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The Graying of Canadian Suburbs: Patterns, Pace, and Prospects



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**THE GRAYING OF CANADIAN
SUBURBS: PATTERNS, PACE,
AND PROSPECTS**

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ABSTRACT

The residence patterns of Canada's elderly shifted significantly from 1971–1991. First, their metropolitanization as seen in their more rapid growth in metropolitan areas as compared to non-metropolitan areas. Second, their suburbanization within metropolitan areas. 1991 saw, for the first time, more seniors living in the suburbs than in core cities. Both these shifts parallel those in the United States in the late 1970s.

Metropolitan aging is occurring across the country. New and old, east and west, metropolitan areas are growing in numbers of elderly and their share of the population. This aging also involves increases in the numbers and proportions of the very old, those aged 75+. The most dramatic aging was in the Inner Suburbs. The fastest rate of growth of numbers of elderly occurred in the Outer Suburbs.

In the 1950s and 1960s, the young tended to be in the suburbs and the elderly in core cities. The present data (paralleling the U.S.) indicate such separation has been declining since 1971. In terms of living arrangements, 59 percent of seniors live in family units, while 29 percent live alone. Core cities have lower proportions of senior family households and higher proportions of seniors who live alone than in the suburbs.

The neighbourhoods in which seniors live show considerable diversity in the numbers of seniors, their household composition, and the facilities and services available. No neighbourhood lacked basic support features (e.g., seniors housing, intermediate care, public transit), but the number of such features did decline the more distant the neighbourhood.

All signs indicate the metropolitan elderly will continue to increase in numbers, in their proportion of the national total, and in their suburbanization. Their future spatial distribution will follow past trends given the strong tendency for people to age in place. An increasing percentage will live outside core cities in the suburbs through the 1990s and beyond as the tide of aging moves outward. In turn, there will be a growing number of suburban seniors living alone, becoming more frail, and possibly being over-housed, all with many implications for planning and housing.

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EXECUTIVE SUMMARY

Aging of Metropolitan Populations

1. The residence patterns of Canada's elderly, those 65 and older, shifted significantly from 1971–1991. First, was the metropolitanization of the elderly; that is, the more rapid growth in numbers of the elderly who live in metropolitan areas as compared to those living in non-metropolitan areas. Second, was the suburbanization of the elderly within metropolitan areas. 1991 saw, for the first time, more seniors living in the suburbs than in core cities of Census Metropolitan Areas (CMAs).
2. Both of these shifts parallel those that occurred in the United States in the late 1970s. In the U.S. in 1988, 74 percent of all the nation's the elderly lived in metropolitan areas and their concentration (proportion) was 12 percent, as compared to Canada CMAs with 57 percent of all seniors and an average concentration of 11 percent in 1991.
3. Metropolitan aging is occurring across the country. In 1991, the concentration of the elderly in nearly half of the 25 CMAs was greater than the national average. CMAs both new and old, and located in all parts of Canada, are experiencing extensive aging. This aging also involves major increases in the numbers and proportions of the very old, those aged 75+, a population group more prone to frailty and in need of support.

Aging Within the Suburbs

4. The suburbanization of the elderly follows the growth of suburban development. The result is that suburbs differ by their age of development and population. Those closest to core cities are not only the oldest, but so are their populations. A simple model based on concentric rings of municipal units surrounding the core city of the CMA yields two or three zones of suburban development — Inner Suburbs, Outer Suburbs, Suburban Fringe — depending upon the size of the metropolitan area. These are then used to analyze suburbanization trends and tendencies.
5. From 1971–1991, the concentration of the elderly population grew in each suburban zone as well as in core cities. The most dramatic aging was in the Inner Suburbs. The fastest rate of growth of numbers of elderly occurred in the Outer Suburbs. The more distant Suburban Fringe also experienced a progressive aging of its population. The number of the very old (75+) in the suburbs increased more than twice as fast as they did in core cities, thereby underlining the pervasiveness of suburban aging.
6. The most important bases for this growth of the suburban elderly were demographic processes acting upon the resident metropolitan population in each zone rather than from in-migration of the elderly. That is, the younger people who moved to metropolitan areas in the 1950s and 1960s simply stayed on in the suburbs they settled and they are now becoming seniors.

Generational Separation of the Elderly

7. Rapid suburbanization in the 1950s and 1960s fostered high concentrations of the young in the suburbs and heightened their concentrations in core cities. Thus, the young and the old became geographically separated from one another. The present data (in parallel with that from the U.S.) indicates that separation has been declining over the past two decades, especially since 1986.

8. Seniors are currently most separated from other age groups in Core Cities and in the Outer Suburbs and least separated in the Inner Suburbs and the Suburban Fringe. Those 65+ are separated most from two middle aged groups, 35–44 and 45–54 in all parts of the metropolitan area and least separated from those aged 55–64. The separation trends of those aged 75 and older are similar to those of the entire seniors' population.

9. Generational separation within individual Canadian CMAs varies: seven, generally small and medium, CMAs have low age separation levels in all zones; nine, including some large and small, CMAs have moderate levels; eight, mostly older eastern, CMAs, have very high levels; and one, Toronto, has a mix of levels among its suburban zones.

10. Levels of elderly separation in U.S. metropolitan areas for 1988 are about 50 percent lower than those in Canadian CMAs for 1991. But general separation tendencies are much the same with those 65+ most separated from middle-aged groups and least separated from young adults and the near-old. Separation levels began to decline in the U.S. at an earlier date than in Canada.

Diversity Within Metropolitan Zones

11. Living arrangements data provide a reflection of other persons in a household who can provide support for seniors. For Canadian CMAs as a whole, 59 percent of seniors' households comprise nuclear family units, while in 29 percent seniors live alone; the remainder live with either other relatives or non-relatives. Core cities have low proportions of senior family households and high proportions of seniors who live alone. The converse is true in the three suburban zones.

12. Differences in seniors household structure have both demographic and geographic explanations. Core cities have high concentrations of the very old, a very large proportion of whom are widowed (demographic) and a greater range of housing stock available to single seniors (geographic). In the suburbs, seniors are younger, married and not yet widowed (demographic). The suburbs were settled largely by families (geographic).

13. A final component study sought to determine how the broad findings regarding the metropolitan elderly applied in actual neighbourhood situations. Data derived from a set of 12 census tracts in the Vancouver CMA located in each of the suburban zones. Two basic tendencies emerged: (1) both the concentrations of the elderly and their living arrangements showed considerable diversity among census tracts, even in the same zone; and (2) there was considerable diversity among tracts within geographic sectors.

14. These census tracts were examined for their complement of supportive features for seniors; e.g., seniors housing, intermediate care, public transit, seniors centre, sidewalks. No tract lacked these features internally or lacked easy access to them. The number of key features did decline the more distant the tract from the core city (excepting for public transit). Also, the more distant the tract the more likely its shopping facilities were not accessible except by car, and it lacked alternative housing to the single family home.

Conclusions

15. This study highlights the growth of the elderly within previously family-oriented suburbs. Most of the metropolitan elderly already live there, and their numbers will continue to grow, including increases of the very old (75+). There will be a growing number of suburban seniors living alone, becoming more frail, and possibly being over-housed, all with broad implications for planning and housing. The diversity among the neighbourhoods in which seniors live suggests the need for fine-tuned planning and policy initiatives.

16. Canadian data, and those from the U.S., indicate the metropolitan elderly will continue to increase in numbers, in their proportion of the national total, in their shares of metropolitan population, and in their suburbanization. Future spatial distribution of the metropolitan/suburban elderly will follow past trends given the strong tendency for older populations to age in place in their present communities. This will lead to a larger percentage of the metropolitan elderly living outside core cities in the suburbs before the end of the 1990s. And the difference between elderly concentrations living in the inner suburbs and those in both outer suburban zones should almost vanish as the tide of aging moves outward.

**«Le vieillissement des populations de banlieue au Canada :
rythme, tendances et perspectives d'avenir»**

RÉSUMÉ

Le vieillissement de la population dans les grandes agglomérations urbaines

1. Au Canada, les tendances en matière de lieu de résidence des personnes âgées de 65 ans et plus ont beaucoup changé de 1971 à 1991. On a d'abord assisté à l'arrivée des personnes âgées dans les villes qui s'est manifestée par une croissance rapide du nombre de ces personnes habitant dans les grandes agglomérations urbaines par rapport à celles qui demeuraient dans les municipalités de plus petite envergure. Ensuite, il y a eu la suburbanisation des personnes âgées de ces agglomérations. En 1991, on constatait qu'il y avait pour la première fois plus de personnes âgées vivant en banlieue que dans les principaux centres des régions métropolitaines de recensement (RMR).
2. Ces deux changements sont survenus parallèlement à ce qui s'est produit aux États-Unis à la fin des années 70. Ainsi, en 1988, 74 % de toutes les personnes âgées des États-Unis vivaient dans les grands centres urbains et leur concentration (proportion) était de 12 %, comparativement aux RMR du Canada où le pourcentage de personnes âgées citadines était, en 1991, de 57 %, selon une concentration moyenne de 11 %.
3. Le vieillissement des agglomérations urbaines se généralise au pays. En 1991, la concentration des personnes âgées de près de la moitié des 25 RMR était supérieure à la moyenne nationale. Les RMR, anciennes ou récentes, présentent un vieillissement important partout au Canada. Ce vieillissement se traduit aussi par une forte augmentation du nombre et de la proportion des personnes très âgées, c'est-à-dire celles qui ont plus de 75 ans, un segment de la population plus susceptible d'être en perte d'autonomie et de nécessiter des services de soutien.

Le vieillissement au sein des banlieues

4. La suburbanisation des personnes âgées suit la croissance des banlieues. Il en résulte que les banlieues diffèrent par l'âge de leur aménagement et de leur population. Celles qui se trouvent le plus près des principaux centres sont non seulement les plus vieilles, mais possèdent également la population la plus âgée. Un modèle simple fondé sur des cercles concentriques d'unités municipales entourant la ville principale de la RMR donne deux ou trois zones d'aménagement de banlieue - banlieues immédiates, banlieues excentriques, zones situées aux limites des banlieues - selon la taille de l'agglomération urbaine. Ces zones servent à analyser les tendances de la suburbanisation.

5. De 1971 à 1991, la concentration de la population âgée s'est accrue dans chaque banlieue ainsi que dans les villes principales. Le vieillissement le plus marqué s'est fait sentir dans les banlieues immédiates, tandis que le rythme de croissance le plus rapide du nombre de personnes âgées a été observé dans les banlieues excentriques. Les zones situées aux limites des banlieues, plus distantes, ont aussi subi un vieillissement progressif de leur population. Le nombre de personnes très âgées (75 ans et plus) vivant en banlieue a augmenté plus de deux fois plus rapidement que la croissance survenue dans les villes principales, soulignant ainsi l'effet envahissant du vieillissement des populations de banlieue.

6. Cette croissance des personnes âgées dans les banlieues s'explique principalement par les processus démographiques qui agissent sur la population résidante des agglomérations urbaines de chaque zone plutôt que par l'arrivée de personnes âgées. En effet, les jeunes gens qui, dans les années 50 et 60, étaient venus peupler les agglomérations urbaines sont tout simplement demeurés dans les banlieues où ils se sont établis et deviennent petit à petit des personnes âgées.

Les personnes âgées et la séparation des générations

7. La suburbanisation rapide qu'ont connue les années 50 et 60 a favorisé de fortes concentrations de jeunes dans les banlieues et a augmenté leur concentration dans les villes principales. C'est ainsi que les jeunes et les personnes âgées ont été séparés géographiquement les uns des autres. Les données actuelles (par rapport à celles des États-Unis) montrent que cette séparation a diminué au cours des vingt dernières années, surtout à partir de 1986.

8. À l'heure actuelle, les personnes âgées sont le plus séparées des autres groupes d'âges dans les villes principales et dans les banlieues excentriques et sont le moins séparées dans les banlieues immédiates et les zones situées aux limites des banlieues. Dans tous les secteurs des agglomérations urbaines, les personnes âgées de 65 ans et plus sont le plus séparées de deux groupes de personnes d'âge moyen, soit les 35 à 44 ans et les 45 à 54 ans, et le moins séparées du groupe des 55 à 64 ans. Les tendances qui touchent les personnes de 75 ans et plus sont similaires à ce que l'on constate pour l'ensemble de la population des personnes âgées.

9. La séparation des générations varie au sein même des RMR canadiennes : sept RMR, généralement petites et moyennes, présentent un faible taux de séparation des générations dans toutes les zones; neuf RMR, certaines grandes, d'autres petites, présentent des taux modérés; huit RMR, pour la plupart situées à l'est et plus vieilles, présentent des taux très élevés tandis qu'une autre, celle de Toronto, se distingue par des taux mixtes parmi ses zones de banlieue.

10. Les taux de séparation des personnes âgées dans les agglomérations urbaines des É.-U. en 1988 sont environ de 50 p. 100 inférieurs à ceux des RMR canadiennes relevés en 1991. Mais les tendances générales de séparation sont beaucoup plus similaires en ce qui concerne les personnes de plus de 65 ans le plus séparées des groupes de personnes d'âge moyen et le moins séparées des jeunes adultes et des près de 65 ans. Les taux de séparation ont commencé à décroître aux États-Unis avant le Canada.

La diversité au sein des agglomérations urbaines

11. Les données portant sur les modalités de vie offrent un reflet des autres personnes composant un ménage qui peuvent apporter du soutien aux personnes âgées. Pour l'ensemble des RMR canadiennes, 59 p. 100 des ménages de personnes âgées sont formés de familles nucléaires, tandis que 29 p. 100 des personnes âgées vivent seules. Les autres habitent soit avec d'autres membres de la famille ou avec des gens avec lesquels elles n'ont pas de liens de parenté. Les villes principales ont de faibles proportions de ménages familiaux d'aînés et de fortes proportions d'aînés vivant seuls. C'est la situation contraire qui se produit dans les trois zones de banlieue.

12. Les différences observées dans la structure des ménages d'aînés s'expliquent à la fois de manière démographique et géographique. Les villes principales présentent de fortes concentrations de personnes très âgées, dont une très grande part ont perdu leur conjoint (facteur démographique) et on y trouve un plus grand choix de logements pour personnes âgées seules (facteur géographique). Enfin, les banlieues ont été peuplées principalement par les familles (facteur géographique).

13. Une dernière étude a été menée pour déterminer jusqu'à quel point les résultats d'ensemble portant sur les personnes âgées des agglomérations urbaines pouvaient s'appliquer aux situations réelles dans les quartiers. Les données ont été tirées d'une série de 12 secteurs de recensement de la RMR de Vancouver situés dans chacune des zones de banlieue. Deux tendances fondamentales ont été observées : (1) tant les concentrations de personnes âgées que leurs modalités de vie se sont avérées très variées au sein des secteurs de recensement, même pour une même zone; (2) la diversité était considérable parmi les secteurs de recensement à l'intérieur des limites géographiques.

14. Ces secteurs de recensement ont été examinés pour déterminer l'importance des services de soutien accessibles aux aînés tels les logements pour aînés, les soins intermédiaires, le transport en commun, les centres pour personnes âgées, les trottoirs. Les personnes âgées peuvent trouver ces services dans leur propre secteur ou peuvent y avoir accès facilement dans d'autres secteurs. Le nombre de services clés diminue proportionnellement avec la distance entre le secteur et la ville principale (sauf dans le cas du transport en commun). En outre, plus le secteur est éloigné, plus ses installations commerciales ne sont accessibles qu'en voiture et plus les choix d'habitation qu'il propose, à part les maisons individuelles, sont limités.

Conclusions

15. Cette étude met en évidence l'augmentation de la présence des personnes âgées dans les banlieues jadis caractérisées par les familles. La plupart des aînés des régions urbaines y habitent déjà et leur nombre va continuer de croître, y compris les personnes très âgées (75 ans et plus). Dans les banlieues, le nombre de personnes âgées vivant seules, possiblement dans des maisons trop grandes pour elles, et en perte d'autonomie va augmenter. Ces changements auront des répercussions considérables sur la planification et le logement. La diversité des quartiers où habitent les personnes âgées laisse supposer qu'il faudra rajuster les initiatives de planification et de réglementation.

16. Les données canadiennes et américaines indiquent que le nombre de personnes âgées vivant dans les agglomérations urbaines va continuer de croître, tant par rapport à la population totale à l'échelle nationale, que par rapport à la population des grandes agglomérations et des banlieues. Dans le futur, la répartition spatiale des personnes âgées dans les agglomérations urbaines et les banlieues sera conforme aux tendances observées par le passé puisque ces personnes ont fortement tendance à demeurer en place à mesure qu'elles prennent de l'âge. C'est ainsi que, d'ici la fin des années 90, on verra un plus grand nombre de personnes âgées des grandes agglomérations sortir des villes principales pour aller vers les banlieues. Et la différence entre la concentration de personnes âgées vivant dans les banlieues immédiates et dans les banlieues plus éloignées devrait presque disparaître à mesure que la vague de personnes âgées s'éloignera des grandes agglomérations.



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1. INTRODUCTION

Context for the Study

The "flight to the suburbs" of the 1950s, '60s, and '70s of young families, combined with the tendency of people to "age in place," is leading to suburban locations in metropolitan areas rapidly becoming "gray." This is the experience in the United States (Golant, 1990). Thus far, it has gone largely unnoticed in Canada since studies of the elderly have treated metropolitan areas either as undifferentiated communities (Northcott, 1988) or as urban aggregates (Stone & Frenken, 1988). But there is little reason to think the Canadian experience would differ from that in the U.S.

Further, many studies have shown that seniors prize their dwellings. It is not uncommon to find them occupying the same dwellings for 15–20 years (Hodge, 1987). It is also known that this longevity of residence stems from the value of predictability it gives to a senior's environment, their ability to maintain social bonds, and/or their strong emotional ties to the home (Rowles, 1983) and community (Golant, 1986). If this is also the case in suburban locations, one should expect large congregations of seniors in the suburbs from those who settled them three and four decades ago.

But few studies, even in the U.S., have considered whether city or suburban locations differ in regard to seniors' habitats. Metropolitan areas have been mostly treated as homogenous geographic units until recent research by Logan (1984) and Golant (1987, 1990), but even these limited the view to a simple dichotomy of core city vs. suburbs. Given that suburbs develop in response to metropolitan expansion, it follows that not all suburbs are in the same stage of development or have the same population age structure. Thus, not only might there be significant differences in the situation of the elderly between core cities and suburbs, generally, but also between older suburbs and more recently developed ones farther afield.

With a more refined geographic perspective on metropolitan areas such as this, it would be possible to pursue a number of salient issues that are raised in the literature regarding the living environments of the metropolitan elderly. For example: does the age concentration provide potential for social interaction with peers? are seniors separated from other age groups? where do the most vulnerable among the elderly, the very old, live? and what is the congruence of residential patterns and patterns of resources and services seniors need? We know, for example, the lower population densities and preponderance of single family homes that characterize suburban areas will pose their own problems in

providing broader choices in housing, transportation, and support services for the elderly that are not encountered in core cities.

But in order to begin to examine such questions it is necessary to have access to basic demographic information about the elderly population in all the component parts of Canada's metropolitan areas. The first step seems to be the development of a statistical base from which one can track the degree and pace of suburbanization of the elderly through the component parts of each metropolitan area. That is the task of the present study.

Objectives of the Study

The overall goal of the study is to develop a statistical perspective on the degree, pace, and characteristics of the population aged 65 years and older living in the suburban sector of Canada's 25 Census Metropolitan Areas (CMAs) over the period 1971–1991.

The objectives established to achieve this goal are as follows:

1. To compare the extent to which suburbs and central (core) cities of all 25 CMAs, individually and collectively, vary in their concentrations of population aged 65 and older for the period 1971–1991;
2. To compare the degree to which young-old (65–74) and very old (75+) populations are separated from the total population and younger adult age groups in all CMAs in central cities and suburbs for the period 1971–1991;
3. To compare the household composition (through their living arrangements) of the population 65 and older in central cities and suburbs in all CMAs, individually and collectively, for 1986;
4. To compare the tendencies of the age concentration, and living arrangements of the population 65 and older in representative census tracts within the central city and suburban rings of a selected CMA (Vancouver) for 1986.

Scope and Methodology

This array of objectives encompasses a need to understand both the general picture of Canada's urban and suburban elderly and the situation of the elderly in individual metropolitan areas.

The starting point for rendering such pictures consisted of a general paradigm of metropolitan growth occurring as a series of concentric rings of suburban development. Such an approach has its basis in the early work of the sociologists of the "Chicago School." In their social area analyses, E. W. Burgess (1925) propounded a Concentric Zone Model of urban growth. The variation used in this study is to define the concentric geographic zones by successive rings of municipalities surrounding the core city. Those

adjacent to the Core City were the first, or oldest, suburbs, while those municipalities in successively more distant rings were younger in terms of suburban development. In this we follow the approach used by Stone (1983) in analyzing settlement pattern shifts of the older population in Western Canadian CMAs.

Thus, the maps of each of the 25 CMAs were examined for, first, the location of the Core City (or, in some cases, cities). Second, the group of municipalities immediately adjacent to the Core City were identified and defined as the ring of Inner Suburbs. Third, in a similar manner, the ring of municipalities adjacent to the Inner Suburbs were identified as the Outer Suburbs and a fourth ring was identified as the Suburban Fringe. The total number of suburban rings in any CMA, and therefore the municipalities included in the analyses, was determined by the location of the 1986 CMA boundary. Only rings of municipalities falling within the CMA boundary were included. Differences will be noted in the number of suburban rings surrounding various Canadian CMAs. This is generally a function of the age of metropolitan development; that is, older metropolitan areas (e.g., Montreal, Toronto, Vancouver) have a larger number of rings of suburban development than more recently designated CMAs. Figure 1 illustrates the geographic outcome of this process for Sherbrooke, Quebec.

Age cohort and other relevant data were assembled for the constituent municipalities of each of the CMAs in each of the quinquennial censuses from 1971 through 1991. The number of municipal units used in the analyses is shown in Table 1 by the metropolitan zone in which they are located. Variations occur in numbers from one census to the next for a combination of at least three reasons. First, amalgamation of municipal units often occurred with the introduction of metropolitan government, thereby reducing their numbers; this is especially noticeable from 1971–1981. Second, metropolitan population growth, especially after 1981, expanded the physical size of CMAs and the number of municipal units comprising them. Third, the number of CMAs increased over the entire period as three medium-size urban areas grew into CMA status.

Special note needs to be made about the number of municipal units comprising core cities. The number is larger than the number of CMAs because in several cases two or more municipalities were deemed to constitute the metropolitan core. For example, Ottawa and Hull, Quebec and Levis, Hamilton and Dundas, Vancouver and North Vancouver and New Westminster, and so forth.

Figure 1

Rings of Metropolitan Development

Sherbrooke Quebec

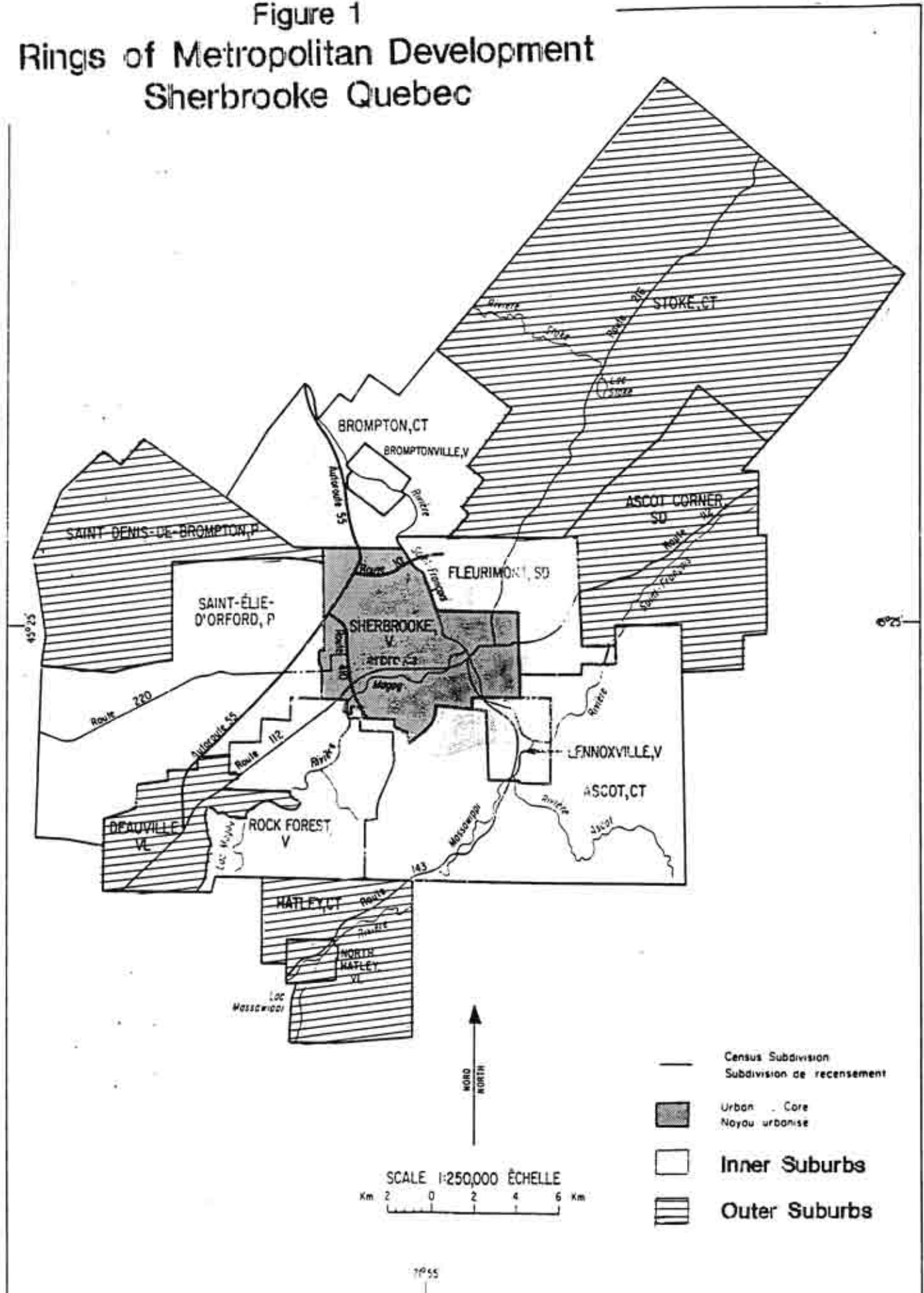


TABLE 1: MUNICIPAL DISTRIBUTION BY CORE CITIES AND SUBURBAN RINGS USED IN THE ANALYSIS OF CANADIAN METROPOLITAN AREAS, 1971—1991

	Number of Municipal Units				
	1971	1976	1981	1986	1991
CORE CITIES	45	32	34	33	33
INNER SUBURBS	114	97	99	125	128
OUTER SUBURBS	123	112	119	178	185
SUBURBAN FRINGE	76	81	82	124	127
TOTAL MUNICIPALITIES	358	322	334	460	473
TOTAL NO. CMAs	22	23	24	25	25

Source: Census of Canada.

Within this data framework, five major analyses were conducted:

- (1) Suburbanization of the Canadian Elderly, 1971-1991 consisted of determining the concentration (percentage distribution) of four age groups of older Canadians (55-64, 65-74, 75+, and 65+) living in the core cities and successive suburban rings of all Canadian CMAs as well as the rates of change of the numbers of elderly for each 5-year census period. Two of the censuses (1971 and 1981) did not report disaggregated figures for the 65-74 and 75+ age groups thereby limiting complete rendering of all trends.
- 2) Separation of the Metropolitan Elderly, 1971-1991 consisted of determining the degree of separation between elderly age groups and other age groups using an Index of Dissimilarity. The Index indicates the percentage one of the age groups would have to move (e.g., from central cities to suburbs) in order to have the same residential distribution as the other age group. The Index varies between zero (no separation) to 100 (maximum separation). This is the method used and confirmed by Golant (1990) for U.S. metropolitan data. Methodological problems of applying the Index appear relatively minor (cf., Cortese et al., 1976) and it has the advantage of generalizability and comparability. Analyses were made for all CMAs for each census.

Indexes were derived for the 65+ age cohort relative to four adult age groups: 20-29, 30-44, 45-54, and 55-64. An additional set of indexes were derived for the 75+ cohort and included as well the

65-74 age group. Information on the population under 20 was not used because their locations will largely duplicate those aged 30-44.

- (3) Living Arrangements of the Metropolitan Elderly, 1986 consisted of analyses of Census Family characteristics for those 65+ for 1986 for each Canadian CMA. The percentage distributions of the elderly in four types of living arrangements: living with family, living alone, living with relatives, and living with non-relatives.
- (4) Diversity of the Suburban Elderly, 1986 was a pilot study consisting of an analysis of elderly age concentrations, elderly separation, and elderly living arrangements for representative census tracts within the core city and successive suburban rings for a single CMA, Vancouver in this case. The aim was to probe differences within metropolitan zones as compared to differences between them.
- (5) Community Environments of the Elderly (1994) was a complementary study of the existence of environmental supports for the elderly in the representative census tracts of the Vancouver CMA used in (4) above. The aim was to probe differences between the core city and successive suburban rings in the availability of needed services.

The findings of each of these analyses are reported in the sections that follow in the order noted above. But, first, a brief note on basic terminology. The term "aging" of a population refers to the increasing proportion (or concentration) of the population who are elderly; in this report, the percentage who are aged 65 and older. Aging of a population would result in an increase in the average age of the population, although this measure is not used here. This should not be confused with the associated measure of the congregation (or numbers) of the elderly and, particularly, with the rates of percentage change in the numbers of elderly.

2. METROPOLITANIZATION OF THE ELDERLY, 1971-1991

The Shift to the Metropolis

Over the two decades from 1971-1991, the number of elderly Canadians aged 65 and older living in Census Metropolitan Areas (CMAs) virtually doubled! The growth in numbers from 914,800 to 1,825,400 (see Table 2 and Figure 2) represents a rate of increase of 99.5 percent for the metropolitan elderly. This compares to an increase of only 35.5 percent for all younger age groups combined in the same period. The result, as Table 3 shows, is a significant increase in the proportion of the elderly, from 7.7 to 10.9 percent, among CMA residents.

A significant shift in the elderly's pattern of settlement occurred in this period as between metropolitan and non-metropolitan areas. The Canadian elderly population living in non-metropolitan areas who comprised 47.6 percent of the total elderly in 1971 declined to 42.4 percent by 1991, although they also continued to grow extensively in numbers from 829,600 to 1,344,600. However, the number of metropolitan elderly grew much faster; indeed, it outstripped non-metropolitan elderly growth in all four of the five-year census periods. A similar shift to metropolitan areas has also been experienced by those aged less than 65 years, especially those aged less than 45 years.

Coupled with the shifting pattern of all elderly (65+) toward metropolitan residence was the growth of the very old (those 75+). Whereas in 1976 nearly equal numbers of those 75+ lived in metropolitan and non-metropolitan areas, by 1991 the numbers in metropolitan areas were one-third higher (see Table 2). Thus, not only are metropolitan areas increasingly where we find the elderly, but also it is increasingly where we find the very old.

To speak of a "shift" in the elderly toward the metropolis is not to talk about their migration from non-metropolitan areas. Rather it is to observe changes in the patterns of where the elderly reside. And it is apparent, especially since 1981, that the metropolitanization of the elderly has become the most prominent feature in the national pattern. The basis for this shift lies in the large-scale rural-to-urban migration of young populations in the 1950s and 1960s. Most of these younger age groups ended up living in metropolitan areas and they have simply aged in place. Even when they moved, it was usually within the same or to another metropolitan area, to draw from U.S. data (Longino, et al., 1984).

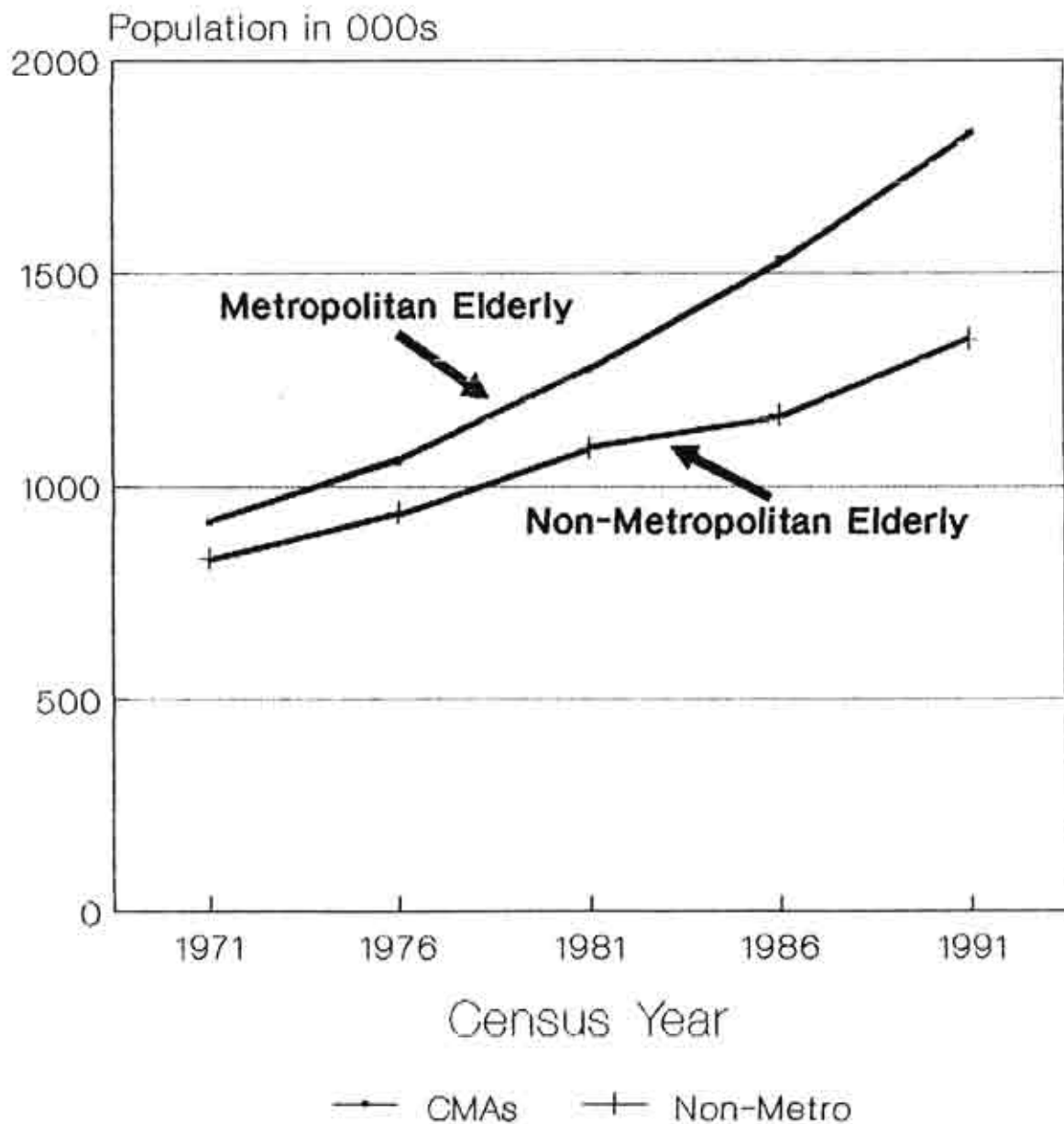
TABLE 2: METROPOLITAN/NON-METROPOLITAN DISTRIBUTION OF THE ELDERLY POPULATION (65+), CANADA, 1971-1991

	65+		Elderly Age Groups 65-74		75+	
	000s	%	000s	%	000s	%
1971						
CANADA	1,744.4	100.0	—	—	—	—
Metropolitan	914.8	52.4	—	—	—	—
Non-Metropolitan	829.6	47.6	—	—	—	—
1976						
CANADA	1,990.9	100.0	1,249.3	100.0	741.6	100.0
Metropolitan	1,054.6	53.0	660.0	52.8	394.6	53.2
Non-Metropolitan	936.3	47.0	589.3	47.2	347.0	46.8
1981						
CANADA	2,360.9	100.0	—	—	—	—
Metropolitan	1,272.1	53.9	—	—	—	—
Non-Metropolitan	1,088.8	46.1	—	—	—	—
1986						
CANADA	2,697.6	100.0	1,650.0	100.0	1,047.6	100.0
Metropolitan	1,532.0	56.8	935.3	56.7	596.7	57.0
Non-Metropolitan	1,165.6	43.2	714.7	43.3	450.9	43.0
1991						
CANADA	3,170.0	100.0	1,895.1	100.0	1,274.9	100.0
Metropolitan	1,825.4	57.6	1,094.7	57.8	730.7	57.3
Non-Metropolitan	1,344.6	42.4	800.4	42.2	544.2	42.7

Source: Census of Canada.

To quote Golant (1990) talking about the U.S. experience: "The most important basis for growth of the elderly in metropolitan areas derives from demographic processes." That is, the aging of these earlier young cohorts, not the in-migration of the elderly, is the most dominant factor in the increasing numbers of the metropolitan elderly.

Figure 2
Metropolitan/Non-Metropolitan
Elderly Distribution 1971-1991



Source: Census of Canada

The converse is the reason for the increase in numbers and proportions of the elderly in non-metropolitan areas. The large rural-to-urban migration of the past left non-metropolitan areas with a preponderance of middle aged people. The aging in place of the latter group soon swelled the number and proportions of the elderly that one finds in non-metropolitan areas, and did so more rapidly than occurred in metropolitan areas. Essentially, what has been happening is that the aging process among metropolitan populations has now caught up with, and surpassed, that of non-metropolitan areas.

It should be noted that part of the shift in the elderly population numbers from non-metropolitan to metropolitan areas was attributable to the elevation of three urban areas to metropolitan status in this period: Oshawa (1976), Trois-Rivières (1981), Sherbrooke (1986). Seniors from these places contributed about one-quarter of the metropolitan shift. The expansion of some CMA boundaries to encompass previously non-metropolitan municipalities during this period also added a small number of elderly to CMA ranks. Notwithstanding these changes, over two-thirds of the shift is attributable to aging within metropolitan areas, a tendency that is bound to continue and magnify in the future.

The Aging of Metropolitan Canada

The general result of this growth in the metropolitan elderly is a progressive aging of metropolitan populations. This can be seen in the data in Table 3 where the concentration of the elderly has gone from 7.71 percent to 10.95 percent of the metropolitan population from 1971–1991. Although this parallels the aging of the Canadian population in the same period, elderly concentrations in metropolitan areas are less than in the nation as a whole. The higher national levels are attributable to the much greater aging occurring in non-metropolitan populations, especially among the very old, and particularly in small cities and towns (Hodge, 1987).

These trends and tendencies occurring in Canada are similar to those occurring in the United States in roughly the same period, 1970–1988 (Golant, 1990). U.S. metropolitan areas increased their share of the elderly population, particularly of the young-old (those aged 65–74) and non-metropolitan populations continued to age with higher than average concentration of the very old.

Also noticeable is the faster pace of metropolitanization of the elderly in the U.S. than in Canada in this period. The U.S. also began (and ended) the period with a slightly more advanced level of population aging compared to Canada. However, more rapid population aging in Canada led to national concentrations of the elderly that were little different between the two countries by the end of the 1980s.

TABLE 3: CHANGING CONCENTRATIONS OF THE ELDERLY POPULATION (65+) IN METROPOLITAN AREAS, CANADA, 1971-1991

		Percent of Population				
		1971	1976	1981	1986	1991
CANADA	65+	8.09	8.68	9.70	10.66	11.61
	75+	—	3.24	—	4.14	4.67
ALL METROPOLITAN AREAS	65+	7.71	8.33	9.32	10.13	10.95
	75+	—	3.12	—	3.94	4.38
NON-METROPOLITAN AREAS	65+	8.55	9.06	10.18	11.45	12.66
	75+	—	3.36	—	4.43	5.12

Source: Census of Canada.

Aging at the Metropolitan Level

The progressive aging of metropolitan populations in Canada is further borne out by looking at elderly concentrations in individual CMAs. Table 4 shows that every CMA increased its concentration of persons 65+ between 1971-1991. And in 1991, nearly half of the metropolitan areas had concentrations that exceeded the national level of 11.61%. The top five CMAs in terms of their 1991 concentrations of persons 65+ are:

Victoria	18.81%
St. Catherines-Niagara Falls	14.98%
Thunder Bay	13.35%
Winnipeg	12.84%
Hamilton	12.83%

The five CMAs with the lowest 1991 concentration of 65+ are:

Oshawa	9.01%
Chicoutimi-Jonquiere	8.80%
Edmonton	8.49%
Halifax	8.23%
Calgary	7.79%.

CMAs both east, west, and central, and new and old are experiencing extensive population aging. No distinctive geographic patterns of the concentrations of the metropolitan elderly in Canada are discernible within these data. But what of the picture within metropolitan areas?

TABLE 4: CONCENTRATION OF THE ELDERLY POPULATION (65+) WITHIN INDIVIDUAL CANADIAN METROPOLITAN AREAS FOR 1971 AND 1991

CENSUS METROPOLITAN AREA	Percent of Population 65+	
	1971	1991
CALGARY	6.30	7.79
CHICOUTIMI-JONQUIERE	4.18	8.80
EDMONTON	5.95	8.49
HALIFAX	6.35	8.23
HAMILTON	8.18	12.83
KITCHENER-WATERLOO	7.43	10.23
LONDON	8.60	12.11
MONTREAL	6.98	10.42
OSHAWA	—	9.01
OTTAWA-HULL	6.42	9.52
QUEBEC CITY	6.60	10.69
REGINA	8.15	10.90
SAINT JOHN	9.40	12.41
SASKATOON	8.96	10.34
SHERBROOKE	—	11.50
ST. CATHARINES-NIAGARA FALLS	8.69	14.98
ST. JOHN'S	6.61	9.32
SUDBURY	4.04	10.44
THUNDER BAY	9.01	13.35
TORONTO	7.54	10.33
TROIS-RIVIÈRES	—	11.78
VANCOUVER	10.06	12.16
VICTORIA	15.20	18.81
WINDSOR	9.39	12.75
WINNIPEG	9.49	12.84

Source: Census of Canada.

3. SUBURBANIZATION OF THE ELDERLY, 1971–1991

The Shift to the Suburbs

The aggregate metropolitan trends of the elderly occur within a basic physical structure of core cities and suburbs. And, typically, the elderly have been found in greatest numbers in core cities. It was largely because these places were the oldest parts of metropolitan areas with the oldest populations (Golant 1972). This was true in Canada until very recently.

Then, in 1991, for the first time in Canadian history, the number of the elderly population living in the suburbs of metropolitan areas exceeded the number living in the core cities. This is as a result of a progressive trend since at least 1971 when core cities were home to nearly two-thirds of the metropolitan elderly (see Table 5). Core cities and suburbs both expanded their elderly population levels, but for the suburbs the increase was more than three times faster than for core cities.

Within this broad suburbanization trend of the elderly is a lesser trend regarding the very old (75+). Although the numbers of the very old in the suburbs increased more than twice as fast as for those in core cities from 1976–1991, those 75 and older were still more likely to live in the core cities in 1991. However, it is likely that within the present decade the suburbs will not only be the place where most of the elderly live, but also will be where most of those 75+ live. Both the greater numbers of those currently aged 65–74 living in the suburbs and the tendency to age in place support this assumption.

Similar trends occurred in metropolitan areas in the United States, only earlier (Golant, 1990). Those 65 and older living in U.S. metropolitan areas were split evenly between core cities and suburbs as early as 1977. And, by 1988, 57.4 percent of the U.S. metropolitan elderly called the suburbs home. Trends among the very old (75+) ran parallel and, in 1977, 50 percent of them lived outside core cities. By 1988, those 75+ in U.S. suburbs increased their share to 55.5 percent.

Aging Patterns Within the Suburbs

Suburban development, by its very nature, is not homogenous. It occurs periodically as the population pressures in an urban area necessitate additional land on the fringe to be opened up and/or intensified with the result that suburbs differ by their age of development and population. Those closest to core cities are not only the oldest but, on average, so are their populations; and so on, through successive stages of suburban development. The suburbanization of the elderly can thus be tracked through

the successive suburban rings of development: the inner suburbs, outer suburbs, and suburban fringe. Their aging situation may then be contrasted with core cities and with other suburbs.

TABLE 5: CORE CITY/SUBURBAN DISTRIBUTION OF THE ELDERLY POPULATION (65+) IN CANADIAN METROPOLITAN AREAS, 1971—1991

	65+		Elderly Age Groups 65-74		75+	
	000s	%	000s	%	000s	%
1971						
METROPOLITAN AREAS	914.8	100.0	—	—	—	—
Core Cities	573.7	62.7	—	—	—	—
Suburbs	341.1	37.3	—	—	—	—
1976						
METROPOLITAN AREAS	1,054.6	100.0	660.0	100.0	394.6	100.0
Core Cities	638.8	60.6	394.4	59.8	244.4	61.9
Suburbs	415.8	39.4	265.6	40.2	150.2	38.1
1981						
METROPOLITAN AREAS	1,272.1	100.0	—	—	—	—
Core Cities	742.0	58.3	—	—	—	—
Suburbs	530.1	41.7	—	—	—	—
1986						
METROPOLITAN AREAS	1,532.0	100.0	935.3	100.0	596.7	100.0
Core Cities	818.8	53.4	485.3	51.9	333.4	55.9
Suburbs	713.2	46.6	450.0	48.1	263.3	44.1
1991						
METROPOLITAN AREAS	1,825.4	100.0	1,094.7	100.0	730.7	100.0
Core Cities	912.3	50.0	527.9	48.2	384.4	52.6
Suburbs	913.1	50.0	566.8	51.8	346.3	47.4

Source: Census of Canada.

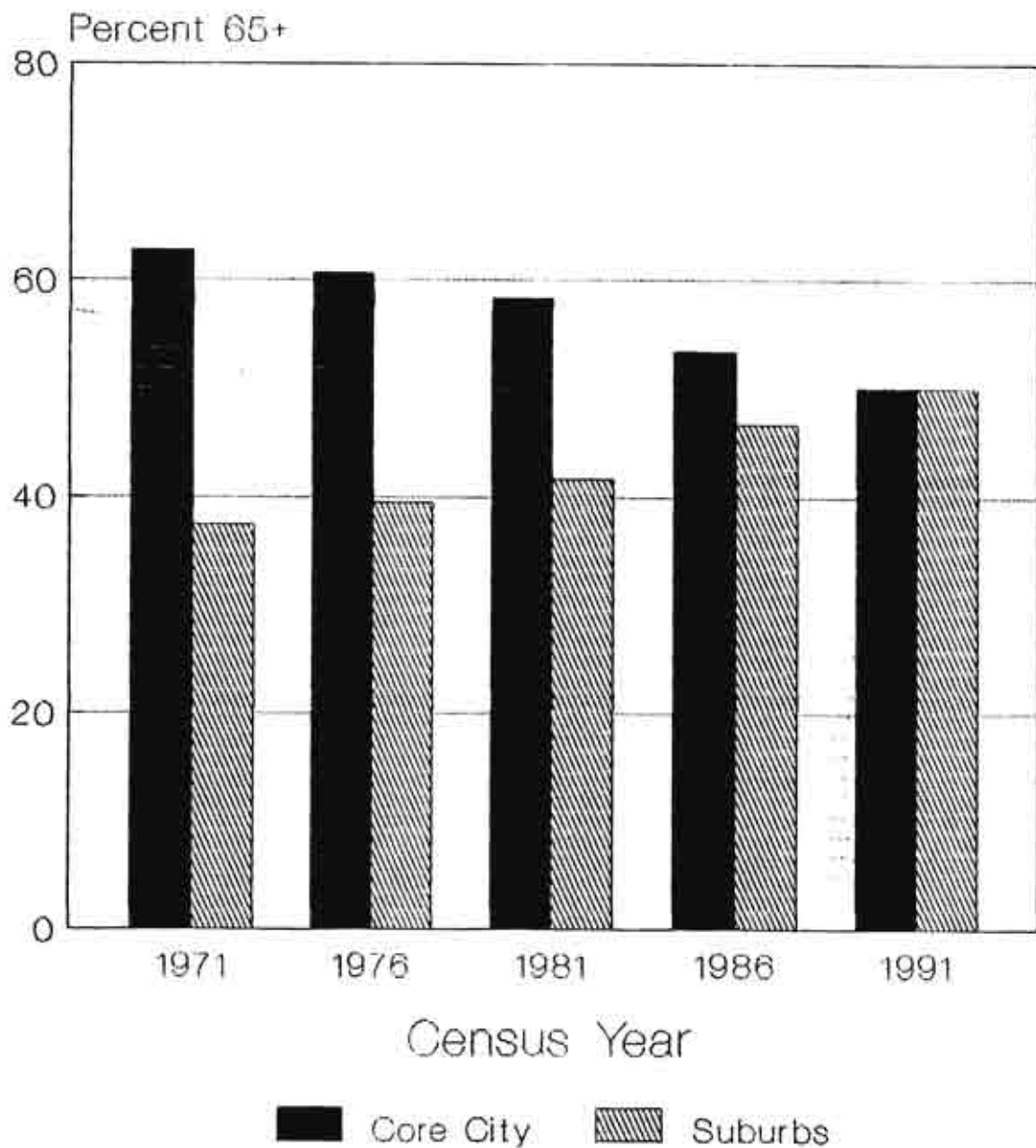
From 1971–1991, the concentration of the elderly population grew in each of the suburban rings as well as in core cities in each five-year census period (see Table 6 and Figure 3). Core cities continued "to age" over these two decades and consistently had the highest concentrations of the elderly within metropolitan areas. And their elderly concentration levels exceeded those for all of Canada in each census period. However, the most dramatic aging was in the inner suburbs where the concentration of those 65 and older nearly doubled and where, in 1991, they were almost at the national level for the first time. Similarly, the concentration of the very old in the inner suburbs increased very fast in this period to a level higher (4.34%) than for the nation (4.02%).

TABLE 6: CHANGING CONCENTRATIONS OF ELDERLY AGE GROUPS BETWEEN CORE CITY/SUBURBS WITHIN CANADIAN METROPOLITAN AREAS, 1971–1991

	Age Groups	Percent of Population				
		1971	1976	1981	1986	1991
ALL METROPOLITAN AREAS	65+	7.71	8.33	9.32	10.13	10.95
	55–64	7.93	8.26	8.92	9.24	8.69
	65–74	—	5.22	—	6.18	6.57
	75+	—	3.12	—	3.94	4.38
CORE CITIES	65+	9.14	10.04	11.11	11.78	12.54
	55–64	8.82	9.16	9.63	9.69	8.85
	65–74	—	6.20	—	6.98	7.25
	75+	—	3.84	—	4.80	5.28
INNER SUBURBS	65+	6.35	7.22	8.62	9.86	11.27
	55–64	7.31	7.93	9.15	9.89	9.47
	65–74	—	4.60	—	6.15	6.93
	75+	—	2.62	—	3.71	4.34
OUTER SUBURBS	65+	5.44	5.43	6.05	7.15	7.93
	55–64	6.20	6.37	6.96	7.55	7.60
	65–74	—	3.51	—	4.60	5.01
	75+	—	1.92	—	2.55	2.93
SUBURBAN FRINGE	65+	6.51	6.64	7.21	8.23	8.73
	55–64	6.53	6.88	7.44	8.04	7.69
	65–74	—	4.17	—	5.24	5.45
	75+	—	2.47	—	3.00	3.28

Source: Census of Canada.

Figure 3
Core City/Suburbs Distribution
of the Metropolitan Elderly



Source: Census of Canada

Both outer suburbs and the suburban fringe, the "younger" parts of metropolitan areas, also experienced a progressive aging of their populations over the 1971–1991 period. But the changes were less dramatic (than for inner suburbs) due, largely, to their younger resident populations and to the continued population influx of mostly young families.

There is a notable feature about the age concentration of the more distant suburbs. In the suburban fringe, age concentrations in all elderly age groups are significantly higher than in the less-distant outer suburbs. Further, this pattern existed as early as 1971 and has continued. This distinctive upswing in the aging tendency of the suburban fringe (or the outer suburbs if there is no fringe development) is a persistent fact in most metropolitan areas in Canada, as we shall see later.

Changing Age Structures and Patterns

Looked at from the point of view of the change in numbers of the various elderly age cohorts reveals tendencies that both confirm the situation described above and portend future tendencies. On average, the numbers in all elderly age groups grew fastest in the outer suburbs and/or the suburban fringe in each census period (see Table 7). Even though there is some slowing down in these latter growth rates after 1986, they are still the highest in the metropolitan area, being two to three times higher than for core cities. Outer suburbs and suburban fringe areas will continue to age, on the basis of these tendencies, well into the next decade.

A somewhat converse trend is apparent in the growth of the pre-retirement 55–64 age cohort. In all parts of the metropolitan area, the young-old have not grown as fast as older age groups in the past two decades and their weakest growth was in core cities in which they actually experienced a decline in numbers from 1986–1991. In spite of high growth rates of this group even in suburban areas, the age concentration of the young-old declined significantly after 1986 in the inner suburbs and suburban fringe and barely held steady in the outer suburbs (see Table 6). This age cohort, it must be remembered, is most responsible for the future size of older age cohorts. A dampening of its growth trends suggests some dampening of the aging of the suburbs as this cohort works its way through the demographic structure over the next decade. A foreshadowing of this is already evident in the core cities and inner suburbs of some metropolitan areas across the country (e.g., Halifax, Hamilton, London, Ottawa-Hull, Toronto, Winnipeg, Vancouver, Victoria).

TABLE 7: RATE OF CHANGE OF ELDERLY AGE GROUPS BETWEEN CORE CITY/SUBURBS WITHIN CANADIAN METROPOLITAN AREAS, 1971—1991

	Age Groups	Percent Change			
		1971–1976	1976–1981	1981–1986	1986–1991
ALL METROPOLITAN AREAS	65+	15.3	20.6	20.4	19.1
	55–64	11.1	16.4	14.9	3.5
	65–74	—	—	—	17.0
	75+	—	—	—	22.5
CORE CITIES	65+	11.4	16.2	10.4	11.4
	55–64	5.3	10.4	4.7	–4.4
	65–74	—	—	—	8.8
	75+	—	—	—	15.3
INNER SUBURBS	65+	21.2	24.5	26.8	24.1
	55–64	16.1	20.3	19.8	3.9
	65–74	—	—	—	22.3
	75+	—	—	—	27.1
OUTER SUBURBS	65+	24.5	35.1	41.7	35.0
	55–64	28.4	31.1	30.3	22.4
	65–74	—	—	—	32.4
	75+	—	—	—	39.7
SUBURBAN FRINGE	65+	15.9	27.4	70.4	31.4
	55–64	19.8	26.8	62.1	17.8
	65–74	—	—	—	28.8
	75+	—	—	—	35.8

Source: Census of Canada.

The explanation of the latter trend is largely demographic and lies in the smaller average family sizes of the Great Depression era and, thus, of a smaller 55–64 age cohort at this time. The next youngest age cohort, 45–54, was similarly affected during the last years of the Depression and the World War II period. Overall, the surge of the seniors' population will be less dramatic over the coming 15 years than it has been over the past 20 years. It will, of course, expand even more dramatically when the first "baby boom" cohort reaches age 65 after 2011.

Distribution of the Suburban Elderly

The resulting geographical distribution of the above trends in the suburban elderly is shown in Table 8. As already noted, the share of the elderly in core cities declined in all age categories. The impact of this shift was experienced in all suburban rings, but most notably in the outer suburbs. Still, in 1991, inner suburbs contained about 50 percent more elderly people, in all age groups, than in both the two outer suburban zones. And, suburban fringe areas, despite their generally higher concentrations of the elderly, were home to only 5–6 percent of the metropolitan elderly. The trends in this regard can be seen in Figure 4.

Future distribution of the metropolitan/suburban elderly will follow past trends given the strong tendency for older populations to age in place in their present communities. This will lead to a larger percentage of the metropolitan elderly living outside core cities in the suburbs before the end of the 1990s. Further, the split between the elderly living in the inner suburbs and those in both outer suburban zones should be almost equal as the tide of aging moves outward.

Core/Suburban Aging at the Metropolitan Level

In general, the trends and tendencies of suburbanization of the elderly described above are found widely distributed among the individual metropolitan areas of Canada. For example, every CMA increased its numbers of persons 65 and older over the twenty years 1971–1991. And the number of 65+ grew in all core cities over this period, except for one (Toronto). Growth of the number of elderly was also the case in the inner suburbs, outer suburbs, and suburban fringe areas of all CMAs over these two decades. The tendency for more distant suburbs to have increased their concentrations of those 65+ is also found in a majority of CMAs. In two-thirds of the CMAs, the concentration of the elderly in outer suburbs and/or suburban fringe areas were higher than inner suburbs in 1991. These various tendencies can be seen in the individual CMA data in Appendix Table A-1.

Core Cities

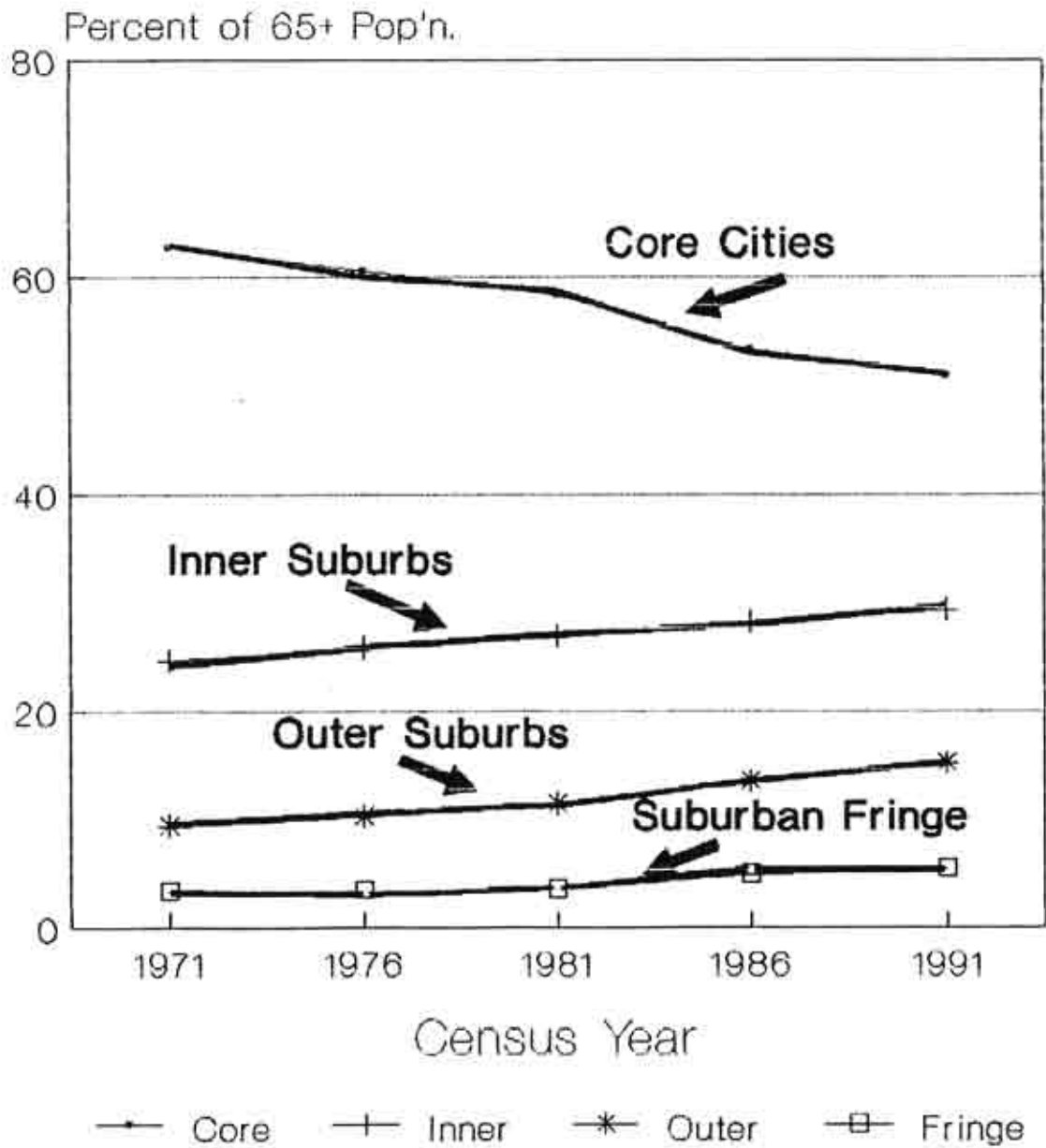
Core cities in all CMAs have the highest concentrations of seniors among the various metropolitan zones across all the census years. And 17 of the 25 CMAs in 1991 have core city concentrations of those 65+ that exceed the national level of 11.61 percent. The most notable are shown in Table 9, with the concentration in Victoria being more than twice the national level. Of the eight CMA cores with lower-than-national levels, four are in the West (Edmonton, Calgary, Saskatoon, Regina) and three others

TABLE 8: DISTRIBUTION OF ELDERLY AGE GROUPS WITHIN SUBURBAN RINGS OF CANADIAN METROPOLITAN AREAS, 1971—1991

	Elderly Age Groups			
	65+	55-64	65-74	75+
	%	%	%	%
1971				
METROPOLITAN AREAS	100.0	100.0	100.0	100.0
Core Cities	62.7	58.8	—	—
Inner Suburbs	24.6	27.5	—	—
Outer Suburbs	9.4	10.5	—	—
Suburban Fringe	3.3	3.2	—	—
1976				
METROPOLITAN AREAS	100.0	100.0	100.0	100.0
Core Cities	60.6	55.7	59.8	61.9
Inner Suburbs	25.8	28.7	26.4	25.1
Outer Suburbs	10.2	12.1	10.5	9.7
Suburban Fringe	3.4	3.5	3.3	3.3
1981				
METROPOLITAN AREAS	100.0	100.0	100.0	100.0
Core Cities	58.3	52.8	—	—
Inner Suburbs	26.8	29.7	—	—
Outer Suburbs	11.4	13.7	—	—
Suburban Fringe	3.5	3.8	—	—
1986				
METROPOLITAN AREAS	100.0	100.0	100.0	100.0
Core Cities	53.4	48.2	51.9	55.9
Inner Suburbs	28.2	31.0	28.8	27.2
Outer Suburbs	13.5	15.6	14.2	12.3
Suburban Fringe	4.9	5.3	5.1	4.6
1991				
METROPOLITAN AREAS	100.0	100.0	100.0	100.0
Core Cities	50.0	44.5	48.2	52.6
Inner Suburbs	29.3	31.1	30.1	28.2
Outer Suburbs	15.2	18.4	16.1	14.1
Suburban Fringe	5.4	6.0	5.6	5.1

Source: Census of Canada.

Figure 4 Metropolitan Elderly Distribution By Suburban Ring 1971-1991



are "younger" eastern manufacturing centres (Oshawa, Chicoutimi-Jonquiere, Kitchener-Waterloo). A review of 1986 data for core cities shows the same arrays of places.

There are variations among the 25 CMAs, some of which suggest more widespread trends for the future. Toronto's core, for example, shows declines in numbers of its elderly in both the 1971–1976 and 1981–1986 periods with the result that it ended up with fewer 65+ in 1991 than two decades earlier. The cores of Quebec City and Halifax both suffered declines in their 65+ populations from 1986–1991. And three other CMA cores (Ottawa-Hull, Vancouver, Victoria) saw declines in the age concentrations of their elderly and only very small increases in numbers in the most recent census period, 1986–1991.

High proportions of 65+ populations in 1991 in metropolitan cores tends also to be accompanied by high proportions of those elderly who are 75+. As Table 9 shows, there is a high degree of correspondence in the top-rated CMAs between these two age cohorts; it is also found in CMAs with much lower elderly concentrations. Those CMA cores with the highest concentrations in 1991 tended to have high concentrations in previous census periods as well. Each place listed had above-average levels as far back as 1971. In other words, population aging is not a recent phenomenon in high concentration core cities and it persists over an extended period, thus, leading to high concentrations of the very old.

TABLE 9: CORE CITIES WITH THE HIGHEST CONCENTRATIONS OF THOSE 65+ AND 75+ IN CANADIAN METROPOLITAN AREAS, 1991

METROPOLITAN AREAS			
	% of those 65+		% of those 75+
1. Victoria	23.91	1. Victoria	13.39
2. Trois-Rivières	16.13	2. Trois-Rivières	6.64
3. Saint John	15.36	3. Saint John	6.78
4. St. Catharines-Niagara Falls	15.21	4. Vancouver	6.55
5. Quebec City	15.18	5. Quebec City	6.32

Source: Census of Canada.
Core City Municipalities n = 33.

Inner Suburbs

Inner suburbs represent the first wave of metropolitan expansion. As one would expect, their populations are somewhat younger than that of core cities. These differences show up generally and in the individual CMA data (see Appendix Table A-1). In all cases, in 1991, inner suburbs have lower concentrations of seniors than their core cities. Still, these concentrations may be quite high. As Table 10 indicates, five CMAs have inner suburbs whose seniors' share is higher than the national average. The same five also have above-average concentrations of the very old (75+). Also, the concentration of seniors in all inner suburbs increased over the two decades, as did their numbers. There is as yet no sign of decline of the elderly in inner suburbs as has begun to show in some core cities.

It does not always follow that CMAs with a more aged core population also have very aged inner suburbs. Here the differences appear more related to the period of suburbanization. The three largest CMAs (Montreal, Toronto, Vancouver) expanded early in the century and older cities like London, Hamilton, Victoria and Quebec City not long after. The inner suburbs of all these places have very high concentrations of seniors. However, Halifax, Ottawa, Saint John, St. John's, and Windsor do not follow this pattern. Some other anomalies occur as with Winnipeg where older inner suburbs were amalgamated with the core city in the 1970s, thereby masking their aging tendencies. While for Oshawa and Kitchener-Waterloo, metropolitan boundaries are so constricted as to not permit more than a single ring of inner suburbs.

TABLE 10: INNER SUBURBS WITH THE HIGHEST CONCENTRATIONS OF THOSE 65+ AND 75+ IN CANADIAN METROPOLITAN AREAS, 1991

METROPOLITAN AREAS			
	% of those 65+		% of those 75+
1. Victoria	18.19	1. Victoria	7.65
2. St. Catharines-Niagara Falls	14.34	2. St. Catharines-Niagara Falls	5.56
3. Toronto	13.10	3. Vancouver	5.17
4. Vancouver	12.54	4. Toronto	5.07
5. Montreal	11.88	5. Montreal	4.65

Source: Census of Canada.
Inner Suburbs Municipalities n = 128.

Outer Suburbs

The outer suburbs represent a still more recent band of metropolitan expansion compared to inner suburbs and, presumably, peopled by still younger age cohorts. This is true in general for Canadian CMAs. The age concentrations of the elderly are lower for outer suburbs compared to inner suburbs (as we have seen in Table 6) for all elderly age groups in each of the last five censuses. Further, age concentrations of all senior age groups have been progressively increasing since 1971.

These concentrations are often very high, as Table 11 shows for the five CMAs with the highest concentrations of those 65+ and 75+ in their outer suburbs in 1991. Indeed, these five (St. Catharines-Niagara Falls, London, Sudbury, Victoria, and Windsor) have outer suburb concentrations that exceed the overall concentration of the elderly in one-half of the CMAs.

But as one approaches the outer limits of metropolitan areas, development is idiosyncratic. For one-half of the CMAs the outer suburbs are the furthest extent of expansion to the present time. And where this is the case, the seniors' concentration in a CMA's outer suburbs may exceed that of its inner suburbs. This is so in 1991 for seven of these eleven CMAs as, for example, in Calgary, London, Sudbury, Regina, Saskatoon, and Trois-Rivières.

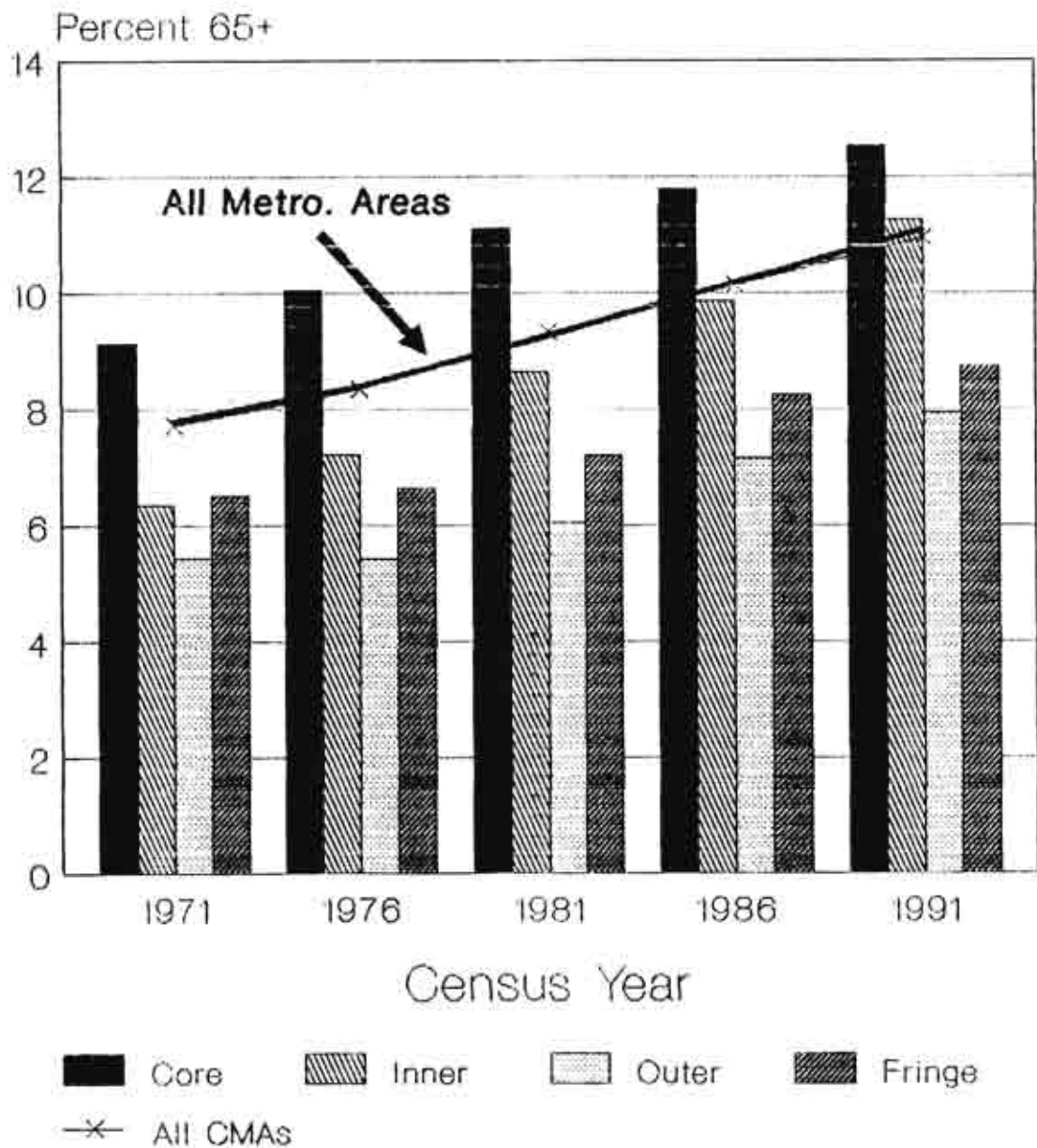
Suburban Fringe

In general, larger and/or older CMAs also have a band of suburban development beyond that of their outer suburbs, which is called here the suburban fringe. For the ten CMAs with a suburban fringe zone, the general picture is that the concentration of the elderly rises above that of closer-in outer suburbs. This is true for six of the ten CMAs with this suburban configuration (see Appendix Table A-1). And in three CMAs (Victoria, Edmonton, and Saint John) the concentration of those 65+ exceed the national average for total metropolitan concentration (Table 12).

Concentrations of the elderly have also been rising steadily in the suburban fringe since 1971 for those 65+ as well as for those 75+. Possibly more importantly, because concentrations fluctuate with changes in younger age groups, is that the numbers of seniors in this distant zone have increased by 2-3 times or more in the past two decades in each of the ten CMAs. In 1991, close to 39,000 seniors lived in Toronto's suburban fringe, nearly 25,000 in Montreal's, over 15,000 in Vancouver's, and almost 9,000 in Victoria's.

The above trends can also be seen in Figure 5.

Figure 5
 Concentration of the Elderly By
 Suburban Ring 1971-1991



Source: Census of Canada

TABLE 11: OUTER SUBURBS WITH THE HIGHEST CONCENTRATIONS OF THOSE 65+ AND 75+ IN CANADIAN METROPOLITAN AREAS, 1991

METROPOLITAN AREAS			
% of those 65+		% of those 75+	
1. St. Catharines-Niagara Falls	15.37	1. London	6.30
2. London	14.54	2. St. Catharines-Niagara Falls	5.87
3. Sudbury	11.48	3. Trois-Rivières	4.17
4. Victoria	11.24	4. Windsor	4.11
5. Windsor	10.62	5. Vancouver	3.83

Source: Census of Canada.
Outer Suburbs Municipalities n = 185.

TABLE 12: SUBURBAN FRINGE AREAS WITH THE HIGHEST CONCENTRATIONS OF THOSE 65+ AND 75+ IN CANADIAN METROPOLITAN AREAS, 1991

METROPOLITAN AREAS			
% of those 65+		% of those 75+	
1. Victoria	21.99	1. Victoria	7.94
2. Edmonton	11.44	2. St. John's	4.78
3. Saint John	11.00	3. Vancouver	3.73
4. St. John's	10.49	4. Edmonton	3.52
5. Vancouver	9.73	5. Toronto	3.46

Source: Census of Canada.
Suburban Fringe Municipalities n = 127.

4. SEPARATION OF THE METROPOLITAN ELDERLY, 1971-1991

Rapid suburbanization by younger families in the 1950s and 1960 tended to foster high concentrations of the young in the suburbs and, conversely, to heighten the concentration of the elderly in central cities. Cowgill (1978), in his U.S. metropolitan studies, represented this as a tendency for the young and the old to become "segregated" from one another. Or, in other words, that central cities would become home mainly to the aged and the suburbs home mainly to the young without either group having the opportunity to encounter each other readily in their daily lives. Whether this tendency continued in U.S. metropolitan areas through the 1980s was the task Golant (1990) set out to determine using the Index of Dissimilarity.

The present study replicates Golant's U.S. work in terms of Canadian metropolitan areas. It also extends that work by looking at differences in elderly separation between the several rings of suburban development. In this section the results of the Canadian CMA data on elderly separation are described first followed by a comparison of the Canadian and U.S. results.

Note should also be made that this study uses the term "separation" in preference to the term "segregation" used by Golant and others. The latter term tends to convey the notion of involuntary exclusion of one age group from another. In this vein, we follow the lead of urban geographers such as Vance (1990) and opt for the view that generations may become separated due to the housing choices they exercise, and are available to them, at key points in the life cycle.

Core-Suburban Residential Separation of the Elderly

The extent of separation of the elderly from other age groups was determined by comparing the distribution of the elderly population among core city and each suburban ring with that of the distribution of other adult age groups, as seen in Table 13. The differences in these distributions reflect the degree to which the elderly is separated from other age groups. This method derives from what is called an Index of Dissimilarity which varies between zero (no separation) to 100 (maximum separation). This index indicates, essentially, the percentage that the elderly age group would have to move from, say, the central city to the outer suburbs, to have the same distribution as some younger age group.

TABLE 13: CORE CITY/SUBURBAN DISTRIBUTION OF POPULATION GROUPS IN CANADIAN METROPOLITAN AREAS, 1971-1991

	TOTAL	Age Groups					
		20-34	35-44	45-54	55-64	65-74	75+
1971							
CMA Pop. (000s)	11,866	2,898	1,483	1,309	941	-	915
CMAs	100.0	100.0	100.0	100.0	100.0	-	100.0
Core Cities	52.9	54.6	50.0	53.7	58.8	-	62.7
Inner Suburbs	29.8	29.0	31.7	30.3	27.5	-	24.6
Outer Suburbs	13.4	13.0	14.2	12.3	10.4	-	9.4
Suburban Fringe	4.9	3.4	4.1	3.7	8.3	-	3.3
1976							
CMA Pop. (000s)	12,655	3,345	1,514	1,432	1,046	660	1,055
CMAs	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Core Cities	50.3	51.6	46.6	50.7	55.7	59.8	61.9
Inner Suburbs	29.9	28.8	31.7	31.3	28.7	29.4	25.1
Outer Suburbs	15.7	15.7	17.3	14.1	12.1	10.5	9.7
Suburban Fringe	4.1	3.9	4.4	4.9	3.5	3.3	3.4
1981							
CMA Pop. (000s)	13,645	3,853	1,740	1,473	1,217	-	1,272
CMAs	100.0	100.0	100.0	100.0	100.0	-	100.0
Core Cities	48.9	51.4	44.2	48.2	52.8	-	58.3
Inner Suburbs	28.9	27.3	30.1	31.3	29.7	-	26.8
Outer Suburbs	17.6	17.1	20.5	16.4	13.7	-	11.4
Suburban Fringe	4.6	4.2	5.2	4.1	3.8	-	3.5

TABLE 13: CORE CITY/SUBURBAN DISTRIBUTION OF POPULATION GROUPS IN CANADIAN METROPOLITAN AREAS, 1971-1991
(Continued)

	TOTAL	Age Groups						
		20-34	35-44	45-54	55-64	65-74	75+	65+
1986								
CMA Pop. (000s)	15,129	4,848	2,258	1,573	1,398	935	597	1,532
CMA%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Core Cities	45.9	49.4	42.2	43.7	48.2	51.9	55.9	53.4
Inner Suburbs	28.9	27.4	29.0	31.4	31.0	28.8	27.2	28.2
Outer Suburbs	19.1	17.8	21.9	19.1	15.6	14.2	12.3	13.5
Suburban Fringe	6.1	5.4	6.9	5.8	5.3	5.1	4.6	4.9
1991								
CMA Pop. (000s)	16,672	4,424	2,736	1,842	1,448	1,095	731	1,825
CMA%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Core Cities	43.6	47.0	41.8	40.9	44.5	48.2	52.6	50.0
Inner Suburbs	28.5	27.2	27.9	29.6	31.1	30.1	28.2	29.3
Outer Suburbs	21.0	19.6	22.9	22.4	18.4	16.1	14.1	15.2
Suburban Fringe	6.9	6.2	7.4	7.1	6.0	5.6	5.1	5.4

Source: Census of Canada

Separation indices were determined for two parts of the seniors population in metropolitan areas: for the entire elderly age group 65+ and for the very old 75+. Each is compared with the following adult age groups: 20–34, 35–44, 45–54, and 55–64. The very old group (75+) was also compared with the young old (65–74). The resulting indices of separation are provided in Table 14 for the entire elderly population 65+ and in Table 15 for the very old population 75+. These tables, derived from the data for the aggregate population of all CMAs, provide a picture of the broad patterns of generational separation. Separation indices for individual CMAs are examined in the next section.

Patterns of Separation for Seniors as a Whole

In general, the elderly population as a whole became less separated from all other age groups within Canadian metropolitan areas in the 1971–1991 period. But within this perspective, Table 14 reveals several distinctive tendencies regarding separation among the various metropolitan rings:

- (1) Seniors are most separated from all other age groups in two zones: Core Cities and Outer Suburbs;
- (2) Inner Suburbs and the Suburban Fringe are, thus, the two rings in which seniors are least separated from all other age groups; indices approached zero in both zones by 1991;
- (3) In Core Cities, seniors became significantly less separated from the young adult age group (20-34) by 1991 compared to 1971;
- (4) In Core Cities, seniors continued to be most separated from older adult age groups (35-44) and (45-54) and saw their separation from the near-old (55-64) actually increase over the two decades; and
- (5) In Outer Suburbs, seniors became progressively more separated from all other age groups from 1971-1991.

Generational separation is generally less in 1991 than it was in 1971. Indeed, separation of the elderly continued to increase through until 1981 in all zones before it began its decline to current levels. Differences among metropolitan zones in 1991 are attributable to various factors. In Core Cities, seniors tend to have higher proportions than all other age groups and, thus, greater separation from them. In Inner Suburbs and the Suburban Fringe, seniors have much the same proportions as other age groups and this results in their low separation levels, while in the Outer Suburbs, seniors have lower proportions than other age groups and resulting high separation levels (Table 14).

TABLE 14: CORE CITY/SUBURBAN RESIDENTIAL SEPARATION BETWEEN THE ELDERLY (65+) AND OTHER AGE GROUPS IN CANADIAN METROPOLITAN AREAS, 1971—1991

	Separation Indices for 65+				
	TOTAL	20-34	35-44	45-54	55-64
1971					
Core Cities	9.8	8.1	12.7	9.0	3.9
Inner Suburbs	5.2	4.4	7.1	5.7	2.9
Outer Suburbs	4.0	3.6	4.8	2.9	1.0
Suburban Fringe	1.6	0.1	0.8	0.4	5.0
1976					
Core Cities	10.3	9.0	14.0	9.9	4.9
Inner Suburbs	4.1	3.0	5.9	5.5	1.9
Outer Suburbs	5.5	5.5	7.1	3.9	1.9
Suburban Fringe	0.7	0.5	1.0	1.5	0.1
1981					
Core Cities	9.4	6.9	14.1	10.1	5.8
Inner Suburbs	2.1	0.5	1.3	2.5	2.9
Outer Suburbs	6.2	5.7	9.1	5.0	2.3
Suburban Fringe	1.1	0.7	2.7	0.6	0.3
1986					
Core Cities	7.5	4.0	11.2	9.7	5.2
Inner Suburbs	0.7	0.8	0.8	3.2	2.8
Outer Suburbs	5.6	4.3	8.4	5.6	2.1
Suburban Fringe	1.2	0.5	2.0	0.9	0.4
1991					
Core Cities	6.4	3.0	8.2	9.1	5.5
Inner Suburbs	0.8	2.1	1.4	0.3	1.8
Outer Suburbs	5.8	4.4	7.7	7.2	3.2
Suburban Fringe	1.5	0.8	2.0	1.7	0.6

Source: Census of Canada

The emerging picture is one of Core Cities in Canadian CMAs increasingly becoming home to the elderly and young adults. Inner Suburbs at the current time have no pronounced generational separation which suggests a long-term balancing out among age groups and this shows little sign of changing in the near future. Outer Suburbs, on the other hand, emerge as home to the older adults and the near-old, which is a reflection of their more recent levels of suburban development where seniors are still somewhat anomalous. The Suburban Fringe situation gives the impression that the full thrust of suburban development, with its pronounced tendency to a middle-aged population, has not yet arrived there. But slight upward increases in the proportions of the middle-aged between 1986 and 1991 suggest this zone will shift toward significantly higher separation levels for the elderly within a decade.

The Situation for The Very Old

The separation trends for those aged 75 and older are similar to those of the entire seniors' population. That is, they are most separated from all other age groups in core cities and outer suburbs, indeed, the indices are generally higher for those 75+ in regard to all age groups in these two zones than they are for the seniors' population as a whole. In particular, the very old experienced increasing separation from those aged 45–54, 55–64, and 65–74 from 1976–1991 in core cities and outer suburbs (Table 15).

The very old are least separated from all other age groups in the inner suburbs and suburban fringe zones. Indices approached zero by 1991 in these two zones. Overall, those 75+ are least separated from the young-old (65–74) in all zones.

Generational Separation in Individual CMAs

A review of separate indices for individual metropolitan areas confirms the general findings described above. That is, the degree of separation of the elderly from other age groups declined between 1971 and 1991 in all CMAs (except Winnipeg, which climbed very slightly). And age groups that are the elderly most separated from are middle-aged (35–44 and 45–54) and least separated from are the near-old (55–64) and young adults (20–34). Regarding the very old (75+), the indices for individual CMAs closely follow the distribution for younger elderly (except for Halifax where the very old are much more confined to the Core City).

Indices for each CMA for 1991 are provided in Appendix Table A-2. They reveal different separation tendencies of the elderly that, in turn, fall into four broad categories:

TABLE 15: CORE CITY/SUBURBAN RESIDENTIAL SEPARATION BETWEEN THE VERY OLD (75+) AND OTHER AGE GROUPS IN CANADIAN METROPOLITAN AREAS, 1976—1991

	Separation Indices for 75+					
	TOTAL	20-34	35-44	45-54	55-64	65-74
1976						
Core Cities	11.6	10.3	15.3	11.2	6.2	2.1
Inner Suburbs	4.8	3.7	6.6	6.2	3.6	3.7
Outer Suburbs	6.0	6.0	7.6	4.4	2.4	0.8
Suburban Fringe	0.8	0.6	1.1	1.6	0.2	0.0
1986						
Core Cities	10.0	6.5	13.7	12.2	7.7	4.0
Inner Suburbs	1.7	0.2	1.8	4.2	3.8	1.6
Outer Suburbs	6.8	5.5	9.6	6.8	3.3	1.9
Suburban Fringe	1.5	0.9	2.3	1.2	0.7	0.6
1991						
Core Cities	9.0	5.6	10.8	11.7	8.1	4.4
Inner Suburbs	0.3	1.0	0.3	1.4	2.9	1.9
Outer Suburbs	6.9	5.5	8.8	8.3	4.3	2.0
Suburban Fringe	1.8	1.1	2.3	2.0	0.9	0.5

Source: Census of Canada

- (1) Overall Low Age Separation - wherein the indices of separation between the elderly and all age groups are well below average (generally below 3.0).
- (2) Moderate Age Separation - wherein the indices of separation between the elderly and all age groups are about average for all CMAs (i.e., 5.0 - 8.0).
- (3) Very High Age Separation - wherein the indices of separation between the elderly and all age groups are above average (generally above 12.0).
- (4) Distinctive Age Separation Pattern - wherein the indices of separation between the elderly and all age groups do not follow a common tendency.

The clusters of CMAs falling within each of the above categories are identified below.

(1) Overall Low Age Separation

The elderly in seven CMAs have very little tendency to be separated from other age groups both in their Core Cities and suburban zones in 1991. Separation tends to be 3 percent or less. These metropolitan areas are generally small and medium size in population and include Calgary, Regina, London, St. Catharines, and Winnipeg. Their low separation indices reflect a balanced distribution of population age groups throughout the CMA. This suggests a good deal of long-term stability in the age-mix subject only to change through new major suburbanization.

(2) Moderate Age Separation

In nine CMAs the elderly are separated from other age groups to a moderate degree. In these metropolitan areas a shift of between 5 and 8 percent would be required between the elderly and other age groups to achieve a balance. In this cluster of CMAs, which include Vancouver, Victoria, Montreal, Saskatoon, Hamilton, Chicoutimi-Jonquiere, and Edmonton, the Core Cities have more elevated indices than in suburban zones.

(3) Very High Age Separation

A total of eight CMAs have age separation indices that would require a shift of at least 12 percent (and in some cases over 20 percent) between elderly and other age groups to achieve a balance. This tendency is found in their Core Cities and at least one suburban zone of such as the following generally older eastern CMAs: Halifax, Ottawa, Quebec City, Saint John, Trois Rivieres and Sudbury. Further, the indices for the very old are often higher than for those 65+ in these places. The pattern one finds is that the elderly strongly dominate the age structure of the Core City while the elderly are in a distinct minority in the suburban age

structure (except in the Suburban Fringe, where one exists). These CMAs, thus, represent the essence of the model first described by Cowgill (1978): "Core cities are the home of the elderly and the suburbs are the home of the young."

(4) **Distinctive Age Separation Patterns**

The Toronto CMA has the most distinctive pattern of generation separation among Canadian metropolitan areas. Its Core City is has very low separation indices (i.e., 3 percent or less) between the elderly and all age groups and rivals those CMAs in the first cluster. The elderly, on the other hand, are highly concentrated in the Inner Suburbs (with indices exceeding 11 percent, except with the 55-64 group). Younger age groups dominate the Outer Suburbs (e.g., Scarborough, North York, Etobicoke) with indices exceeding 10 percent). Again, as in other CMAs, the separation of the elderly is negligible in the Suburban Fringe.

The differences in generational separation between CMAs are due, undoubtedly, to a variety of reasons, including the size of population and its age of development, particularly of its suburban development. For example, metropolitan municipalities that became suburban destinations three or more decades ago will now be experiencing a distinct aging of their populations as compared to those that have suburbanized more recently. But what explains the persistence of high separations of the elderly in one CMA and not in another. Also, is there a tendency for a "mature" type of generational distribution? do Toronto and Vancouver reflect this, for example? The answer to these kinds of questions will have to await finer-grain analyses.

Canada vs. U.S. Metropolitan Generational Separation

The present study offers the opportunity to compare age separation patterns and trends in the metropolitan areas of Canada and those of the United States as described by Golant (1990). There is a slight variation in the time series used in each study because of differences in census dates in the two countries: i.e., Canada 1976-1991 and U.S. 1975-1988. In addition, the data can only be compared at the aggregate level for metropolitan areas because the U.S. study does not provide data for suburban zones as does the present study. These differences aside, useful comparisons can be made for both the total elderly (65+) and the very old (75+) as shown in Table 16.

TABLE 16: COMPARISON OF TRENDS IN RESIDENTIAL SEPARATION OF THE ELDERLY IN METROPOLITAN AREAS OF CANADA (1976–1991) AND THE U.S. (1975–1988)

Separation Indices for 65+						
<u>CAN.</u>	Total Population	20–34	35–44	45–54	55–64	65–74
1991	6.4	3.0	8.2	9.1	5.5	NA
1976	10.3	9.0	14.0	9.9	4.9	NA
Separation Indices for 75+						
1991	9.0	5.6	10.8	11.7	8.1	4.4
1976	11.6	10.3	15.3	11.2	6.2	2.1
Separation Indices for 65+						
<u>UNITED STATES:</u>	Total Population	20–29	30–44	45–54	55–64	65–74
1988	2.7	0.9	4.2	6.3	3.1	NA
1975	7.2	4.1	10.9	8.5	4.8	NA
Separation Indices for 75+						
1988	4.6	1.0	6.1	8.2	5.0	3.0
1975	7.4	4.3	11.1	8.7	5.0	0.3

Source: Census of Canada and Golant, 1990

Current Levels of Elderly Separation

For both the total elderly and the very old, U.S. metropolitan age separation levels are substantially lower than those in Canada for the most recent data. U.S. levels are approximately 50 percent lower between most age groups and both groups of the elderly (Table 16).

Leaving aside actual levels of age separation, in both countries, those 65+ are most separated from the two middle-aged groups and least separated from young adults and the near-old. The same tendencies are found in the separation of the very old in both countries. Also similar are the elevated separation levels of the very old as compared to those 65+, about 50 percent higher.

Trends in Age Separation

Changes in age separation levels between the metropolitan elderly and other age groups have followed much the same course in both the U.S. and Canada since the mid-1970s. First, there has been general decline in the separation indices. Second, within this general downward tendency, Canadian metropolitan separation levels increased between the 65+ group and the near-old (55-64) and between the 75+ group and the 45-54 and 55-64 groups. The latter contrasts with U.S. trends where differences declined. Third, the very old in both countries became further separated from the young-old (65-74) in the past decade and a half.

Given that aging of the U.S. population is more advanced than that of Canada, it seems reasonable to assume that U.S. metropolitan trends in age separation represent the levels toward which Canadian metropolitan areas will tend. Thus, Canadian CMA generational separation will probably continue to decline with the exception of that between the young-old and the very old.

5. HOUSEHOLD COMPOSITION OF THE METROPOLITAN ELDERLY, 1986

The previous sections have dealt with the general residential patterns of the elderly in Canada's metropolitan areas. But seniors, like other population groups, live within households comprising different combinations of people. For seniors, living arrangements are important to know because they reflect the availability of others in the household who can provide support, if the need arises. In this section, the living arrangements for seniors are examined for each of the metropolitan zones using 1986 census data.

The census provides four broad categories of seniors' living arrangements that can be used to penetrate this subject:

- Living with (nuclear) family members,
- Living with other relatives,
- Living with non-relatives, and
- Living alone.

Available data cover the entire 65+ population not living in institutions and do not permit any age segmentation.

The first three categories represent households where one or more persons is/are available to share household tasks and to provide personal support such as driving. The last category consists of those households who have no other person living with them who could provide support. To gerontologists, this group is especially vulnerable if major frailty or other losses should occur.

General Metropolitan Tendencies

For metropolitan areas as a whole, nearly 60 percent of seniors' households comprise family units. A further 12.8 percent live as boarders or tenants with relatives or non-relatives; however, almost 30 percent comprise only a single person (see Table 17 and Figure 6).

There are significant variations on these proportions between core cities and suburbs. Core cities have the lowest proportions of senior family households (54.8%) and the highest proportion of seniors who live alone (33.0%). Conversely, in the inner and outer suburbs and the suburban fringe senior family households are much more dominant (62.8–64.6%) and single person household are well below 25 percent.

Core cities are clearly the primary metropolitan locations for single person senior households. While core cities have only 50 percent of the metropolitan seniors' population, they have nearly 60 percent of the seniors who live alone. Suburban seniors, by contrast, live mostly in family households. The core city situation is explained in part by demographic factors — their higher concentrations of the very old, a very large proportion of whom are widowed — and in part by a greater range of housing stock available to single seniors. The suburban situation is explained largely by the younger age status of seniors, not yet subject to being widowed, and by being originally settled largely by families.

TABLE 17: CORE CITY/SUBURBAN LIVING ARRANGEMENTS OF THE ELDERLY (65+) IN CANADIAN METROPOLITAN AREAS, 1986

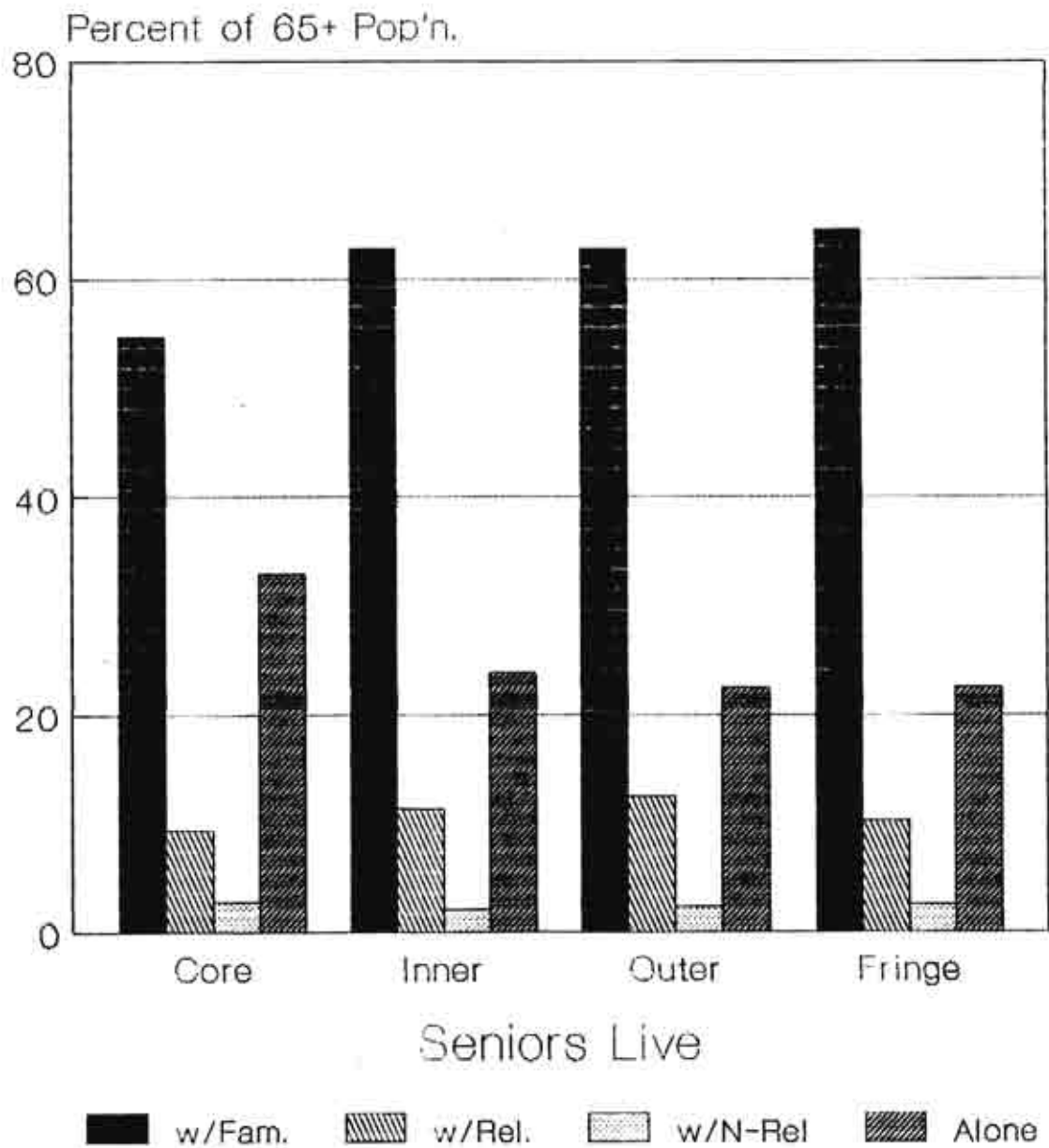
	Percent of Population 65+			
	Living with Family	Living with Relatives	Living with Non-Relatives	Living Alone
All Metropolitan Areas	58.7	10.3	2.5	28.5
Core Cities	54.8	9.4	2.8	33.0
Inner Suburbs	62.8	11.3	2.1	23.8
Outer Suburbs	62.8	12.5	2.3	22.4
Suburban Fringe	64.6	10.3	2.5	22.6

Source: Census of Canada

CMA Variations

The data regarding living arrangements for seniors in individual CMAs are provided in Appendix Table A-3. Overall, the patterns described above prevail across the 25 CMAs, but some notable exceptions occur. Toronto's core has the lowest proportion of seniors living in family units (48.2%) while the highest proportion is found in Chicoutimi-Jonquiere (66.6%). The CMA with the lowest share of seniors living alone is St. John's and, conversely, this CMA has the highest shares of seniors living with other relatives (18–21%). Victoria, on the other hand, has the lowest shares of seniors living with other relatives (4–6%) and also has the highest proportion of seniors living alone in its core (43.1%). Both the latter probably indicate the status of Victoria as a retirement centre to which seniors move, leaving relatives behind.

Figure 6
Elderly Living Arrangements
By Suburban Ring 1986



6. DIVERSITY OF THE SUBURBAN ELDERLY

Thus, far, our analyses have been focused on the contrasts in elderly concentrations and living arrangements across the different zones of metropolitan development. In this final section we shift the focus onto the situation within metropolitan zones to determine the degree of homogeneity that exists regarding age concentrations and living arrangements. This analysis is, of necessity, very preliminary and is restricted to an examination of these variables in 12 census tracts in the Vancouver CMA. The census tracts are located within three geographical sectors that emanate from downtown Vancouver to the east, southeast, and south (see Figure 7). They are selected to represent districts within, respectively, the outer limits of the core city, inner suburbs, outer suburbs, and suburban fringe (except for the south sector). Their demographic profiles were not known prior to the analyses.

Elderly Concentrations Within the Suburbs

According to the census tract test data shown in Table 18, there is considerable diversity within metropolitan zones in regard to concentrations of various elderly age groups. For example, there are substantial differences even within the core city, not only between the inner and outer tracts but also among the three outer tracts. The southeast outer tract has a concentration of 20.1 percent, nearly double that of the tract in the eastern sector, and all outer tracts have higher concentrations than the inner tract of the core city. A similar range of differences appears among the tracts in each of the suburban zones.

Besides the observed diversity among tracts in the same zone, two other aspects also deserve mention. First, concentrations of all elderly age groups in a census tract tend to be of the same relative scale. That is, a tract with a high concentration of those 65+ tends to have high concentrations of other elderly age groups, and vice versa. Second, there is no consistency in levels of elderly age concentrations within a geographic sector: some may be high in one zone and not in another and so forth.

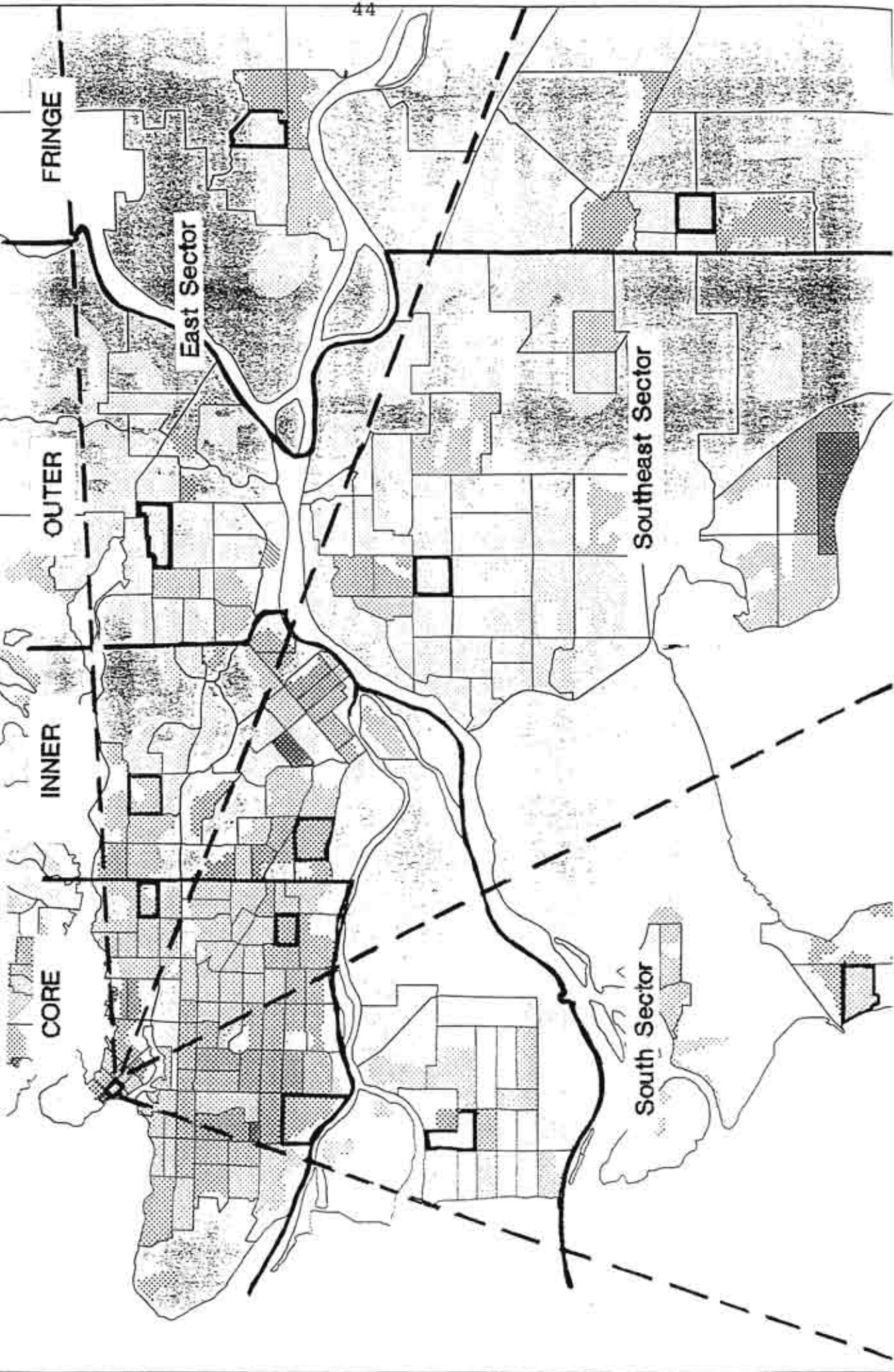
TABLE 18: CONCENTRATION OF ELDERLY AGE GROUPS BY METROPOLITAN ZONE AND GEOGRAPHIC SECTOR, VANCOUVER, 1986

Census Tract Location	Age Groups	Metropolitan Sector		
		East	South	Southeast
Core (Inner)	65+	11.9	11.9	11.9
	55-64	8.7	8.7	8.7
	65-74	6.8	6.8	6.8
	75+	5.1	5.1	5.1
Core (Outer)	65+	12.3	17.4	20.1
	55-64	10.9	11.3	14.7
	65-74	7.9	10.5	11.0
	75+	4.3	6.9	9.7
Inner Suburbs	65+	9.9	7.7	15.6
	55-64	12.4	10.2	12.3
	65-74	6.2	5.6	9.8
	75+	3.7	2.2	5.8
Outer Suburbs	65+	4.5	12.1	4.7
	55-64	9.8	11.0	6.2
	65-74	3.5	6.7	3.1
	75+	1.0	5.4	1.6
Suburban Fringe	65+	8.5	—	6.1
	55-64	9.6	—	4.7
	65-74	5.9	—	4.5
	75+	2.6	—	1.6

Source: Census of Canada

Figure 7

Sample Census Tracts
Vancouver Metropolitan Area



Elderly Living Arrangements Within the Suburbs

An examination of Table 19 reveals two contrasting situations regarding elderly living arrangements. First, there is evident, as we saw with overall metropolitan figures, the tendency for more seniors to live alone in the core city and for this to decrease in successive suburban zones. But, second, there is also considerable diversity in the elderly's living arrangements within zones and geographical sectors, such as seen with age concentrations.

Consider just the outer tracts in the core city: the proportions of seniors living in family units ranges from 46.0 to 69.6 percent and the proportions living alone in the southeast sector tract is double that in the south sector tract. Besides, the proportions of seniors who live with other relatives in the south sector tract is only half that of those in the east sector tract.

Extensive differences also exist between the tracts in each of the suburban zones and considerable variation exists between tracts in the same geographic sector.

* * * * *

Census tracts are a reasonably good proxy for an urban neighbourhood in that they contain, normally, from 3,000 to 5,000 people in total. Given this perspective, the data emerging in this limited analysis of Vancouver CMA tracts indicates considerable variation between the neighbourhoods in which seniors live. It further suggests the need for more penetrating examinations of both the reasons for, and the implications of, these variations.

TABLE 19: LIVING ARRANGEMENTS OF THE ELDERLY POPULATION (65+) BY METROPOLITAN ZONE AND GEOGRAPHIC SECTOR, VANCOUVER, 1986

Census Tract Location	Living Arrangements	Metropolitan Sector		
		East	South	Southeast
		Percent of Tract Population 65+		
Core (Inner)	Living with Family	30.8	30.8	30.8
	Living with Relatives	4.5	4.5	4.5
	Living with Nonrelatives	4.5	4.5	4.5
	Living Alone	60.2	60.2	60.2
Core (Outer)	Living with Family	60.0	69.6	46.0
	Living with Relatives	15.3	7.8	10.7
	Living with Nonrelatives	1.7	2.2	1.7
	Living Alone	23.0	20.4	41.6
Inner Suburbs	Living with Family	70.2	63.5	74.1
	Living with Relatives	11.5	12.5	7.5
	Living with Nonrelatives	2.9	2.1	1.7
	Living Alone	15.4	21.9	16.7
Outer Suburbs	Living with Family	73.7	68.8	65.6
	Living with Relatives	10.5	8.3	15.7
	Living with Nonrelatives	2.6	1.8	4.6
	Living Alone	13.2	21.1	14.1
Suburban Fringe	Living with Family	65.2	—	76.1
	Living with Relatives	10.9	—	9.5
	Living with Nonrelatives	—	—	3.3
	Living Alone	23.9	—	11.1

Source: Census of Canada

7. COMMUNITY ENVIRONMENTS OF THE METROPOLITAN ELDERLY

As the elderly are increasingly found in the suburbs, it is important to enquire how well community environments support seniors daily lives in these outer parts of metropolitan areas, for there is little reason to expect their needs will differ from those of other seniors. The onset of frailty, the inability to drive or to care for a family home, or the loss of a partner are occurrences in old age that do not respect geographic boundaries.

We know from the previous section that demographic differences exist among the elderly even at the level of neighbourhoods within metropolitan areas. But, as Golant (1990) urges, we need to go beyond demographic differences and capture a sense of the "ecological diversity" that exists among the parts of the metropolitan areas where seniors live. Only in this way can we know if the community environment is supportive of seniors' independence or what the National Advisory Council on Aging calls an "enabling environment" (NACA, 1989). Following this, we now examine several aspects of the community environments for a sample of seniors' communities in the Vancouver CMA.

Analytical Approach

Twelve census tracts distributed through each suburban zone and each geographic sector, as employed in the analyses in the previous section, form the sample of such communities. These areas are home to between 3,000 and 6,000 people each and average about 3 sq.km. (1 sq.mi.) in area, the size of a typical urban neighbourhood. Each census tract was examined for the presence of several key physical features that contribute to the ability of seniors to continue to live independently in their own communities; that is, features that contribute to seniors independence. The features looked for in each census tract include an intermediate care/nursing home, seniors housing, public transportation, a seniors activity centre, and local sidewalks. Their presence in the neighbourhood or nearby, where applicable, would be vital to seniors in these census tract neighbourhoods being able to maintain their independence (Hodge, 1993). Specific measures of each feature and the rationale for including them are described below.

Intermediate Care/Nursing Home: Given the importance to the elderly of both health care and continued residence in their own communities, an intermediate care facility within easy access of a senior's current residence offers the promise of continuity in their lives as well as in those of spouses, relatives, and friends should the need arise to seek such care. A facility, preferably, should be located within 2.5 km. of a senior's residence.

Measure – number of such facilities within the census tract and in immediately adjacent tracts.

Seniors' (Assisted) Housing: An independent living alternative to single family homes or duplexes in a senior's local area can be crucial both to maintaining his/her independence and connection with familiar surroundings, services, and friends. It is especially so for low income seniors. A project, preferably, should be located within 2.5 km. of a senior's residence.

Measure – number of such projects within the census tract and in immediately adjacent tracts.

Seniors' Activity Centre: The opportunity to interact with fellow seniors helps to maintain an elderly person's quality of life and connectivity to the larger community as well as being a symbol of the worth of seniors. A centre, preferably, should be located within 2.5 km. of a senior's residence.

Measure – number of such centres within the census tract and in immediately adjacent tracts.

Public Transit: The ability of seniors to get around their own communities is a cornerstone of seniors' independence. This is especially so for those 30–40 percent of seniors who are unable or unwilling to drive (cf. Hodge, 1992). Access to a public transit route, preferably, should be located no farther than 600 metres from a senior's residence (where the terrain is relatively flat).

Measure – number of public transit routes within and bordering the census tract.

Local Sidewalks: Seniors who don't drive, as well as those who do, like to be able to walk to many of their local destinations, e.g., stores, bank, post office, bus stop, library, park, church. Sidewalks in their residential surroundings both provide safety and promote independence.

TABLE 20: COMMUNITY ENVIRONMENT FEATURES BY METROPOLITAN ZONE AND GEOGRAPHIC SECTOR, VANCOUVER, 1994

Census Tract Location		Metropolitan Sector		
		East	South	Southeast
Core (Inner)	Intermediate Care Home	4	4	4
	Seniors (Assisted) Housing	14	14	14
	Seniors Activity Centre	2	2	2
	Public Transit Routes	3	3	3
	Sidewalk Coverage	Full	Full	Full
Core (Outer)	Intermediate Care Home	3	9	3
	Seniors (Assisted) Housing	15	17	8
	Seniors Activity Centre	0	2	0
	Public Transit Routes	4	4	3
	Sidewalk Coverage	Full	Partial	Partial
Inner Suburbs	Intermediate Care Home	1	1	4
	Seniors (Assisted) Housing	5	8	6
	Seniors Activity Centre	1	1	0
	Public Transit Routes	3	3	4
	Sidewalk Coverage	Full	Partial	Partial
Outer Suburbs	Intermediate Care Home	2	1	2
	Seniors (Assisted) Housing	1	2	2
	Seniors Activity Centre	1	0	1
	Public Transit Routes	2	3	4
	Sidewalk Coverage	None	Partial	Partial
Suburban Fringe	Intermediate Care Home	3	—	1
	Seniors (Assisted) Housing	4	—	4
	Seniors Activity Centre	1	—	1
	Public Transit Routes	2	—	3
	Sidewalk Coverage	None	—	None

Source: Greater Vancouver Regional Hospital District; B.C. Housing; B.C. Transit; Silver Harbour Seniors Centre; Field Surveys

Measure – the extent of sidewalk provision within the census tract: Full, where sidewalks exist on every street; Partial, where at least half the streets have sidewalks; None, where few if any sidewalks are provided.

Conditions in each census tract in the sample were examined regarding each of these measures. Secondary data sources, obtained from appropriate authorities, were used to determine the location of intermediate care homes, assisted housing and seniors' activity centres relative to each census tract. Transit maps were used to measure public transit access. Site visits were made to each tract to determine the provision of sidewalks and the availability of alternative housing types and local shopping facilities.

Sufficiency of Community Environments

The examination of census tracts in the Vancouver CMA, as presented in Table 20, revealed some expected differences between neighbourhoods in different parts of the metropolitan area as well as some unexpected similarities. That is, the findings did not always follow the conventional wisdom of suburban neighbourhoods lacking necessary physical attributes for seniors. For example, public transit service was widely available in all suburban zones at very much the same level as in the core city. To obtain bus service, seniors in every tract neighbourhood would seldom have to walk more than 600 metres to the nearest route, terrain differences notwithstanding.

Also commonly available to seniors in all suburban zones and sectors were intermediate care facilities and seniors assisted housing projects. No tract's seniors lacked either of these facilities. By contrast, seniors' activity centres were somewhat unevenly distributed among the various parts of the metropolitan area; even two (outer) core city neighbourhoods lacked a centre within easy access.

However, the availability of key physical features for supporting seniors did, in general, decline the more distant the suburban zone (with the exception of public transit routes). This "distance-decay" function is most noticeable with regard to the provision of local sidewalks. But it is also true to a lesser degree with the provision of intermediate care and seniors' housing. Moreover, tract neighbourhoods in the core city, in both inner and outer areas, offered seniors a much greater number of supportive features as compared to any of the suburban zones. Neighbourhoods in the Inner Suburbs were the next best endowed with facilities and services.

Site visits confirmed a more rudimentary environment available to seniors in the more distant suburban zones. Local sidewalks were only partially provided, if at all, in the Outer Suburbs and the Suburban Fringe. Also, shopping facilities tended to be only on the periphery of the neighbourhood and, then, often unevenly distributed. Thus, shopping and other services cannot be obtained readily by seniors wishing to walk to them. And even with public transit available, the lack of sidewalks makes this option inaccessible to many seniors. Add to this that the distant suburban neighbourhoods seldom had any apartment housing available to seniors wishing an alternative to their single family homes. Each of the

tracts examined in the latter zones, it must be remembered, were already home to several hundred seniors each. As they age, mobility and housing issues will undoubtedly emerge for many suburban seniors, as Carp (1976) observed two decades ago.

* * * * *

It must be noted, in conclusion, that this component study constituted a research "probe" to determine the presence of any broad patterns, similarities and differences. While grounded in empirical evidence about the significance of each physical feature to seniors' lives, only the presence of these features and not their quality was examined. For example, one could (and should) examine the terrain of the neighbourhood relative to transit access or determine the supply of seniors' housing units and nursing home beds relative to the size and composition of the seniors' population in the area. At a minimum, the results of this probe provide some direction for the conduct of more refined studies of seniors' suburban neighbourhoods.

8. CONCLUSIONS ON PATTERNS, PACE AND PROSPECTS

Shifting Residence Patterns of the Elderly

Over the two decades 1971–1991, three significant shifts occurred in the residence patterns of Canadian seniors, as revealed in this study's data:

- **The first is a shift toward metropolitan living.** Close to 60 percent of Canadian seniors now live within metropolitan areas. Their numbers grew by 99 percent compared to only 62 percent for non-metropolitan areas. The essential reason for this shift is demographic. That is, the aging of younger age groups who had swelled metropolitan populations from 1950–1970. Every Canadian CMA shows an increase in the numbers and proportion of its seniors' population which is 65 and older and of the very old (75+).
- **The second is the shift toward suburban living.** For the first time, in 1991, the number of elderly living in the suburbs of Canadian CMAs now exceeds the number living in core cities. Further, this shift affects newer suburbs as well as older ones, although generally declining with distance from the core city. Inner Suburbs, those closest to the core city, are currently experiencing the most dramatic aging and are now home to 30 percent of metropolitan seniors. Again, the demographic imperative plus the tendency of older people to age-in-place is the primary reason for this shift. Those 75+ are also part of this suburban aging.
- **The third is the reduction in age separation.** While the rapid suburbanization of the 1950s and 1960s fostered the concentration of the young in suburbs and of the old in core cities, since 1986 the generational separation has declined in most CMAs. Substantial separation still exists between seniors and other adults in core cities and in outer (newer) suburbs, although both are also declining. Two-thirds of CMAs have low to moderate generational separation of below 8 percent; the remainder have levels exceeding 12 percent. The reasons seem to include variations in population size and the pace and age of suburban development among CMAs.

These pattern changes parallel those experienced in metropolitan areas in the United States over roughly the same period, 1970–1988. Similar trends occurred in the U.S., only at an earlier date (Golant, 1990): those aged 65 and older living in U.S. metropolitan suburbs first exceeded the number of core city seniors in 1977, compared to 1991 in Canada; and major declines in age separation of seniors occurred after 1980 in the U.S., but not until 1986 in Canada.

Pattern Diversity Among the Suburban Elderly

The broad shifts in residential patterns of Canada's metropolitan seniors manifest themselves in two other significant tendencies of seniors: (1) their living arrangements and (2) the actual physical surroundings in which they live within the suburbs. The present study examined both of these tendencies in a cross-sectional way using 1986 census data and 1994 field surveys. In both instances, the result is that considerable diversity exists among groupings of suburban seniors and among their neighbourhoods.

- Household Diversity. Substantial variation occurs in the living arrangements of seniors between core cities and their suburbs. Seniors in core cities have a higher tendency to live alone (33%) and not in family situations (55%) than do seniors living in any of the suburban zones (23% and 63% respectively). In other words, core cities are the prime locations for single person senior households, due primarily to their higher concentrations of the very old who are more subject to widowhood and possibly by their greater range of housing stock suitable to single seniors. The converse is true for the suburbs. And while these tendencies prevail generally across all 25 CMAs, variations do occur in individual CMAs, due again to ecological and historical differences.
- Community Diversity. Ultimately, demographic patterns and living arrangements of seniors are arrayed in actual communities where seniors live. A sample of 12 census tracts covering all suburban zones of the Vancouver CMA provide a picture of considerable diversity of their senior residents and of the physical environments with which they must cope. In other words, the broad aggregates of data representing core cities and various suburban zones "smooth over smaller" residential situations of seniors, as Golant (1990) surmised in his U.S. studies.

The Vancouver probe indicates that the neighbourhood concentration of seniors and their living arrangements may vary substantially in any suburban zone as well as in any geographic sector of a metropolitan area. The provision of physical features of a neighbourhood that would support seniors independence — such as a nursing home, seniors housing, public transit and local sidewalks — tends to decline in numbers the more distant the suburb is from the core city.

The broad pattern changes of the metropolitan elderly are important in understanding the age group implications of on-going demographic changes. The diversity revealed regarding the communities in which seniors live provides a connection between aggregate aging tendencies and local needs of seniors.

Pace and Prospects of Future Elderly Suburbanization

There is no reason to expect that the suburbanization of the elderly in Canadian CMAs has reached its limit. For one, the two decades studied here indicate that further aging is still to come for newer, more distant suburbs. The U.S. data suggest this as well and also indicate the age concentrations we may expect in our suburbs, especially in the growth of the very old living there. And, of course, the aging of the "baby boom" generation is still to come after 2011 and will affect the suburbs more dramatically than it does core cities.

Using the U.S. metropolitan experience suggests that by the end of the current decade (or 2001), upwards of 60 percent of seniors in Canadian CMAs will live in the suburbs. Moreover, as many as 55 percent of the very old (75+) could be living there as well. These tendencies, among others, will lead to a continued reduction in generational separation over the decade.

The other side of this situation is the prospect of greater diversity in the types of senior households that exist in suburban areas with its attendant issues for housing and other supportive facilities and services for seniors. Indications from the Vancouver census tract probe of community environments suggest the need for a wide array of neighbourhood improvements, especially in more distant suburbs. Planning and policy initiatives will be needed to respond to the continuing aging of suburban populations such that services and facilities are in place for "enabling environments" for the suburban elderly.

Core cities, by contrast, show signs of reaching a plateau in their levels of aging. Whether the numbers of their elderly will begin to decline in the coming decade, as happened in a few Canadian core cities between 1986 and 1991, or even whether the latter declines will continue, is uncertain. In part this will depend upon the numbers of 45–54 and 55–64 year olds in their populations, two groups whose numbers are disproportionately low in the entire population. Each core city may experience different trends

and, thus, a watching brief on each is called for. What one can be certain about, however, is that core city seniors will age further with the result of even greater numbers of those 75+ to be accommodated and cared for.

9. REFERENCES

- Burgess, E. W. (1925). "The Growth of the City," in R. E. Park, E. W. Burgess and R. D. McKenzie eds., The City, Chicago: University of Chicago Press.
- Carp, Frances (1976). "Housing and Living Environments for Older People," in R. Binstock and E. Shanas eds., Handbook of Aging and the Social Sciences, New York: VanNostrand.
- Cortese, C. F., R. F. Falk, and J. Cohen (1976). "Further Considerations on the Methodological Analysis of Segregation Indices," American Sociological Review, Vol. 41, 630-637.
- Cowgill, D. O. (1978). "Residential Segregation by Age in American Metropolitan Areas," Journal of Gerontology, Vol. 33, 446-453.
- Crenna, David (1989). "Will We Ever Solve the Housing Problem?: Toward a Housing Agenda for the 1990s" in Tom Carter, ed. Perspectives on Canadian Housing Policy, Winnipeg: University of Winnipeg Institute for Urban Studies, Occasional Paper 17, 25-33.
- Golant, Stephen (1990). "The Metropolitanization and Suburbanization of the U.S. Elderly Population, 1970-1988," The Gerontologist, Vol. 30:1, 80-85.
- Golant, Stephen (1987). "Residential Moves by Elderly Persons to U.S. Central Cities, Suburbs, and Rural Areas," Journal of Gerontology, Vol. 42:5, 534-539.
- Golant, Stephen (1986). "Understanding the Diverse Environments of the Elderly," Environments, Vol. 18:3, 35-51.
- Greenburg, Lawrence (1982). "The Implications of an Aging Population for Land Use Planning," in A.M. Wames, ed., Geographical Perspectives on the Elderly, New York: John Wiley and Sons, 401-425.
- Hodge, Gerald (1993). Canada's Aging Rural Population: The Role and Response of Local Government, Toronto: ICURR Press.
- Hodge, Gerald (1992). Small Town Seniors and Their Freedom to Move, Burnaby BC: Simon Fraser University Gerontology Research Centre.
- Hodge, Gerald (1987). The Elderly in Canada's Small Towns: Recent Trends and their Implications, Vancouver: University of B.C. Centre for Human Settlements, Occasional Paper No.43.
- Logan, John R. (1984). "The Graying of the Suburbs," Aging, Vol. 345:4, 4-8.
- Logan, John R. and Glenna Spitze (1988). "Suburbanization and Public Services for the Aging," The Gerontologist, Vol. 28:5, 644-647.
- National Advisory Council on Aging (1989). Understanding Seniors' Independence, Ottawa: NACA.
- Northcott, Herbert (1988). Changing Residence: The Geographic Mobility of Elderly Canadians, Toronto: Butterworths.

- Rowles, Graham (1983). "Geographical Dimensions of Social Support," in G. Rowles and R. Ohta, eds., Aging and Milieu, New York: Academic Press, 111-130.
- Stone, Leroy O. (1983). "Settlement Pattern Shifts for the Older Population in and Around Western Canada Metropolitan Areas," in Aging Households: Demographic Trends and Implications for Service Provision at Home and Abroad, Vancouver: University of B.C. Centre for Human Settlements, Occasional Paper No. 27, 3-37.
- Stone, Leroy O. and Hubert Frenken (1988). Canada's Seniors, Ottawa: Statistics Canada, Cat. No. 98-121.
- Vance, James E. Jr. (1990). The Continuing City, Baltimore: Johns Hopkins Press.
- Welfield, Irving H. (1986). "Our Graying Suburbs: An Unusual Housing Problem," The Public Interest, (Fall) 50-57.

10. APPENDIX

TABLE A-1: CHANGING CONCENTRATIONS OF THE ELDERLY POPULATION WITHIN INDIVIDUAL CANADIAN METROPOLITAN AREAS, 1971-1991

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
CALGARY				
1971				
Core	6.30	6.23	—	—
1976				
Core	6.48	6.66	3.93	2.55
1981				
Core	6.13	6.40	—	—
1986				
Core	6.92	7.22	4.28	2.64
Inner Suburbs	3.26	3.43	2.16	1.10
Outer Suburbs	5.55	8.07	3.78	1.77
1991				
Core	7.91	7.16	4.87	3.04
Inner Suburbs	5.31	4.03	2.91	2.40
Outer Suburbs	7.16	8.93	4.09	3.07
CHICOUTIMI-JONQUIERE				
1971				
Core	4.01	6.04	—	—
Inner Suburbs	4.34	4.92	—	—
Outer Suburbs	5.42	6.34	—	—
1976				
Core	5.06	7.03	3.65	1.41
Inner Suburbs	4.03	5.43	2.88	1.15
Outer Suburbs	3.14	5.08	2.54	0.60

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
CHICOUTIMI-JONQUIERE <i>Continued</i>				
1981				
Core	6.27	8.28	—	—
Inner Suburbs	3.33	4.65	—	—
Outer Suburbs	3.50	4.91	—	—
1986				
Core	7.87	9.22	5.43	2.44
Inner Suburbs	5.85	7.08	3.85	2.00
Outer Suburbs	5.05	6.25	3.47	1.58
1991				
Core	9.78	9.27	6.53	3.26
Inner Suburbs	7.14	7.44	4.78	2.36
Outer Suburbs	6.29	7.79	4.44	1.86
EDMONTON				
1971				
Core	6.24	6.70	—	—
Inner Suburbs	3.62	4.52	—	—
Outer Suburbs	7.27	10.38	—	—
1976				
Core	7.14	7.31	4.43	2.71
Inner Suburbs	2.94	3.87	1.83	1.11
Outer Suburbs	6.65	5.25	3.50	3.15
1981				
Core	7.31	7.36	—	—
Inner Suburbs	3.12	4.43	—	—
Outer Suburbs	3.83	4.22	—	—
1986				
Core	8.25	8.08	5.04	3.21
Inner Suburbs	3.92	5.02	2.55	1.37
Outer Suburbs	7.85	6.87	4.61	3.24
Suburban Fringe	11.76	7.84	9.80	1.96

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
EDMONTON <i>Continued</i>				
1991				
Core	9.53	7.94	5.76	3.77
Inner Suburbs	4.86	5.43	3.10	1.76
Outer Suburbs	7.65	7.37	4.65	3.01
Suburban Fringe	12.32	11.44	8.80	3.52
HALIFAX				
1971				
Core	8.28	9.14	—	—
Inner Suburbs	3.96	5.21	—	—
Outer Suburbs	4.25	5.08	—	—
1976				
Core	10.01	9.94	6.12	3.88
Inner Suburbs	4.72	6.01	3.21	1.52
Outer Suburbs	4.48	5.26	2.86	1.62
1981				
Core	11.86	10.14	—	—
Inner Suburbs	6.02	7.76	—	—
Outer Suburbs	4.99	5.31	—	—
1986				
Core	13.48	9.34	7.88	5.60
Inner Suburbs	7.28	8.31	4.79	2.49
Outer Suburbs	4.96	5.47	3.33	1.63
1991				
Core	11.00	8.41	4.50	6.51
Inner Suburbs	8.86	8.52	5.80	3.05
Outer Suburbs	5.33	5.91	3.50	1.84
HAMILTON				
1971				
Core	9.54	8.79	—	—
Inner Suburbs	5.26	6.68	—	—
Outer Suburbs	6.72	7.05	—	—

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
HAMILTON Continued				
1976				
Core	10.42	9.20	6.34	4.09
Inner Suburbs	6.11	7.34	3.98	2.13
Outer Suburbs	6.94	7.87	4.45	2.49
1981				
Core	11.97	10.72	—	—
Inner Suburbs	7.45	8.84	—	—
Outer Suburbs	8.18	9.42	—	—
1986				
Core	13.22	11.42	7.80	5.43
Inner Suburbs	9.04	9.83	5.81	3.23
Outer Suburbs	8.91	9.80	5.76	3.15
1991				
Core	14.54	9.98	8.66	5.88
Inner Suburbs	10.72	9.32	6.84	3.89
Outer Suburbs	10.13	9.18	6.50	3.63
KITCHENER-WATERLOO				
1971				
Core	7.04	7.02	—	—
Inner Suburbs	8.17	7.77	—	—
1976				
Core	7.64	7.15	4.84	2.80
Inner Suburbs	8.43	7.80	5.07	3.36
1981				
Core	8.62	8.31	—	—
Inner Suburbs	9.56	8.31	—	—
1986				
Core	9.32	8.85	5.62	3.70
Inner Suburbs	10.42	8.77	6.17	4.25

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
KITCHENER-WATERLOO <i>Continued</i>				
1991				
Core	10.07	7.97	6.05	4.02
Inner Suburbs	10.56	7.88	6.18	4.39
LONDON				
1971				
Core	8.27	7.73	—	—
Inner Suburbs	7.31	7.95	—	—
Outer Suburbs	11.56	9.72	—	—
1976				
Core	8.95	8.39	5.42	3.53
Inner Suburbs	8.67	8.91	5.26	3.40
Outer Suburbs	11.42	8.30	5.66	5.75
1981				
Core	10.18	9.18	—	—
Inner Suburbs	9.35	10.45	—	—
Outer Suburbs	12.10	9.26	—	—
1986				
Core	11.14	9.35	6.69	4.45
Inner Suburbs	10.43	10.77	6.72	3.70
Outer Suburbs	13.70	9.82	7.95	5.75
1991				
Core	11.88	8.21	7.09	4.79
Inner Suburbs	11.12	9.73	7.05	4.07
Outer Suburbs	14.54	8.84	8.24	6.30
MONTREAL				
1971				
Core	8.91	9.88	—	—
Inner Suburbs	5.89	6.98	—	—
Outer Suburbs	4.56	6.05	—	—
Suburban Fringe	5.06	6.17	—	—

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
MONTREAL Continued				
1976				
Core	10.83	10.54	7.23	3.61
Inner Suburbs	6.80	7.60	4.47	2.34
Outer Suburbs	5.20	6.56	3.52	1.68
Suburban Fringe	5.36	6.34	3.58	1.73
1981				
Core	12.94	11.45	—	—
Inner Suburbs	8.26	8.89	—	—
Outer Suburbs	6.14	7.26	—	—
Suburban Fringe	6.07	7.00	—	—
1986				
Core	13.75	11.72	8.27	5.48
Inner Suburbs	9.78	10.21	6.09	3.69
Outer Suburbs	7.36	7.88	4.79	2.57
Suburban Fringe	6.96	7.84	4.63	2.33
1991				
Core	14.64	10.52	8.57	6.07
Inner Suburbs	11.88	10.51	7.25	4.63
Outer Suburbs	8.45	8.29	5.36	3.09
Suburban Fringe	7.35	7.46	4.79	2.56
OSHAWA				
1976				
Core	7.21	6.27	4.46	2.75
Inner Suburbs	7.47	6.92	4.40	3.07
1981				
Core	7.76	7.82	—	—
Inner Suburbs	6.55	7.14	—	—
1986				
Core	8.51	8.82	5.14	3.37
Inner Suburbs	8.07	7.92	4.98	3.09

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
OSHAWA Continued				
1991				
Core	10.10	8.42	6.25	3.85
Inner Suburbs	7.74	7.20	4.89	2.85
OTTAWA-HULL				
1971				
Core	8.24	8.75	—	—
Inner Suburbs	3.38	4.65	—	—
Outer Suburbs	5.05	5.75	—	—
Suburban Fringe	2.38	3.21	—	—
1976				
Core	9.52	9.94	5.82	3.70
Inner Suburbs	3.45	5.09	2.25	1.20
Outer Suburbs	4.32	5.49	2.90	1.42
Suburban Fringe	7.39	7.06	4.72	2.68
1981				
Core	11.83	11.08	—	—
Inner Suburbs	4.37	6.27	—	—
Outer Suburbs	4.41	5.96	—	—
Suburban Fringe	7.67	7.29	—	—
1986				
Core	13.28	10.62	8.14	5.14
Inner Suburbs	5.27	7.02	3.53	1.74
Outer Suburbs	5.32	5.87	3.56	1.76
Suburban Fringe	7.64	7.51	4.88	2.77
1991				
Core	14.36	9.13	8.50	5.86
Inner Suburbs	6.26	7.40	4.28	1.98
Outer Suburbs	5.62	5.83	3.69	1.92
Suburban Fringe	7.61	7.61	4.73	2.88

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
QUEBEC CITY				
1971				
Core	9.14	9.76	—	—
Inner Suburbs	5.35	6.65	—	—
Outer Suburbs	4.15	5.70	—	—
Suburban Fringe	4.35	5.39	—	—
1976				
Core	10.72	10.32	7.06	3.66
Inner Suburbs	5.53	6.54	3.72	1.81
Outer Suburbs	5.16	6.69	3.60	1.56
Suburban Fringe	5.18	5.88	3.51	1.68
1981				
Core	12.82	10.92	—	—
Inner Suburbs	6.89	7.53	—	—
Outer Suburbs	6.24	7.34	—	—
Suburban Fringe	4.64	5.26	—	—
1986				
Core	13.97	10.86	8.44	5.53
Inner Suburbs	8.73	8.67	5.56	3.17
Outer Suburbs	7.30	8.11	4.84	2.46
Suburban Fringe	5.46	5.80	3.70	1.76
1991				
Core	15.18	10.15	8.86	6.32
Inner Suburbs	10.86	9.56	6.66	4.20
Outer Suburbs	8.82	8.14	5.59	3.22
Suburban Fringe	6.20	5.92	4.06	2.14
REGINA				
1971				
Core	8.16	7.75	—	—
Inner Suburbs	6.72	10.67	—	—
1976				
Core	8.75	8.15	5.15	3.60
Inner Suburbs	5.02	8.78	3.13	1.88

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
REGINA Continued				
1981				
Core	9.22	8.18	—	—
Inner Suburbs	6.49	9.14	—	—
1986				
Core	9.88	7.99	5.87	4.01
Inner Suburbs	5.62	9.76	4.53	2.09
Outer Suburbs	8.37	8.47	5.63	2.74
1991				
Core	11.05	7.81	6.28	4.77
Inner Suburbs	8.00	7.64	5.82	2.18
Outer Suburbs	8.79	7.99	5.92	2.87
SAINT JOHN				
1971				
Core	9.60	9.09	—	—
Inner Suburbs	7.93	8.20	—	—
Outer Suburbs	7.70	7.33	—	—
Suburban Fringe	11.61	6.68	—	—
1976				
Core	10.59	9.67	6.19	4.40
Inner Suburbs	6.69	6.93	4.11	2.58
Outer Suburbs	5.51	5.59	3.52	1.99
Suburban Fringe	8.74	6.39	4.82	3.91
1981				
Core	12.26	9.96	—	—
Inner Suburbs	7.30	7.57	—	—
Outer Suburbs	4.86	5.26	—	—
Suburban Fringe	8.14	6.18	—	—
1986				
Core	14.04	9.88	8.25	5.79
Inner Suburbs	8.33	7.29	5.30	3.03
Outer Suburbs	5.92	5.63	3.87	2.05
Suburban Fringe	10.35	7.54	6.14	4.21

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
SAINT JOHN Continued				
1991				
Core	15.36	9.00	8.58	6.78
Inner Suburbs	9.35	7.91	5.77	3.59
Outer Suburbs	6.04	5.79	3.83	2.20
Suburban Fringe	11.00	7.26	6.22	4.78
SASKATOON				
1971				
Core	8.96	7.25	—	—
1976				
Core				
1981				
Core	9.51	7.74	—	—
1986				
Core	9.72	7.26	5.58	4.14
Inner Suburbs	6.02	5.48	3.72	2.30
Outer Suburbs	8.22	6.99	5.86	2.36
1991				
Core	10.74	7.26	5.89	4.85
Inner Suburbs	5.74	8.56	3.38	2.36
Outer Suburbs	9.35	7.79	5.87	3.48
SHERBROOKE				
1986				
Core	12.95	9.76	7.66	5.29
Inner Suburbs	6.37	5.88	4.03	2.34
Outer Suburbs	8.53	7.79	5.47	3.05

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
SHERBROOKE <i>Continued</i>				
1991				
Core	15.05	9.48	8.60	6.44
Inner Suburbs	6.89	6.13	4.21	2.68
Outer Suburbs	8.72	8.57	5.26	3.46
ST. CATHARINES-NIAGARA FALLS				
1971				
Core	8.32	8.44	—	—
Inner Suburbs	8.77	8.41	—	—
Outer Suburbs	9.36	8.85	—	—
1976				
Core	9.80	9.13	6.10	3.70
Inner Suburbs	9.39	9.57	5.78	3.61
Outer Suburbs	9.98	9.17	6.28	3.70
1981				
Core	11.70	10.61	—	—
Inner Suburbs	10.85	11.19	—	—
Outer Suburbs	11.82	11.12	—	—
1986				
Core	13.46	11.22	8.24	5.22
Inner Suburbs	12.86	11.44	7.89	4.97
Outer Suburbs	13.68	12.16	8.62	5.05
1991				
Core	15.21	10.18	9.24	5.97
Inner Suburbs	14.34	10.18	8.84	5.50
Outer Suburbs	15.37	11.00	9.49	5.87

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
ST. JOHN'S				
1971				
Core	7.31	8.00	—	—
Inner Suburbs	2.89	3.80	—	—
Outer Suburbs	5.52	6.53	—	—
Suburban Fringe	9.43	7.74	—	—
1976				
Core	8.34	8.64	5.09	3.25
Inner Suburbs	3.47	4.62	2.35	1.12
Outer Suburbs	5.35	6.31	3.49	1.86
Suburban Fringe	9.06	9.39	5.50	3.56
1981				
Core	10.15	8.23	—	—
Inner Suburbs	4.52	4.82	—	—
Outer Suburbs	5.20	5.63	—	—
Suburban Fringe	9.42	8.84	—	—
1986				
Core	10.63	8.15	6.41	4.22
Inner Suburbs	5.35	4.64	3.68	1.69
Outer Suburbs	7.06	6.02	4.64	2.42
Suburban Fringe	10.75	7.39	6.99	3.76
1991				
Core	11.69	7.96	6.60	5.09
Inner Suburbs	5.64	5.05	3.46	2.18
Outer Suburbs	6.78	6.27	4.25	2.53
Suburban Fringe	10.49	7.56	7.20	3.29
SUDBURY				
1971				
Core	4.89	7.28	—	—
Inner Suburbs	2.36	3.95	—	—
Outer Suburbs	2.86	6.40	—	—

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
SUDBURY Continued				
1976				
Core	6.71	8.32	4.63	2.07
Inner Suburbs	2.90	5.03	2.09	0.81
1981				
Core	9.07	10.27	—	—
Inner Suburbs	3.89	6.36	—	—
1986				
Core	11.18	11.30	7.28	3.89
Inner Suburbs	5.29	7.94	3.93	1.36
Outer Suburbs	5.34	10.23	4.45	0.89
1991				
Core	13.29	10.22	8.30	4.98
Inner Suburbs	6.23	8.55	4.54	1.68
Outer Suburbs	7.69	7.69	6.11	1.57
THUNDER BAY				
1971				
Core	9.09	8.91	—	—
Inner Suburbs	6.52	7.88	—	—
1976				
Core	9.63	9.47	6.08	3.55
Inner Suburbs	7.12	7.26	4.88	2.24
1981				
Core	10.90	10.31	—	—
Inner Suburbs	6.79	7.82	—	—
Outer Suburbs	7.63	5.93	—	—
1986				
Core	12.26	10.48	7.65	4.61
Inner Suburbs	7.05	8.47	4.82	2.22
Outer Suburbs	5.77	8.08	4.23	1.54

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
THUNDER BAY <i>Continued</i>				
1991				
Core	13.83	9.20	8.31	5.52
Inner Suburbs	8.12	9.47	5.59	2.53
Outer Suburbs	6.37	7.87	4.49	1.87
TORONTO				
1971				
Core	10.99	9.30	—	—
Inner Suburbs	6.74	7.93	—	—
Outer Suburbs	4.41	5.39	—	—
Suburban Fringe	6.47	6.39	—	—
1976				
Core	11.79	8.91	7.06	4.73
Inner Suburbs	8.10	8.70	5.19	2.90
Outer Suburbs	4.37	5.44	2.74	1.63
Suburban Fringe	6.84	6.86	4.01	2.83
1981				
Core	12.49	9.55	—	—
Inner Suburbs	9.84	10.27	—	—
Outer Suburbs	4.89	6.27	—	—
Suburban Fringe	7.56	7.95	—	—
1986				
Core	11.96	9.53	6.62	5.35
Inner Suburbs	11.32	11.28	6.99	4.33
Outer Suburbs	5.46	6.80	3.47	1.99
Suburban Fringe	8.28	8.48	5.01	3.27
1991				
Core	12.01	8.63	6.64	5.37
Inner Suburbs	13.10	10.51	8.02	5.08
Outer Suburbs	6.17	6.93	3.94	2.23
Suburban Fringe	8.69	7.99	5.23	3.46

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
TROIS RIVIÈRES				
1981				
Core	11.91	10.52	—	—
Inner Suburbs	7.12	5.07	—	—
Outer Suburbs	4.56	5.39	—	—
1986				
Core	13.42	11.49	8.07	5.35
Inner Suburbs	8.12	8.77	5.21	2.90
Outer Suburbs	9.53	8.18	5.84	3.69
1991				
Core	16.13	11.70	9.49	6.64
Inner Suburbs	9.14	8.77	5.86	3.28
Outer Suburbs	9.85	8.24	5.68	4.17
VANCOUVER				
1971				
Core	13.20	11.14	—	—
Inner Suburbs	6.89	8.14	—	—
Outer Suburbs	7.53	6.58	—	—
Suburban Fringe	8.68	7.98	—	—
1976				
Core	14.40	11.49	8.36	6.03
Inner Suburbs	8.20	9.36	4.97	3.24
Outer Suburbs	7.35	7.06	4.46	2.89
Suburban Fringe	8.52	7.68	5.25	3.27
1981				
Core	15.21	10.92	—	—
Inner Suburbs	10.12	10.30	—	—
Outer Suburbs	8.18	7.83	—	—
Suburban Fringe	8.99	7.76	—	—
1986				
Core	15.16	10.30	8.63	6.53
Inner Suburbs	11.57	10.61	7.17	4.40
Outer Suburbs	9.20	8.19	5.90	3.30
Suburban Fringe	9.50	7.65	5.94	3.56

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
VANCOUVER Continued				
1991				
Core	14.27	8.98	7.72	6.55
Inner Suburbs	12.54	9.43	7.37	5.17
Outer Suburbs	10.21	7.88	6.28	3.83
Suburban Fringe	9.73	7.34	5.99	3.73
VICTORIA				
1971				
Core	22.89	11.54	—	—
Inner Suburbs	12.34	10.16	—	—
Outer Suburbs	7.30	7.92	—	—
Suburban Fringe	17.65	11.92	—	—
1976				
Core	24.24	12.14	12.21	12.03
Inner Suburbs	14.18	11.38	7.68	5.50
Outer Suburbs	7.41	8.43	4.78	2.63
Suburban Fringe	15.18	13.47	9.32	5.86
1981				
Core	25.77	11.25	—	—
Inner Suburbs	15.30	12.22	—	—
Outer Suburbs	8.29	9.11	—	—
Suburban Fringe	17.31	14.85	—	—
1986				
Core	25.25	9.61	12.05	13.20
Inner Suburbs	17.12	11.71	10.36	6.76
Outer Suburbs	9.54	8.75	6.49	3.05
Suburban Fringe	19.81	13.71	13.56	6.25
1991				
Core	23.91	7.40	10.52	13.39
Inner Suburbs	18.19	9.95	10.53	7.66
Outer Suburbs	11.24	8.34	7.47	3.77
Suburban Fringe	21.99	11.53	14.06	7.94

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
WINDSOR				
1971				
Core	10.03	8.18	—	—
Inner Suburbs	6.22	6.02	—	—
Outer Suburbs	7.73	7.26	—	—
Suburban Fringe	7.37	6.91	—	—
1976				
Core	10.96	8.77	6.58	4.38
Inner Suburbs	6.06	6.33	3.64	2.42
Outer Suburbs	8.15	8.15	4.62	3.53
Suburban Fringe	7.25	7.29	4.72	2.53
1981				
Core	12.10	10.29	—	—
Inner Suburbs	6.06	7.48	—	—
Outer Suburbs	8.85	8.63	—	—
Suburban Fringe	7.40	7.59	—	—
1986				
Core	12.78	10.70	7.24	5.54
Inner Suburbs	6.67	8.54	4.33	2.34
Outer Suburbs	9.97	8.73	6.08	3.89
Suburban Fringe	8.45	7.47	5.63	2.82
1991				
Core	14.29	9.80	8.45	5.84
Inner Suburbs	6.98	7.82	4.66	2.32
Outer Suburbs	10.62	8.27	6.51	4.11
Suburban Fringe	9.14	7.94	6.17	2.97
WINNIPEG				
1971				
Core	10.15	9.45	—	—
Inner Suburbs	6.11	6.60	—	—
1976				
Core	10.20	9.29	6.19	4.01
Inner Suburbs	8.18	7.52	4.52	3.66

Census Metropolitan Area	Percent Elderly Age Groups			
	65+	55-64	65-74	75+
WINNIPEG Continued				
1981				
Core	11.64	9.80	—	—
Inner Suburbs	8.27	7.80	—	—
1986				
Core	12.31	9.41	7.33	4.98
Inner Suburbs	7.59	7.50	4.53	3.06
1991				
Core	13.18	8.41	7.62	5.65
Inner Suburbs	7.32	7.04	4.47	2.84

Source: Census of Canada

Notes: Percent 65+ may not equal totals of 65—74 and 75+ due to random rounding in original census figures.

TABLE A-2: DISTRIBUTION OF SEPARATION INDICES OF THE ELDERLY POPULATION (65+ AND 75+) AMONG CORE CITIES AND SUBURBAN ZONES OF CANADIAN METROPOLITAN AREAS, 1991

		65+					75+					65+
		TOTAL	20-34	35-44	45-54	55-64	TOTAL	20-34	35-44	45-54	55-64	
SUDBURY	CORE	-16.07	-15.40	-19.48	-16.67	-12.50	-22.08	-21.41	-25.49	-22.68	-18.51	-9.20
	INNER SB	15.17	15.19	18.32	14.85	10.94	20.13	20.15	23.28	19.81	15.90	7.60
	OUTER SB	.90	.22	1.16	1.82	1.56	1.94	1.26	2.20	2.86	2.60	1.59
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
THUNDER	CORE	-3.26	-2.19	-4.43	-4.55	-3.30	-4.27	-3.20	-5.44	-5.56	-4.31	-1.67
	INNER SB	2.70	1.71	3.61	4.05	2.90	3.58	2.59	4.49	4.93	3.78	1.46
	OUTER SB	.57	.49	.83	.51	.41	.70	.62	.96	.64	.54	.22
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TORONTO	CORE	-2.65	.63	-2.15	-3.73	-3.03	-5.14	-1.86	-4.64	-6.22	-5.52	-4.12
	INNER SB	-11.27	-12.12	-15.21	-11.90	-3.31	-10.23	-11.08	-14.17	-10.86	-2.27	1.72
	OUTER SB	12.08	11.08	14.82	13.10	5.61	13.60	12.60	16.34	14.62	7.13	2.51
	FRINGE	1.83	.41	2.53	2.52	.72	1.77	.35	2.47	2.46	.66	-.10
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TROIS R	CORE	-13.38	-12.44	-17.83	-13.22	-6.12	-15.69	-14.75	-20.14	-15.53	-8.43	-3.80
	INNER SB	10.91	10.89	14.15	12.02	5.99	14.18	14.16	17.42	15.29	9.26	5.39
	OUTER SB	2.47	1.55	3.68	1.20	.13	1.51	.59	2.72	.24	-.83	-1.58
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
VANCOUVER	CORE	-6.02	-.63	-6.61	-8.41	-4.50	-9.56	-4.17	-10.15	-11.95	-8.04	-6.13
	INNER SB	-.79	-2.48	-1.15	1.67	1.67	-.18	-1.87	-.54	2.28	2.28	1.06
	OUTER SB	4.77	2.25	5.00	4.98	2.29	6.96	4.44	7.19	7.17	4.46	3.79
	FRINGE	2.04	.86	2.77	1.77	.54	2.78	1.60	3.51	2.51	1.28	1.28
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
VICTORIA	CORE	-6.52	.61	-8.09	-11.91	-11.34	-14.47	-7.34	-16.04	-19.86	-19.29	-14.20
	INNER SB	1.44	-.63	.48	3.60	4.71	3.67	1.60	2.71	5.83	6.94	4.00
	OUTER SB	7.42	6.79	9.60	9.16	5.59	10.11	9.48	12.29	11.85	8.28	4.85
	FRINGE	-2.34	-6.77	-2.00	-.85	1.05	.69	-3.74	1.03	2.18	4.08	5.45
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
WINDSOR	CORE	-8.80	-6.40	-12.60	-11.82	-5.00	-10.75	-8.35	-14.55	-13.77	-6.95	-3.24
	INNER SB	6.21	4.83	8.93	8.28	4.00	7.46	6.08	10.18	9.53	5.25	2.08
	OUTER SB	1.66	.87	2.39	2.30	.55	1.91	1.12	2.64	2.55	.80	.42
	FRINGE	.95	.71	1.30	1.25	.46	1.39	1.15	1.74	1.69	.90	.74
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
WINNIPEG	CORE	-2.46	-.99	-3.33	-3.05	-1.58	-2.76	-1.29	-3.63	-3.35	-1.88	-.52
	INNER SB	2.46	.99	3.33	3.05	1.58	2.76	1.29	3.63	3.35	1.88	.52
	TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Positive PCTS indicate MORE of this age group than of seniors. Negative PCTS indicate FEWER of this age group than of seniors.

TABLE A-3: LIVING ARRANGEMENTS OF THE ELDERLY POPULATION (65+) WITHIN INDIVIDUAL CANADIAN METROPOLITAN AREAS, 1986

	Percent of Population 65+*			
	Living with Family	Living with Relatives	Living with Non-Relatives	Living Alone
CALGARY				
Core	58.7	8.5	1.9	30.8
Inner Suburbs	63.1	7.1	1.2	29.8
Outer Suburbs	69.7	10.9	0.9	18.6
CHICOUTIMI-JONQUIERE				
Core	66.6	10.6	2.4	20.4
Inner Suburbs	68.4	12.9	2.5	16.0
Outer Suburbs	75.9	10.1	1.3	15.2
EDMONTON				
Core	58.6	8.4	2.2	30.9
Inner Suburbs	66.7	9.5	1.4	22.6
Outer Suburbs	65.4	4.9	1.8	28.2
Suburban Fringe	78.6	7.1	—	21.4
HALIFAX				
Core	54.9	12.0	3.6	29.4
Inner Suburbs	60.4	12.0	2.6	25.0
Outer Suburbs	62.0	16.5	2.6	18.6
HAMILTON				
Core	57.2	9.0	2.2	31.6
Inner Suburbs	66.6	9.0	1.2	23.2
Outer Suburbs	69.8	8.6	1.5	20.9
KITCHENER-WATERLOO				
Core	60.9	8.4	1.9	28.8
Inner Suburbs	61.5	9.2	1.7	27.7

	Percent of Population 65+*			
	Living with Family	Living with Relatives	Living with Non-Relatives	Living Alone
LONDON				
Core	58.7	7.0	1.7	32.6
Inner Suburbs	69.3	8.9	1.7	20.4
Outer Suburbs	59.8	5.4	1.6	33.1
MONTREAL				
Core	50.9	11.5	3.6	34.0
Inner Suburbs	57.4	12.8	2.9	26.8
Outer Suburbs	60.8	13.5	3.1	22.7
Suburban Fringe	63.2	13.1	3.8	19.2
OSHAWA				
Core	60.4	9.1	2.3	28.2
Inner Suburbs	64.0	9.1	1.5	25.4
OTTAWA-HULL				
Core	54.2	8.7	2.3	34.9
Inner Suburbs	62.9	14.2	2.5	20.4
Outer Suburbs	65.6	12.2	2.1	19.9
Suburban Fringe	65.7	10.5	3.0	19.9
QUEBEC CITY				
Core	51.0	12.0	3.6	33.4
Inner Suburbs	63.6	11.5	3.1	21.8
Outer Suburbs	63.0	11.0	3.2	22.6
Suburban Fringe	68.0	12.9	3.2	16.1
REGINA				
Core	57.6	6.6	2.6	33.2
Inner Suburbs	72.2	5.6	—	33.2
Outer Suburbs	64.5	7.2	3.0	25.3

	Percent of Population 65+*			
	Living with Family	Living with Relatives	Living with Non-Relatives	Living Alone
SAINT JOHN				
Core	54.6	11.7	2.9	30.8
Inner Suburbs	66.0	12.7	2.0	20.8
Outer Suburbs	63.6	12.6	3.1	21.1
SASKATOON				
Core	58.6	6.2	2.2	33.1
Inner Suburbs	73.8	6.4	1.4	17.4
Outer Suburbs	68.5	4.9	1.9	24.1
SHERBROOKE				
Core	56.5	9.6	3.7	30.2
Inner Suburbs	61.7	10.0	4.2	23.9
Outer Suburbs	66.9	7.8	6.3	21.8
ST. CATHARINES-NIAGARA FALLS				
Core	61.3	8.0	1.7	29.0
Inner Suburbs	63.7	8.2	1.4	26.5
Outer Suburbs	61.5	7.9	1.6	29.1
ST. JOHN'S				
Core	58.5	17.7	2.7	21.0
Inner Suburbs	60.9	21.3	2.3	15.5
Outer Suburbs	66.2	18.2	2.5	12.6
Suburban Fringe	63.0	17.8	—	15.1
SUDBURY				
Core	58.7	7.7	1.8	31.9
Inner Suburbs	67.0	9.0	1.4	22.8
Outer Suburbs	74.6	6.8	—	16.9
THUNDER BAY				
Core	57.2	7.5	3.0	32.4
Inner Suburbs	71.1	8.8	1.8	20.2
Outer Suburbs	60.0	20.0	—	20.0

	Percent of Population 65+*			
	Living with Family	Living with Relatives	Living with Non-Relatives	Living Alone
TORONTO				
Core	48.2	11.6	5.4	34.8
Inner Suburbs	60.5	11.6	1.8	20.7
Outer Suburbs	61.1	17.4	1.7	19.8
Suburban Fringe	63.4	10.7	1.9	24.1
TROIS RIVIÈRES				
Core	54.7	11.2	3.6	30.5
Inner Suburbs	62.3	12.0	3.4	22.3
Outer Suburbs	63.8	14.8	2.4	19.3
VANCOUVER				
Core	51.9	9.1	2.6	36.5
Inner Suburbs	62.6	8.8	2.1	26.5
Outer Suburbs	65.6	8.3	2.0	24.1
Suburban Fringe	63.9	7.4	2.0	26.6
VICTORIA				
Core	50.6	4.3	2.0	43.1
Inner Suburbs	65.4	6.0	1.6	27.0
Outer Suburbs	70.8	6.2	1.7	20.8
Suburban Fringe	72.3	3.9	1.4	22.4
WINDSOR				
Core	55.5	8.2	1.8	34.6
Inner Suburbs	65.8	13.7	1.6	18.1
Outer Suburbs	65.6	8.4	1.5	24.5
Suburban Fringe	65.2	7.4	2.2	25.9
WINNIPEG				
Core	57.2	7.2	1.6	34.0
Inner Suburbs	67.9	7.2	1.9	21.5

Source: Census of Canada

Notes: *Totals may not equal 100% due to rounding census categories.