the Phase 1 sample should consist of households that are recent movers, assuming that the stratification procedure applied by ASDE on the sampling frame was correct.

The Phase 1 sample can be characterized, on the surface, as a non-probability sample that purposely targets households in specific study areas based on observed transit and income characteristics in those study areas (Nardi, 2003). In this light, the sample cannot make claims of representation for the GTA as a whole. Within the chosen study areas, however, each household was randomly selected, and therefore the sample can claim to be representative of all owner-occupied households in the study areas. Although the sample has been stratified based on whether a household has recently moved, it is not limited to being a non-probability quota sample; instead, stratification helps to ensure that the sample has an exact proportionate representation of the mobility rate in the population (Nardi, 2003).

Ultimately, this survey targeted an individual within the household who is over 18 years of age and is characterized as the (or one of the) household head(s). Through its covering letter (see Appendix 3) the survey does not specify a random procedure for choosing which head of household should fill out the questionnaire such as the person with the most recent birthday. Instead, the survey allows the household to self-select who participates in hopes of making the questionnaire more convenient. By targeting a household head, a person generally responsible for the fiscal management and decision making in the household, it was assumed that respondents would have the ability to describe the entire household's travel behaviour as well as the decision making process for choosing their current place of residence.

Despite the interest in household behaviour, it is the attitudinal information volunteered by individuals that is of critical importance to this thesis. This thesis relies on the attitudinal expressions of its participants to investigate perceptions of trends in physical urban growth and the preferred strategies for accomodating such growth and development; reported individual and household behaviours can be used as a supplement to gauge the influence that attitudes have on individuals' everyday actions. This author recognizes that attitudes alone cannot bring about policy change in the urban form debate. Instead, support for change in principle must be accompanied by a will to implement such attitudes in the face of competing alternatives.

4.4.2 Survey Construction

The questionnaire attempts to gather a dataset that accurately reveals the travel patterns, housing preferences, and general attitudes of the responding sample. Also, it seeks to elicit a representation of the respondents' attitudes towards various methods in which the GTA's anticipated population growth could be physically accommodated. To do this, the survey instrument (see Appendix 3) was divided into five sections of inquiry: A. Your Travel Patterns; B. Family Travel Patterns; C. Housing Choices; D. Transportation and Urban Life; and, E. New Urban Development.

Sections A and B gather information regarding the travel habits of respondents and their households. In hopes of improving response rates, respondents were not asked complete a travel diary. Instead, respondents were asked to provide information on personal and family travel habits such as the location of common travel destinations like work, school, shopping, and entertainment facilities; the frequency of trips to such destinations; and, the mode used to travel to these

destinations. Also, respondents were asked questions regarding their rationale for using the mode(s) they do versus other transportation options.

Section C intends to gather a sense of respondents home selection process by asking them to rank the importance of twenty-three statements related to factors that may have influenced their decision to choose their current home including: dwelling features; dwelling situation relative to other destinations throughout the City; and, the neighbourhood within which their dwelling is located. Also, respondents are asked to rank the importance of these three categories relative to each other and to provide an indication of their ideal housing and neighbourhood type.

Section D presents a series of 46 Likert statements[22] divided into 9 sections (Private Automobile, Car/van pooling, Public Transportation, General Transportation, Environment, Housing, Economy, Neighbourhood, Community) that are intended to uncover attitudes toward urban living and transportation, environment, community, and life in general. When administered with a uniform scale (e.g. 1-strongly disagree, 2-agree, 3-neutral/undecided, 4-agree, 5-strongly agree) Likert statements can be easily analysed in relation to each other to reveal patterns of response that form groups among respondents based on shared attitudes (Palys, 1997). Section D also presents a number of other questions that are intended to shed light on personal behaviour and attitudes by revealing how involved respondents are in their communities. For the purposes of this thesis, Section D provides the base for categorizing respondents into attitudinally-based groups for further inquiry.

[22] Likert statements, named after Rensis Likert, are a series of propositions or assertions to which respondents are asked to indicate the degree with which they agree or disagree with each assertion (Jackson, 1988; Likert, 1932; Palys, 1997).

Finally, Section E attempts to determine respondents' preferences for accommodating the GTA's anticipated growth including identifying issues to be considered when approving new urban residential development in the GTA, and their support for various forms of new residential development if proposed near their home. For this thesis, Section E will facilitate testing on whether the general attitudes revealed by Section D are maintained when respondents are faced with a scenario that would impact their city, their neighbourhood, and their lifestyle.

As mentioned previously, this study is patterned after a San Francisco area study completed in 1992 (Kitamura et al, 1994) that analysed the relationship between land use, attitudes, and travel behaviour. For the purposes of this survey, rather than constructing an entirely new survey instrument, the researchers obtained a copy of the survey instrument used in the San Francisco study and, with the permission of the corresponding author,[23] incorporated large portions of it into the present study. As a result, Sections A, B, C and D of the questionnaire simply represents an amalgamation of the Household Questionnaire and Individual Questionnaire used by Kitamura et al (1994) that has been adapted to a Toronto context.

Section E, on the other hand, was not based on a previous survey instrument and so its questions were specifically created. In order to categorize respondents according to their attitudes toward impending development within the context of a larger debate over urban form, questions were designed using a taxonomy established by Forsyth in an early 1990s study of an urban form debate in suburban Sydney, Australia (Forsyth, 1999) as described in Table 4.6.

[23] Patricia L. Mokhtarian, Professor, Department of Civil and Environmental Engineering, Associate Director, Institute of Transportation Studies, University of California, Davis.

Table 4.6:

Ideologies of Participants in an Urban Form Debate, Sydney, Australia

Expansionists	Developers	Scientific Environmentalists	Local Environmentalists	Consolidationists
Low-density suburban growth promotes equality among classes	Profit-driven	Regional focus	Motivated to preserve current lifestyle	Advocate compact, mixed-use urbam forms
Single detached housing is the highest quality form of housing	Housing form is market driven	Environmental sustainability is critical for all development	Low densities provide for high quality of life	Suburban development creates social divisions within the city
All people should be able to own a suburban home	Environmental degradation can be controlled technologically	Need tougher environmental regulations	Urban growth should be halted or decentralized	Housing needs to address changing needs of population
Environmental degradation can be controlled technologically	Need for housing overrides environmental issues	Urban intensification is a technological means to physically contain population and to protect natural resources	Current lifestyle is superior	Reginal coordination of development is needed
View framed with nuclear family in mind		Development should be dispersed to areas beyond the metropolitan region		

(Forsyth, 1999)

For this thesis, Section E requires respondents to indicate the degree to which they agree or disagree with the forms of development encouraged by groups identified by Forsyth. Because each group identified represents extreme ideologies, moderate attitudes will be reflected by more moderate answers on the survey questions. Furthermore, in order to have respondents align themselves with these groups, Section E asks them to rank the key tenet from each group relative to each other in the order which they feel each should influence the form of new urban residential development. Although ranking does not reveal the intensity of opinion, it does reveal a respondent's order of priorities (Nardi, 2003).

Finally, Section E asks respondents to indicate the degree to which they would support certain types of residential development should they be proposed near their home. Each style of development presented represents a different degree of intensity and nature of urban residential development. This questioning is used to test whether respondents' views on the means for accommodating anticipated growth in the GTA corresponds with their opinion on the type(s) of development that they would support in their neighbourhood.

The questionnaire concludes by gathering basic demographic information in order to allow for a determination of the respondents' representation the general population as well as to enable comparisons to be made among groups within the responding sample. These questions were designed to be as simple and as unobtrusive as possible to maximize rates of response (Nardi, 2003).

Overall, the questionnaire contains 14 pages of questions and a one-page comment form inviting respondents to express any questions or concerns with the survey. With only one exception, all questions in the survey were closed so that responses would be structured to facilitate data compilation and analysis. Also, because closed questions are relatively quick and easy to complete, they enabled a wider range of questions to be included in the survey (Palys, 1997).

4.5 Data Collection

In June 2002, 1,598 packages containing a survey booklet, a covering letter, a sheet addressing common questions that respondents may have, a slip inviting respondents to express their interest in participating in a series of follow-up focus group seminars, and a postage-paid addressed return envelope were mailed to the addresses selected for Phase 1.

To make the survey as convenient as possible, potential respondents were given the option of either completing the questionnaire and returning it using the postage-paid return envelope provided or completing the survey on-line at GTASurvey.ca and submitting their responses directly to an electronic database.

To increase response rates for mail-out surveys, the literature suggests mailing reminder notices to those households that have not returned their survey within a timely manner (Jackson, 1988, Palys, 1997). Generally, within two weeks of an initial survey mailing, approximately 85% of the surveys to be returned will be received. After four weeks, about 96% of all surveys to be returned will have been received (Jackson, 1988). Approximately three weeks after the initial mailing, a reminder notice was sent to those who had not returned their survey. In hopes of increasing the number of returned surveys in the Riverdale, Scarborough, and Mississauga study areas where initial response rates were promising, full versions of the survey accompanied the reminder notice for approximately 70% of the addresses with outstanding surveys. Finally, approximately four weeks after the first reminder letter was issued, a final reminder notice was sent to all addresses that had not returned their completed survey.

Data entry and coding was simplified by the use of the Internet page interface. Because the majority of questions in the survey required respondents to select an answer from a set of potential responses, each response was automatically coded with a numerical value if selected on the web version of the survey. These responses, in turn, were placed in a text file that could easily be imported into Microsoft Excel and SPSS. Because of the ease with which data could be collected and coded using the GTASurvey.ca interface, all completed hard-copy versions of the survey were manually entered by the researchers into the GTASurvey.ca Internet form. This allowed for all responses to be automatically coded and compiled into a standard data format for analysis.

4.6 Limitations

This study employed a mail-out questionnaire as the principal data collection tool due to the nature of the topic being studied, the methodological precedence in this area of study, and the context within which the study was carried out. Although the mail-out questionnaire was deemed to be the most suitable method for this study, it has several limitations that should be noted prior analysing the resulting data.

Mail-out questionnaires make a number of implicit assumptions about those who are being asked to complete the survey. First, because the survey is written in English only, it assumes that respondents are literate in the English language and are able to understand the vocabulary used in the survey (Nardi, 2003; Palys, 1997). For example, respondents are assumed to know the difference between a townhouse and a duplex. Second, because respondents have no opportunity to clarify questions with the researchers, it assumes that the instructions accompanying the survey will be understood and followed correctly (Palys, 1997). As will be seen in Chapter Five, some

instructions were indeed misinterpreted and so such cases had to be removed during data analysis. Finally, the questionnaire assumes that people have given some previous thought to the issues being studied and that they are willing to share their thoughts in a serious manner (Nardi, 2003; Palys, 1997). Those who have no previous opinion on a subject or those who complete surveys with malicious intent could fabricate answers that do not reflect their true opinions and thus jeopardize the quality of the resulting data.

Previously it was noted that bias among respondents can compromise a study's ability to produce representative results. Due to the low response rates typically achieved for mail-out questionnaires (10% - 40%), respondents are often an atypical collection of people who are highly educated, politically liberal, less authoritarian, and have an interest in the topic of study and are therefore more eager to share their opinions than the general population (Nardi, 2003; Palys, 1997). In order to qualify the conclusions drawn from the data gathered through this study, response bias will be assessed as part of the next chapter.

Ultimately, the goal of many social science surveys is to learn something about a group of individuals' attitudes in hopes of predicting some aspect of their future behaviour (Palys, 1997). Surveys, such as the one used in this study, rely on individuals to self-report their attitudes and behaviours using the structured questions provided. Unfortunately, because respondents are aware that their answers will be observed, they may moderate their responses to portray themselves in a favourable manner or to satisfy a perceived bias in the survey itself (Palys, 1997). Furthermore, because individuals' range of attitudes and emotions vary, they may interpret questions differently thus affecting their responses (Nardi, 2003). For example, although Sections D and E of the

questionnaire rely on numerous Likert statements to aggregate respondents into groups based on a statistical perception of shared attitudes, individual respondents may vary in their interpretation of what motivates them to choose *Strongly Agree* versus *Agree*. To address this issue it is important to assess the validity and reliability of the survey instrument as well as to compare respondents on an on an aggregated basis rather than an individual basis.

4.7 Conclusion

This chapter highlights the processes that determined the geographic focus of the present research as well as the method with which this research was conducted. This thesis investigates the attitudes of individuals who live in Riverdale, York, Etobicoke, Scarborough, Mississauga, and Richmond Hill because these areas generally exhibit higher rates of public transportation use relative to their surroundings while maintaining average income levels for the Toronto CMA as a whole. Because this survey is patterned after a previous study that successfully investigated similar issues, it was decided that data should be collected from individuals in the same fashion by using a mail-out questionnaire.

For the purpose of this thesis, a mail-out questionnaire is a suitable method for gathering information because of the large number and range of questions that were posed, the limited budget for the project, and the geographic dispersion of the sample population. Although mail-out questionnaires do not lend themselves to producing results that can be generalized to larger populations, this thesis does not intend to generalize beyond the sample. Instead, this thesis is most concerned with testing whether general attitudes revealed through statistical analysis correspond to individuals' responses to a situation that challenges their beliefs.

CHAPTER 5: ANALYSIS AND RESULTS

5.1 Introduction

To address the research question of whether people's general attitudes towards urban life influence their opinion on ideal urban form, and whether their opinion on ideal urban form is consistent with the type(s) of urban residential development that they would support in proximity to their home, the data gathered from the questionnaire must be statistically explored to identify significant relationships or patterns. This chapter provides an overview of the data collected via the mail-out questionnaire and describes the results of the analysis thereof. It begins by describing the overall response rate for the survey, by providing a demographic description of the respondents, and by pointing to the bias inherent in the overall group. The chapter then explores how the respondents are partitioned into attitudinally-based groups, it provides an attitudinal and demographic description of the resulting groups, and it offers some observations about the significance of these groups in the context of debating future urban form. Finally, the chapter assesses group attitudes towards ideal urban form and compares them to their general attitudes to identify any consistencies between the two.

5.2 Survey Response

As of September 1, 2002, 325 surveys were completed in accordance with the survey methodology described in the previous chapter thus generating an overall response rate of 23%[24]. Table 5.1 outlines the distribution of responses:

[24] This number assumes that all undeliverable surveys were truly undeliverable, and not a refusal to participate.

Table 5.1:

Summary of Survey Complete Returns and Response Rates, September 1, 2002

	Neighbourhood	Completed	Undeliverable	Total Mailed	Response Rate
Inner City	**Riverdale**	83	29	286	32%
	York	52	37	247	25%
Inner Suburbs	**Etobicoke**	31	30	252	14%
	Scarborough	51	22	294	19%
Outer Suburbs	**Mississauga**	65	27	284	25%
	Richmond Hill	43	20	218	22%
Totals		**325**	**165**	**1581**	**23%**

Generally, survey response was greatest in the inner city and lowest in the inner suburbs. This observation may be explained by the general concentration of highly educated population in the inner city and their tendency to participate in research (Palys, 1997; Statistics Canada, 2003c). Furthermore, as Table 5.2 illustrates, participants from the inner city were quicker to return their completed surveys than those from the other areas, thus supporting the notion that the respondents from the inner city have a greater propensity for participating in survey research.

Table 5.2:

Timing of Complete Survey Returns from date of Mailing (June 3, 2002)

	Neighbourhood	First 25 Days	After 25 Days	Total
Inner City	**Riverdale**	43	40	83
	York	28	24	52
Inner Suburbs	**Etobicoke**	18	13	31
	Scarborough	22	29	51
Outer Suburbs	**Mississauga**	28	37	65
	Richmond Hill	19	24	43
Totals		**158**	**167**	**325**

5.3 Respondent Profile[25]

Generally, the survey participants are middle-aged (36 – 55), well educated homeowners living in single detached dwellings. Notwithstanding this generalization, there are significant demographic and socio-economic differences among the participants that become apparent when analysed geographically. Specifically, greatest variation occurs when the population is viewed in light of their respective urban zone: inner city, inner suburbs and outer suburbs. Therefore, it is appropriate to briefly profile select demographic and socio-economic variables here.

5.3.1 Gender

Generally, more men participated in the survey than women. This observation is most prevalent in the outer suburban study areas of Mississauga and Richmond Hill where two-thirds of the surveys returned were completed by men. In the inner suburbs of Etobicoke and Scarborough, male participation outpaced that of women by almost 20%.

In contrast to the suburban areas, the inner city areas of Riverdale and York experienced a higher level of participation from women than men. This distinction may prove significant if men have an inherently different world-view than women and therefore differing attitudes towards the survey content.

[25] See Appendix 4 for a graphic representation of the demographic and socioeconomic characteristics of the survey respondents by geographic area.

5.3.2 Age

Overall, each of the urban zones experienced a similar age profile for its survey participants. In each area, over half of all participants were between the ages of 36 and 55. Little variation was observed for participation among the young (less than 26 years) and the elderly (over 66 years). Participation among people aged 26 to 35 and 56 to 65 did vary between areas, however, it is not expected that such variation will contribute significantly to the survey results by producing age biases between the geographic areas and study neighbourhoods.

5.3.3 Education

Previously, it was noted that highly educated people tend to participate in survey research more often that those who are less educated. In this study, education was indeed an influential determinant of participation as almost 86% of all respondents have either completed a post-secondary diploma or degree, or are in the process of doing so. Notwithstanding this observation, some significant differences do exist between the study areas. Compared to their inner and outer suburban counterparts, respondents from the inner city are more highly educated with 69% of them having attained a university degree versus 19% and 41% in the other two areas respectively. On the other hand, respondents from the inner and outer suburbs exhibit higher levels of college education than the inner city.

5.3.4 Country of Birth

The Toronto Census Metropolitan Area is the most culturally diverse urban region in Canada with 42% of its residents originating from outside of Canada (Statistics Canada, 2003c). Likewise, those who responded to the survey are also diverse with the population being evenly split between

those born in Canada and those born elsewhere. Among the study areas, however, immigrant respondents are disproportionately concentrated in the suburban areas.

In Riverdale and York, almost 70% of respondents were born in Canada while in Etobicoke and Scarborough the opposite is true. If birthplace has any effect on attitudes, it should be evident when comparing the survey results for the inner city with the other two areas.

5.3.5 Housing Characteristics

As could be expected from the sampling parameters used for this study, approximately 80% of respondents own their homes rather than rent. Compared to the other study areas, the inner city has a higher proportion of respondents who rent. Given the diversity of housing types available in the inner city and the higher residential densities located there however, it is reasonable to expect that renting would be more common in Riverdale and York than elsewhere.

Looking at the types of dwellings in which the survey respondents live, the majority live in single detached homes. In fact, when the proportions of respondents who live in single detached homes and semi-detached homes are added together, their numbers almost perfectly mirror the proportion of respondents who own their place of residence – particularly in the inner and outer suburbs.

Among the study areas, however, the inner city is distinct as just over half of its respondents live in forms of housing other than single detached homes. As noted previously, the inner city study areas exhibit much higher residential densities than the suburban study areas and therefore it is

reasonable to expect that respondents from this area would live in a greater variety of housing forms such as semi-detached, duplex and low-rise residential buildings.

5.3.6 Household Characteristics

Generally, respondents from the inner and outer suburbs have more household members than respondents from the inner city. For example, over half of all respondent households in the suburban areas have four or more members while the opposite is true for the inner city – 53% of respondents from the inner city live in a household with only 1 or 2 members. This difference in household size can be attributed to the incidence of children living at home. In the suburban areas, over 60% of respondent households have children living at home whereas fewer than 50% of inner city respondents have children at home.

Compared to household size and the presence of children at home, household income is not as sharply varied among respondents across the study areas. Generally, households from the inner city and outer suburbs have high household incomes. Specifically, 56% and 44% of respondent households from the inner city and outer suburbs respectively have household incomes of over $80,000. Notwithstanding this similarity, the true household income of respondents from the inner city can not be assessed as almost 25% of respondents from Riverdale and York reported a household income of over $120,000 which represents the open-ended, upper income option in the survey. Household incomes for respondents from the inner suburbs were more modest than the other study areas as approximately 46% of those respondents reported a household income between $40,000 and $60,000.

5.4 Response Bias

The goal of this thesis is not to make generalizations about the beliefs of GTA residents, but to test the influence of stated personal attitudes in the face of a direct test – the potential of development in one's City region and, more specifically, the potential of development near one's home. Therefore, this study did not attempt to attain a representative respondent population of either the GTA or the subject study areas.

From the description of demographic and socio-economic variables presented in this chapter and illustrated in Appendix 4, it is clear that the participants in this study are not homogeneous. Given the many differences between respondents from the inner city and the suburban areas in particular, it is reasonable to expect that the survey data will reveal attitudinal differences between the inner city and the suburbs. Specifically, respondents from the inner city are mostly highly educated, Canadian-born females who live in smaller households without children and with high incomes. In contrast, respondents from the suburbs are most often foreign-born males with relatively high education levels, children living at home, and with a modest to moderately high household income. Furthermore, respondents from the inner city live in a greater variety of dwelling types than their suburban counterparts who primarily live in single detached housing. Given that respondents from the inner city and the suburbs have a very different demographic and socio-economic make-up and a very different physical context, it is expected that their responses will reflect their different life experiences to date.

Overall, the most respondents are homeowners who live in either single or semi-detached dwellings. Given this, it is expected that the group will show a bias towards supporting low-

density forms of housing similar to that in which they already live. Also, it is anticipated that respondents will react negatively to any form of development that they perceive to threaten their property value.

5.5 Cluster Analysis

In her work on suburban expansion in Sydney, Australia, during the early 1990s, Forsyth identified five distinct groups of participants in a debate over urban growth and form – each defined by a shared set of attitudes and values. Similarly, this thesis evaluates respondent attitudes by partitioning participants into distinct groupings based on shared opinions related to transportation, urban life, the environment and economy. By evaluating respondents in this manner, this thesis, and other similar studies, recognizes that respondents and their attitudes are not homogeneous (Williams & Lawson, 2001).

To classify respondents into groups where attitudinal similarity is maximized within each group and attitudinal dissimilarity is maximized between groups, Cluster Analysis is used. Cluster Analysis is an exploratory data analysis tool that seeks to "combine observations into groups or clusters such that each group […] is homogeneous with respect to certain characteristics [while ensuring that each group is different from each other] with respect to the same characteristics" (Statsoft, 2005, Sharma, 1996, p.185). At the outset, a technique called Hierarchical Clustering is used to identify preliminary groupings within the data.

5.5.1 Hierarchical Cluster Analysis

Hierarchical clustering is used to identify groups among data when the researcher as no a priori hypothesis about how the data will cluster. In hierarchical clustering, the researcher must choose among the various clustering algorithms available, a method by which groups will be formed (Everitt & Dunn, 2001; Kaufman & Rousseeuw, 1990; Sharma, 1996). For this thesis, the Ward's clustering algorithm available in the SPSS statistical software package is used because it seeks to create groups that are homogeneous within the group and because it is widely used in survey-based attitudinal studies (Everitt & Gunn, 2001; Fredline & Faulkner, 2000; Kaufman & Rousseeuw, 1990; Sharma, 1996; Williams & Lawson, 2001)[26]. To interpret the results of the hierarchical clustering procedure, SPSS produces a visual representation of the clustering process called a dendogram.

Figure 5.1 on the next page displays the dendogram produced for the GTA Survey respondents based on the answers given for questions 1 through 7 inclusive, 8 d), f) and 9a) from Section D of the survey, representing 36 variables (a copy of the survey is included in Appendix 3). Of the 325 surveys received, 49 were considered invalid for cluster analysis as they were missing responses to one or several of the questions to be analysed. Therefore, 276 cases were included in the cluster analysis. Along its left side, the dendogram depicts each valid case (respondent) as its own cluster that coincides with a linkage distance of 0 (as shown on the horizontal scale at the top and bottom of the page). Each time the linkage distance increases by a unit, the clustering algorithm relaxes its criteria for determining within-group homogeneity, therefore enabling the agglomeration of similar

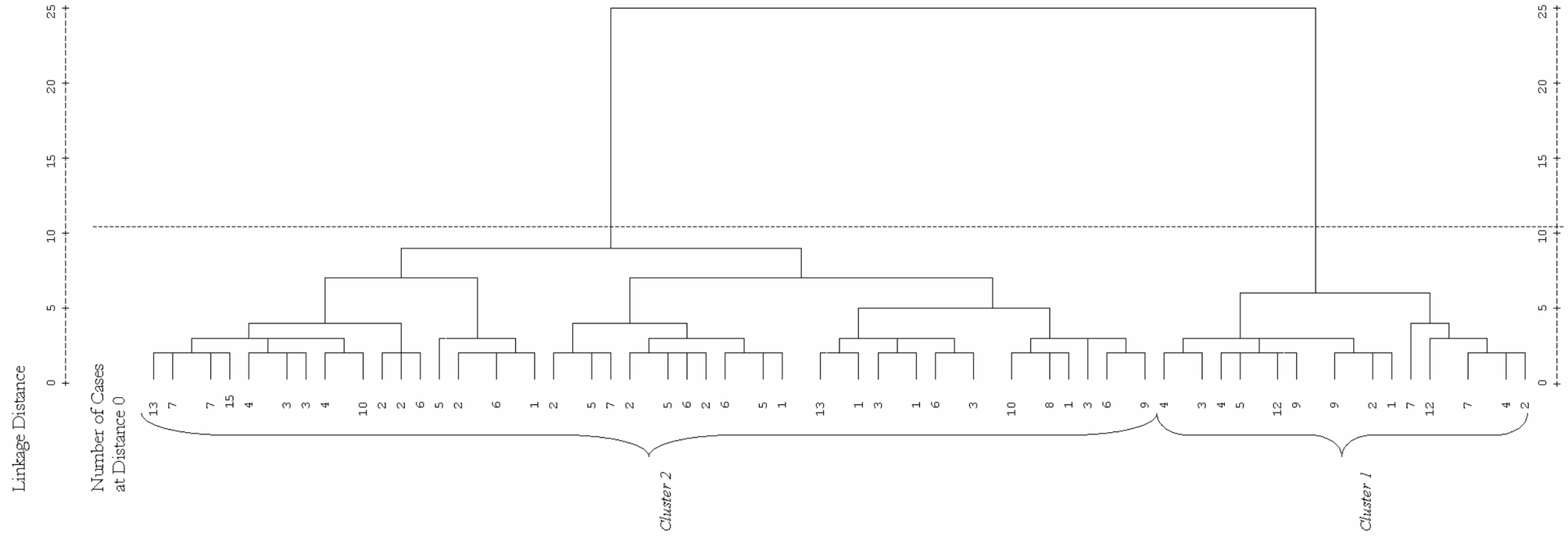
[26] Ward's algorithm tends to produce clusters of small size because it uses an ANOVA approach to assessing distance between clusters. Other clustering algorithms such as Nearest Neighbour and Furtherst Neighbour may produce differing cluster solutions (Statsoft, 2005).

cases together (Statsoft, 2005). A small linkage distance between instances of agglomeration (e.g. under 5 units) is indicative of similarity between the cases being grouped while a large linkage distance between agglomerations is indicative of dissimilarity.

To determine an appropriate number of clusters, one must look for the point in the dendogram where the linkage distance between agglomerations is sufficiently large to indicate that the most similar of cases have already been grouped together and that any further grouping of cases would result in a significant loss of homogeneity within the group. In Figure 5.1, that point is located approximately at a linkage distance of 10 and is represented visually with a dashed vertical line. Given this, it is reasonable to interpret two distinct groups or clusters within the data.

Figure 5.1:

Dendogram of Hierarchical Clustering of Responses to
The GTA Survey



5.5.2 K-Means Cluster Analysis

Through the hierarchical clustering procedure it is determined that two groups, one with 81 members and the other with 195, exist among the respondents. However, given that hierarchical cluster analysis is an exploratory tool, I have opted to perform a K-Means cluster analysis on the survey data (using SPSS) to confirm the previous results. K-Means cluster analysis is a non-hierarchical clustering technique whose name is derived from the fact that the user or researcher must indicate the number of clusters desired (i.e. *k* clusters) (Sharma, 1996; Statsoft, 2005). Therefore, the number of clusters must be known or hypothesized prior to commencing analysis.

In this thesis, the purpose of performing a K-Means analysis is to test the accuracy of the cluster solution identified during the previous hierarchical analysis. An advantage of k-means analysis is that, once it is known how many clusters should be present in a dataset, the algorithm will assign each case to the cluster to which it is closest and, if necessary, reassign cases to other clusters if it is subsequently determined to be appropriate. In contrast, hierarchical clustering techniques do not have the ability to reassign individual cases once they have been agglomerated into clusters (Everitt & Dunn, 2001; Kaufman & Rousseeuw, 1990; Sharma, 1996). In this study, the K-Means analysis determined that the two clusters of respondents contain 107 and 169 members respectively rather than 81 and 195 as previously noted. Therefore, the K-Means procedure refined the initial hierarchical cluster solution to provide more appropriately delineated clusters that were used for the remainder of this thesis' attitudinal analyses.

5.6 Interpreting the Cluster Solution

Having identified two clusters within the dataset, it is now necessary to determine what each cluster represents. To interpret the clusters, I compared the mean scores (or answers) from each cluster for the variables included in the cluster analysis. First, a one-way Analysis of Variance (ANOVA) was performed on the clusters to determine whether the difference between the mean scores for each cluster is significant[27,28]. As can be seen in Table 5.3 on the next page, the difference between the means of each cluster is significant at the 0.01 level for all but two variables. Through the ANOVA procedure, it is confirmed that the two clusters are indeed unique in their attitudes and that the clustering process was effective in maximizing within group homogeneity and between group heterogeneity.

[27] ANOVA is a statistical procedure used to determine the significance of observed differences between two or more sample groups or clusters by estimating the variance (i.e. the average squared deviation from the mean) for the entire respondent population twice: First based on how the two identified clusters vary from the mean of all respondents on any given variable (between groups); and Second, based on how each case varies from their respective cluster mean within each cluster. ANOVA compares these two estimates as a ratio (estimate of population variance based on between groups variation / estimate of population variance based on within groups variation) to produce a result called the F statistic. A large F statistic value indicates that the observed difference between the cluster means is significant and is not by chance (Freund, 2001).

[28] Because ANOVA is being applied to only two groups in this thesis, the result will be the same as performing a T-test for independent samples (Statsoft, 2005).

Table 5.3: *ANOVA of Means for Clustering Variables, Clusters 1 and 2*

Variable		Sum of Squared Deviations	Degrees of Freedom	Mean Squared Deviation	F Statistic	Significance
I really need the freedom driving allows me.	Between Groups	54.569	1	54.569	55.278	0.000
	Within Groups	270.485	274	0.987		
	Total	325.054	275			
There are too many cars on the road during rush hour with only one person in them.	Between Groups	31.362	1	31.362	45.481	0.000
	Within Groups	188.939	274	0.69		
	Total	220.301	275			
Driving allows me to get more done.	Between Groups	39.789	1	39.789	51.137	0.000
	Within Groups	213.196	274	0.778		
	Total	252.986	275			
I try to avoid getting stuck in traffic.	***Between Groups***	***2.02***	***1***	***2.02***	***3.634***	***0.058***
	Within Groups	***152.281***	***274***	***0.556***		
	Total	***154.301***	***275***			
I like someone else to do the driving.	Between Groups	29.195	1	29.195	24.436	0.000
	Within Groups	327.367	274	1.195		
	Total	356.562	275			
Car-pooling saves money.	Between Groups	15.291	1	15.291	24.333	0.000
	Within Groups	172.187	274	0.628		
	Total	187.478	275			
I am not comfortable riding with strangers or in someone else's car.	Between Groups	40.812	1	40.812	33.498	0.000
	Within Groups	333.825	274	1.218		
	Total	374.638	275			
Car-pooling is a reliable way to commute.	Between Groups	10.999	1	10.999	13.634	0.000
	Within Groups	221.041	274	0.807		
	Total	232.04	275			
I can read and do other things when I use public transit.	Between Groups	26.919	1	26.919	26.213	0.000
	Within Groups	281.382	274	1.027		
	Total	308.301	275			
It costs more to use public transportation than it does to drive a car.	Between Groups	50.006	1	50.006	48.596	0.000
	Within Groups	281.95	274	1.029		
	Total	331.957	275			
Public transit is unreliable.	Between Groups	50.133	1	50.133	44.307	0.000
	Within Groups	310.026	274	1.131		
	Total	360.159	275			
I use public transit when I cannot afford to drive.	***Between Groups***	***4.124***	***1***	***4.124***	***3.132***	***0.078***
	Within Groups	***360.785***	***274***	***1.317***		
	Total	***364.909***	***275***			
Buses and streetcars are annoying because they stop all the time.	Between Groups	45.964	1	45.964	41.747	0.000
	Within Groups	301.674	274	1.101		
	Total	347.638	275			
Trains (GO, LRT) and subways, with right-of-way, are the best way to travel to work.	Between Groups	30.062	1	30.062	31.269	0.000
	Within Groups	263.427	274	0.961		
	Total	293.489	275			
Traffic congestion will take care of itself because people will make adjustments.	Between Groups	30.992	1	30.992	39.697	0.000
	Within Groups	213.917	274	0.781		
	Total	244.909	275			
Stricter vehicle smog control laws should be introduced and enforced.	Between Groups	71.769	1	71.769	94.76	0.000
	Within Groups	207.521	274	0.757		
	Total	279.29	275			
We need to build more roads to help decrease congestion.	Between Groups	151.437	1	151.437	145.995	0.000
	Within Groups	284.215	274	1.037		
	Total	435.652	275			
More lanes should be set aside for car-pools and buses.	Between Groups	20.61	1	20.61	20.842	0.000
	Within Groups	270.941	274	0.989		
	Total	291.551	275			
We should provide incentives to people who use electric or other clean-fuel vehicles.	Between Groups	34.306	1	34.306	49.565	0.000
	Within Groups	189.647	274	0.692		
	Total	223.953	275			
Environmental protection is good for the economy.	Between Groups	25.53	1	25.53	38.385	0.000
	Within Groups	182.238	274	0.665		
	Total	207.768	275			
Jobs are more important than the environment.	Between Groups	43.556	1	43.556	52.576	0.000
	Within Groups	226.994	274	0.828		
	Total	270.551	275			
Car use is an environmental problem.	Between Groups	47.235	1	47.235	72.913	0.000
	Within Groups	177.504	274	0.648		
	Total	224.739	275			
High density residential development (low and high-rises, townhouses) should be encouraged.	Between Groups	43.044	1	43.044	44.03	0.000
	Within Groups	267.866	274	0.978		
	Total	310.909	275			
I need to have space between me and my neighbours.	Between Groups	34.311	1	34.311	44.788	0.000
	Within Groups	209.906	274	0.766		
	Total	244.217	275			
Having shops and services within walking distance of my home would be important to me.	Between Groups	31.729	1	31.729	50.972	0.000
	Within Groups	170.561	274	0.622		
	Total	202.29	275			
It is important for children to have a large backyard for playing.	Between Groups	26.674	1	26.674	28.747	0.000
	Within Groups	254.239	274	0.928		
	Total	280.913	275			
Living in a multiple family unit (apartment, condo, row-house) ranks very low in my personal preference for housing choices.	Between Groups	21.018	1	21.018	17.057	0.000
	Within Groups	337.634	274	1.232		
	Total	358.652	275			
Too much valuable agricultural land is consumed to supply housing.	Between Groups	26.42	1	26.42	27.164	0.000
	Within Groups	266.49	274	0.973		
	Total	292.909	275			
I would be willing to pay a toll to commute on an uncongested road.	Between Groups	9.598	1	9.598	7.204	0.008
	Within Groups	365.022	274	1.332		
	Total	374.62	275			
Vehicle emissions increase the need for health care.	Between Groups	45.347	1	45.347	75.369	0.000
	Within Groups	164.856	274	0.602		
	Total	210.203	275			
Using tax dollars to pay for public transportation is a good investment.	Between Groups	53.719	1	53.719	76.602	0.000
	Within Groups	192.15	274	0.701		
	Total	245.87	275			
Environmental protection costs too much.	Between Groups	80.507	1	80.507	107.144	0.000
	Within Groups	205.881	274	0.751		
	Total	286.388	275			
We should raise the price of gasoline to reduce congestion.	Between Groups	126.131	1	126.131	129.361	0.000
	Within Groups	267.159	274	0.975		
	Total	393.29	275			
It is important to me to live in a neighbourhood where people are similar to me.	Between Groups	20.875	1	20.875	21.944	0.000
	Within Groups	260.644	274	0.951		
	Total	281.518	275			
It is important that dwellings in the neighbourhood be about the same size.	Between Groups	25.944	1	25.944	33.275	0.000
	Within Groups	213.633	274	0.78		
	Total	239.576	275			
I feel a responsibility to care for and improve the quality of the neighbourhood in which I live.	Between Groups	4.549	1	4.549	10.745	0.001
	Within Groups	116.012	274	0.423		
	Total	120.562	275			

Second, the mean scores are compared in Table 5.4 on the next page to aid in identifying definitive attitudinal characteristics of each cluster. Based on the differences between the mean responses provided by the groups to the numerous 5-point Likert statements, it appears that the clusters are distinguished most significantly by their responses to the following statements:

- We need to build more roads to help decrease congestion (difference of 1.52);
- We should raise the price of gasoline to reduce congestion (difference of 1.38);
- Environmental protection costs too much (difference of 1.11);
- Stricter vehicle smog control laws should be introduced and enforced (difference of 1.05);
- I really need the freedom driving allows me (difference of 0.91); and,
- Using tax dollars to pay for public transportation is a good investment (difference of 0.9).

Table 5.4:
Comparison of Mean Responses to GTA Survey Attitudinal Questions, Clusters 1 and 2

		Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)		
Section D Question Number	**Statement in Questionnaire**	**Cluster 1**	**Cluster 2**	**Difference**
1a)	I really need the freedom driving allows me.	3.6	4.5	0.91
1b)	There are too many cars on the road during rush hour with only one person in them.	4.6	3.9	0.69
1c)	Driving allows me to get more done.	3.7	4.5	0.78
1d)	I try to avoid getting stuck in traffic.	4.2	4.4	0.18
2a)	I like someone else to do the driving.	3.5	2.8	0.67
2b)	Car-pooling saves money.	4.3	3.8	0.48
2c)	I am not comfortable riding with strangers or in someone else's car.	2.7	3.5	0.79
2d)	Car-pooling is a reliable way to commute.	3.6	3.2	0.41
3a)	I can read and do other things when I use public transit.	4.2	3.6	0.64
3b)	It costs more to use public transportation than it does to drive a car.	1.8	2.6	0.87
3c)	Public transit is unreliable.	2.2	3.1	0.87
3d)	I use public transit when I cannot afford to drive.	2.4	2.6	0.26
3e)	Buses and streetcars are annoying because they stop all the time.	2.5	3.4	0.84
3f)	Trains (GO, LRT) and subways, with right-of-way, are the best way to travel to work.	4.1	3.4	0.68
4a)	Traffic congestion will take care of itself because people will make adjustments.	1.6	2.3	0.69
4b)	Stricter vehicle smog control laws should be introduced and enforced.	4.7	3.6	1.05
4c)	We need to build more roads to help decrease congestion.	2.2	3.8	1.52
4d)	More lanes should be set aside for car-pools and buses.	3.9	3.4	0.56
4e)	We should provide incentives to people who use electric or other clean-fuel vehicles.	4.5	3.8	0.72
5a)	Environmental protection is good for the economy.	4.4	3.8	0.62
5b)	Jobs are more important than the environment.	1.9	2.7	0.81
5c)	Car use is an environmental problem.	4.4	3.6	0.85
5d)	High density residential development (low and high-rises, townhouses) should be encouraged.	3.6	2.8	0.81
6a)	I need to have space between me and my neighbours.	3.3	4.0	0.72
6b)	Having shops and services within walking distance of my home would be important to me.	4.5	3.9	0.69
6c)	It is important for children to have a large backyard for playing.	3.2	3.8	0.63
6d)	Living in a multiple family unit (apartment, condo, row-house) ranks very low in my personal preference for housing choices.	3.3	3.9	0.56
6e)	Too much valuable agricultural land is consumed to supply housing.	4.0	3.4	0.64
7a)	I would be willing to pay a toll to commute on an uncongested road.	3.0	2.6	0.38
7b)	Vehicle emissions increase the need for health care.	4.4	3.5	0.83
7c)	Using tax dollars to pay for public transportation is a good investment.	4.5	3.6	0.9
7d)	Environmental protection costs too much.	1.6	2.7	1.11
7e)	We should raise the price of gasoline to reduce congestion.	3.2	1.9	1.38
8d)	It is important to me to live in a neighbourhood where people are similar to me.	2.5	3.1	0.57
8f)	It is important that dwellings in the neighbourhood be about the same size.	2.4	3.1	0.63
9a)	I feel a responsibility to care for and improve the quality of the neighbourhood in which I live.	4.1	3.9	0.26

However, this description of the variables' contribution to the definition of the two clusters does not consider correlation between the variables and could therefore be a misleading interpretation. Therefore, the clusters were subjected to a step-wise discriminant analysis using SPSS in order to identify which variables best discriminate between the two. Of the variables that were suitable for analysis (i.e. those that were both uncorrelated to other variables and significantly different between the groups), Table 5.5 displays their relative influence on the discriminant function in descending order based on their correlation with the function.

Table 5.5:
Factor Structure Matrix of the Discriminant Function

Section D Question #	Independent Variable	Function
4c)	We need to build more roads to help decrease congestion	0.529
7d)	Environmental protection costs too much	0.453
4b)	Stricter vehicle smog control laws should be introduced and enforced	-0.426
7c)	Using tax dollars to pay for public transportation is a good investment	-0.383
7b)	Vehicle emissions increase the need for health care	-0.380
1a)	I really need the freedom driving allows me	0.326
6a)	I need to have space between me and my neighbours	0.293
3c)	Public transit is unreliable	0.291
5d)	High density residential development should (low and high-rises, townhouses) should be encouraged	-0.291

Pooled within-groups correlations between discriminating variables and the standardized canonical discriminant function. □ Variables ordered by absolute size of correlation within function.

When the results of the discriminant analysis are compared to the mean responses provided by each cluster as noted in Table 5.4, Cluster 1 appears to favour an urban landscape and lifestyle

while Cluster 2 seems favour a suburban, automobile-oriented landscape and lifestyle. Given this, Cluster 1 can be referred to as an Urbanist group and Cluster 2 can be referred to as a Suburbanist group. A detailed description of the nine key discriminating variables is provided below followed by a detailed description of each group.

5.6.1 "We need to build more roads to help decrease congestion"

Responses to this statement proved to be the most significant discriminating factor between the two clusters as this question resulted in the widest margin of difference between the mean score recorded for each cluster. On the 5-point Likert scale where 1 represents strongly agree, 2 – agree, 3 – neutral/undecided, 4 – agree, and 5 – strongly agree, Cluster 1 responded with an average of 2.2 whereas the average for Cluster 2 was 3.8. Essentially, Cluster 1 does not believe in constructing roads as a means of reducing congestion whereas Cluster 2 agrees new roads are part of the solution to congestion.

5.6.2 "Environmental protection costs too much"

In the survey, this question was grouped together with questions related to the economy in general. In doing this, it is assumed that respondents will answer this question based on their perceived impacts that enforcing or achieving environmental protection will have on the economy. Cluster 1 provided a mean response of 1.6, indicating they feel quite strongly that environmental protection is not too costly for the economy. Cluster 2, on the other hand, provided a mean response of 2.7, indicating that they are less certain about whether environmental protection is an excessively costly endeavour.

5.6.3 "Stricter vehicle smog control laws should be introduced and enforced"

This statement, in conjunction with the statement profiled in the previous section, is intended to reveal respondents' commitment to achieving enhanced environmental protection through the use of legislated regulation. With a mean response of 4.7, Cluster 1 strongly supports the use of tougher vehicle emission laws to address poor urban air quality and, in particular, smog. This response also implies that Cluster 1 believes vehicle emissions are, at least in part, to blame for poor urban air quality. This implication is confirmed by Cluster 1's strong agreement with the statement "Car use is an environmental problem" (mean = 4.4).

Cluster 2, on the other hand, is less supportive of introducing tougher vehicle emissions laws (mean = 3.6). This more neutral position towards emissions laws is corroborated by the group's more neutral response of 3.6 towards "Car use is an environmental problem."

5.6.4 "Using tax dollars to pay for public transportation is a good investment"

One objective of *Places to Grow*, and typically a key objective of Growth Management and Smart Growth, is to ease traffic gridlock and thereby strengthen the urban economy by increasing the share of person trips accommodated by public transportation versus the automobile. This statement tests whether respondents feel government investment in public transit is good for the economy and, implicitly, whether respondents would potentially support expanded public investment in transit. Members of Cluster 1, on average, provided a response of 4.5 thereby indicating strong support for government funding of public transit whereas Cluster 2 was less supportive with an average response of 3.6.

5.6.5 “Vehicle emissions increase the need for health care”

One criticism that is often made of contemporary automobile-oriented development is that vehicle emissions place added stress on human health and the economy in terms of increased incidences of respiratory disease and the health care costs associated with treating such disease. Based on their mean responses (Cluster 1 = 4.4, Cluster 2 = 3.5), it appears that Cluster 1 believes more strongly than Cluster 2 that vehicles emissions are deteriorating human health. These responses are affirmed by the responses described in Section 5.6.3 above.

5.6.6 “I really need the freedom driving allows me”

Members of Cluster 2 feel more strongly than Cluster 1 that they need the freedom driving allows them with mean responses of 4.5 and 3.6 respectively. This response is indicative of the lifestyle which members of each group lead – one that is more automobile-oriented versus one that is less car dependent – and is likely a function of the physical environment with which they interact on a daily basis.

5.6.7 “I need to have space between me and my neighbours”

This question intends to gather a sense of the values that respondents employ when selecting a new dwelling or evaluating new development in general. It also is intended to be indicative of the type of lifestyle and environment that they value and would prefer to seek if given the ability to choose. Generally, Cluster 2 agrees (mean response = 4.0) that they need space between themselves and their neighbours whereas Cluster 1 is more neutral on the subject (mean response = 3.3). This would seem to indicate that Cluster 2 would prefer a lower-density environment and lifestyle whereas Cluster 1 would be open to living in either low or higher density developments.

5.6.8 "Public transit is unreliable"

This statement assesses respondents' perception of public transit. Presumably, this perception is influenced by their experience with using public transit which will vary according to both the respondents' expectations for public transit and the type and level of service provided wherever one may live. With a mean response of 2.2, Cluster 1 disagrees with the statement provided; specifically, they have had a positive experience with public transit and view it as being a reliable means of transportation. Cluster 2, on the other hand, provided a neutral response of 3.1. This response seems to indicate that Cluster 2 respondents are unable to provide an opinion on the reliability of public transit perhaps because they do not use it due to the lifestyle or environment in which they live.

5.6.9 "High density residential development should (low and high-rises, townhouses) should be encouraged"

In the survey, this statement is grouped with statements under the heading 'Environment'. Therefore, based on the context in which this statement appears, respondents are prompted to evaluate housing density and its potential effects on the environment. Cluster 2 was generally neutral toward this statement (mean response = 2.8) while Cluster 1 was more agreeable to the statement with a mean response of 3.6. These responses seem to indicate that Cluster 1 perceives more of a connection between density and the environment than Cluster 2 or is more willing to commit to a position regarding higher density housing.

5.7 Clusters 1 and 2: The Definitive Characteristics

5.7.1 Cluster 1 – The Urbanites

Based on the analysis of the cluster solution, Cluster 1 has been identified as the 'Urbanites'. This group generally favours a lifestyle that can be found in more urban environment such as the inner city.

5.7.1.1 Demographic and Socioeconomic Summary[29]

The Urbanites are comprised primarily of respondents from the Inner City. As can be seen in Table 5.6, Riverdale and York respectively contribute 48% and 28% of the Urbanite cluster's membership.

Table 5.6:
Location of Residence for Members of the Urbanite Cluster

Inner City	**76%**	Riverdale	48%
		York	28%
Inner Suburbs	**13%**	Etobicoke	6%
		Scarborough	7%
Outer Suburbs	**11%**	Mississauga	5%
		Richmond Hill	7%

Overall, females account for 46% of the responses received. The Urbanite cluster, however, is comprised of 58% female respondents. Given this group's high concentration of respondents from the inner city and the higher level of female participation in the inner city as was noted previously, it is reasonable to anticipate that women would have a stronger presence in this group. While there is a noticeable difference between the gender make-up of this group and the overall group of respondents, this difference did not appear in the age composition of the group. Specifically, the age profile of the Urbanite group essentially mirrors that of all respondents.

Compared to the overall respondent population, this group is more highly educated with 65% of its members having attained a university degree (versus 48% for the general response group). In

addition, while the survey participants are evenly split between those who are born in Canada and those born elsewhere, this group contains a higher proportion of respondents (60%) who are born in Canada. Similar to the observation noted with gender above, the education and country of birth profile for this group appears to be influenced by the high concentration of respondents from the inner city as it closely reflects the inner city respondents' profile noted in Section 5.3.

Similar to the general population and the overall group of survey respondents, most people in this group own their homes. Unlike the overall group of respondents, however, this group lives in a relatively diverse array of housing types. Specifically, only 42% of this group resides in single detached dwellings versus approximately 60% for the overall respondent population. Given the greater diversity observed in this group's housing stock, it comes as little surprise that the group also exhibits a 10% higher level of rental tenure compared to the overall response group.

Relative to all respondents, this group consists primarily of smaller households. Specifically, 70% of all households in this group have three or fewer occupants compared to 55% for all respondent households. Furthermore, this group consists of fewer households with children living at home than the general respondent population. Once again, these household characteristics seem to mirror those of the inner city respondents thus reflecting the heavy presence of inner city respondents in this group.

[29] See Appendix 4 for a graphic and tabular representation of the demographic and socioeconomic characteristics for each group.

In Section 5.3.6 it was noted that household income varies little among respondents across the study areas. Similarly, the household income profile for this group mirrors that of all respondents. Given this, household income did not influence group membership.

5.7.1.2 Transportation

Based on the mean responses shown in Table 5.7, members of this group acknowledge that they generally need the freedom that driving affords them, however, they are not apt to rely on their vehicles as their sole means of transportation. These respondents are likely to have car-pooled in the past, or are willing to try car-pooling, as they believe it is an economical and reliable way of traveling and they are comfortable with being a passenger in someone else's car and/or riding with strangers. In addition, this group has highly positive attitudes towards the use of public transit noting that they can read or do other things while riding transit, that riding transit is no more

Table 5.7:
Cluster 1 Responses to Transportation Related Statements

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
I really need the freedom driving allows me.	3.6
Driving allows me to get more done.	3.7
Car-pooling is a reliable way to commute.	3.6
I like someone else to do the driving.	3.5
I am not comfortable riding with strangers or in someone else's car.	2.7
Car-pooling saves money.	4.3
I can read and do other things when I use public transit.	4.2
It costs more to use public transportation than it does to drive a car.	1.8
Public transit is unreliable.	2.2
Trains (GO, LRT) and subways, with right-of-way, are the best way to travel to work.	4.1

expensive than driving their own vehicle and that transit is a reliable means of travel. In fact, this group believes that transit forms such as subways and trains that drive along their own right-of-way, separate from other vehicles such as cars, is the best way to travel to work.

On the topic of more controversial transportation related issues, this group believes that there are too many single-occupant vehicles on the road during rush hour and that traffic congestion will not be solved by people adjusting their driving habits on their own accord. They do not support building new roads to ease congestion, but rather the promotion of transit use and car-pooling through the creation of dedicated bus and high-occupancy vehicle traffic lanes on our roadways and the use of public tax dollars to fund transit. Table 5.8 illustrates that this group is generally indifferent towards raising gas prices to combat traffic congestion and towards paying a toll to drive on an uncongested road.

Table 5.8:

Cluster 1 Response to Controversial Transportation Related Statements

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
There are too many cars on the road during rush hour with only one person in them.	4.6
Traffic congestion will take care of itself because people will make adjustments.	1.6
We need to build more roads to help decrease congestion.	2.2
More lanes should be set aside for car-pools and buses.	3.9
Using tax dollars to pay for public transportation is a good investment.	4.5
We should raise the price of gasoline to reduce congestion.	3.2
I would be willing to pay a toll to commute on an uncongested road.	3.0

5.7.1.3 Environment

When considering the environment, this group believes that the use of private automobiles is an environmental problem, that vehicle emissions increase the need for health care, and that our growing cities are consuming too much valuable agricultural land to supply housing. They feel that environmental protection is not too costly of an endeavour to undertake and that it is beneficial for the economy to do so. Furthermore, they feel that job protection should not take precedence over protecting the environment. To combat the environmental problems caused by vehicle use, this group strongly supports the use of tough anti-smog vehicle emissions laws as well as incentives for people who use electric or other clean-fuel vehicles. To address the consumption of agricultural land on the urban fringe, this group moderately supports the encouragement of higher density development such as low and high-rise multi-unit buildings, townhouses, etc.

Table 5.9:
Cluster 1 Responses to Statements Related to the Environment and Environmental Protection

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
Car use is an environmental problem.	4.4
Vehicle emissions increase the need for health care.	4.4
Stricter vehicle smog control laws should be introduced and enforced.	4.7
We should provide incentives to people who use electric or other clean-fuel vehicles.	4.5
Too much valuable agricultural land is consumed to supply housing.	4.0
High density residential development (low and high-rises, townhouses) should be encouraged.	3.6
Environmental protection costs too much.	1.6
Environmental protection is good for the economy.	4.4
Jobs are more important than the environment.	1.9

5.7.1.4 Housing

As is evidenced in the responses shown in Table 5.10, this group considers it important to have shops and services within walking distance of their homes. They are generally not concerned with having a large yard for children to play in or with having lots of space between themselves and their neighbours. They are indifferent towards living in a multi-unit residential development such as an apartment, condominium, or row house, and it is not important to them whether the houses in their neighbourhood are of a similar size. Furthermore, it is not important for them to live in a neighbourhood where their neighbours are of a similar ethnic and/or socio-economic background as themselves.

Table 5.10:
Cluster 1 Responses to Statements Related to Housing and Neighbourhoods

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
Having shops and services within walking distance of my home would be important to me.	4.5
It is important for children to have a large backyard for playing.	3.2
I need to have space between me and my neighbours.	3.3
Living in a multiple family unit (apartment, condo, row-house) ranks very low in my personal preference for housing choices.	3.3
It is important that dwellings in the neighbourhood be about the same size.	2.4
It is important to me to live in a neighbourhood where people are similar to me.	2.5

5.7.1.5 Urbanites Attitudinal Summary

From this description it can be inferred that this group, if given the opportunity, would use transit regularly and would live in a socially diverse neighbourhood that provides a variety of shopping, service, and recreational opportunities within walking distance from their home. In short, this group would favour a type of lifestyle and built form that could be found in the inner city.

Attitudinally, this group mirrors Herbert Gans' (1991) description of inner city residents as *cosmopolites* – those who are attracted to inner city living by the diversity and/or uniqueness of experiences that can be found there – or the *unmarried or childless* – those attracted by inner city/downtown employment opportunities who do not need much living space. Like those in the urbanite cluster, these groups tend to be highly educated and they choose to live in the inner city for the lifestyle and/or conveniences that inner city living affords them (Gans, 1991). Similarly, the urbanites reflect Richard Florida's description of the *Creative Class* – a highly educated group of people that employ creativity in their work – in terms of their attraction to urban amenities, their concern for the environment, and their desire to have convenient access to multiple forms of transportation rather than automobiles alone (Florida, 2002). Demographically, this group mirrors that described by Birch (2006) of those who live downtown: highly educated single individuals and small households with few children.

Given this group's lack of concern for having an abundance of personal space, their general support for housing and human diversity, and their positive views towards public transportation and addressing urban environmental problems, this group would be more likely to favour the policy direction contained in *Places to Grow* compared to their suburbanite counterparts.

5.7.2 Cluster 2 – The Suburbanites

Cluster 2 has been identified as the 'Suburbanites'. This group generally favours an automobile-oriented lifestyle that can be found in neighbourhoods developed since the 1950s – the inner and outer suburbs.

5.7.2.1 Demographic and Socioeconomic Summary

Membership in the Suburbanite cluster is more evenly distributed among the three urban zones than the previous group. Notwithstanding this, when combined it is clear that this group is heavily concentrated with suburban respondents – 77% of this group's members reside in either the inner or outer suburbs.

Table 5.11:
Location of Residence for Members of the Suburbanite Cluster

Inner City	**23%**	Riverdale	12%
		York	11%
Inner Suburbs	**31%**	Etobicoke	10%
		Scarborough	21%
Outer Suburbs	**46%**	Mississauga	27%
		Richmond Hill	18%

Similar to the overall set of responses received, males outnumber females in this group. In fact, males account for 59% of this group's membership. As described previously in Section 5.3, males had significantly higher levels of participation in the suburban areas and therefore that participation reflects itself in this group's composition. Similar to the Urbanites, however, age does not seem to influence group membership as the age profile of this mirrors that of all respondents.

Generally, respondents in this group are well educated although not as highly educated as the Urbanite group. Specifically, 40% of this group's members have attained a university degree and another 23% have attained a college diploma. Unlike the Urbanite group, however, this group

contains a higher proportion of respondents (56%) who were born outside of Canada. Once again, these observations appear to be influenced by the high concentration of respondents from the suburban areas as they reflect the education and county of birth profiles noted in Section 5.3.

Similar to the Urbanite group, the overwhelming majority (84%) of this group's members own their homes. Unlike the previous group, however, this group lives in a mostly homogeneous mix of housing types as 83% of this group resides in either single detached or semi-detached dwellings.

Relative to all respondents and the Urbanite group, larger households are common in this group. Specifically, 54% of all households in this group have 4 or more occupants compared to 45% for all respondents and 30% for the Urbanite group. Furthermore, 60% of the households in this group have children living at home versus 51% for the other group.

Like the Urbanites, suburbanite household income generally mirrors that of all respondents. Therefore, household income is not an influential factor in determining group membership. Based on the demographic and socio-economic observations noted here, it is evident that neighbourhood of residence, and more particularly, urban zone of residence, has had the greatest influence on group membership.

5.7.2.2 Transportation

This group strongly feels that they need the freedom driving affords them because they can get more done with their time. They do acknowledge that car-pooling may be a more economical means of travel, however they are unlikely to participate in a car pool due to their preference for

driving, their discomfort with having someone else drive and/or riding with strangers, and their uncertainly over the reliability of car-pooling. Similarly, while this group acknowledges the potential for doing other things such as reading while riding transit, they are unlikely to choose transit due to their uncertainty over the reliability of the service and the cost of riding transit versus driving. The group generally does not take a position on whether transit is a better way to travel to work versus other means.

Table 5.12:
Cluster 2 Responses to Transportation Related Statements

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
I really need the freedom driving allows me.	4.5
Driving allows me to get more done.	4.5
Car-pooling is a reliable way to commute.	3.2
I like someone else to do the driving.	2.8
I am not comfortable riding with strangers or in someone else's car.	3.5
Car-pooling saves money.	3.8
I can read and do other things when I use public transit.	3.6
It costs more to use public transportation than it does to drive a car.	2.6
Public transit is unreliable.	3.1
Trains (GO, LRT) and subways, with right-of-way, are the best way to travel to work.	3.4

Like the Urbanite group, this group believes that there are too many single occupant vehicles on the roads during rush hour and that traffic congestion will not take care of itself by forcing people to make adjustments. To address the problem of traffic congestion however, this group supports the construction of new roads. This group does not support raising fuel prices to fight congestion nor do they support paying tolls to drive on uncongested roads. Therefore, it can be assumed that this group would support the use of public money for the construction of new roads. While this

group moderately supports the use of public money to fund transit, it is less supportive of providing dedicated bus and high-occupancy vehicle lanes on area roadways.

Table 5.13:

Cluster 2 Responses to Controversial Transportation Related Statements

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
There are too many cars on the road during rush hour with only one person in them.	3.9
Traffic congestion will take care of itself because people will make adjustments.	2.3
We need to build more roads to help decrease congestion.	3.8
More lanes should be set aside for car-pools and buses.	3.4
Using tax dollars to pay for public transportation is a good investment.	3.6
We should raise the price of gasoline to reduce congestion.	1.9
I would be willing to pay a toll to commute on an uncongested road.	2.6

5.7.2.3 Environment

Unlike the Urbanites, this group only moderately agrees that the use of private automobiles is an environmental problem, that vehicle emissions increase the need for health care, and that our growing cities consume too much valuable agricultural land to supply housing. They are uncertain whether environmental protection is too costly of an endeavour to undertake, however they feel that it is beneficial to the economy to do so. Furthermore, they are undecided as to whether protecting the environment should take precedence over protecting jobs. This group supports giving incentives to people who use electric or other clean-fuel vehicles, however, they only moderately agree with the use of tough anti-smog vehicle emissions legislation to address urban air quality. Furthermore, this group is uncertain whether encouraging higher density

Table 5.14:
Cluster 2 Responses to Statements Related to the Environment and Environmental Protection

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
Car use is an environmental problem.	3.6
Vehicle emissions increase the need for health care.	3.5
Stricter vehicle smog control laws should be introduced and enforced.	3.6
We should provide incentives to people who use electric or other clean-fuel vehicles.	3.8
Too much valuable agricultural land is consumed to supply housing.	3.4
High density residential development (low and high-rises, townhouses) should be encouraged.	2.8
Environmental protection costs too much.	2.7
Environmental protection is good for the economy.	3.8
Jobs are more important than the environment.	2.7

residential development is an appropriate means for addressing the outward expansion of the city (see Table 5.14 above).

5.7.2.4 Housing

When choosing a home, members of this group feel that it is important to have space between them and their neighbours and that children should have a large yard to play in. They also feel it is important to have shops and services within walking distance of their home. They are generally indifferent towards living in a neighbourhood that has similar sized homes and people of similar ethnic and socio-economic backgrounds; however, they would not want to live in a multi-unit residential development such as an apartment, condominium, or townhouse (see Table 5.15 on the following page).

Table 5.15:

Cluster 2 Responses to Statements Related to Housing and Neighbourhoods

Statement	Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)
Having shops and services within walking distance of my home would be important to me.	3.9
It is important for children to have a large backyard for playing.	3.8
I need to have space between me and my neighbours.	4.0
Living in a multiple family unit (apartment, condo, row-house) ranks very low in my personal preference for housing choices.	3.9
It is important that dwellings in the neighbourhood be about the same size.	3.1
It is important to me to live in a neighbourhood where people are similar to me.	3.1

5.7.2.5 Suburbanites Attitudinal Summary

Based on the description presented above, it seems this group would prefer to live in a neighbourhood that maintains or enhances their ability to drive to regular destinations such as work and school, while at the same time providing shops, services and recreational opportunities within a convenient walking distance. These people are more likely to favour living in dwellings that provide personal outdoor space for children to play in and buffer space from neighbours such as single and semi-detached dwellings. In short, this group would favour a type of lifestyle and form that can be found in suburban neighbourhoods.

From this group's response towards driving and having personal space, it is evident that they value personal autonomy and individual freedom rather than communal relationships. Furthermore, given the proportion of respondents with children, having access to services and amenities that are oriented towards children is important. Thomas (1998) argues that suburbanites generally value individualism and equality among people – people should be free to pursue the kind of life and lifestyle they desire without heavy government regulation. Additionally, Sigelman & Heng (2001)

note that suburbs are often valued for the perceived quality of their schools, low crime rates, housing availability, shopping and recreational opportunities compared to inner city areas. Generally, households judge these factors in light of how they contribute to the family's ability to raise children (Spates & Macionis, 1982). These statements appear to be true for the Suburbanite group.

This group would be unlikely to support planning policies or legislative proposals that they perceive to interfere in their ability to carry out their current or desired lifestyle. Specifically, they are unlikely to support measures that inconvenience their use of personal automobiles or promote residential densities that are higher than accustomed. These people would likely not support *Places to Grow* should it have such an impact on the neighbourhoods in which they live.

5.8 Attitudes Towards Ideal Urban Form

Having identified two groups among the respondents based on their general attitudes towards urban life, the environment and the economy, and having explored the attitudinal and demographic/socio-economic characteristics of those groups, the focus of this thesis now turns to addressing the central research question: are people's opinions on ideal urban form in a growing metropolis reflective of their general attitudes and is their opinion on ideal urban form consistent with the type(s) of urban residential development that they would support in proximity to their home?

Section E of the questionnaire contains three questions that gather respondents' opinions on ideal urban form and the importance of specific issues that are particularly contentious in debates on

urban form at a regional scale. Rather than explicitly asking participants to identify their ideal urban form or having them indicate their preference towards a pre-determined selection of illustrations depicting various urban forms[30], these questions focus on the means by which respondents would choose to accommodate the GTA's anticipated population growth for decades to come. By posing questions in this manner, participants are implicitly instructed to consider their answers in the context of the larger city-region in which they live and to acknowledge that future urban growth and change on the landscape is inevitable. Through indicating their feelings on how the GTA should grow, participants will also reveal their opinions on ideal urban form by choosing the type of GTA that they would prefer to live in by approximately 2028. Furthermore, by indicating the type(s) of development that they would support in close proximity to their current home, the respondents also provide an indication of their commitment to ensuring that their ideal urban form comes to fruition.

To address the research question, the answers provided by the Urbanite and Suburbanite groups are compared in a one-way ANOVA to determine whether the difference between the mean scores for each group is significant. Then, any significantly different mean scores are compared to identify the definitive attitudinal characteristics of each cluster as they relate to urban form. Finally, these identified characteristics are compared with those identified in Section 5.7 in order to determine whether there is consistency both within the groups and between the groups thereby providing an indication of influence between general attitudes and specific attitudes on urban form.

[30] Visual stimuli were not included in the survey instrument because, at its outset, this study envisioned hosting a series of focus groups where survey participants would be presented visual representations of various landscapes and development forms to allow for testing of their written responses. Unfortunately, due to time and budget constraints, these sessions were never held.

5.8.1 Accommodating Anticipated Growth

Between 2002 and 2028, the GTA is projected to grow by over 2 million people to a population of approximately 7.5 million people. While it may be difficult for the today's GTA residents to envision what a future city-region of this size would look like and how it would function, to many, now is the time to make decisions regarding how this growth should be accommodated so that in 2028 the GTA will remain a desirable place to live and work. To this end, respondents were asked to indicate the degree to which they agree or disagree with seven proposals for accommodating the GTA's anticipated growth that generally represent the full spectrum of urban growth possibilities.

Table 5.16:

Comparison of Mean Responses to Question No. 1, Section E: Accommodating Anticipated Growth, Clusters 1 & 2

		Mean Response (1 = Strongly Disagree, 3 = Neutral, 5 = Strongly Agree)		
Section E Question Number	Statement in Questionnaire	Cluster 1	Cluster 2	Difference
1a)	Toronto's growth should be primarily directed to the suburban fringe.	2.22	3.10	0.88
1b)	GTA planners should be focusing on growth in the existing urban area.	3.76	3.18	0.59
1c)	Toronto should coordinate its development with other municipalities to help spread growth outside the GTA.	3.47	3.79	0.32
1d)	The GTA should freeze all new development and force growth elsewhere.	2.36	2.41	0.05
1e)	Toronto should emphasize using semi-detached/duplex homes and townhouses to accommodate its growth.	3.43	3.05	0.38
1f)	Any new resident of Toronto should be able to find a single family home to buy or rent.	3.06	3.46	0.40
1g)	Toronto should emphasize using low and high-rise apartments and condos to accommodate its future growth.	3.49	3.16	0.33

Table 5.16 displays the mean score by cluster for each statement related to accommodating future growth. Overall, these scores appear to indicate that there is a significant attitudinal difference between the two clusters that is, once again, influenced by location of residence. Specifically, the Urbanites (Cluster 1) are supportive of intensifying the existing built area as a means of

accommodating growth whereas the Suburbanites (Cluster 2) are mostly indifferent towards intensification. Additionally, the Urbanites are also supportive of using a mix of housing types and densities such as semi-detached, duplex and townhouse dwellings as well as low and high-rise residential buildings to achieve intensification whereas the Suburbanites are again indifferent towards these housing options but are more supportive of single detached dwellings. Both groups agree that attempting to freeze urban growth in the GTA and force it elsewhere would be inappropriate and that development should be coordinated with surrounding municipalities to help spread growth outside the GTA.

Given the Urbanites' support for intensification and the use of mixed housing types and densities to accommodate growth, it appears that their vision of Toronto in 2028 is one that reflects the neighbourhoods of the inner city which they currently enjoy. Conversely, given the Suburbanites' indifference towards intensification and mixed forms of housing, and their support for single detached dwellings, they appear to concede that if it is necessary to accommodate growth inside the GTA, it should be done through the creation of neighbourhoods similar to those in which they currently live – a landscape of primarily single detached dwellings other lower density residential uses. With these attitudinal differences, it seems that Urbanites would be more supportive of *Places to Grow*-driven developments than the Suburbanites. Table 5.17 on the following page confirms that the differences described here are significant.

Table 5.17:

Analysis of Variance of Cluster Means, Question No. 1, Section E: Accommodating Anticipated Growth, Clusters 1 & 2

Variable		Sum of Squared Deviations	Degrees of Freedom	Mean Squared Deviation	F Statistic	Significance
Toronto's growth should be primarily directed to the suburban fringe.	Between Groups	49.98	1	49.978	54.995	0.000
	Within Groups	244.46	269	0.909		
	Total	294.44	1			
GTA planners should be focusing on growth in the existing urban area.	Between Groups	21.409	1	21.409	22.731	0.000
	Within Groups	254.293	270	0.942		
	Total	275.702	271			
Toronto should coordinate its development with other municipalities to help spread growth outside the GTA.	Between Groups	7.032	1	7.032	6.559	0.011
	Within Groups	288.393	269	1.072		
	Total	295.424	270			
The GTA should freeze all new development and force growth elsewhere.	Between Groups	0.161	1	0.161	0.166	0.684
	Within Groups	259.63	267	0.972		
	Total	259.792	268			
Toronto should emphasize using semi-detached/duplex homes and townhouses to accommodate its growth.	Between Groups	9.196	1	9.196	11.45	0.001
	Within Groups	216.044	269	0.803		
	Total	225.24	270			
Any new resident of Toronto should be able to find a single family home to buy or rent.	Between Groups	10.209	1	10.209	9.536	0.002
	Within Groups	289.07	270	1.071		
	Total	299.279	271			
Toronto should emphasize using low and high-rise apartments and condos to accommodate its future growth.	Between Groups	7.022	1	7.022	7.764	0.006
	Within Groups	244.181	270	0.904		
	Total	251.202	271			

5.8.2 Considerations for Influencing Urban Form

In order to test the perceived relationship between general attitudes as described in Section 5.7 and attitudes towards potential development, it is important to understand what each group considers to be the key issues that need to be addressed when evaluating new development. In 1999, Forsyth identified five fundamental factors that participants in a planning debate used to evaluate the feasibility of proposed development. These factors are: equality of access to high quality housing; profitability of the development; ecological integrity; the impact on current nearby residents; and, residential demand. For the purpose of this study, respondents were asked to rank these factors in the order, relative to each other, which they felt they should influence the design of new residential development[31].

[31] Due to a typographical error in the printing of the survey, many respondents misinterpreted the instructions for Question No. 2, Section E. Of the 307 responses received for the question, only 172 eligible for analysis; 73 from Cluster 1 and 99 from Cluster 2.

Table 5.18:

Mean Rankings of Development Evaluation Factors: Clusters 1 & 2

	Mean Rank (1 = Most Important, 5 = Least Important)		
Statement in Questionnaire	**Cluster 1**	**Cluster 2**	**Difference**
Ensuring equal access to high quality housing	2.56	2.91	0.35
Profitability of the development	4.62	4.43	0.18
Ecological integrity	2.00	2.46	0.46
The impact on curent residents near the development	2.59	2.34	0.25
Residential demand	3.23	2.85	0.38

When comparing the responses from each cluster, it is clear that they are both least concerned with the profitability of proposed development relative to the other factors under consideration. This result is not surprising since profitability, as identified in the Forsyth (1999) study, is typically only a consideration for those who have a vested financial interested in the development such as those employed in the homebuilding industry and proponents of new development. As can be seen in Table 5.19, the difference between the rankings given by both groups is insignificant for most factors.

Table 5.19:
ANOVA of Mean Rankings of Development Evaluation Factors: Clusters 1 & 2

Variable		Sum of Squared Deviations	Degrees of Freedom	Mean Squared Deviation	F Statistic	Significance
Ensuring equal access to high quality housing	Between Groups	5.072	1	5.072	2.55	0.112
	Within Groups	338.154	170	1.989		
	Total	343.227	171			
Profitability of the development	Between Groups	1.393	1	1.393	1.948	0.165
	Within Groups	121.584	170	0.715		
	Total	122.977	171			
Ecological integrity	Between Groups	9.071	1	9.071	7.392	0.007
	Within Groups	208.626	170	1.227		
	Total	217.698	171			
The impact on curent residents near the development	Between Groups	2.535	1	2.535	2.092	0.15
	Within Groups	205.994	170	1.212		
	Total	208.529	171			
Residential demand	Between Groups	6.208	1	6.208	3.855	0.051
	Within Groups	273.768	170	1.61		
	Total	279.977	171			

Notwithstanding the overall similarity of the answers given by each cluster for this question, the groups are distinguished in the importance they attribute to ecological integrity as a factor for influencing new development. Specifically, the Urbanites identified ecological integrity as the most important factor to be considered when evaluating proposed development whereas the Suburbanites identified the impact of the proposed development on nearby residents as their most important consideration.

This difference of opinion is significant because it could influence each group's support for various forms of development. For example, if the Urbanites concur with the planning literature, or the literature that accompanies *Places to Grow*, that higher density, mixed use forms of development are more ecologically friendly, then they may be more inclined to support developments proposing a range of housing types and densities, including semi-detached dwellings, townhomes, and low/high rise residential buildings. On the other hand, if the Suburbanites perceive these varied

styles and densities of housing as threatening their current quality of life, they may be more likely to oppose such types of developments.

Based on this rationale, it appears that the Urbanites would be more open-minded to consider development that deviates from the current suburban landscape while the Suburbanites would not. This result appears to be consistent with the attitudinal characteristics identified earlier during the interpretation of the cluster analysis as well as the answers given by each group on their preferred means for accommodating the GTA's anticipated growth.

5.8.3 Developing Close to Home

As stated previously in this chapter and throughout this thesis, the purpose of identifying general attitudes among the survey participants and attitudes towards accommodating anticipated urban growth is to allow for an assessment of whether these attitudes influence respondents' opinions when development is proposed in close proximity to their homes. In other words, will respondents support similar forms of development at the local scale as they do at the regional scale?

To address this question, respondents were asked to indicate the degree to which they would support various forms of housing if they were proposed near their home. Although the term 'near' is not defined for respondents and is therefore subject to interpretation, it is this author's position that respondents will interpret 'near' as being a geographic threshold surrounding their home within which they perceive to have a personal vested interest in community well-being. As such, respondents will express feelings towards development that they perceive may have an impact on their personal sphere of geographic attachment.

Table 5.20:

Mean Ratings of Proposed Residential Types: Clusters 1 & 2

	Mean Response (1 = Strongly Oppose, 3 = Neutral, 5 = Strongly Support)		
Development Style	**Cluster 1**	**Cluster 2**	**Difference**
Single Family Homes	3.25	3.99	0.74
Mixed Towhouses/Condominiums	3.66	3.30	0.36
Semi-detached and Duplex Homes	3.70	3.52	0.18
Low Rise Apartments	3.33	2.65	0.68
High Rise Apartments	2.14	2.11	0.04

Based on the ratings shown in Table 5.20, it is evident that the Urbanites are comfortable supporting developments that propose townhomes/condominiums as well semi-detached and duplex homes. It is also evident that they are more supportive of low-rise apartment buildings than their Suburban counterparts. In fact, low-rise apartments garnered more support among the Urbanites than single-family homes. The Suburbanites, on the other hand, have a strong preference for the development of single family homes in proximity to their homes. They also share the Urbanites' support for semi-detached and duplex homes. Both groups are united in their dislike for high-rise apartment developments. As shown in Table 5.21, the differences described here are significant while the noted similarities exhibit high significance values (i.e. >0.01) thus further emphasizing the similarity between the groups on those variables.

Table 5.21:

ANOVA of Mean Ratings of Proposed Residential Types: Clusters 1 & 2

Development Style		Sum of Squared Deviations	Degrees of Freedom	Mean Squared Deviation	F Statistic	Significance
Single family homes only	Between Groups	35.561	1	35.561	40.946	0.000
	Within Groups	234.494	270	0.868		
	Total	270.055	271			
Mixed towhouses/condos	Between Groups	8.494	1	8.494	9.511	0.002
	Within Groups	240.251	269	0.893		
	Total	248.745	270			
Semi-detached and duplex homes	Between Groups	2.161	1	2.161	2.823	0.094
	Within Groups	205.205	268	0.766		
	Total	207.367	269			
Low rise apartments	Between Groups	29.637	1	29.637	23.653	0.000
	Within Groups	337.056	269	1.253		
	Total	366.694	270			
High rise apartments	Between Groups	8.51E-02	1	0.0851	0.072	0.789
	Within Groups	318.896	269	1.185		
	Total	318.982	270			

5.9 Conclusion

From this analysis it is evident that the attitudes identified during the interpretation of the initial cluster analysis have remained consistent for each group throughout the subsequent analysis. Specifically, the Urbanites have been consistent in their support for an urban lifestyle, the development of neighbourhoods that contain a mix of housing types and densities, and the consideration of environment when evaluating new development. Similarly, the Suburbanites have also been consistent in their support for suburban forms of development that exhibit a housing mix similar to the neighbourhoods in which they live – primarily single family dwellings. Moreover, a primary concern of the Suburbanites appears to be maintaining the lifestyle that they currently enjoy, whether it is through controlling the style of new residential development or through ensuring adequate infrastructure is provided to accommodate new growth. Given the heavy geographic bias of each cluster's membership, these results do not come as a surprise.

CHAPTER 6: CONCLUSIONS AND DISCUSSION

6.1 Introduction

Today, many people believe that contemporary urbanization is leading society to a fate of environmental ruin and that human quality of life is suffering as a result of the way we have organized our physical surroundings. Also, many believe that contemporary city-building is undermining our cities' ability to compete economically on a global stage and that, as a consequence, economic investment is by-passing inefficient cities. For many, these perceived trends will continue until major changes are made to our surroundings and the lifestyle that has precipitated from them. As shown previously in this thesis, urban planners, theorists, and politicians have proposed several means for attempting to address the inadequacies of the contemporary urban landscape in hopes of creating a more economic, social, and environmentally sustainable future. In Ontario, many of these proposals are being implemented as part of *Places to Grow*. Of the means discussed, a fundamental underlying principle is the belief that changes in the built environment will encourage lifestyle changes that significantly alter the way we perform daily activities.

Despite the effort that planners have poured into defining and implementing the Growth Management and Smart Growth movements, little attention has been paid to how people react to these measures. Given the growing public perception of the adverse consequences of our current urban landscape, and the solutions proposed to address those consequences, this thesis studied a group of residents from the rapidly growing Greater Toronto Area in order to assess: their general attitude towards urban living; the consistency of these attitudes with their preferred means of

accommodating anticipated urban growth on a macro or regional scale; and their commitment to supporting new residential development on a micro scale that implements their ideals for accommodating urban growth. Specifically, the research question identified in the introductory chapter for this thesis was:

> *When facing rapid population growth on a regional scale, do people's general attitudes towards urban life influence their opinion on ideal urban form, and is their opinion on ideal urban form consistent with the type(s) of urban residential development that they would support in proximity to their home?*

The significance of this work is to highlight for planners and politicians alike potential sources of support and/or resistance towards the sorts of land-use reforms proposed by planners in general and, in particular, those mandated by *Places to Grow*.

6.2 Attitudes and Conviction

To address the research question, cluster analysis was used to partition 325 survey participants based on their responses to a series of Likert statements related to transportation, urban life, the environment and economy. From this exercise emerged two groups – the Urbanites and the Suburbanites – with 107 and 169 members respectively (or 38.7% and 61.2% of the clustered respondents, respectively).

Respondents from the inner city study areas of Riverdale and York comprise 76% of the Urbanite group's membership. This group tends to favour a lifestyle and built form that is typical of the inner city. They value having convenient, walking access to shopping, service, and recreational opportunities as well as public transit. This group is environmentally conscious, is supportive of encouraging alternative forms of transportation through the use of financial incentives, and believes there is a link between urban density and agricultural land consumption. Based on the

foregoing, this group appears to be inclined to support many of the policies contained in *Places to Grow* that are intended to address traffic congestion and urban dispersion such as promoting the use of transit and requiring higher density forms of development. However, based on this analysis, it is not possible to distinguish whether these people will use public transit based on an attitudinal predisposition to support transit or if the relationship between land use and transportation infrastructure has a greater influence on the use of public transit.

In contrast to the Urbanites, 77% of the Suburbanites reside in the inner and outer suburban study areas of Etobicoke, Scarborough, Mississauga and Richmond Hill. This group tends to favour a lifestyle and built form that is typical of suburban neighbourhoods. They value having the ability to drive to regular destinations such as work and school, as well as having convenient access to shopping, service and recreational opportunities. They also value dwellings that provide personal outdoor space for recreation and buffering such as single and semi-detached dwellings. This group is unlikely to support planning policies or legislative proposals that are perceived to interfere in their current lifestyle or promote residential densities that are higher than they are accustomed.

When asked how Toronto's anticipated growth to 2028 should be accommodated, the Urbanites exhibited consistency with their general attitudes by indicating support for intensifying the existing built area and using a mix of housing types and densities to accommodate growth. Similarly, the Suburbanites also remained consistent with their general attitudes by primarily supporting the use of single detached dwellings as a means to accommodate growth.

In choosing between factors to be considered for evaluating new development, the Urbanites exhibit environmental consciousness by identifying ecological integrity as their primary consideration while the Suburbanites exhibit concern for maintaining quality of life by identifying the impact on nearby residents as their primary consideration. Given this, should the Urbanites accept planners' arguments regarding the link between land use and environmental degradation, they may be more likely to support the kinds of developments planners and politicians are advocating as being more environmentally responsible such as the increased residential densities mandated by *Places to Grow*. The Suburbanites, on the other hand, may not support such alternative forms of development if they perceive them as adversely affecting their current lifestyle or quality of life.

Finally, when asked to indicate the type(s) of residential development that they would support in close proximity to their homes, the groups gave answers that maintained their respective attitudinal profiles. Specifically, the Urbanites indicated they would support a mix of housing styles and densities including townhomes/condominiums, semi-detached and duplex homes, and low-rise apartment buildings. The Suburbanites, on the other hand, indicated their strongest preference would be for lower density, ground-oriented developments proposing single detached homes and/or semi-detached/duplex homes.

Throughout this analysis, it is evident that each group has remained consistent with the attitudes identified through the initial cluster analysis. As such, it is concluded that respondents' attitudes towards ideal urban form (as evidenced by their responses towards the means by which impending development should be accommodated) and the types of development that they would support in

close proximity to their homes are influenced by their general attitudes towards transportation, urban life, the environment and economy. Furthermore, given the overwhelming geographic bias of each group's composition, it is concluded that, for this study, respondents' general attitudes are greatly influenced by their daily experiences and the neighbourhoods in which they live.

Notwithstanding this conclusion, we have already seen in Chapter Three that real-life situations such as the Minto Towers project at Yonge Street and Eglinton Avenue can produce the opposite behaviours from local residents. In that example, inner city residents opposed neighbourhood redevelopment that had overarching policy support and would be considered favourable in light of *Places to Grow*. The lesson to be learned from this case is that people can, and often do, react in unpredictable ways to proposed development. Just like suburban residents, inner city residents will oppose developments that they deem to be too drastic for their neighbourhoods. This tendency will be a challenge for municipalities and developers as they implement *Places to Grow*.

6.3 The Objectives: Additional Themes of Inquiry

In addition to answering the research question, this thesis also seeks to achieve the following objectives:

1. To understand the origins, objectives and potential implications of recent urban form debate in the academic literature;
2. To understand the origin, nature, and complications of a perceived ideological divide between urban form as sought by planning policy and the public's concept of ideal urban form;

3. To assess whether an individual's geographic location, demographic, and socio-economic background correlates with their general attitudes, their opinions on ideal urban form, and their willingness to support various development types;
4. To test whether an established taxonomy of participant attitudes in a specific urban form debate can be applied in a more general setting; and,
5. To establish a basis for understanding where support for various forms of residential development may be found.

The first objective is addressed in Chapter Two where it is discussed how much of current planning debate, which focuses largely on ameliorating perceived shortcomings of contemporary urban form for the betterment of cities' environmental, social and economic health, is rooted in events that occurred in the 1960s and 70s. Specifically, the growth of the environmental movement in the 1960s and economic globalization in the 1970s gave rise to a planning debate that attempts to view urbanization in a more holistic manner while at the same time recognizing cities' role as centres of economic activity and competition in the global economy. Ideologies such as Smart Growth, Growth Management and New Urbanism attempt to manipulate urban form from the top-down in order to the shortcomings of today's urban landscape. Additionally, grass roots movements such as Healthy Cities and Safe Cities are slowly establishing roles for the public to improve the social condition of their communities; unfortunately, there are currently few examples of where these approaches have sustained public participation long enough to have a lasting impact.

Overall, the implication of these ideologies and movements is that people are being asked to accept changes to their physical surroundings which, in turn, may impose changes to their lifestyle. However, the literature on these topics remains silent on how personal attitudes and preferences interact with the potentially lifestyle-changing measures that are proposed. Therefore, it seems that movements such as Growth Management, Smart Growth, New Urbanism, Healthy Cities and Safe Cities are not based on empirical behavioural research but on hypothesized links between behaviour and environment.

The second objective is prefaced by Section 1.3 of the introductory chapter where it is discussed how North Americans generally prefer living in lower density, ground-oriented developments rather than higher density developments as envisioned by Growth Management exercises such as *Places to Grow*. In Chapter Three, the role of culture is discussed in the context of purchasing a home and, based on evidence in the planning/housing literature and cognitive psychology literature, in the context of a strong demand for suburban-style residential development in the Toronto area. It is argued that ownership of ground-oriented housing is a pervasive cultural value in Toronto. However, as evidenced by a lack of references in Chapter Three, little information exists on the other values that drive average Torontonians to live as they do and generate perpetual demand for dispersed urban expansion. Given the prevalence of homeownership, the chapter concludes that Torontonians will likely resist changes in the urban landscape that threaten the low-density landscape to which they are accustomed such as those changes mandated by *Places to Grow*.

The third objective is addressed through the analysis of the survey responses in Chapter Five. At the outset of this research, study areas were chosen from the inner city, inner suburbs and outer suburbs in order to allow for the comparison of results between areas. The fundamental purpose of doing such a comparison was to determine the influence that geography has on attitudes. Based on the concentration of respondents from the inner city in the Urbanite group and the concentration of suburban respondents in the Suburbanite group, it is concluded that geography does indeed influence attitudes. However, as previously noted in the Minto Towers example, the degree to which behaviour corresponds to attitudes depends on how people react to stimuli at any given time.

The fourth objective is implicitly addressed through the analysis of the survey responses in Chapter Five where respondents were classified into groups of shared attitudinal outlooks using cluster analysis. Forsyth (1999) identified participants in an early 1990s urban growth debate as falling into five categories based on their ideological perspective: Expansionists, Developers, Scientific Environmentalists, Local Environmentalists, or Consolidationists. Because the cluster exercise resulted in two groups rather than five among the respondents, it is concluded that the taxonomy developed by Forsyth did not reveal itself in this study. This difference is likely due to the inherent differences between the two studies, namely, the degree of involvement that participants had in an urban growth debate and the degree of interaction that the researcher had with the participants. For the purpose of making comparisons however, it is noted that the Urbanites identified in this thesis are more attitudinally aligned with the Consolidationists and Scientific Environmentalists identified by Forsyth while the Suburbanites are generally aligned with the Expansionists and Local Environmentalists.

Finally, based on the results of the survey analysis that show the relationship between attitudes towards urban form and respondents' geographic location as well as the consistency of these attitudes throughout the various courses of inquiry, it is concluded that geography may serve as a predictor for the support of proposed residential development. Generally, respondents tend to support development styles that are similar to those they are already accustomed.

6.4 Psychology, Culture and Land Use Planning

Cognitive Psychologists would suggest that people's opinions on ideal urban form are influenced by the life experiences that are entrenched into their value and attitude system. Most often these experiences are the ones they're most familiar with – daily experiences. Therefore, the fact that this thesis has produced results confirming this assertion should come as no surprise.

In Chapter Three, it is noted that home buying decisions are largely guided by cultural beliefs and expectations, which are in turn shaped by life experiences; if people have the ability to choose, they will choose a housing style and location that enables them to live the lifestyle which they believe is most appropriate for them. Given this, homebuyers tend to cluster naturally in urban space depending on their prevailing cultural and personal values. Evidence of this is described by Ley (1996) as many graduates of inner city universities ultimately settle down as permanent inner city residents. This clustering therefore explains the attitudinal dichotomy between the inner city and suburban respondents who, as was noted previously, are generally financially free to choose housing available throughout the GTA.

Building from this logic, planners and politicians seeking support for new planning tools and legislation that promotes residential intensification and the provision of a range of housing types and densities would be most likely to find that support among residents of neighbourhoods that already exhibit such qualities. Today however, as can be seen in Table 6.1, the majority of GTA residents live in suburban neighbourhoods and the majority of its population growth occurs in the suburbs. This creates a paradoxical situation for planners as it is precisely the contemporary suburban landscape and lifestyle that they are attempting to change. Given the results of this research and the literature reviewed, it is unlikely that current suburban residents would support such change with enthusiasm. Without the support of suburban public, what are planners and politicians' able to do?

Table 6.1:
Population Change in the GTA, 1996 - 2001

	1996	2001	% Change
Inner City	798,614	826,607	4%
Inner Suburbs	1,577,200	1,645,414	4%
Outer Suburbs	2,243,462	2,600,332	16%
GTA	4,621,272	5,074,354	10%

(Statistics Canada, 2003b; 2003c)

6.5 Implementing Land Use Change

In the GTA, municipalities are faced with the challenge of implementing *Places to Grow* on a local scale. While the directions of *Places to Grow* are clear, the means of implementing them are not. In the coming months and years, municipalities will be reviewing their official plan policies and zoning by-laws to ensure they will achieve, over time, minimum density and intensification targets. As part of implementing *Places to Grow*, municipalities will need to determine which areas of their communities are appropriate for intensification and which areas should remain stable. Additionally, until such a determination is made, municipalities will need to evaluate development applications on a case-by-case basis to ensure that they conform to the Provincial Growth Plan.

For the general public, opportunities are available through the planning process to participate in policy formation. All too often, however, people are either unaware of or apathetic to these opportunities until the policy framework has been established and a development is proposed that stands to impact their immediate neighbourhood. For *Places to Grow*, because municipalities must implement Provincial policies regardless of local public opinion, planners and politicians must ensure that the public is aware of the legislative context in which policies and land use planning decisions are made. Also, wherever the opportunity exists, they must ensure that public is involved in making planning decisions that will shape the community for years to come such as identifying intensification nodes or corridors. Using tools such as Visioning and Collaborative Planning can give people a sense of ownership over their community's direction will help foster understanding and support for local land use planning decisions. Partnering planning experts with local residents as is often done in Healthy City and Safe City projects, may also serve to build and maintain public interest in the planning process.

Given the widespread land use changes that are required to occur within the existing built area to accommodate intensification over time, and the proximity that these changes will have to existing residents, I anticipate that intensification development has the potential to be more contentious among current residents than greenfield development – particularly in areas where the degree of intensification proposed differs dramatically from the existing character of the area. Given this, municipalities will likely have a simpler task of implementing minimum density targets for existing designated greenfield areas than built areas. Notwithstanding this, the success of any new development or redevelopment will depend on its ability to appeal to those cultural values that

factor most heavily in homebuyers' decisions. To that end, research needs to identify those cultural values and personal attitudes that influence homebuyers most.

As the urban and suburban landscape becomes more dense and varied in form over time, residents may adapt their views of ideal urban form and become habituated to their evolving environment; this is an implicit goal of most Growth Management exercises including *Places to Grow*. Also, as Toronto's demographics change due to population aging and continued immigration, *Places to Grow* implicitly assumes that the culture of the city will change over time to value diversity in urban form. However, the success of *Places to Grow* in this regard will be dependent on its ability to maintain or enhance quality of life and the ability for people to meet their needs in an environment where opportunities for behaviour will be changing. For example, as urban and suburban densities increase and public transportation receives priority for funding over new road construction, municipalities will need to ensure that the delivery of enhanced transit services is coordinated to offset any increases in traffic congestion caused by a lack of new roads. Similarly, the homebuilding community will need to design their developments so as to meet the cultural expectations of the housing market while at the same time achieving the densities required under *Places to Grow*. For families looking for ground-oriented living, townhomes may become more common for new construction rather than single detached dwellings; if the changing urban landscape can meet people's needs without alienating their cultural values, than *Places to Grow* should be successful.

As a starting point for implementing intensification, planners and developers should be able to look to existing residents for support provided developments generally maintain or enhance the

character of the areas under consideration. Habituation to evolution and support for more dramatic change may come in time as small, incremental changes build momentum.

6.6 Future Directions

The study areas chosen for this thesis were done so because they exhibited above average levels of transit use and average household levels. By choosing neighbourhoods in this way, it was thought that attitudes could be tested against land use to determine which has more influence on the high levels of transit use observed. In other words, since the households in these study areas could afford to live almost anywhere in the GTA, did they choose their neighbourhood based on their desire to live a transit-oriented lifestyle or did a transit-oriented lifestyle develop because of a special relationship between land use and transportation infrastructure in these areas? Although these questions were not the focus of this thesis, it could be inferred from the attitudinal characteristics described of the two groups that transit-orientation was not a key consideration for these people when purchasing their homes. Inner city respondents were generally very positive towards public transportation however they also acknowledged the importance of having the freedom that driving affords them. Suburban respondents were less positive about public transportation and indicated their need for driving very strongly.

The questionnaire used for this study did collect information about respondents' travel patterns including the distance to and mode used for travelling to work/school, and to common destinations such as grocery stores, shopping malls, convenience stores and power centres as well as their reasons for or against using public transportation, however, this information was not used in this thesis. For future study, it would be useful to compare the travel characteristic information

collected from the respondents with the attitudinal characteristics described in this thesis to determine the influence of attitudes on transit use.

Additionally, based on the auto-oriented description of the suburbanite group given in this thesis, it appears that the high levels of transit use observed in the suburban study areas (compared to their suburban surroundings) did not translate into a group of suburban respondents who are attitudinally oriented towards using public transportation. Given the socio-economic nature of the people who were surveyed – mostly middle to upper-middle income households that own their homes – it should be expected that these people would have little financial restriction to prevent them from owning or leasing a vehicle. Future studies of a similar nature would benefit from obtaining a representative sample from such neighbourhoods in order to determine whether socio-economics can better explain transit use in an auto-oriented landscape than attitudes; perhaps those using transit in these suburban areas are those who cannot afford own a vehicle.

In the immediate future, planners can work to determine the applicability of this thesis' results to the general population – that attitudes towards urban living and new urban development are shaped by daily living experiences. Additionally, similar studies to this one should test whether attitudinal convictions shown by survey respondents are maintained in real life situations and whether attitudinal and lifestyle change is brought about by changes in urban form. Such testing could be done by carrying the study out in a longitudinal manner that monitors actual development in close proximity to participants' dwellings and then surveys participants for their opinions on this development. Such work would give planners a better sense of the support they can expect to

receive when attempting to implement change as well as a tool to measure the effectiveness of their land use reforms in influencing attitudes and behaviour.

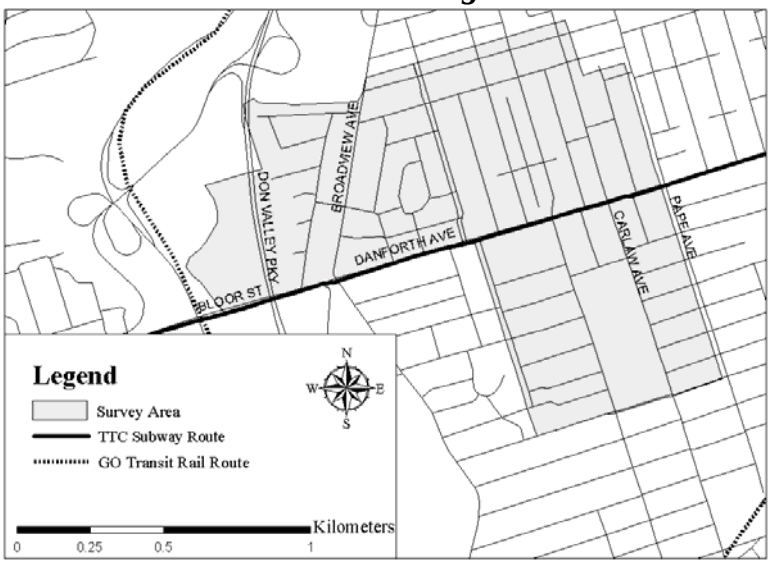
Finally, research needs to address a lack of information regarding the attitudes, preferences, and cultural values of that segment of the population that currently fuels the new home market through their home buying and lifestyle choices – the middle class. Understanding how and why the middle class lives as they do will give planners more insight on how programs such as Growth Management and Smart Growth impact average citizens and should allow planners to establish policies that better incorporate people's behavioural tendencies. Demands from the middle class have effectively created the cities we see today; planners need a better understanding of this group in order to improve the city of tomorrow.

APPENDIX ONE: Study Area Profiles

Riverdale

Located just east of Toronto's downtown along Danforth Avenue, the Riverdale study area comprises part of three locally-known neighbourhoods: Riverdale, Playter Estates, and Toronto's famous Greektown on the Danforth (City of Toronto, 2000). Annexed by the City of Toronto in 1884, development in Riverdale accelerated in 1918 with the completion of the Prince Edward Viaduct which connected the area to downtown via Bloor Street/Danforth Avenue (Dunkelman, 1997). By 1930, the area had been completely urbanized with mostly two and three storey Victorian and Edwardian homes (Dunkelman, 1997). In recent years gentrification[32] has become a common occurrence as the area has become popular among young affluent professionals looking to live in an established neighbourhood near downtown (Dunkelman, 1997).

Riverdale Survey Neighbourhood and Surrounding Area



Riverdale Survey Neighbourhood Sub-components, 1996

TTS Traffic Zone	Census Tract
258	0071.00
259	0084.00
260	0085.00

[32] Gentrification is a "process involving an influx of upper- and middle-class households into an area of old homes that were previously occupied by lower-middle and low-income individuals and households" for the purpose of renovating or redeveloping the housing stock (Yeates, 1998, p. 404 ; Ley, 2000).

Relative to other inner city areas, Riverdale is a more residentially-focused area with almost 70% of its land area dedicated to residential uses. Proportionally, Riverdale's housing stock contains more single and semi-detached dwellings and significantly fewer high-rise dwellings than other inner city neighbourhoods. With a net residential density similar to the inner city average, Riverdale has been developed as a dense neighbourhood of older homes on small parcels.

When looking at the profile of Riverdale's residents, one can see that the neighbourhood is typical of the inner city with a large proportion of young adults (25-44) among its population. Relative to the inner city average, however, Riverdale has a higher rate of home ownership, fewer immigrants, and a much higher proportion of residents with university degrees. From the1996 and 2001 census counts, the trends that emerge are that of an increase in home ownership, a decrease in immigrant population, and an increase in the numbers of well-educated residents. With population growth at almost nil, the census provides good evidence that gentrification is continuing in the study area.

In terms of transportation, Riverdale provides many options for moving around. The neighbourhood is centred on the Toronto Transit Commission's (TTC) Bloor-Danforth subway line with three stations in the area. Several bus routes traverse the neighbourhood and connect to the subway at their termini while a streetcar service travels from the intersection Danforth Avenue and Broadview Avenue to the major Queen Street line to the south (TTC, 2003). With a grid street network consisting of many small blocks, pedestrians are never far from the vibrant commercial strip along the Danforth while bicycle lanes on Danforth Avenue and in the parklands lining the Don River connect cyclists to downtown and to Toronto's network of cycling routes (City of Toronto, 1999). For those who prefer to drive, major streets such as the Danforth/Bloor Street and

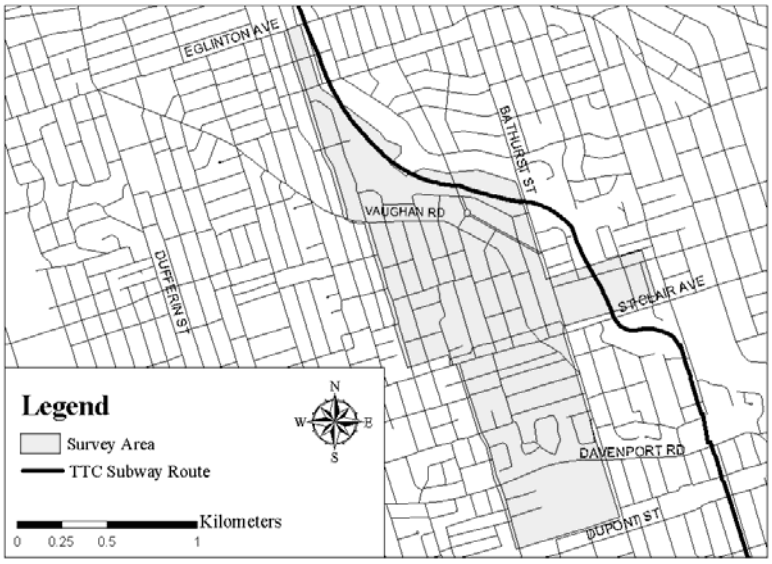
Queen Street provide access to downtown while the adjacent Don Valley Expressway connects drivers to the GTA's freeway system and beyond.

Of the study areas surveyed, Riverdale is the smallest both in terms of land area and population. In 2001, the Riverdale survey area encompassed approximately 1.4 km^2 and had a population of 11,049.

York

The York study area is located northwest of downtown Toronto along St. Clair Avenue West and Bathurst Street; approximately five kilometres from the heart of Toronto's financial district. Named for the former City (and Township) in which much of the neighbourhood was once located, the area is comprised of three local neighbourhoods: Humewood, Hillcrest, and Wychwood Park (City of Toronto, 2000). York is characterized by its tree-lined one-way streets and cul-de-sacs that shelter the area from the bustle of the big city.

York Survey Neighbourhood and Surrounding Area



In the late 1800s, development in York arose both spontaneously and systematically as the village known as Bracondale sprouted at the intersection of Christie Street and Davenport Road and the former estates known as Humewood and Wychwood Park became subdivided under plans of subdivision. By 1930, most of the area had been completely urbanized with a wide range of single and semi-detached homes (Dunkelman, 1997). Today, the entire Wychwood Park neighbourhood has been recognized for the historical significance of both its homes and the nature of its development[33] with the distinction of being named an Ontario Heritage Conservation District (Dunkelman, 1997).

York Survey Neighbourhood Sub-Components, 1996

TTS Traffic Zone	Census Tract
121	0116.00
183	0165.00
	0167.01
	0167.02

Similar to Riverdale, York is more residentially-focused than other inner city neighbourhoods with approximately 65% of its area being dedicated to residential uses. Proportionally, York's housing stock contains fewer single and semi-detached dwellings and more low-rise and medium/high-rise dwellings than other inner city neighbourhoods[34]. With a net residential density greater than the inner city average, York has managed to retain its original character as a neighbourhood of old single and semi-detached homes while intensifying development along its major arterials.

Similar to other inner city neighbourhoods, York contains a large proportion of young adults (25-44) among its population. Unlike Riverdale and other inner city neighbourhoods, however, York

[33] Wychwood Park is noted for being one of Toronto's earliest planned communities (Dunkelman, 1997).

[34] Much of the neighbourhood's interior contains single and semi-detached dwellings while the major though fares such as Bathurst Street, St. Clair Avenue, and Vaughan Road are lined with significant apartment and condominium developments.

also contains a relatively large proportion of residents aged 75 years and older. Relative to the inner city average, York has a much lower rate of home ownership, a similar number of immigrants, and a much higher proportion of residents with university degrees. Similar to the rest of the inner city, home ownership rates have risen, the immigrant population as a proportion of the total population has decreased, and the population has remained proportionally well-educated between 1996 and 2001. Given the area's higher than average proportion of rental accommodations, and the bi-modal age distribution of its population, York appears to accommodate those who are looking for the benefits of inner city living without the burdensome responsibilities of homeownership: young adults and older adults.

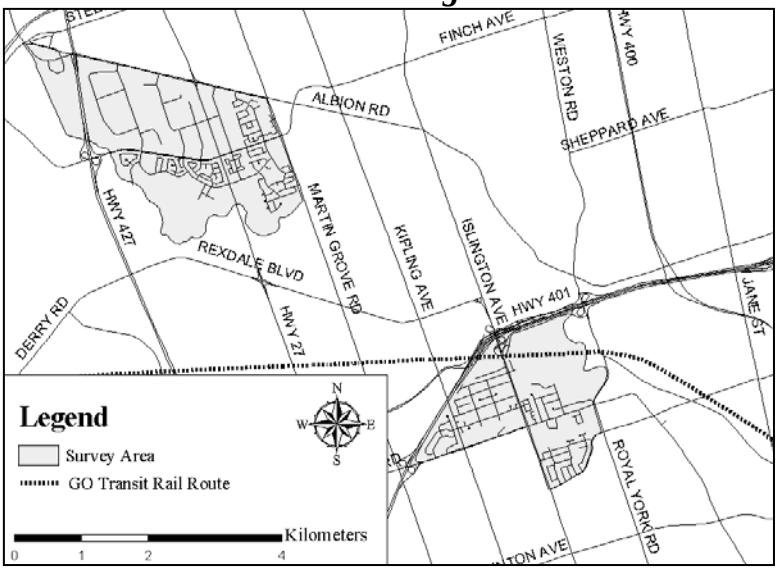
Like most other inner city areas, York provides many transportation options. Located adjacent to the Yonge-University-Spadina subway line, York is served directly by two stations and is in close proximity to a third station. The neighbourhood is well-served by buses with connecting stops to the subway while the St. Clair Avenue West streetcar line acts as a major link between the neighbourhood and Yonge Street (TTC, 2000). Like Riverdale, York's grid street network and small block sizes allow pedestrians to quickly walk to the many local shops along Vaughan Road and Davenport Road as well as to the vibrant commercial strip along St. Clair Avenue (Dunkelman, 1997). For cyclists, Davenport Road contains dedicated cycling lanes while the nearby Cedarvale Ravine contains a marked path (City of Toronto, 1999). Due to an extensive use of one-way streets and traffic calming measures, driving within the neighbourhood can be a challenge for the uninitiated. For residents of York, however, several major streets serve the area including Bathurst Street, Eglinton Avenue, St. Clair Avenue and Davenport Road. Only minutes

away is the southern terminus of the Allen Expressway which provides easy access to Highway 401 and the rest of the GTA.

Because York is a typical inner city neighbourhood, it is generally more dense than the outlying suburban areas. As of 2001, York had an area of only 1.9 km^2 and a population of 17,721. Together with Riverdale, these two areas are by far the smallest of the study areas in terms of land area and population while being the most densely populated.

Etobicoke

Etobicoke Survey Neighbourhood and Surrounding Area



The Etobicoke study area is located in the northwest corner of the City of Toronto in the former inner suburban City of Etobicoke. Because of the difficulty noted previously in defining contiguous areas for study in the inner suburbs, the Etobicoke study area consists of two parts: a southern portion that is adjacent to the south side of Highway 401 and a northern portion that rests along the northern banks of the West Humber River. The southern portion of the survey area is approximately fifteen kilometres northwest of downtown while the northern portion is approximately twenty kilometres from downtown. Both areas are only minutes away from Lester B. Pearson International Airport. The Etobicoke study area is comprised of five local neighbourhoods – Humbergate, Kingsview

Village, Silverstone, The Westway, and Woodbine Downs – as identified by the City of Toronto and a sixth neighbourhood, Smithfield, as identified by historical records (City of Toronto, 2000; Dunkelman, 1997).

Etobicoke Survey Neighbourhood Sub-components, 1996

TTS Traffic Zone	Census Tract
39	0239.00
40	0243.01
53	0243.02
54	0248.01
	0248.03

The Etobicoke area is known as one of the most culturally diverse areas in Toronto with a large Somalian community as well as many recent immigrants to Canada (Dunkelman, 1997).

Prior to the 1950s, this area of Etobicoke was largely rural farmland. A village named Smithfield had grown around a school located on Albion Road, just west of Martin Grove Road in the northern portion of the survey area but, for the most part, the area was in agricultural production until the pressures of urbanization became overwhelming in the 1950s and 1960s (Dunkelman, 1997). Today, this area is located directly adjacent to the large industrial area associated with Pearson Airport and the Highway 401 and Highway 409 corridors. Residential development in the southern portion of the Etobicoke survey area is typified by a concentration of large high-rise apartment complexes along Dixon Road and Kipling Avenue with large-lot single-family homes on interior streets. The northern portion of the study area, which continued to be developed into the 1980s, consists of a large number of single-family homes as well as private and subsidized townhouses and row houses (Dunkelman, 1997).

Compared to other inner suburban areas, Etobicoke dedicates a smaller proportion of its land to residential uses. Instead, large portions of the study area are dedicated to industrial uses such as

the corridor directly adjacent to Highway 401 and the areas north of Finch Avenue, west of Highway 27 (City of Toronto, 2002). As of 1996, almost 50% of Etobicoke's housing stock was comprised of high-rise dwellings – a proportion much higher than the inner suburban average – with much of the rest being single detached dwellings. With such a high concentration of high-rise developments, one might assume that densities in this area would be among the highest in the GTA. Because, however, many of the area's single family homes have been developed on relatively large lots of sixty feet frontage or greater, net residential densities are only a little higher than the inner suburban average and they come nowhere close to the levels reached in the inner city (Dunkelman, 1997).

In relation to other inner suburban neighbourhoods, Etobicoke contains a much larger concentration of children under the age of fifteen and a slightly larger concentration of adults between the ages of 25 and 34. This would suggest, perhaps, that young families with children are prevalent in this area. Relative to the inner suburban average, Etobicoke has slightly higher levels of home ownership and immigrant residents, and a much lower proportion of residents with university degrees. Education levels in Etobicoke are, in fact, much lower than the rest of the survey neighbourhoods and are lower than other inner suburban areas.[35] Overall, at 31%, Etobicoke had in 2001 the highest proportion of adults aged twenty and over without a high school diploma compared to the other study areas (Scarborough was the second highest at 26%). Like other inner suburban areas, home ownership is on the rise in Etobicoke as well as the proportion of residents who are immigrants. Education levels, on the other hand, are remaining stable. Although census data suggests that education levels among adults are lower in Etobicoke than in other areas,

[35] This may come as a surprise since the northern portion of the neighbourhood is home to Humber College, located just off Finch Avenue.

the rising prevalence of home ownership in the area also suggests that education is not necessarily impacting residents' ability to purchase their own homes.

Unlike inner city areas, public transportation in Etobicoke is almost exclusively provided by bus. The TTC operates bus routes along all major roads throughout the area with a particular focus on the Humber College campus. Those seeking to use the subway can connect from buses on Kipling Avenue at the Kipling subway station, about three major blocks south of the area. The TTC also has several bus routes that connect to routes in the neighbouring Mississauga transit network. For those seeking a direct route to downtown, the GO commuter train has one stop in the study area on its Georgetown line that can connect commuters to the core and to other areas across the GTA (TTC, 2000).

For pedestrians, Etobicoke is a typical suburban location in that most destinations have been designed for automobile access. Because the area has been developed in super-blocks (large, straight arterial roads on the exterior, quiet curvilinear streets and cul-de-sacs on the interior), shopping opportunities have been located on the surrounding arterial roads away from residential areas which makes walking to such destinations impractical for many people (Dunkelman, 1997). To date, the only cycling path in the area is a shared cycling/walking path along the banks of the West Humber River and the Humber River (City of Toronto, 1999; City of Toronto, 2003).

Etobicoke is well equipped to accommodate the needs of drivers. With several major arterial roads traversing the neighbourhood such as Albion Road, Dixon Road, Finch Avenue, Kipling Avenue, and Martin Grove Road, drivers are easily connected to Toronto's network of major streets.

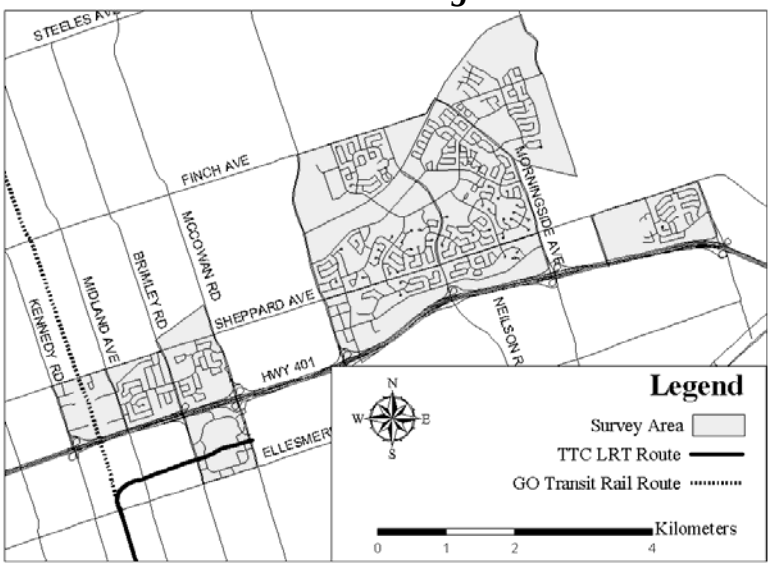
Furthermore, the area is directly served by Highways 401, 409, and 27 which facilitates travel throughout the GTA for local residents.

In many ways, Etobicoke is an area of extreme juxtapositions – it contains some of the most abrupt changes in land use to be found anywhere in Toronto. Highway 401, Rexdale Boulevard, and Finch Avenue generally serve as the only buffers between residential neighbourhoods and Toronto's major industrial zone (City of Toronto, 2002). Quiet residential streets abut Toronto's busiest freeways while large high-rise apartment towers shield wide-lot single-family homes from the elements of the surrounding city. Although these differences are extreme, each land use has been carefully separated from each other to replicate the single use zoning that is so representative of suburban Toronto. With such differences, yet similarities, on the ground, it seems fitting that Etobicoke's population is growing more diverse yet more representative of the City on the whole as new immigrants settle in the area.

Scarborough

The Scarborough study area is located in the northeast corner of the City of Toronto in the former inner suburban City of Scarborough. Similar to the Etobicoke study area, the Scarborough study area consists of three distinct parts which are located in close proximity to each other in order to overcome the difficulty in defining contiguous areas for study in the inner suburbs as noted previously. All three areas are generally located along the north side of Highway 401, east of Kennedy Road. The western portion of the survey area is approximately seventeen kilometres northeast of downtown, the central portion approximately twenty kilometres, and the eastern portion is approximately twenty-three kilometres from downtown. The Scarborough study area is comprised of three local neighbourhoods – Malvern, Malvern West, and Rouge (City of Toronto, 2000). Like Etobicoke, Scarborough is known as one of the most culturally diverse areas in Toronto with over sixty

Scarborough Survey Neighbourhood and Surrounding Area



Scarborough Survey Neighbourhood Sub-components, 1996

TTS Traffic Zone		Census Tract	
379	439	0362.04	0378.05
425	440	0368.00	0378.06
429	441	0377.01	0378.10
430	442	0377.02	0378.11
438	447	0378.02	0378.12
		0378.03	0378.13
		0378.04	

different cultures currently settled in the area and more recent immigrants settling in daily (Dunkelman, 1997).

Like many other areas in the inner suburbs, this area of Scarborough remained largely agricultural into the 1950s. In the 1960s, the Canada Mortgage and Housing Corporation purchased many of the area's farms in order to build a community of affordable homes. At the same time, private developers were attracted to the area with the opening of Highway 401 (Dunkelman, 1997). Today, industries serve to buffer the neighbourhood's residential areas from Highway 401 while large open space features such as the Rouge Valley Park and the Toronto Zoo hem the neighbourhood in on its eastern margins (City of Toronto, 2001). Residential development in the western and central portions of the study area consists of a mix of single detached, semi-detached, and townhouse dwellings as well as low rise apartments (Dunkelman, 1997). Many high-rise residential buildings are located along the area's major roads such as Morningside Avenue and Sheppard Avenue. Throughout this area there are many subsidized housing developments that offer affordable dwellings based on income (Dunkelman, 1997). The eastern portion of the study area is characterized by mostly single detached and semi-detached dwellings on extra wide and deep lots (Dunkelman, 1997). Although development in the Scarborough study area began and was planned for in the 1960s, most of the area was built during the 1970s, 1980s, and 1990s making this area of Scarborough one of the youngest inner suburbs in the city (Dunkelman, 1997).

Based on the size of the study area's census tracts, Scarborough has the lowest proportion of its land occupied by residential uses at approximately 18% compared to the other study areas. This low proportion is a result of the presence of large areas of land being dedicated to industrial, park,

and commercial uses (City of Toronto, 2002). Compared to other inner suburban areas, Scarborough's housing stock contains a substantially higher proportion of single detached and row house/townhouse dwellings and substantially fewer high rise dwellings. Although Scarborough proportionally contains far fewer high rise dwellings than Etobicoke, its net residential density is only slightly lower than Etobicoke's; both of which are higher than the inner suburban and CMA average.

Like Etobicoke, Scarborough contains a much larger concentration of children under the age of fifteen in relation to other inner suburban areas, but only an average concentration of adults between the ages of 25 and 44. This would suggest, perhaps, that not only are young families with children prevalent in this area, but that families in Scarborough have on average more children than other inner suburban areas. This generalization is supported by the fact that Scarborough has, on average, substantially more persons living in each private household than either the inner suburban or the CMA average (see Appendix 2). Relative to the inner suburban average, Scarborough has much higher levels of home ownership and a higher proportion of immigrant residents. Although Scarborough has a lower proportion of residents with university degrees, it has a higher proportion of residents with college or technical diplomas. Like other inner suburban areas, home ownership is increasing in Scarborough as well as the proportion of residents who are immigrants. With average housing prices among the most affordable in the City of Toronto, the Scarborough survey neighbourhood has become an attractive location for immigrants wishing to purchase their own homes (Dunkelman, 1997).

Compared to Etobicoke, Scarborough has more public transportation options for its residents. The TTC's Scarborough Light Rapid Transit (LRT) serves the western portion of the neighbourhood directly with two stations that subsequently allows passengers to connect almost seamlessly to the Bloor-Danforth subway line. Buses run along all major roads in the neighbourhood, offering connections to both the Scarborough LRT and the recently opened Sheppard subway line. The GO commuter train has one stop in the area on its Stouffville line as well as a bus connection at the Scarborough Town Centre (TTC, 2000).

For pedestrians, Scarborough is a similar to Etobicoke in that most destinations have been designed for automobile access. The area's super-block development style has meant, again, that shopping opportunities are located on the surrounding arterial roads away from residential areas making walking to such destinations impractical for many people. There are, however, three pedestrian paths in the neighbourhood that help to better connect residents to Tapscott Road – one of the neighbourhood's main transit routes and commercial locations. To date, there is only one marked cycling route in the study area, but it is disconnected from the City's larger cycling network. Also, there are several short trails through the area's parks that allow for mostly recreational cycling (City of Toronto, 1999; City of Toronto, 2003).

Scarborough has clearly been designed with the needs of the automobile taking priority. The area has numerous major arterial roads that connect drivers to the immediately surrounding urban area while Highway 401 directly serves the neighbourhood with six interchanges. The Scarborough Town Centre mall, located in the western portion of the study area, has been clearly situated at the

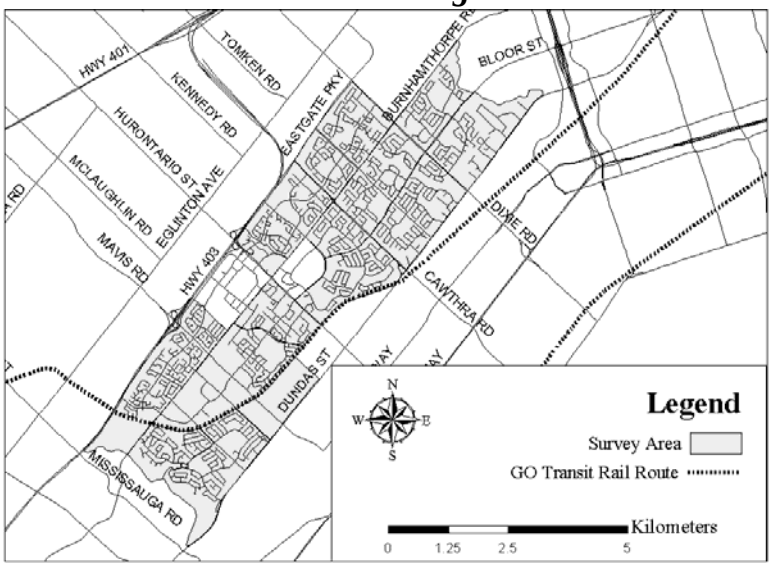
intersection of Highway 401 and McCowan Road to take advantage of this area's high degree of automotive connectivity – drawing visitors from far beyond the immediate area.

According to Scarborough's physical age, layout, and housing stock profile, one would believe that this area is a typical outer suburb. Because of this neighbourhood's social characteristics, slow growth rates, and elevated transit use levels, however, it has much more in common with the inner suburbs than the outer suburbs. Scarborough is the largest study area in terms of physical area and the second largest in terms of population.

Mississauga

The Mississauga study area is comprised of a large corridor extending from the Mississauga-Toronto border to the Credit River with Highway 403 and Dundas Street delimiting its northern and southern extents respectively. Centred on Mississauga's downtown area, the heart of the Mississauga study area is approximately twenty-one kilometres west of downtown Toronto. Unlike the inner suburbs, the extent of the Mississauga study area was not determined by a lack of spatial continuity between traffic zones eligible for study, but rather, by an abundance of eligible traffic zones contiguous to each other. The Mississauga study area is comprised of several local

Mississauga Survey Neighbourhood and Surrounding Area



residential neighbourhoods: Applewood, Creditview, Erindale, Fairview, Mississauga Valleys, and Rathwood. In addition, the area also encompasses the Mavis-Erindale employment district and a portion of the Dixie employment district (City of Mississauga, 2003). Since the 1950s, the City of Mississauga has been one of the fastest growing municipalities in the country.

Mississauga Survey Neighbourhood Sub-components, 1996

TTS Traffic Zone		Census Tract	
1510	1573	0517.00	0524.02
1564	1574	0518.00	0525.01
1565	1575	0519.00	0525.02
1568	1578	0520.01	0526.01
1569	1580	0520.02	0526.02
1570	1581	0520.03	0527.01
1571	1714	0520.04	0527.03
1572	1715	0521.02	0527.05
		0521.03	0527.06
		0521.04	0527.07
		0522.00	0527.08
		0523.00	0527.09
		0524.01	

During the 1950s, Mississauga (then known as Toronto Township) was an area in transition. Largely rural at the time, Toronto Township quickly become a dormitory suburb of Toronto (Peat, Marwick and Partners, 1974). This growth was due in large part to the opening of the Queen Elizabeth Way, a multilane limited access expressway along the southern portion of the Township, and the Malton Airport (now Lester B. Pearson International Airport), in the northeast corner of the Township, just over a decade earlier in 1939 (McDonald, 1997; Greater Toronto Airports Authority [GTAA], 1999). Between 1946 and 1966, Mississauga grew from a population of 16,411 to 107,459 and then, five years later, to a population of 165,512 in 1971 (Lemon, 1985; Regional Municipality of Peel, 1977). Applewood, which comprises much of the eastern extent of the survey neighbourhood, was established in 1951 as one of the earliest subdivision developments in the Township (Clarkson, 1977).

In 1960, the Mississauga study area was in the process of urbanizing as development grew along Dundas Street from the Etobicoke border to Hurontario Street. By 1976, the area was almost completely urbanized with new planned communities (Regional Municipality of Peel, 1977). The residential character of the area today is generally typified by single and semi-detached housing along winding streets and cul-de-sacs and high rise apartment and condominium development along major arteries such as Hurontario Street, Bloor Steet, and portions of Dundas Street (Dunkelman, 2003; Belgue & Chapman, 1970). Most recently, low density development has occurred at the western boundary of the study area while high density development has flourished around the City Centre. Compared to the City as a whole, growth in this neighbourhood has slowed considerably over the last inter-census period due to the lack of developable lands.

Compared to Toronto's other outer suburbs, this area of Mississauga dedicates a much higher proportion of its land to residential uses at approximately 48%. Having been built primarily between 1960 and 1976, the study area exhibits many physical traits that are more characteristic of the inner suburbs. Mississauga's net residential density is comparable to that of Scarborough and Etobicoke, and its housing profile is more typical of the inner suburbs with single detached and high rise dwellings making up approximately 32% and 38% of the neighbourhood's housing stock respectively whereas approximately 62% of the outer suburban housing stock is composed of single detached housing.

When looking at the demographic and social characteristics of the Mississauga study area, it again appears to be inner suburban in character. Compared to the inner suburban average, Mississauga shares a similar population age profile, has a similar proportion of residents who are immigrants to

Canada, and has a similar profile for highest level of education achieved by its population. Notably however, homeownership levels – a hallmark of suburban living – are more typical of outer suburban neighbourhoods.

Compared to other outer suburban areas, this area of Mississauga is well served by public transit. Specifically, it is served directly by three GO train stops and one GO bus stop allowing commuters to travel to Toronto's downtown or across the GTA (TTC, 2003). Mississauga Transit also has a dense network of bus routes in the centre of this area with the City's main bus terminal located nearby at the Square One shopping centre. Mississauga Transit also provides bus service along the major east-west roads of Dundas Street, Bloor Street, and Burnhamthorpe Road which connect to bus routes and the subway in the Toronto transit system (TTC, 2003).

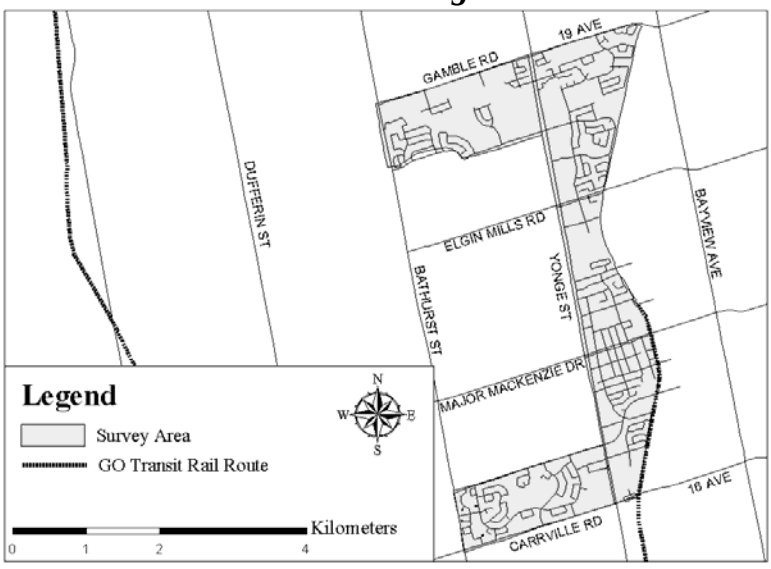
For pedestrians, Mississauga poses the same opportunities and constraints as any other GTA suburban neighbourhood. Like the inner suburban neighbourhoods profiled above, Mississauga has been designed primarily with automobile accessibility as a priority which means that most shopping opportunities are isolated from the residential subdivisions along arterial roads which often makes walking unfeasible. Pedestrian and bicycle trails generally serve to connect residential subdivisions though linear parks rather than providing alternative routes to major employment or shopping destinations such as the City Centre. Although no City trails or paths in the study area connect to corresponding routes in the City of Toronto, bicycle lanes along Burnhamthope Road West and Rathburn Road West do serve the Erindale GO train station that can connect commuters to other parts of the GTA (City of Mississauga, 2003b).

As mentioned before, transportation has played a key role in promoting Mississauga's growth. In 1997, the City of Mississauga had more limited access expressways converging within its borders than any other city in North America (McDonald, 1997). Given this, the Mississauga study area has numerous options for automobile travel. Highway 403 directly serves the northern portion of the area while the Queen Elizabeth Way is only minutes to the south. Mississauga's grid system of arterial roads transects the area many times with major roads. Like Scarborough, this study area has been clearly designed with the automobile in mind.

On the surface, Mississauga appears in many ways to be a typical inner suburban GTA community. This, in part, may be because of the area's proximity to the former settlements that comprised Mississauga prior to amalgamation in 1968, or perhaps because the area was primarily developed during the 1960s and 1970s. Most likely, however, this resemblance is a reflection of Mississauga City Council's decision in the late 1970s to transform the City from a dormitory suburb to a major City in its own right by promoting industrial development and diversification, a balanced housing stock, and an intensified downtown area (McDonald, 1997) thereby creating a different urban landscape and attracting a different mix of residents than what the outer suburbs would otherwise exhibit. Mississauga is the second largest study area in terms of physical area and the largest in terms of population.

Richmond Hill

Richmond Hill Survey Neighbourhood and Surrounding Area



Richmond Hill Survey Neighbourhood Sub-components, 1996

TTS Traffic Zone	Census Tract
1106	0420.02
1111	0421.02
1119	0422.01
1121	0422.02
1123	0424.01

The Richmond Hill study area can generally be described as a narrow north-south corridor bounded by Yonge Street on the west and the Canadian National Railway on the east. At its northern extent, the area is bounded by Gamble Road/19th Avenue while its southern limit is defined by Carrville Road/16th Avenue. The area hosts the Town's major indoor shopping mall and several smaller plazas. Centred on Richmond Hill's historic core area on Yonge Street, north of Major Mackenzie Drive, the Richmond Hill study area is approximately twenty-five kilometres north of downtown Toronto. The study area is comprised of four local neighbourhoods – Elgin Mills, Hillsview, North Richvale, and Old Richmond Hill (Rand McNally, 2000; Dunkelman, 2003). As with the rest of the GTA, Richmond Hill has grown culturally diverse in recent decades. The Town is well known for its large, affluent Chinese community (Dunkelman, 2003).

At the end of the 1940s, the Village of Richmond Hill had a total population of approximately 2,000 people (Robinson & Clark, 1999). This historic area of Richmond Hill encompasses

approximately one-third of the study area. During the 1950s, a housing construction boom propelled the village's population to 16,000 and into town status (Robinson & Clark, 1999). By 1974, the southern portion of the study area was fully developed with Hillcrest Mall as its anchor and high rise residential developments alongside (Robinson & Clark, 1999). Throughout the 1980s and 1990s, growth in Richmond Hill has been focused in its northern areas. Prior to 1988, the entire area northeast of Yonge Street and Elgin Mills Road was largely undeveloped (MapArt, 1988). By 2000 however this area was fully developed for residential purposes (Rand McNally, 2000). Today, residential development in the study area is focused along Gamble Road, west of Yonge Street.

Relative to other GTA outer suburban areas, Richmond Hill is typical in the amount of land area it has dedicated to residential uses at approximately 30%. Richmond Hill, like many other outer suburban GTA communities, has been planned with less intensive residential developments than their inner suburb and inner city counterparts and has placed a greater emphasis on preserving and creating parks and open spaces (Robinson & Clark, 1999). Compared to the outer suburban average, Richmond Hill's housing stock contains proportionally fewer single detached dwellings and more high-rise dwellings. Among the six survey neighbourhoods, however, Richmond Hill has the highest proportion of its housing stock developed as single detached thereby reflecting the area's status as an outer suburb. Net residential density in the Richmond Hill study area is slightly lower the outer suburban average.

Among the study areas, Richmond Hill has the largest concentration of children under the age of fifteen as well as the second highest concentration of adults between the ages of 35 and 44. The

neighbourhood's population distribution is typical for the outer suburbs. This suggests that Richmond Hill, like the rest of the outer suburbs, is home to more households with children than the inner city and inner suburb areas. Home ownership rates in Richmond Hill reflect the outer suburban average at 80%. Compared to the other study areas, homeownership has increased more in Richmond Hill since 1996 than anywhere else. Similarly, where Richmond Hill once reflected the outer suburban average in terms of the proportional size of its immigrant population (38%), by 2001 almost half of Richmond Hill's population was foreign-born – thus exhibiting greatest increase among all study areas. Compared to the rest of the outer suburbs, adult residents of Richmond Hill tend to be well educated with approximately 57% holding a post-secondary diploma or degree. Relative to the other inner and outer suburban study areas, residents of Richmond Hill hold the most college diplomas and university degrees.

Similar to Mississauga, this area of Richmond Hill is well served by public transit compared to other outer suburban areas. GO Transit serves the area directly with one commuter rail station and a bus line on Yonge Street to connect residents to downtown Toronto (York Region Transit, 2003). York Region Transit (YRT) emphasizes Yonge Street as a bus corridor in the Town's downtown area by having many of its bus routes converge in the core and by providing a park-and-ride parking lot in the core – all peripheral bus routes in the area connect to lines on Yonge Street at least once. YRT also provides bus service that connects to TTC bus routes and, in particular, the Finch subway station. At this time, only the northern potion of the study area along Gamble Road is not directly served by YRT (York Region Transit, 2003).

Like most outer suburban areas, much of Richmond Hill has been designed for automobile accessibility. Most shopping opportunities segregated away from the residential areas to busy arterial roads making walking to such destinations an unattractive choice. Only in the historic core area where stores and on-street parking still line both sides of Yonge Street could one consider the area to be pedestrian friendly. There are, however, a number of pedestrian and cycling pathways in the more recently developed portions of the area that serve to link the various residential subdivisions throughout the town via linear parks. Several collector streets also serve as marked cycling routes to connect park trails to major streets (Town of Richmond Hill, 2004).

As mentioned previously, road accessibility has been fundamental in driving growth in Richmond Hill. It is not surprising, then, to see Richmond Hill relying on its historically travelled routes even today. Yonge Street, Bathurst Street, and Leslie Street act as north-south spines that connect the area to Toronto and to Highway 407. The study area has several east-west arteries that connect drivers to the nearby Highways 404 and 400. With the exception of the core area, Richmond Hill's street network looks like any other suburban area with meandering collector roads feeding a large grid of major streets.

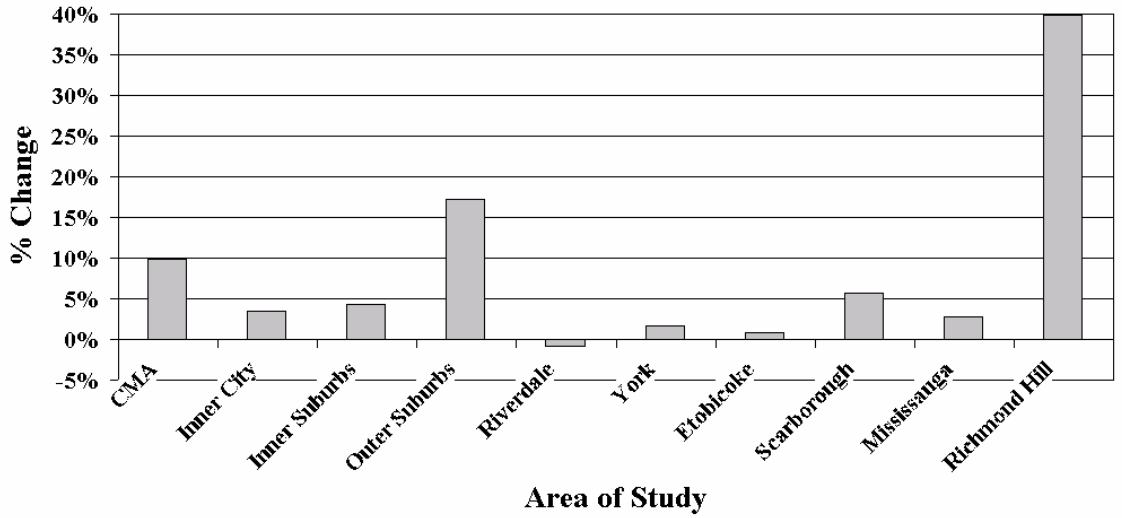
When considering its physical and demographic characteristics, Richmond Hill could be depicted as the GTA's prototypical outer suburban community. With the fastest population growth rates among the areas surveyed, however, Richmond Hill is in a state of evolution. Whether this community will grow to be something other than a typical outer suburban town remains to be seen.

APPENDIX TWO: Summary of Demographic and Socio-economic Characteristics for Each Study Area and Urban Zone in Tabular and Graphic Form, 1996 & 2001 Census (Statistics Canada, 2003b; 2003c)

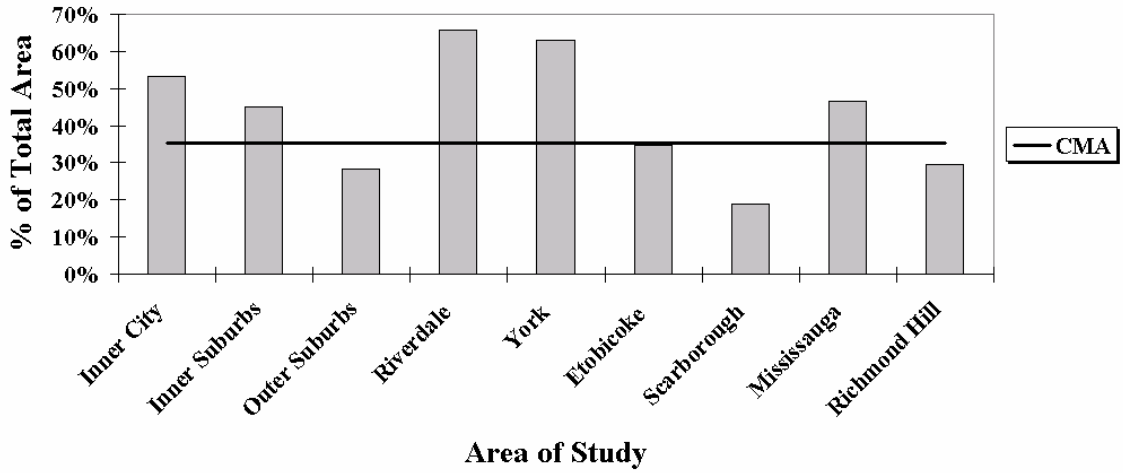
Summary of Final Census Population Counts for Each Geographic Area of Study, 1996 - 2001

Geographic Area	Census Year	Population	Land Area, km^2	Gross Density	% Change in Population, 1996 - 2001	# Households	% Movers, 5 year
CMA	1996	4,262,068	5,839.3	729.9		1,486,870	46%
	2001	4,682,857	5,891.5	794.8	10%	1,630,525	45%
Inner City	1996	798,614	118.1	6,759.9		342,845	52%
	2001	826,607	120.4	6,866.6	4%	356,035	49%
Inner Suburbs	1996	1,577,200	503.3	3,133.8		557,160	45%
	2001	1,645,414	501.9	3,278.1	4%	580,020	44%
Outer Suburbs	1996	1,886,254	5,217.9	361.5		586,865	45%
	2001	2,210,836	5,269.2	419.6	17%	694,470	45%
Riverdale	1996	11,147	1.4	8,257.0		4,940	46%
	2001	11,049	1.4	8,184.4	-1%	4,905	44%
York	1996	17,425	1.8	9,470.1		8,215	54%
	2001	17,721	1.9	9,326.8	2%	8,275	48%
Etobicoke	1996	30,279	9.7	3,118.3		9,205	45%
	2001	30,545	10.4	2,937.0	1%	9,565	43%
Scarborough	1996	72,317	46.5	1,556.2		20,340	46%
	2001	76,399	46.1	1,656.2	6%	21,735	43%
Mississauga	1996	126,272	31.0	4,075.9		40,175	46%
	2001	129,744	32.0	4,049.4	3%	42,235	46%
Richmond Hill	1996	39,116	21.5	1,819.3		13,450	55%
	2001	54,691	19.6	2,796.1	40%	18,110	59%

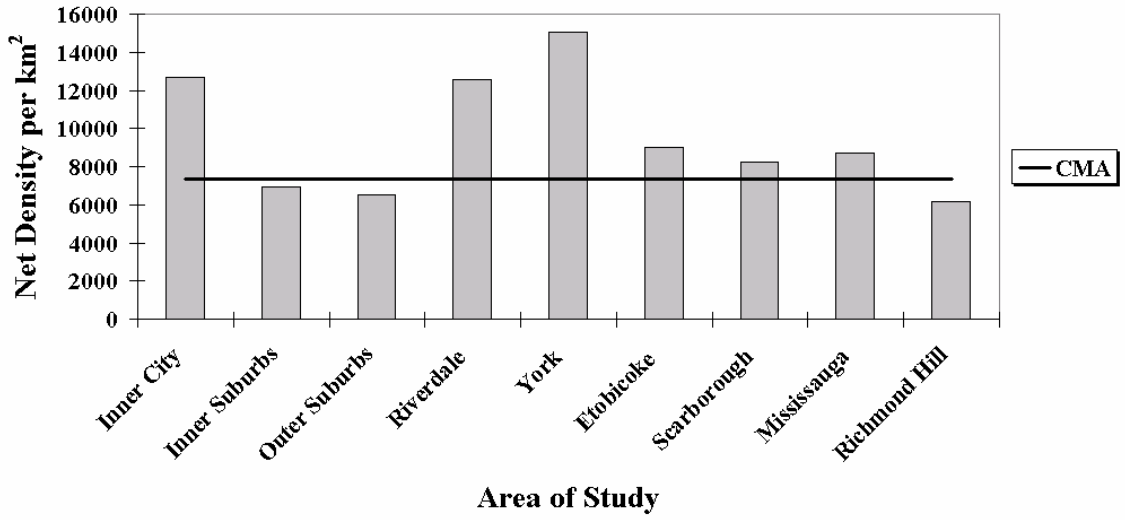
% Change in Population by Geographic Area of Study, 1996 - 2001



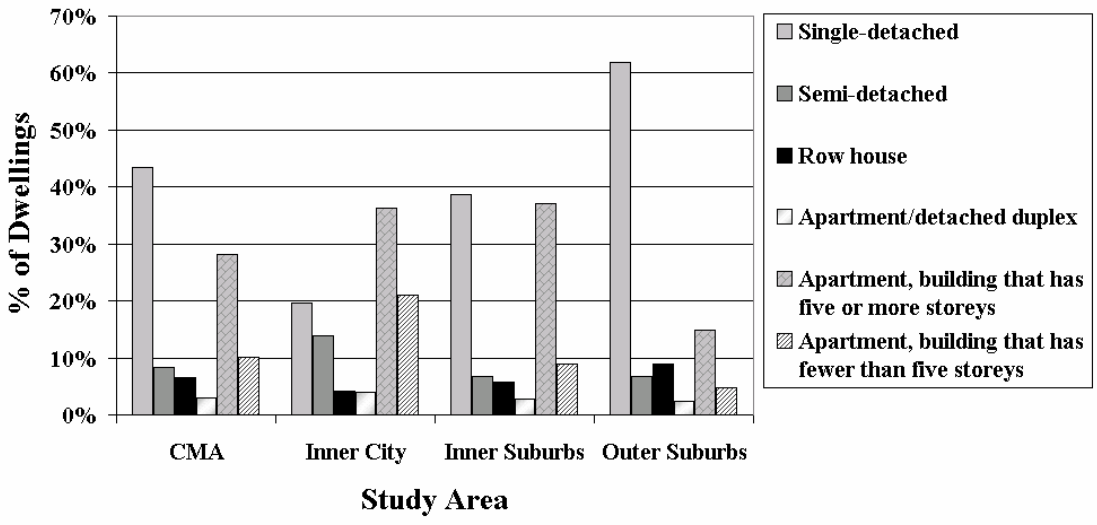
Proportion of Area Dedicated to Residential Uses for the Urbanized Census Tracts of the Geographic Areas of Study, 1996



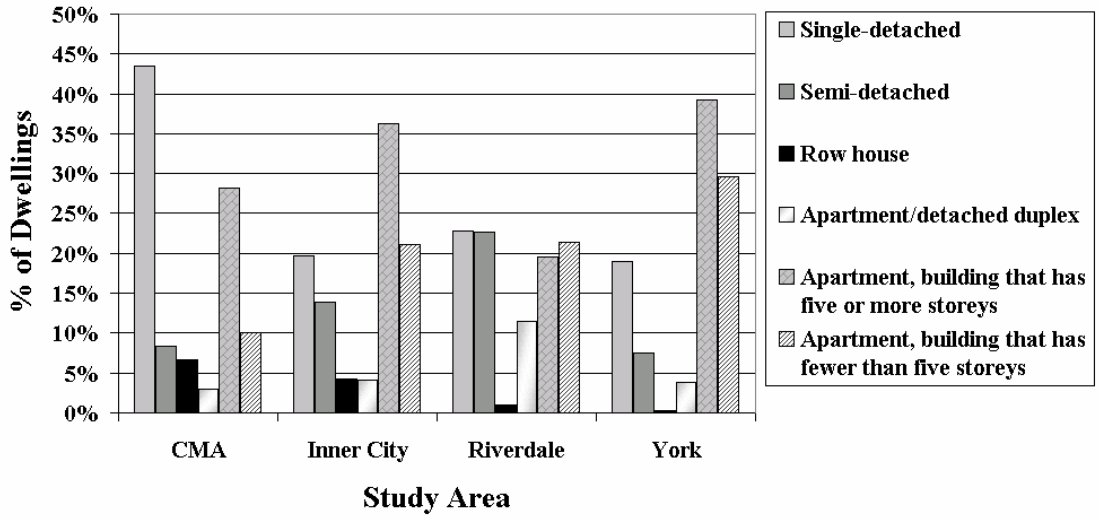
Net Residential Density of the Geographic Areas of Study, 1996



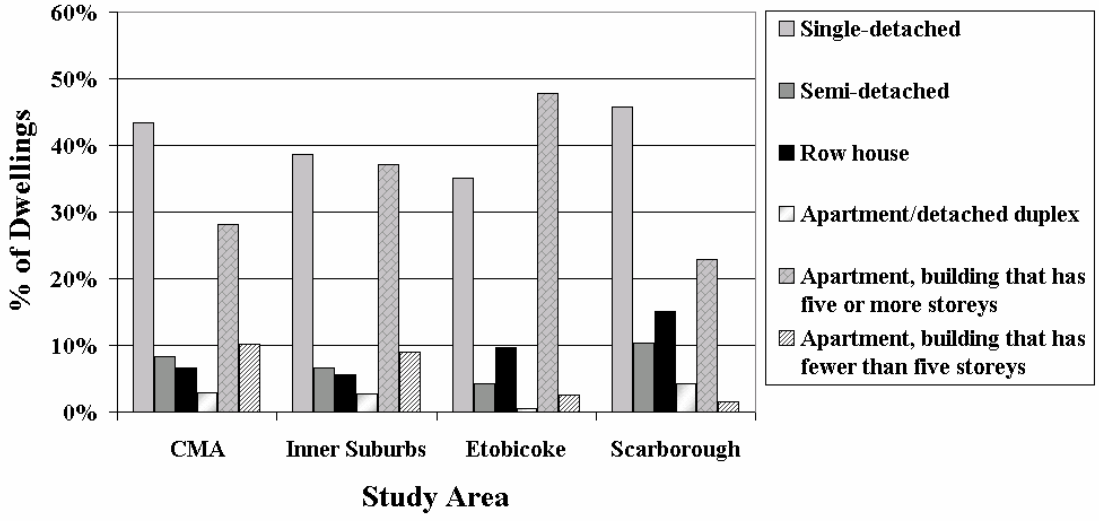
Profile of Residential Dwellings by Building Type for the Control Study Areas, 1996



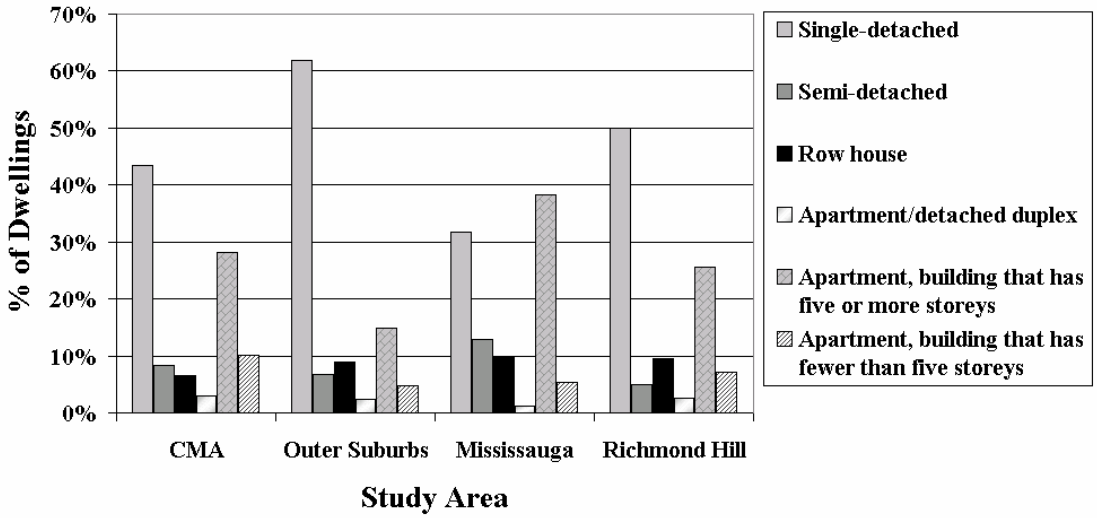
Profile of Residential Dwellings by Building Type for the Inner City Study Areas, 1996



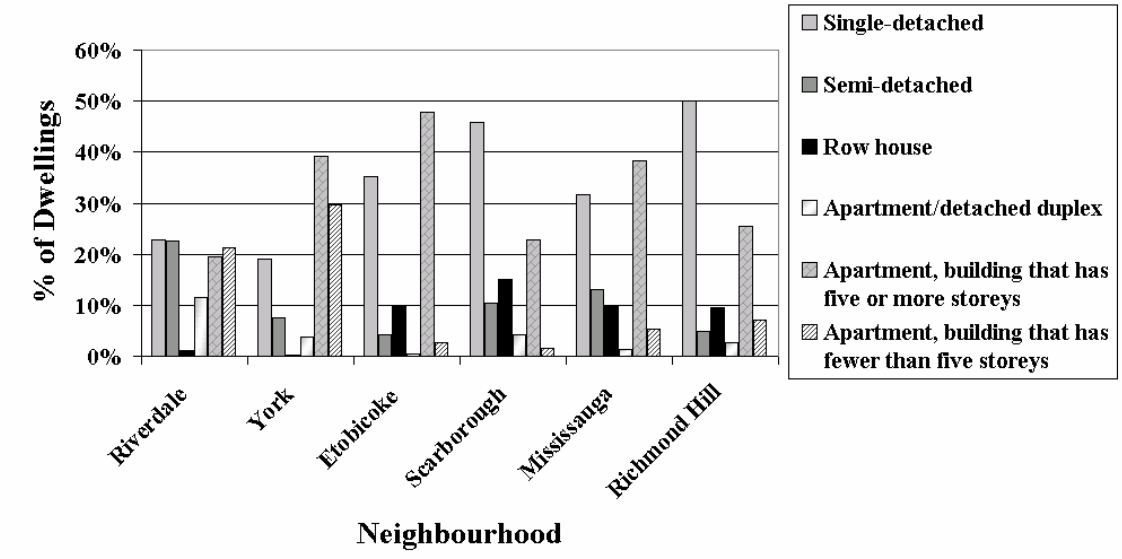
Profile of Residential Dwellings by Building Type for the Inner Suburban Study Areas, 1996



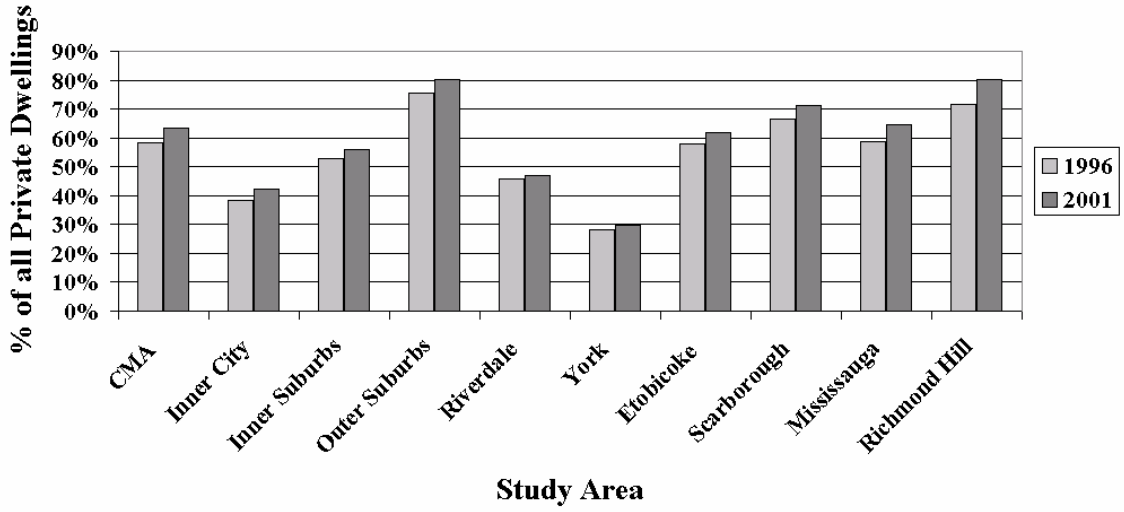
Profile of Residential Dwellings by Building Type for the Outer Suburban Study Areas, 1996



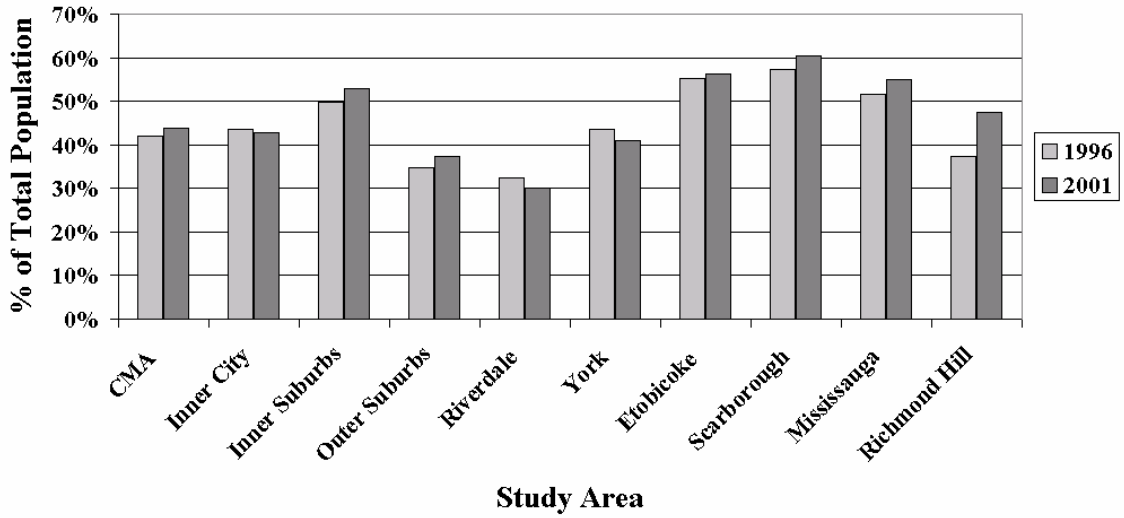
Profile of Residential Dwellings by Building Type for all Survey Neighbourhoods, 1996



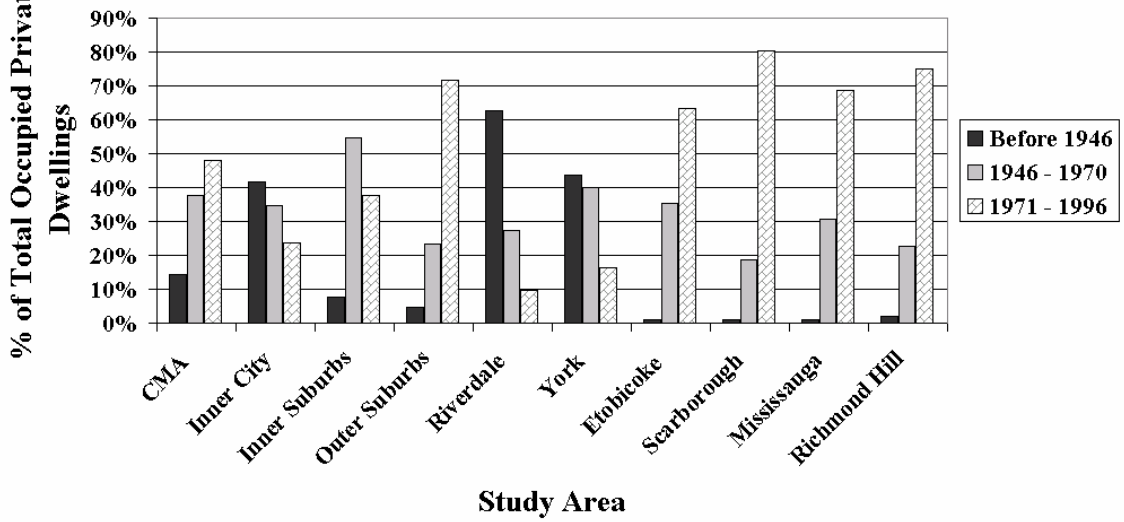
Number of Dwellings Owned as a Proportion of all Private Dwellings for each Geographic Study Area, 1996 & 2001



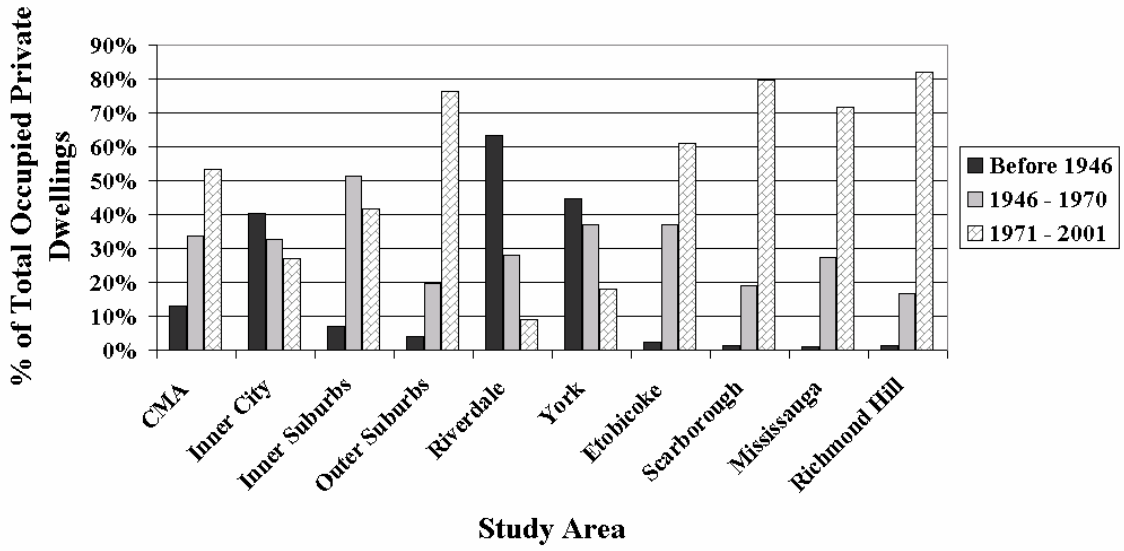
Number of Immigrants as Proportion of Total Population for each Geographic Study Area, 1996 & 2001



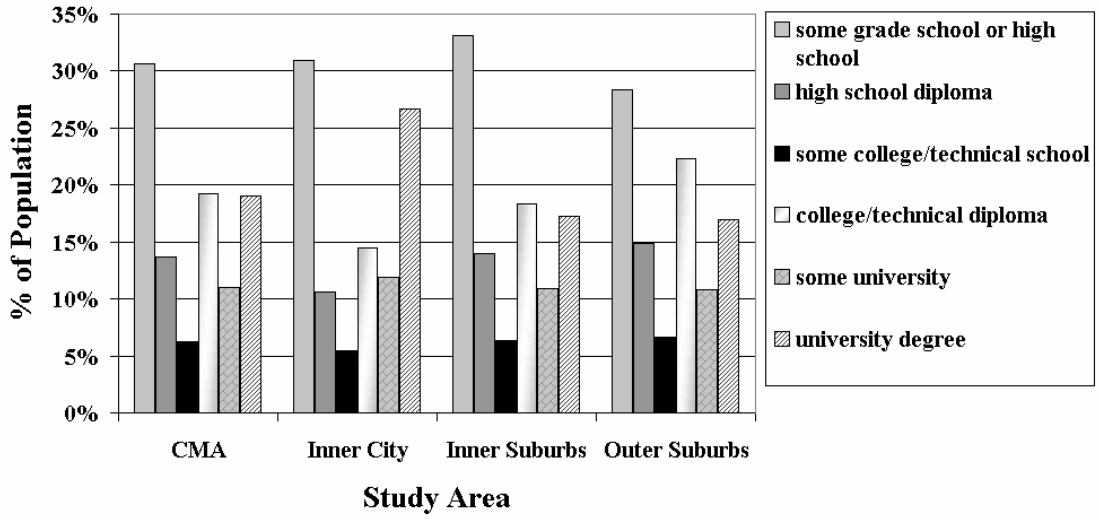
Profile of Housing Stock for each Geographic Study Area by Date of Construction, 1996 Census



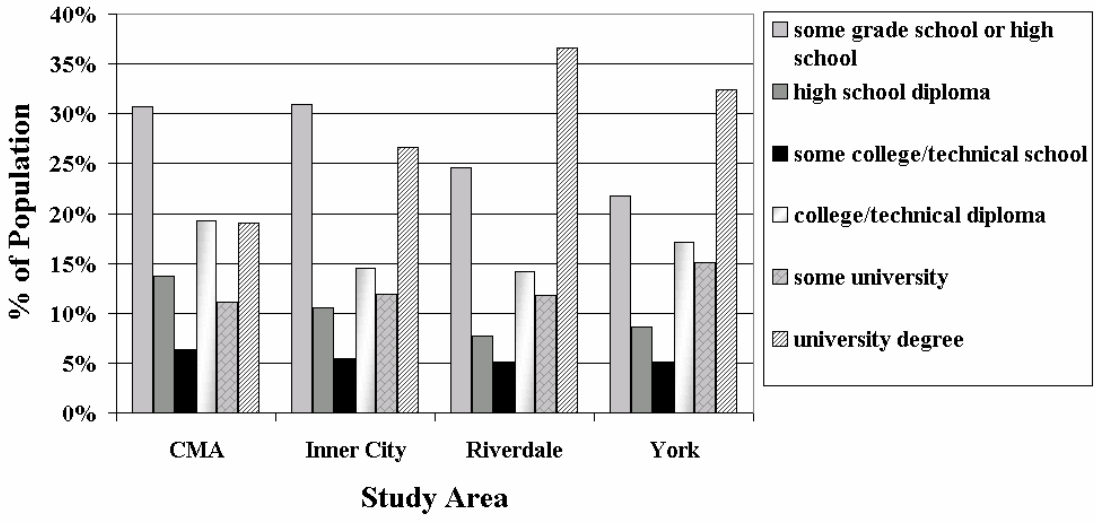
Profile of Housing Stock for each Geographic Study Area by Date of Construction, 2001 Census



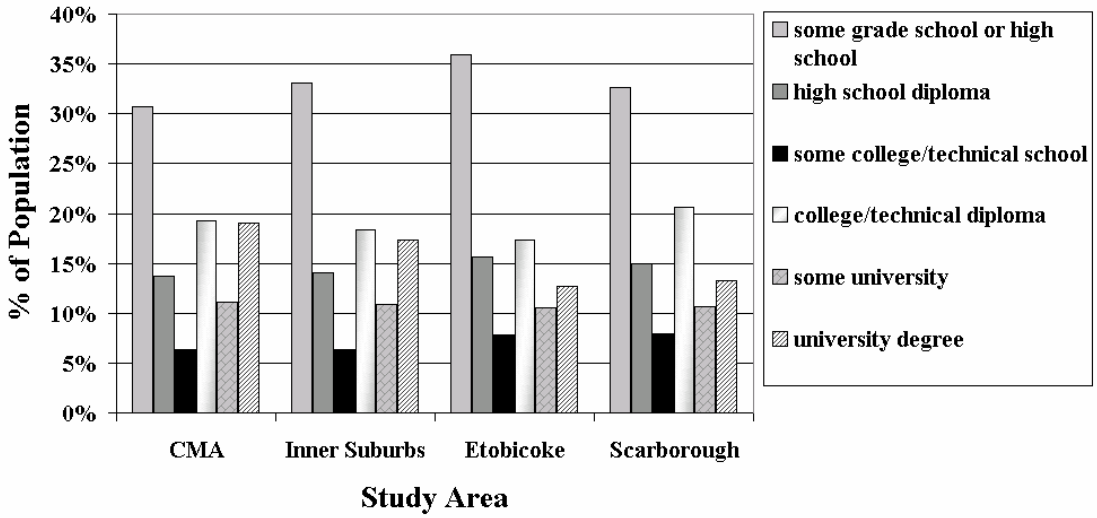
Profile of Highest Education Level Achieved for the Control Study Areas, 1996 - Persons 15 years and older



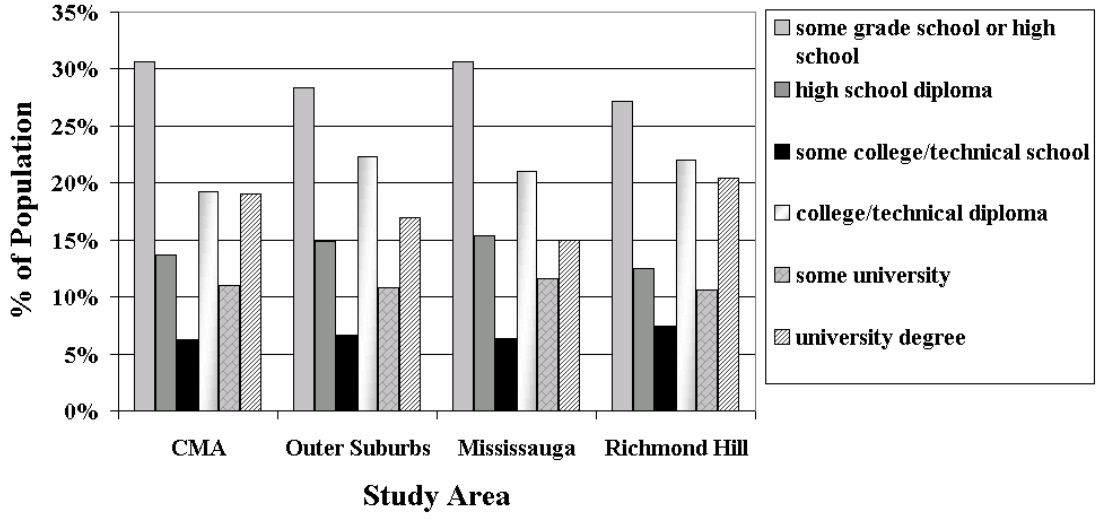
Profile of Highest Education Level Achieved for the Inner City Study Areas, 1996 - Persons 15 years and older



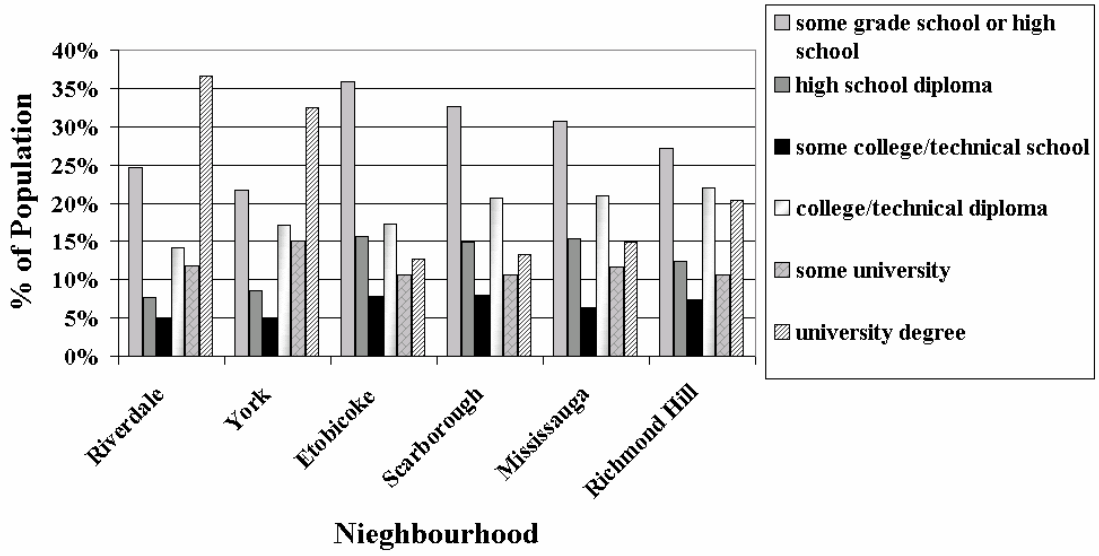
Profile of Highest Education Level Achieved for the Inner Suburban Study Areas, 1996 - Persons 15 years and older



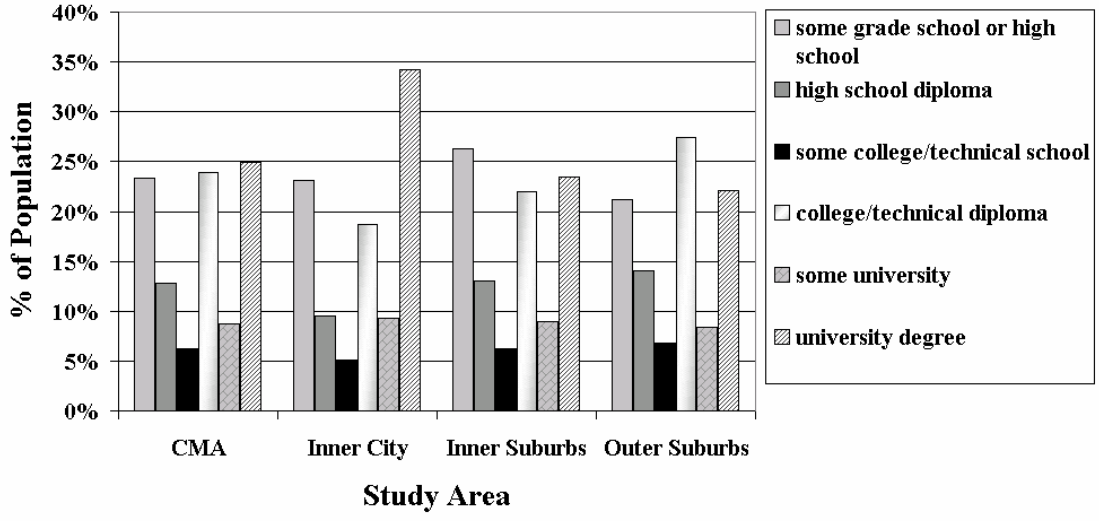
Profile of Highest Education Level Achieved for the Outer Suburban Study Areas, 1996 - Persons 15 years and older



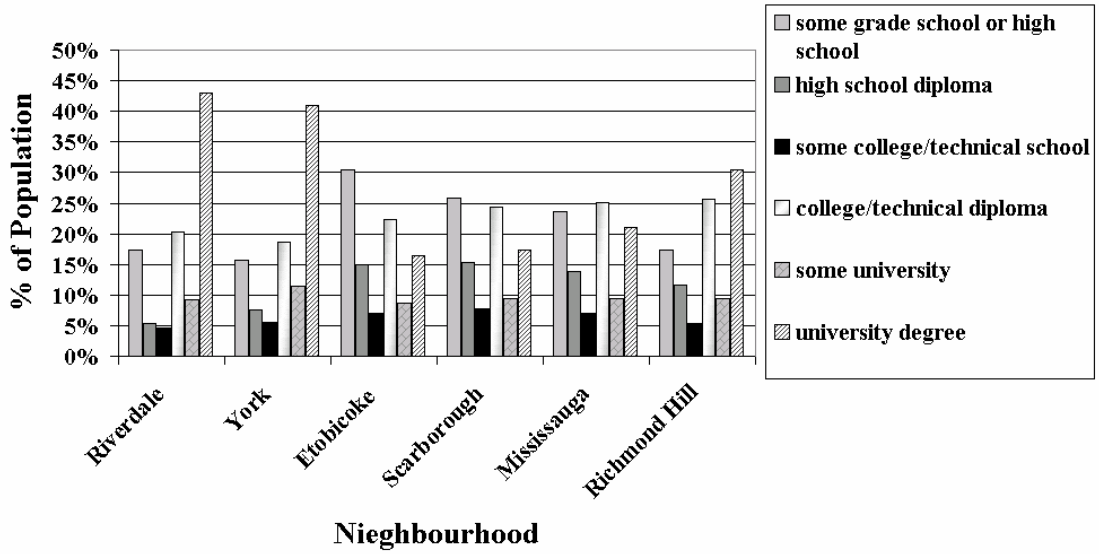
Profile of Highest Education Level Achieved for all Survey Neighbourhoods, 1996 - Persons 15 years and older



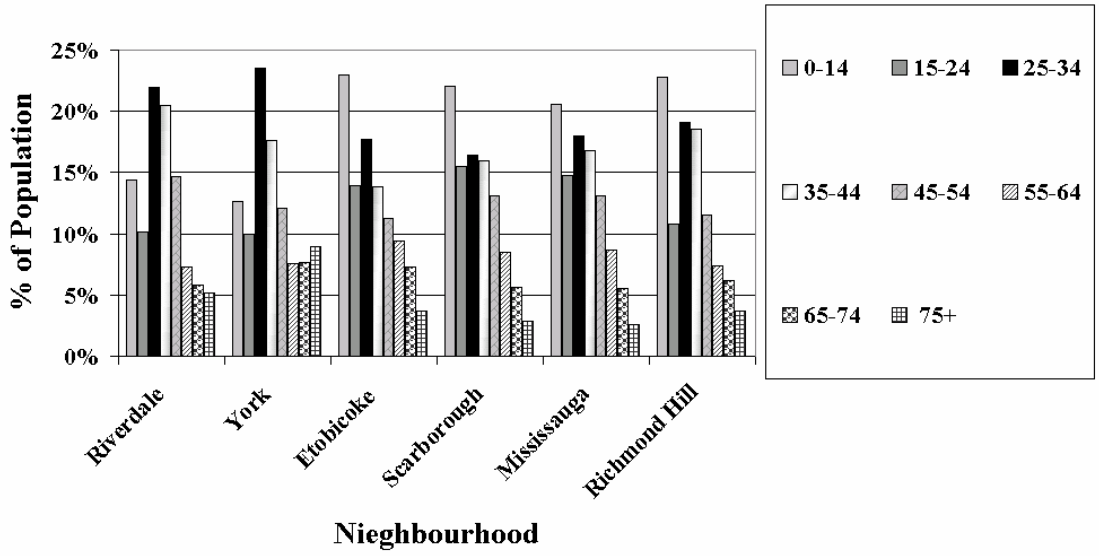
Profile of Highest Education Level Achieved for the Control Study Areas, 2001 - Persons 20 years and older



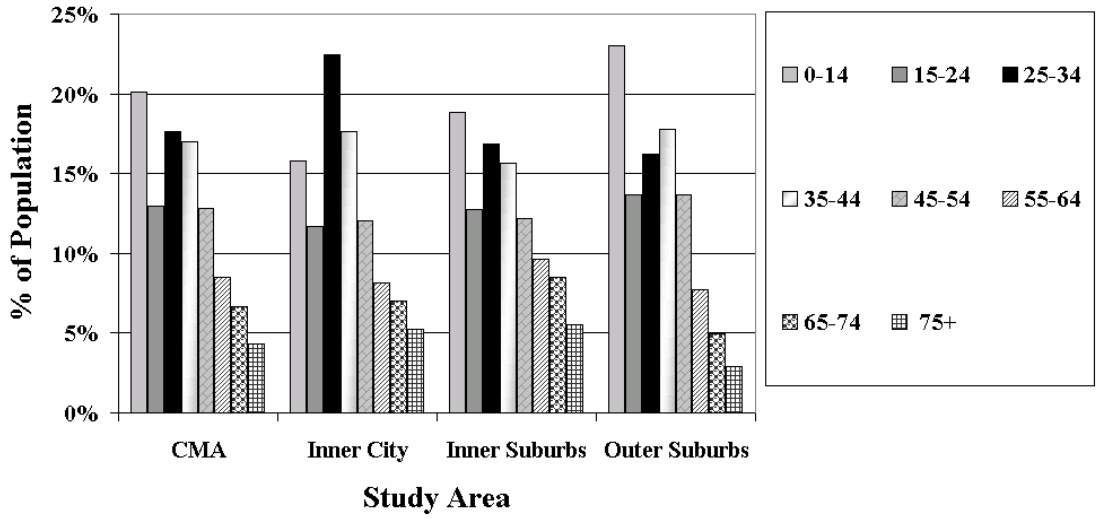
Profile of Highest Education Level Achieved for all Survey Neighbourhoods, 2001 - Persons 20 years and older



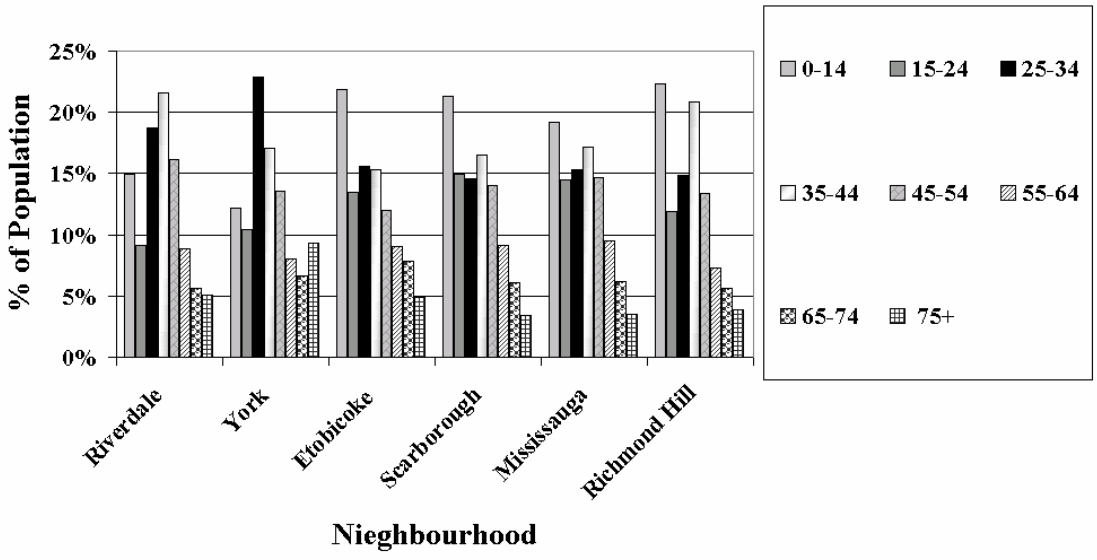
Profile of Population Composition by Age for all Survey Neighbourhoods, 1996



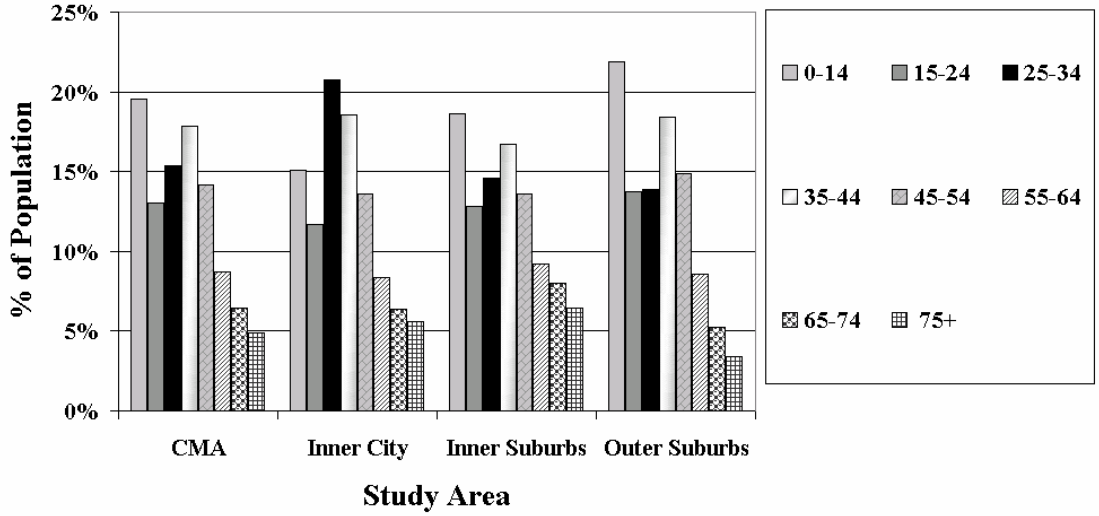
Profile of Population Composition by Age for the Study Control Areas, 1996



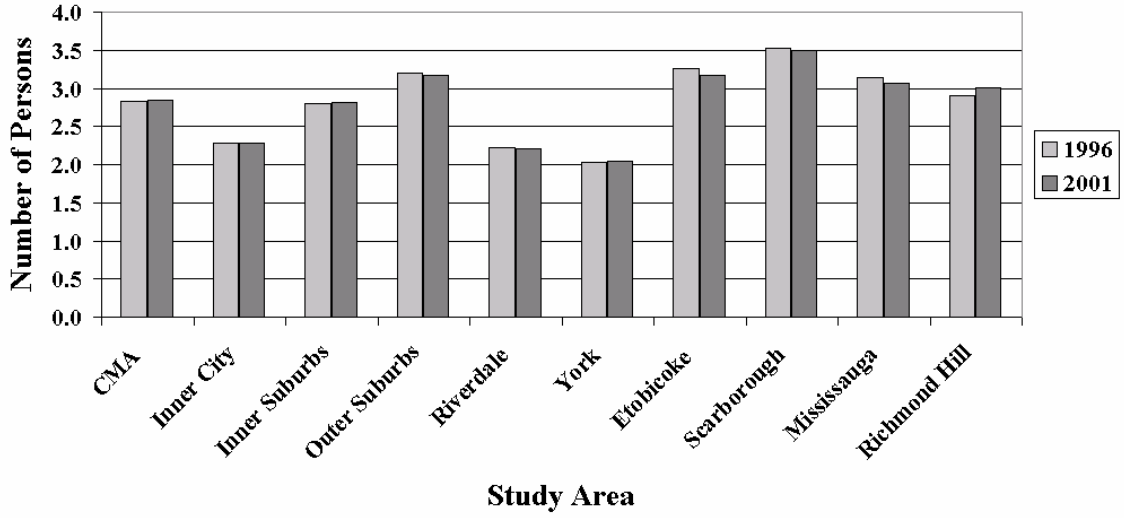
Profile of Population Composition by Age for all Survey Neighbourhoods, 2001



Profile of Population Composition by Age for the Study Control Areas, 2001



Average Number of Persons in Private Households by Geographic Study Area, 1996 & 2001



APPENDIX THREE: Survey Instrument and Covering Letter

Neighbourhoods and Travel Behaviour in the Greater Toronto Area

May 2002

University of Waterloo

School of Planning
Department of Geography
Department of Sociology

Neighbourhood-Travel Survey

You have been selected to participate in this survey because you live in one of the Greater Toronto Area neighbourhoods included in our survey. ***Your responses are an important part of this project.*** Please take time to answer the following questions, using a check mark (or an 'x') in the appropriate box which best fits your household, or by filling in the blank.

A. Your Travel Patterns

1. How many people, including children and/or boarders live in your household? _____

2. How would you describe your present home?

- ☐ Detached single-family home
- ☐ Semi-detached single-family home
- ☐ Townhouse
- ☐ Duplex/ triplex
- ☐ Condominium or rental unit in low-rise building (less than 5 stories)
- ☐ Condominium or rental unit in high-rise building (5 stories or more)
- ☐ Other (please specify) _____

3. Do you... ☐ Own? ☐ Rent?

4. Please indicate how many cars or other vehicles the members of your household own or lease?

Car ____ Minivan ___ SUV ___ Truck/full van ____ Motorcycle ___

5. Are you employed?

☐ Yes → Is your employment ☐ Full-time? ☐ Part-time?
☐ No

6. Do you attend any type of school program, such as trade certification, college, continuing education, university?

☐ Yes → Are you enrolled ☐ Full-time? ☐ Part-time?

☐ No

7. Are you ... ☐ Retired? ☐ A Homemaker? ☐ Unemployed?

If you said 'Retired,' 'Homemaker,' or 'Unemployed,' please go to question B.1

8. Work/school location _____ _____ _____
(nearest intersection or street address) (city) (postal code)

9. Time to commute one-way from home to work/school: _____ mins
(enter '0' if you work at home)

10. How many days a week do you commute to work/school? _____ days/week

If you do not commute, please go to question B.1.

11a. In general, how would you rate your journey to work/school?

☐ Very unpleasant ☐ Unpleasant ☐ Neutral ☐ Pleasant ☐ Very pleasant

11b. Can you say why, in a few words? _____

_____

_____

12. How do you usually travel to work/school?

☐ Drive alone in my vehicle
☐ Ride or drive with one or more others
☐ Public transportation
☐ Bicycle
☐ Walk
☐ Other _____ (please specify)

13. How frequently do you ride public transportation (local bus, GO bus/train, etc.) to work/school?

☐ Every day
☐ 2 to 4 times per week
☐ once a week
☐ less than once per week
☐ less than once a month
☐ Never → *Please go to question 16*

14. I use public transportation to get to work/school because (please check all that apply):

☐ I don't have a vehicle available to me
☐ It saves money
☐ There is not enough parking
☐ Its good for the environment
☐ It saves wear and tear on my vehicle
☐ Parking is expensive
☐ I have time to read and relax
☐ It's as fast or faster than driving and parking
☐ Less stressful than driving
☐ Other _____
(please specify)

15. How do you get to the stop or station?

☐ Walk ☐ Bicycle ☐ Drive alone ☐ Drive or ride with others
☐ Other _____ (please specify)

If you answered question 15 above, please go to question 17

16. I do not use public transportation to get to work/school because (check all that apply):

- ☐ None available
- ☐ It doesn't stop near my home
- ☐ There is no stop near work
- ☐ I have to transfer to get to my work
- ☐ There is no comfortable place to wait
- ☐ The stop or station is unsafe
- ☐ None available at the right time
- ☐ It's too expensive
- ☐ Physical impairment
- ☐ I work after dark
- ☐ Transit is too crowded
- ☐ The vehicle is uncomfortable
- ☐ It's too slow/ takes too long
- ☐ I use my car for work
- ☐ I use my car for errands
- ☐ I take child(ren) to school or daycare
- ☐ I have too much to carry
- ☐ It doesn't run on time
- ☐ Other _____ (please specify)

17. How frequently do you walk or cycle to work/school when the weather is suitable?

- ☐ Every day
- ☐ 2 to 4 times per week
- ☐ once a week
- ☐ less than once per week
- ☐ less than once a month
- ☐ Never *Please go to question 19*

18. I walk or cycle to work/school because (check all that apply):

- ☐ I don't have a vehicle
- ☐ It saves money
- ☐ For exercise
- ☐ I live close to work
- ☐ It is more pleasant than other forms of travel.
- ☐ Parking is expensive
- ☐ There is not enough parking
- ☐ It's good for the environment
- ☐ Other _____ (please specify)

If you answered question 18 above, please go to question 20.

19. I never walk or bicycle to work/school because (please check all that apply):

- ☐ I don't have a bicycle
- ☐ Physical impairment
- ☐ It's too far
- ☐ I have too much to carry
- ☐ I don't dress for it
- ☐ I take child(ren) to childcare
- ☐ I do personal errands
- ☐ I use my car for work
- ☐ Wind, weather, heat or cold
- ☐ The roads are unsafe due to heavy traffic
- ☐ I don't like to be sweaty when I arrive
- ☐ There are no showers
- ☐ There are no bike lockers or racks
- ☐ My route is through a dangerous neighbourhood
- ☐ Some drivers are not careful
- ☐ I work after dark
- ☐ There are no sidewalks or bike paths
- ☐ I don't like to walk or cycle
- ☐ Other (specify) _____

20. Compared to your previous home, how has your journey to work changed, in terms of time and mode of travel, since you moved to this address? *If you have not moved in the past five years, please go to the next question (21).*

Time of commute	**Mode of commute**	
☐ Longer	☐ Stayed the same	
☐ Stayed the same	*Or* In the past I used: (check all that apply)	
☐ Shorter	☐ Car	☐ Walk
	☐ Public Transit	☐ Cycle
	☐ Car pool	☐ Other _____

21. Ideal Commute Time
Some people may value their commute time as a transition between home and work, while others may feel it is stressful or a waste of time. For *you*, what would be the ideal *one-way* commute time? ____mins

B. Family Travel Patterns

1a. Is your spouse/partner employed?

☐ I live alone, am not married, have no partner. *Please go to question 5.*

☐ Yes → Is this employment ☐ Full-time? ☐ Part-time?
☐ No

1b. Does your spouse/partner attend school?

☐ Yes → Is this enrolment ☐ Full-time? ☐ Part-time?
☐ No

2. What is your spouse/partner's primary means of travel to work/school?

☐ Drive vehicle
☐ Van/car pool
☐ Public transportation
☐ Bicycle
☐ Walk
☐ Other _____ (please specify)

3. How often does he/she commute to work/school?

☐ Every day
☐ 2 to 4 times per week
☐ once a week
☐ less than once per week

4. Spouse/partner's work/school location _____ _____ _____
(street address or nearest intersection) (city) (postal code, if known)

5. How many times per week do you, or your spouse/partner, take your child(ren) to school or daycare?

☐ No children living at home. *Please go to question 9.*

☐ More than once a day
☐ Once a day
☐ 1-3 times a week
☐ Less than once a week
☐ Never, they travel by themselves
If "never," *please go to question 7.*

6. How do you usually take the children to school/daycare?

☐ Drive
☐ Car pool
☐ Public transit
☐ Walk
☐ Cycle
☐ Other _____

7. How many times a week do you, or your spouse/partner, take the children to non-school activities, for example sport leagues, lessons, etc.?

☐ More than once a day
☐ Once a day
☐ 1-3 times a week
☐ Less than once a week
☐ Never, they travel by themselves
☐ Never, they don't have any non-school activities
If "never," *please go to question 9.*

8. What is your primary means of taking your children to these activities?

☐ Drive
☐ Car pool
☐ Public transit
☐ Walk
☐ Cycle
☐ Other _____

9. Do you ever use public transit for ...

	Never	Rarely	Sometimes	Often	Always
Visiting friends?	☐	☐	☐	☐	☐
Art or cultural entertainment?	☐	☐	☐	☐	☐
Dining out?	☐	☐	☐	☐	☐
Sporting events?	☐	☐	☐	☐	☐

11a. How many times, on average, do you or your spouse/partner go to a grocery store?

_____ times per week OR _____ times per month

11b. List up to three grocery stores where you shop. Please list the most frequently visited one first.

Name of store	Street or nearest intersection	How do you usually get there (walk, drive, bus, taxi.)
_____	_____	_____
_____	_____	_____
_____	_____	_____

12a. How many times, on average, do you or your spouse/partner go to a shopping mall?

_____ times per week OR _____ times per month OR _____ times per year

12b. List up to two malls where you shop. Please list the most frequently visited one first.

Name of mall	Street	How do you usually get there (walk, drive, bus, etc.)
_____	_____	_____
_____	_____	_____

13a. How many times, on average, do you or your spouse/partner go to a neighbourhood convenience store?

_____ times per week OR _____ times per month

13b. How do you usually get there? _____

14a. How many times, on average, do you or your spouse/partner shop at a factory outlet or a "big box" store (not in a mall), such as Costco, Home Depot, Ikea, Canadian Tire, Chapters, Staples, etc? If you never visit this type of store, enter "0" in the blank.

_____ times per week OR _____ times per month OR _____ times per year

14b. List up to three of these stores where you shop. Please list the most frequently visited one first.

Name of store	Street or nearest intersection	How do you usually get there (walk, drive, bus, etc.)
_____	_____	_____
_____	_____	_____
_____	_____	_____

10. Considering <u>all</u> the trips your family makes, can you estimate, either for the week, the month, or the year, how many kilometres the members of your household drive with ...

Your primary vehicle?	_____ kms per week	**OR** _____ kms per month	**OR** _____ kms per year
A secondary vehicle, if applicable?	_____ kms per week	**OR** _____ kms per month	**OR** _____ kms per year

☐ Don't have a car

C. Housing Choices

1. How long have you lived in your present home? _____ years OR _____ months

2. How far, in kilometres, is your present home from your previous home?

☐ Less than 1 km (half a mile)
☐ 1 to 10 kms (1/2 to 6 miles)
☐ 11 to 50 kms (7 to 30 miles)
☐ 51 to 100 kms (31 to 60 miles)
☐ 101 to 500 kms (61 to 300 miles)
☐ More than 500 kms (more than 300 miles)

3. When choosing a home, we all make trade-offs between what is available and what we feel is important. Please rate, on a scale of 1 to 5, how important each of the following factors were when choosing your **present** home, aside from price.

Dwelling features	**Not at all important**				**Very important**
Dwelling size, number of rooms/bedrooms	1	2	3	4	5
Specific style such as a single family home, condo, townhouse, etc.	1	2	3	4	5
Large lot	1	2	3	4	5
Presence of front porch/front yard	1	2	3	4	5
Presence of or size of backyard	1	2	3	4	5
New or modern dwelling	1	2	3	4	5
Availability of parking	1	2	3	4	5

Location of dwelling	**Not at all important**				**Very important**
Home is close to:					
Workplace	1	2	3	4	5
Schools	1	2	3	4	5
Shopping	1	2	3	4	5
Downtown	1	2	3	4	5
Public transit	1	2	3	4	5
Highways or major streets	1	2	3	4	5
Friends and family	1	2	3	4	5

3. (continued)

Neighbourhood features	Not at all important		Somewhat important		Very important
Prestige of neighbourhood	1	2	3	4	5
Crime rate in neighbourhood	1	2	3	4	5
Presence of local parks/green space	1	2	3	4	5
Neighbourhood is made up of single family homes only	1	2	3	4	5
Lack of traffic, noise and air pollution	1	2	3	4	5
Pedestrian safety/ availability of sidewalks	1	2	3	4	5
No stores, offices, factories nearby	1	2	3	4	5
Older, mature neighbourhood	1	2	3	4	5
Mix of different people (age, race, income)	1	2	3	4	5

4. Of the three groups of features in question 3 above, Dwelling, Location and Neighbourhood, can you rank the importance of each in making the choice of a home, aside from price?
   1 = most important 2 = 2nd most important 3 = 3rd most important

	Rank
Dwelling features (size or style of house, etc)	____
Location of dwelling (proximity to schools etc.)	____
Neighbourhood features (prestige, quiet, maturity)	____

5. What is your favourite area or neighbourhood in the Greater Toronto Area?

   _____

6. Choosing from the following categories, which category letter best describes the neighbourhood of your previous home? **Please write the letter in the blank.** _____

   A. An inner city or downtown area
   B. An older inner suburb of a city (built between 1945 and 1970)
   C. A newer suburb of a city (built between 1971 and 1995)
   D A brand new suburban development on the fringe of a city
   E. A small or medium town
   F. A large lot in the country
   G. A farm

7. Using the categories above, if you could live anywhere you wanted, which category letter best describes where would you prefer to live? **Please write the letter in the blank.** _____

8. If you could change your present dwelling, within the bounds of what you think you can afford in the next few years, (not considering location) would you …

- ☐ Make no change
- ☐ Remodel or add to your present home
- ☐ Move to a (another) townhouse, apartment or condominium
- ☐ Move to a (another) single family home

D. Transportation and Urban Life

Please indicate how much you agree or disagree with the following statements about a variety of subjects. Your opinions are important, even if you feel you are not very familiar with the topics. Choosing 'neutral' means you do not agree or disagree, you are undecided, or unsure.

1. Private Automobile	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I really need the freedom driving allows me.	☐	☐	☐	☐	☐
b. There are too many cars on the road during rush hour with only one person in them.	☐	☐	☐	☐	☐
c. Driving allows me to get more done.	☐	☐	☐	☐	☐
d. I try to avoid getting stuck in traffic.	☐	☐	☐	☐	☐

2. Car/van-pooling	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I like someone else to do the driving.	☐	☐	☐	☐	☐
b. Car-pooling saves money.	☐	☐	☐	☐	☐
c. I am not comfortable riding with strangers or in someone else's car.	☐	☐	☐	☐	☐
d. Car-pooling is a reliable way to commute.	☐	☐	☐	☐	☐

3. Public Transportation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I can read and do other things when I use public transit.	☐	☐	☐	☐	☐
b. It costs more to use public transportation than it does to drive a car.	☐	☐	☐	☐	☐
c. Public transit is unreliable.	☐	☐	☐	☐	☐
d. I use public transit when I cannot afford to drive.	☐	☐	☐	☐	☐
e. Buses and streetcars are annoying because they stop all the time.	☐	☐	☐	☐	☐
f. Trains (GO, LRT) and subways, with right-of-way, are the best way to travel to work.	☐	☐	☐	☐	☐

4. General Transportation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Traffic congestion will take care of itself because people will make adjustments.	☐	☐	☐	☐	☐
b. Stricter vehicle smog control laws should be introduced and enforced.	☐	☐	☐	☐	☐
c. We need to build more roads to help decrease congestion.	☐	☐	☐	☐	☐
d. More lanes should be set aside for car-pools and buses.	☐	☐	☐	☐	☐
e. We should provide incentives to people who use electric or other clean-fuel vehicles.	☐	☐	☐	☐	☐

5. Environment	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Environmental protection is good for the economy.	☐	☐	☐	☐	☐
b. Jobs are more important than the environment.	☐	☐	☐	☐	☐
c. Car use is an environmental problem.	☐	☐	☐	☐	☐
d. High density residential development (low and high-rises, townhouses) should be encouraged.	☐	☐	☐	☐	☐

6. Housing	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I need to have space between me and my neighbours.	☐	☐	☐	☐	☐
b. Having shops and services within walking distance of my home would be important to me.	☐	☐	☐	☐	☐
c. It is important for children to have a large backyard for playing.	☐	☐	☐	☐	☐
d. Living in a multiple family unit (apartment, condo, row-house) ranks very low in my personal preference for housing choices.	☐	☐	☐	☐	☐
e. Too much valuable agricultural land is consumed to supply housing.	☐	☐	☐	☐	☐

7. Economy	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I would be willing to pay a toll to commute on an uncongested road.	☐	☐	☐	☐	☐
b. Vehicle emissions increase the need for health care.	☐	☐	☐	☐	☐
c. Using tax dollars to pay for public transportation is a good investment.	☐	☐	☐	☐	☐
d. Environmental protection costs too much.	☐	☐	☐	☐	☐
e. We should raise the price of gasoline to reduce congestion.	☐	☐	☐	☐	☐

8. Neighbourhood	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Its not safe for someone to walk alone at night in my neighbourhood.	☐	☐	☐	☐	☐
b. There is too much traffic in my neighbourhood.	☐	☐	☐	☐	☐
c. My neighbourhood is a safe place to raise children.	☐	☐	☐	☐	☐
d. It is important to me to live in a neighbourhood where people are similar to me.	☐	☐	☐	☐	☐
e. My neighbourhood needs more sidewalks.	☐	☐	☐	☐	☐
f. It is important that dwellings in the neighbourhood be about the same size.	☐	☐	☐	☐	☐

9. Community	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I feel a responsibility to care for and improve the quality of the neighbourhood in which I live.	☐	☐	☐	☐	☐
b. I plan to remain a resident of this neighbourhood for a number of years.	☐	☐	☐	☐	☐
c. I feel comfortable borrowing things from and exchanging favours with my neighbours.	☐	☐	☐	☐	☐
d. I have made new friends since moving to this neighbourhood.	☐	☐	☐	☐	☐
e. In general, it's pretty easy for me to tell a stranger in my neighbourhood from someone who lives here.	☐	☐	☐	☐	☐
f. I don't feel at home in this neighbourhood.	☐	☐	☐	☐	☐
g. If there were a serious problem in this neighbourhood, the people here could get together to solve it.	☐	☐	☐	☐	☐

10. Since you moved to this neighbourhood, has your community organized events such as neighbourhood yard sales, block or street parties?

☐ Yes ☐ No ☐ Don't know/unsure

If yes, have you participated in any such events?

☐ Yes ☐ No

11. Does your community have a ...

a) Homeowners/Condo or neighbourhood association?
☐ Yes →
☐ No
☐ Don't know/unsure

Are you active in this group? (attend meetings, hold a position)
☐ Yes →
☐ No →

Is your membership...
☐ Mandatory (required by lease or deed)
☐ Voluntary

b) Neighbourhood Watch?
☐ Yes →
☐ No
☐ Don't know/unsure

Are you active?
☐ Yes
☐ No

c) Block Parents Association?
☐ Yes →
☐ No
☐ Don't know/unsure

Are you active?
☐ Yes
☐ No

12. How many of your neighbours do you know by name? _____

13. How many of your neighbours would you visit socially? _____

14. How would you describe the level of community feeling in your neighbourhood?

☐ Friendly and tight-knit
☐ Neighbourly and polite
☐ Distant and private

15. Compared to the community of your previous home, would you say this neighbourhood is....

☐ More friendly/neighbourly than previous area
☐ About the same as previous area
☐ More distant and private than previous area

E. New Urban Development

Between now and 2028, the Greater Toronto Area is projected to grow by over 2 million people to a population of 7.5 million. With this in mind, please answer the following questions on new urban development. Your opinions are important, even if you feel you are not very familiar with the topic.

1. Please indicate how much you agree or disagree with the following statements about potential development options for accommodating Toronto's projected growth. Choosing 'neutral' means that you do not agree or disagree, that you are undecided, or that you are unsure.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Toronto's growth should be primarily directed to the suburban fringe.	☐	☐	☐	☐	☐
b. GTA planners should be focusing on growth in the existing urban area.	☐	☐	☐	☐	☐
c. Toronto should coordinate its development with other municipalities to help spread growth outside the GTA.	☐	☐	☐	☐	☐
d. The GTA should freeze all new development and force growth elsewhere.	☐	☐	☐	☐	☐
e. Toronto should emphasize using semi-detached/duplex homes and townhouses to accommodate its growth.	☐	☐	☐	☐	☐
f. Any new resident of Toronto should be able to find a single family home to buy or rent.	☐	☐	☐	☐	☐
g. Toronto should emphasize using low and high-rise apartments and condos to accommodate its future growth.	☐	☐	☐	☐	☐

2. Given the following choices, please rank these issues in the order which you feel they should influence the design of new urban residential development (1 = most important; 4 = least important).

	Rank
Ensuring equal access to high quality housing.	_____
Profitability of the development	_____
Ecological integrity	_____
The impact on current residents near the development.	_____
Residential demand.	_____

3. Imagine that a new residential development were proposed near <u>your</u> home. To what degree would you support it if it consisted of …

	Strongly Oppose	Oppose	Neutral	Support	Strongly Support
Single family homes only	☐	☐	☐	☐	☐
Mixed townhouses/condos	☐	☐	☐	☐	☐
Semi-detached and duplex homes	☐	☐	☐	☐	☐
Low rise apartments	☐	☐	☐	☐	☐
High rise apartments	☐	☐	☐	☐	☐

F. Demographic Information

The information requested here is for analysis purposes only. Your responses are strictly confidential and will not be used by anyone other than the researchers involved in this project. It will not be sold or used for marketing or other purposes. We would appreciate if you could answer the questions below regarding yourself and your household.

1. How many licensed drivers live full-time in your home? _____

2. In what age group do you belong?

☐ 18-25 ☐ 46-55 ☐ 76 or older
☐ 26-35 ☐ 56-65
☐ 36-45 ☐ 66-75

3. Gender: ☐ Male ☐ Female

4. What is your educational background?

☐ Some grade school or high school
☐ High school diploma
☐ Some college/ or technical school
☐ College or technical diploma
☐ Some university
☐ University degree

5. What income group best represents your household income last year (2001), before taxes?

☐ $20,000 or less
☐ $20,001 to $40,000
☐ $40,001 to $60,000
☐ $60,001 to $80,000
☐ $80,001 to $100,000
☐ $100,001 to $120,000
☐ over $120,000

6. What best describes your occupation?

☐ Not applicable (retired, unemployed)
☐ Student
☐ Clerical/ administrative support
☐ Service/ repair
☐ Retail or other sales
☐ Manager/ administrator
☐ Professional /technical
☐ Production/ construction / crafts
☐ I have no paid employment. I am a homemaker

7a. In what country were you born? _____

7b. If you were not born in Canada, in which year did you emigrate to Canada? _____

If you would like to receive a summary of the results of this survey, please provide your name and address and a copy will be mailed to you in September of this year.

Name: _____

Mailing address: _____

Additional Comments

If you have any comments on this survey or any of the questions in it, please use this space below.

_____

_____

_____

_____

_____

_____

_____

Thank you for participating in this survey. Your responses are greatly appreciated.

Dear GTA resident,

We are writing to you to tell you about a project at the University of Waterloo, and to ask for your help. Last year, a group of researchers in the School of Planning and Department of Geography received funding to conduct research on neighbourhood choice and automobile use in the Toronto area. We are interested in household travel patterns, as well as how people choose to live in their neighbourhoods.

The survey will ask many questions about vehicle and public transit use, choice of home and community, and attitudes about various subjects, including the economy, the environment, and urban growth. The responses to these questions will be analyzed by our research team in order to develop a clearer picture of people's views on automobile use and residential developments. The survey uses a sample of 2000 households drawn randomly from various neighbourhoods in Toronto. Most of the residents selected have moved in the past 5 years, while others are long-term residents of the neighbourhood.

You are among the group of residents selected at random to participate in this survey because you live in one of our selected neighbourhoods. As a member of your neighbourhood, your view's on growth in housing and automobile use are very important to us. We encourage you to respond so that your views are represented. We are requesting that an **adult (18 years or older), who is also one of the heads of the household**, be the person who fills out this survey.

We have mailed the survey so that everyone chosen to participate is free to complete it when it is convenient. A stamped return envelope has been included for easy return. People who have filled this survey out say it takes about 35 minutes to complete. Your survey has a numerical ID so that if you have access to the internet, you can respond using our on-line version of the survey on the World Wide Web – simply log on to **GTASurvey.ca** and use the four digit number as your ID and password. There are instructions along with the survey to guide you through the process. The survey is identical to the one you received in the mail. Using the web survey will save you the trouble of remembering to post the completed survey.

Let me assure you that your participation is voluntary. You are not required to respond, and may refuse to answer any question. **All the information you provide is completely confidential**. We guarantee this not only on ethical grounds but by regulations of the university. The research procedures and the questionnaire have been reviewed and received ethics clearance by the Office of Research Ethics of the University of Waterloo. Answers from the survey are treated as group data, so that no individual's responses can reveal their identity. The identification number helps us to get in touch with those who have not yet filled out the survey, and keeps us from bothering those of you who have. We like to send a reminder to people in case they planned to fill out the survey but forgot.

We have tried to make the survey as interesting and enjoyable to fill out as possible. We sincerely hope that you will find participating in this survey to be worthwhile. These days there are many development issues within the Greater Toronto Area, and we feel it is important the public's views should be known. This survey should help, and we hope you will be willing to participate. We think you will be glad you did.

A second phase of this research project involves exploring further some of the issues in this survey, through organized group discussions of eight to ten individuals, who are interested in expressing their views on development issues. The focus group will occur on a week night in June, at a public building in your neighbourhood. The session will last about one and a half to two hours, and will include a short presentation and group discussions. If you would like to learn more about how to participate in one of these focus groups, we invite you to fill out the information slip included in this survey package and return it in the same envelope as the survey. Please provide your name address and telephone number. We will be contacting those who express an interest by mail with exact details on location and time.

If you have any questions or concerns about your participation in this project, please contact Dr. Susan Sykes of the Office of Research Ethics at 519-885-1211, ext.6005.

Thank you in advance for helping us out.

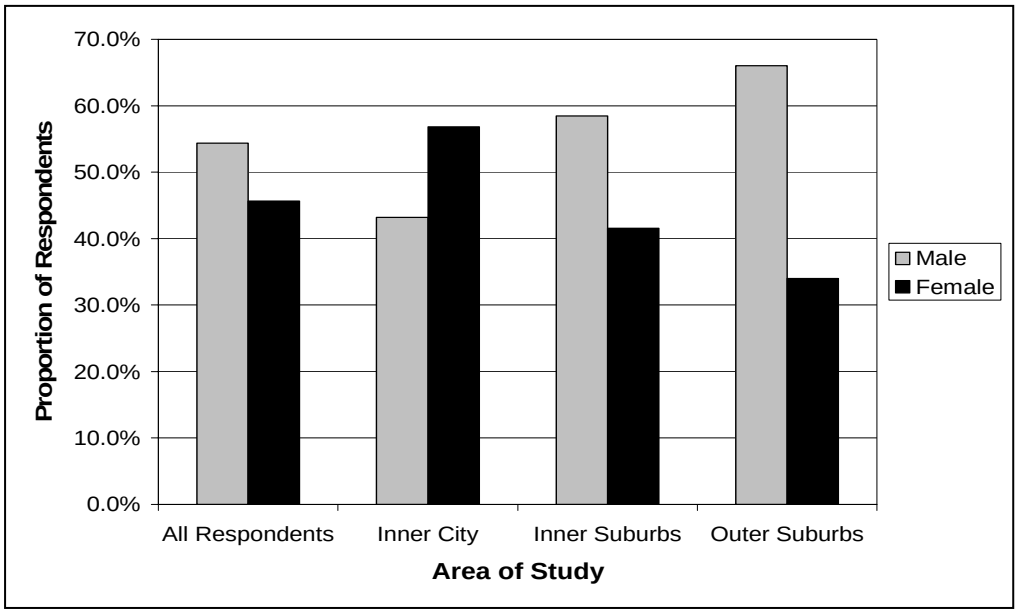
Sincerely,

Dr. Pierre Filion
School of Planning
(519) 885 1211 ext.3963

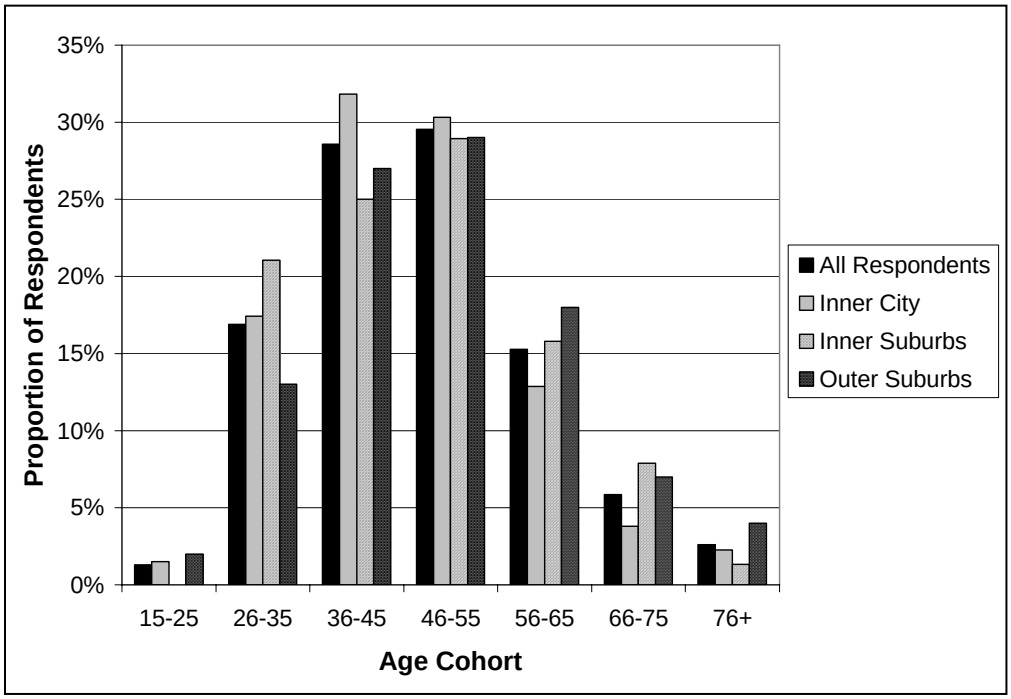
Dr. Trudi Bunting
Department of Geography
(519) 885 1211 ext.3962

APPENDIX FOUR: Graphic and Tabular Representation of Survey Respondents' Demographic and Socio-economic Characteristics

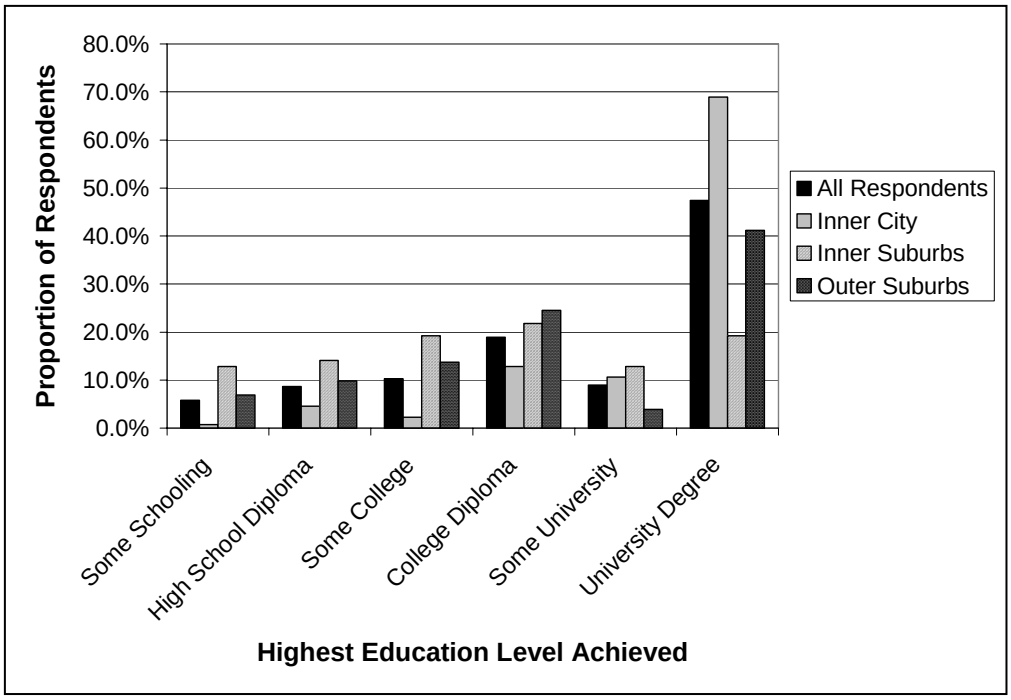
Distribution of Respondents by Gender and Geographic Location



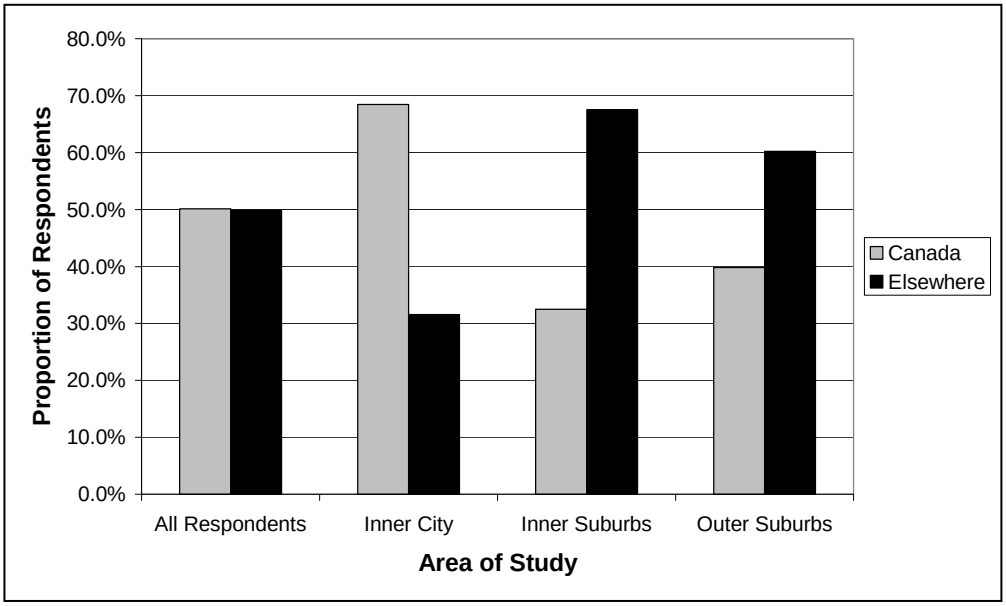
Distribution of Respondents by Age and Geographic Location



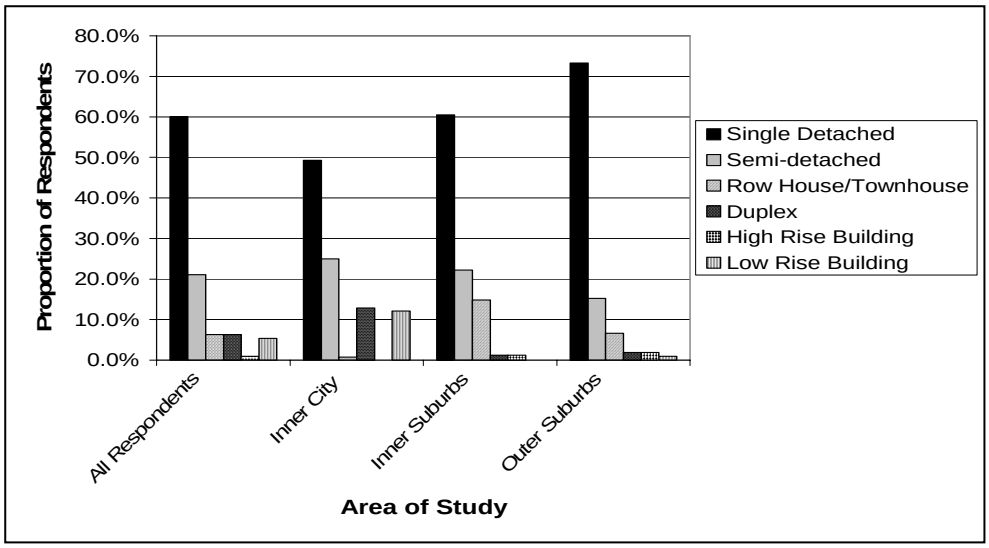
Distribution of Respondents by Educational Achievement and Geographic Location



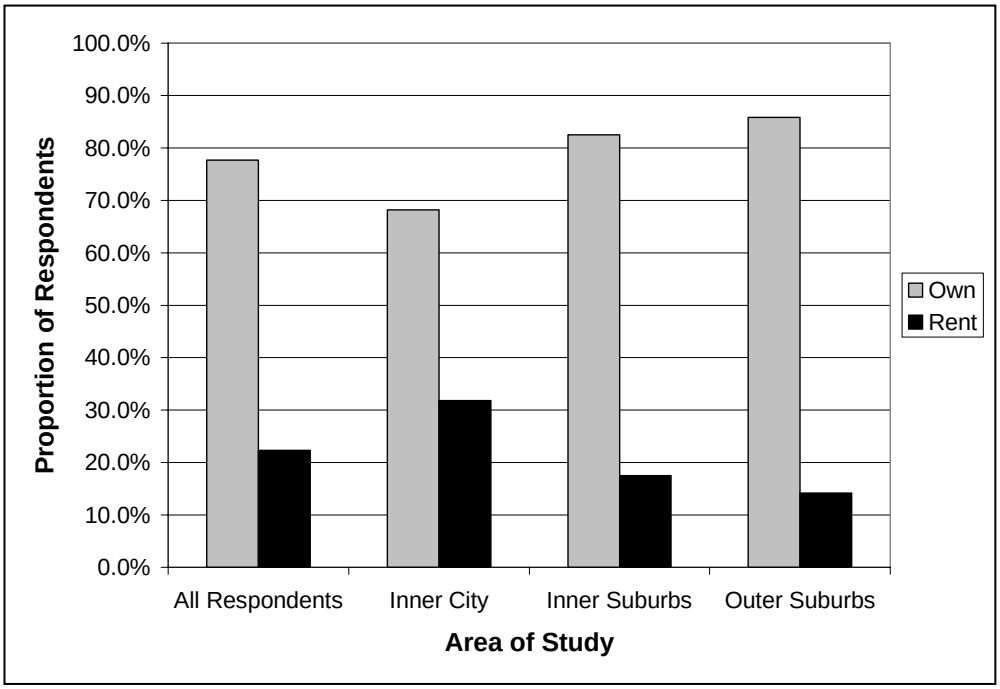
Distribution of Respondents by Country of Birth and Geographic Location



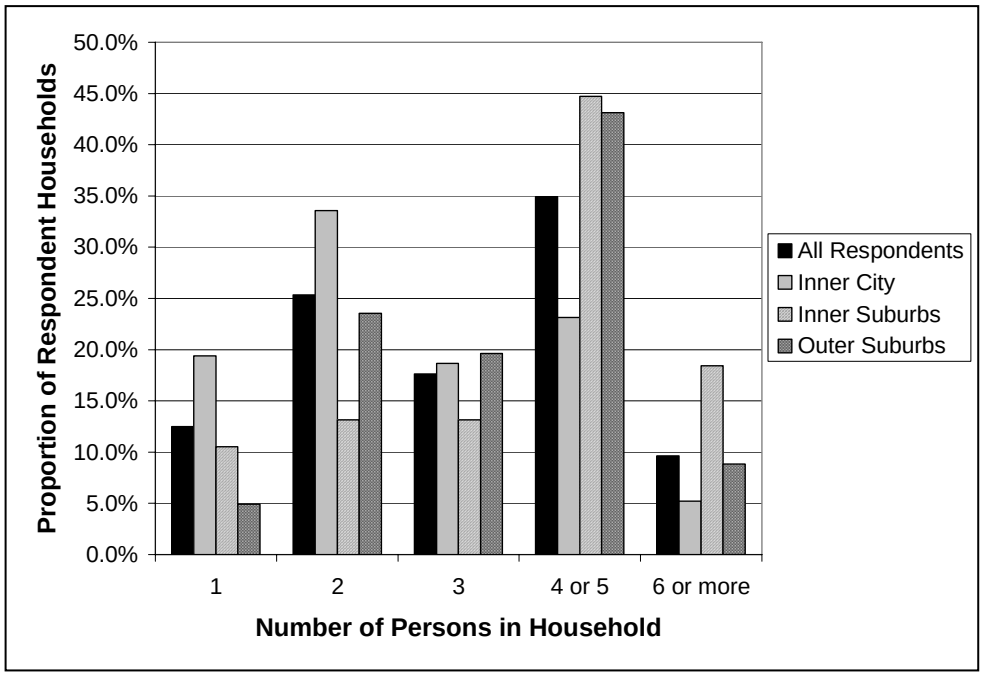
Distribution of Respondents by Home Type and Geographic Location



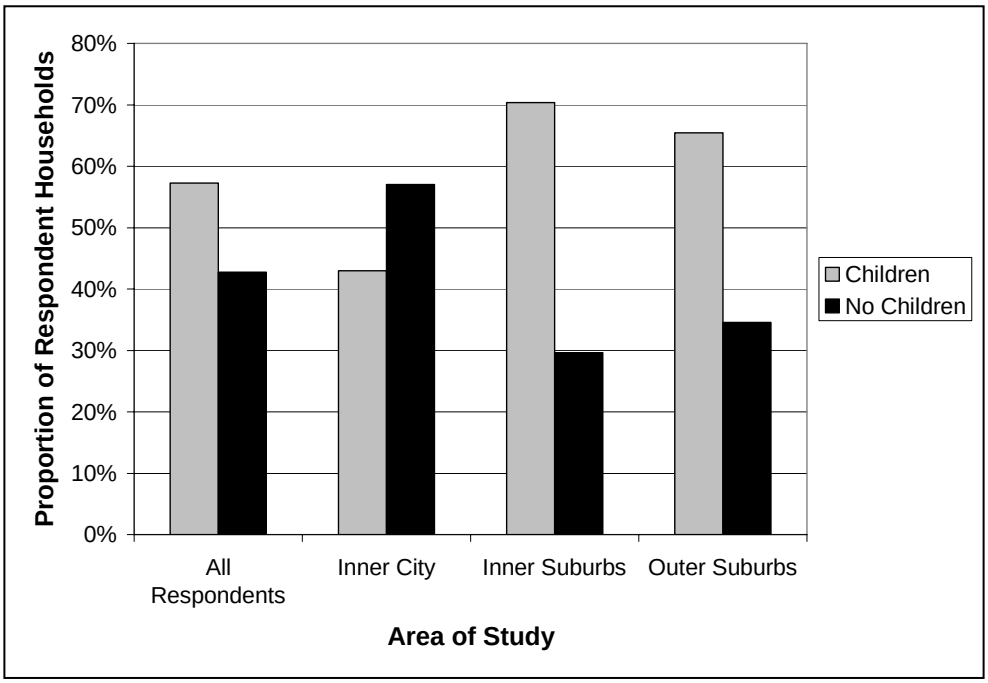
Distribution of Respondents by Home Tenure and Geographic Location



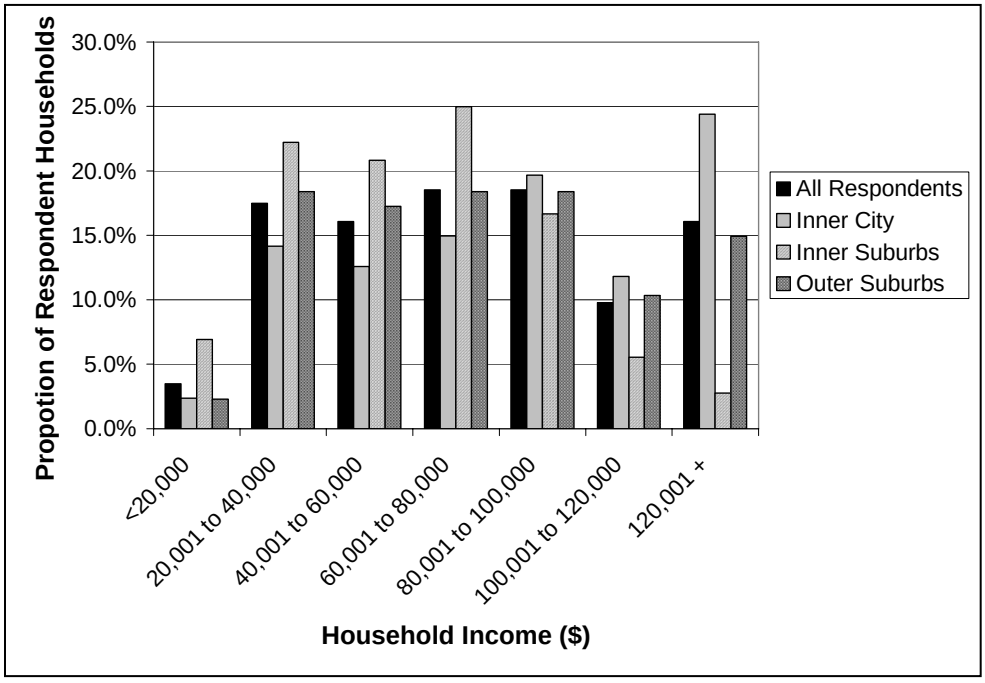
Number of Persons Living in Respondent Households by Geographic Location



Respondent Households with Children Living at Home by Geographic Location



Respondent Household Income by Geographic Location



APPENDIX FIVE: Addendum to the Sampling Frame

During the planning stages for implementing the mail-out questionnaire, it was decided that approximately 20% of the final sample (2000 addresses) should constitute rental or multiple unit dwellings. To facilitate this investigation in the inner city where it was perceived that the two chosen study areas, Riverdale and York, were too small to provide a large enough random sample of apartment addresses, a third study area named Davisville which contains a large number of apartment and multiple unit dwellings was chosen to provide the required sample of apartment addresses for the inner city.

Upon receiving the complete list of randomly chosen addresses, it was found that most addresses excluded evidence such as a unit or apartment number that would that would allow for questionnaires to be delivered directly to individual tenants or building occupants. In order to advance the study, the survey was split into the two phases described in Section 4.4.2 and the addresses were split into those which were thought to be multiple or rental units and those thought to be owner-occupied dwellings.

To address a lack of information on apartments, the author consulted municipal tax rolls, City Directories[36], and even visited several candidate buildings in person in hopes of attaining tenant-specific addresses. Unfortunately, these efforts did not yield useable addresses. As a result, it was decided that Phase 2 of the survey would be cancelled, that any Phase 1 responses from the Davisville study area would not be used, and that all efforts would be made to increase response rates with Phase 1.

[36] City Directories are regularly published listings of all residential and business addresses in a city. These lists also contain other information such as the name of principal occupants, spouses and children, phone numbers, length and type of tenure, and even homeowner occupation and employer.

APPENDIX Six: Study Context

In 2001, Professors Pierre Filion and Trudi Bunting of the University of Waterloo jointly received a research grant from the Social Sciences and Humanities Research Council of Canada (SSHRC) for a project titled *Understanding and Addressing Urban Dispersion: A Study of Post-1950 Suburban Land Use and Transportation in Canada*. Together, Filion and Bunting set out to redefine the nexus between land use, socio-economic status, and transportation behaviour by supplementing traditional thought on the subject with behaviourally-based knowledge that would highlight Canadian urban households' values and their locational and housing preferences.

At its inception, the project was to study households in the Toronto, Calgary and Kitchener Census Metropolitan Areas (CMA). The investigation was also to consist of three phases: 1) An analysis of the multivariate relationships between land use, socio-economics and transportation behaviour for each city by using a Geographic Information System (GIS) to integrate the appropriate data geographically; 2) An investigation of the micro-scale land use and transportation patterns and citizen attitudes and preferences in neighbourhoods where exhibited levels of transit use and/or walking were significantly higher than their surrounding area; and, 3) An exploration of the policy options available for mitigating urban dispersion's adverse consequences through the integration of the preceding macro and micro analyses. In the spring of 2002, the project was scaled back to exclude the cities of Calgary and Kitchener from its focus however the course of procedure remained intact.

In January 2002, I joined the project as a research assistant. Initially, my role consisted of investigating the academic literature to assess the relevancy of existing work to the work at hand and identifying the neighbourhoods suitable for further analysis under phase two of the project.

Early into this work, however, I accepted an opportunity to expand my role by incorporating my own research interests into the project and use the project's survey instrument for my own purposes as well. Given this, the methodology that employed in this thesis has been greatly influenced by the needs of the parent project, known as the Greater Toronto Area (GTA) Survey.

APPENDIX SEVEN: Letter of Copyright Permission

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August 29, 2006

Brad Appleby
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