

Canada's Aging Population (1986) Redux*

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RÉSUMÉ

Canada's Aging Population par Susan McDaniel était le livre inaugurale dans la série Butterworths sur le vieillissement dans les années 1980. Ceci a ouvert une industrie d'expansion dans la recherche sur le vieillissement. Maintenant, on sait beaucoup plus sur les processus – à la fois individuels et collectives – qui font partie du vieillissement. Maintenant, on peut faire des projections plus fiables de la population future. Cela dit, les mythes et les malentendus persistent – en particulier sur les implications politiques du vieillissement de la population. Il semble que les mêmes craintes et les mêmes angoisses se répètent maintes fois. Il reste une déconnexion entre nos connaissances croissantes au sujet de la population et les médias ou les réponses politiques.

ABSTRACT

Canada's Aging Population by Susan McDaniel was the inaugural book in the Butterworths series on aging in the 1980s. It opened a "growth industry" in research on aging. Much more is known now about the processes, both individual and collective, that are part of aging. More reliable projections of future population can now be made. That said, myths and misunderstandings – particularly about the policy implications of population aging – persist. It seems that the same fears and anxieties occur again and again. The disconnect remains between our growing knowledge about population aging and media or policy responses.

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Canada's Aging Population (McDaniel, 1986) was the inaugural monograph in the Butterworths Perspectives on Individual and Population Aging Series, edited by Barry McPherson. The book is described by McPherson in his foreword as not merely a fact book, but a book that provides "linkages between demographic processes and a number of biological, psychological and sociological processes that can impact on both aging individuals and aging populations" (p. vii). He continued the foreword by noting that the book attempted to dispel myths about population aging, and then added, with a hint of pleasure, that the book worked

to keep statistics to a minimum. This latter point is something we have kept in mind as we update the original book.

Population aging is the process whereby an entire population grows older. It is a concept not readily comprehended since it does not connect clearly and directly with our own experiences of getting older on each birthday. Populations age differently than individuals, less through biological maturation than by having few young entrants and a greater proportion of individuals living longer. Essentially, if a population is cut away at the base by a declining birth rate, then regardless of

what happens to older people, the population will age. This is why the major cause of demographic aging is well-practiced family planning.

The 1986 book addresses cohort flows over time and how these can determine and/or affect life chances. If, for example, one is born into a large cohort such as the baby boom (i.e., those born from 1946 to 1966), competition for jobs, for schools, and for marriage partners is steep. This cohort then, or at least some portion in the cohort, may do less well overall than those born prior to or during World War II in much smaller cohorts. This has been examined more closely since 1986 by McDaniel (2001), among others. The 1986 discussion, of course, predates the popularized concepts of Generation X or Y (Coupland, 1991) that have captured so much attention, and made cohort flow an everyday idea. It also predates the first edition of the widely read book, *Boom, Bust and Echo ...* (Foot, 1996) about how cohort size and flow can explain many social and economic trends.

Population aging can be measured in a variety of ways outlined in the 1986 book including (a) percentage change in the population over a certain age, typically 65; (b) so-called dependency ratios of those who are old or young or both to those in the middle of the population; (c) median age; (d) or years remaining until death. All measures, of course, have undergone changes since 1986, as can be seen in the updated tables. The measure that has received the most criticism in recent decades is the dependency ratio (see Gee, 2000; McMullin & Cooke, 2004, for example), although the 1986 book noted that critiques of this measure are long-standing (see Myles, 1982, for example). Arguments against the dependency ratio (typically the ratio of those over age 65 to those in the presumed working ages of 18–64) are its unrealistic reflection of actual behaviours by age. For instance, increasing numbers of people are in the paid workforce while still in school, and recently, there has been an increase in the numbers of people over age 65 still working for pay. And, in the presumed labour-force-age population, many are not working in the paid labour market either because they have to care for young children or elders, for example, or because they cannot find work. Yet, the demographic dependency measure is still used extensively, as if it had meaning (see Parliamentary Budget Office, 2010, as but one example).

The 1986 book used the power of perspective to comprehend and interpret population aging. This viewpoint was unusual in the mid-1980s since much of the work on demographic aging at the time was simply descriptive. Three perspectives were discussed: (a) demographic determinism, (b) the crisis approach, and (c) the contextual approach. Demographic deter-

minism takes the view that social structure and actions are determined by demographic change. This is essentially the perspective taken by Foot (1996) and by Coupland (1991), as we have mentioned. Demographic determinism is not alarmist about the implications, it is just an outlook expressing confidence that changing populations, particularly shifting cohort sizes, can explain much about society and the economy.

The second perspective advanced demographic determinism, through an extra step, to a crisis approach in posing the question as to whether society can adjust sufficiently to meet the changes brought about by population aging. This “take” on population aging recurs every few years, as if aging population were something new or previously unnoticed. This perspective, it was predicted (McDaniel, 1987), can and has been used as a paradigm to explain policy cuts in Canada for several decades.

The third perspective in the 1986 book is the contextual approach wherein population aging is set within the complexity of changing social realities. This is where much of the research on population aging in Canada over the past 25 years has been centred.

Canada, in the 1986 book, was just one among all developed countries experiencing population aging. In the mid-2000s, it remains among the demographically youngest of the developed countries, with 13.1 per cent of its population aged 65 and over in 2005 (see Table 1). The United States has now taken the lead from Canada in having the youngest population among developed countries. The reasons are clear in Table 1, with the United States having more young people, indicative of a higher birthrate. The oldest countries in the mid-2000s are Japan, Italy, Germany, and Spain. Of those, only Germany appeared in the 1986 table. Much has been written in the past 25 years about Japan's aging population (United Nations, 2008). As the demographically oldest country in the world, it is leading the way for the rest of us.

Added to our updated table are China and India, both of which are rapidly aging, particularly China with its relatively low birth rate. Together, these two countries now have close to one third of the world's older population (United States National Institute of Aging, 2008). The developing world, taken as a whole, is aging very fast, something not considered in the mid-1980s, and this has obvious implications for future international policies. More people in the developing world will not age in good health, which is a budding future challenge for policy makers and families in these countries and for global institutions. It is said that the developed world had the good fortune to grow rich before growing old. The developing world is growing old before growing rich, thereby creating serious policy challenges.

Table 1: Percentage distribution of population by three age groups for selected developed countries + India and China, 2005

Developed Country	Distribution by Age Group (%)		
	0–14	15–64	65 and over
Belgium	17.1	65.7	17.3
Canada	17.6	69.3	13.1
France	18.4	65.1	16.5
Germany	14.3	66.8	18.9
Japan	13.4	66.6	20.0
Hungary	15.5	68.8	15.6
Italy	14.2	66.1	19.7
Norway	19.6	65.9	14.5
Spain	14.5	66.8	17.7
Sweden	17.4	65.5	17.2
Switzerland	16.1	67.9	16.0
United Kingdom	18.0	65.9	16.1
United States	20.8	66.8	12.4
China	22.0	70.4	7.6
India	33.1	62.3	4.6

Source: United Nations Data: World Population Prospects, 2008 Revision (<http://data.un.org/Explorer.aspx?d=POP>)

Table 2 updates the long history of population aging across the world. It points, as well, to the perils of population projections. In the case of Canada and the United States, projections of the older population by 2010, as presented in the 1986 book, were too high. For many European countries, projections were too low. In Table 3, what is interesting is that the point made in 1986 was even truer by 2001: that is, although the median age of Canada's population and the proportion aged 65 and over have continued to rise, the overall "dependency" (i.e., the combination of young and old in ratio to the middle) has never been lower. It has dropped almost consistently since 1851. Moreover, Table 4 shows that despite the considerable alarmism about worker shortages – this with an unemployment rate hovering around 8.5 per cent – the proportion of the population that is of labour force age remains substantial and has actually increased since 1981, the most recent year reported in the 1986 book. That deep concern about labour shortages as a result of population aging may be overstated has been demonstrated in several studies over the past 25 years (see Hicks, 2011; Marshall, Heinz, Krüger, & Verma, 2001; McMullin & Cooke, 2004).

Contemporary issues in 1986 included concerns about zero population growth and worry that it might lead to lower economic growth. Very clearly, this concern was not well founded, even in 1986. We would add emphasis now to points made in 1986: that population aging is the collective result of people's choices to have fewer children, that economic alarmism about an aging population

is not well founded, that intergenerational strife in Canada is not likely, and that an older population can be both productive and creative. On the latter point, increasing evidence as well as contemporary trends towards later and more flexible retirement (see Hicks, 2011; Schellenberg & Ostrovsky, 2008) suggest that with longevity, more people work longer, and with the knowledge and skills they bring to the workforce, they often work more productively than do younger workers (McMullin & Cooke, 2004). Concerns are still occasionally expressed about mobility and job prospects if older workers stay longer in the paid labour market, but generally, the policy issue has now become how best to retain older workers longer to help, as is customary in our pay-as-you-go pension system, in making pension contributions for younger workers, as well as to help older workers maintain productive lives longer (Tremblay & Genin, 2009).

Concerns, raised in the 1986 book, about women in an aging Canada continue. Although many more women now work in paid labour than 25 years ago, with a particularly sharp increase among women with young children, there are still challenges to be addressed as women age. A dichotomy has emerged (see Zimmerman, 2009) with some women having access to good pensions while others who spent their lives raising children or working in low-skill, often part-time jobs having very limited financial prospects for retirement and old age. These issues, raised by Gee and Kimball (1987) in a subsequent Butterworths Series book, persist in 2011.

Five areas of policy focus relevant to population aging were discussed in the 1986 book: (a) retirement and work, (b) health issues, (c) housing, (d) family, and (e) education. We have come some way in the past 25 years towards a better understanding of the relation of demographic aging to retirement and work. Subsequent books in the Butterworths Series (McDonald & Wanner, 1990) contributed substantially to this understanding, as have others (e.g., see Schellenberg, 1994). The Canadian public pension system has been reformed, with higher premiums for those working and with the creation of an arm's-length Canada Pension Plan (CPP) Investment Board, which manages the fund to obtain better returns for future retirees. That said, it is widely acknowledged in 2011 that the CPP is inadequate in providing a pension that can be lived on. Aside from the demographics of an aging population, it is also clear that private pensions are very much in need of regulation and better management. The financial crisis of 2008 onward taught that lesson as leading companies, such as Nortel Networks, went bankrupt, dissolving their employees' pensions with their insolvency.

Public discussion on how to solve the many challenges of providing livable pensions is ongoing, with conflicting

Table 2: Old age dependency ratios for selected countries 1950–1980, and projected to 2060

World	New										New										
	1950	1960	1970	1980	1990	2000	2010	2010	2015	2020		2020	2025	2025	2030	2035	2040	2045	2050	2055	2060
Core Developed Regions																					
Total	9.2	9.5	9.6	9.9	9.8	10.5	10.9	14.1	16.0	12.7	18.1	26.5	20.5	22.7	23.8	24.5	25.0	25.5			
Canada	11.8	13.5	15.2	17.2	17.5	19.8	20.9	14.1	16.0	24.3	18.1	26.5	20.5	22.7	23.8	24.5	25.0	25.5			
United States	12.2	12.7	12.7	13.1	14.5	15.1	16.5	13.0	14.3	22.8	16.1	27.3	18.1	19.8	20.6	21.0	21.2	21.6			
Hungary	12.5	15.5	15.9	16.2	17.6	16.9	17.0	24.2	26.3	21.9	30.3	25.0	33.3	34.06	36.21	40.11	46.69	50.83	54.49		
Norway	10.9	13.8	17.0	20.8	20.7	22.8	24.2	22.7	25.7	29.2	28.3	30.3	31.3	34.32	37.74	40.24	40.94	41.43	42.38		
Sweden	14.7	17.6	20.6	23.2	24.5	22.1	21.5	27.8	31.5	27.2	33.7	29.4	35.5	37.43	39.59	40.78	41.11	41.91	43.99	46.71	
United Kingdom	15.5	18.1	20.9	25.2	26.6	24.9	27.5	24.7	27.1	32.9	28.6	33.6	30.4	33.23	35.89	36.92	36.72	37.96	40.23		
Belgium	16.0	17.9	20.6	23.1	23.2	23.1	23.3	26.1	28.2	27.1	30.6	29.2	33.8	37.58	40.47	42.27	43.01	43.87	44.72		
France	16.2	18.5	21.2	21.8	21.1	23.8	23.5	25.8	29.3	28.3	32.8	31.2	35.9	39.02	41.74	43.99	44.18	44.68	45.18		
W. Germany	17.3	18.8	20.7	21.4	19.7	22.0	21.4	31.2	32.2	27.0	35.3	29.5	39.5	46.23	52.79	54.73	55.13	56.43	58.25	59.08	
Switzerland	14.0	16.0	20.7	22.7	20.1	22.8	28.5	24.9	27.5	30.0	29.9	32.0	33.2	37.72	41.81	43.74	44.61	45.74	47.05	48.00	
	14.4	15.2	17.4	20.2	20.8	23.5	28.3			34.0		35.8									
Developed Regions																					
Total	7.8	7.4	7	7	7.5	7.9	8.5	10.3				11.8									

Source: US-Population Projections, 2008 National Population Projections; http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/details/dataset?p_product_code=TSDE511; Table 052-0004 Projected population, by projection scenario, sex and age group as at July 1, Canada, provinces and territories, annual (persons) <http://www.census.gov/population/www/projections/summarytables.html>

Table 3: Three measures of demographic aging for Canada, 1851 to 2009

Year	Measures		
	Median Age	Population age 65 and over (%)	Total Dependency Ratio
1851	17.2	2.7	0.909
1861	18.2	3.0	0.834
1871	18.8	3.7	0.828
1881	20.1	4.1	0.749
1891	21.4	4.6	0.692
1901	22.7	5.0	0.651
1911	23.8	4.7	0.603
1921	24.0	4.8	0.644
1931	24.8	5.6	0.592
1941	27.1	6.7	0.526
1951	27.7	7.8	0.615
1961	26.3	7.6	0.712
1971	26.3	8.1	0.604
1981	29.5	9.7	0.475
1991	33.3	11.6	0.503
2001	37.2	12.6	0.490
CANSIM		051-0001	
Estimates of population, by age group and sex for July 1, Canada, provinces and territories annual (persons) 1971–2008			

Source: Statistics Canada: Population Estimates & Demographics 1981–2001, CANSIM 051-0001, Estimates of population, by age and sex for July 1, Canada provinces and territories, annual (persons) 1971–2008

<http://www5.statcan.gc.ca/cansim/a05?lang=eng&id=510001>

proposals being considered. Many wish to see an expansion of the CPP. Others prefer to opt for individual savings plans such as those in the United States, or some hybrid of individual and corporate plans. What is crucial in these discussions is that the underlying force that motivates pension discussions in Canada is generally not demographic aging, but rather the inadequacy of the amounts CPP provides to retirees and the challenge of bankrupt companies leaving their retirees without pensions.

With respect to health issues and population aging, the past 25 years have seen massive growth in research and data sources, affording researchers significant new policy-relevant insights. Yet, remarkably, many of the myths outlined in the 1986 book remain. It is the case, as pointed out in 1986, that hospitalizations increase with age. It is also the case, as was emphasized in the 1986 book, that Canada's older population tends to be healthy until very, very late in life. Whether older individuals are physically active is a question raised by recent studies (e.g., Wister, 2005). Yet, in recent years several new surveys, including the Canadian Community Health Survey (Statistics Canada, 2010a), have found that most people who attain older ages live in a

Table 4: Labour force age composition (percentage of total labour force) in Canada, 1851–2009

Year	Total Labour Force		Working Age Population
	15–24 years	25–64 years	
1851	20.5	31.9	52.4
1861	21.0	33.5	54.5
1871	20.5	34.2	54.7
1881	21.2	35.9	57.1
1891	20.7	38.4	59.1
1901	20.0	40.6	60.6
1911	19.4	43.0	62.4
1921	17.3	43.5	60.8
1931	18.8	44.0	62.8
1941	18.7	46.8	65.5
1951	15.3	46.6	61.9
1961	14.3	44.1	58.4
1971	18.6	43.8	62.4
1981	19.3	48.5	67.8
1991	18.5	51.2	69.7
2001	16.6	53.6	70.2
2009	13.6	56.0	69.6

Source: Statistics Canada: CANSIM Database, Table 282-0002; <http://0-estat.statcan.gc.ca/darius.uleth.ca/Results/OMNEC2D.CSV>

relatively healthy state for a long time. Those with poor habits such as long-term smoking, or those who live in low-income housing, less often live as long, and when they do, they do not age in good health (see Buckley, Denton, Robb, & Spencer, 2006; McMullin, 2010). Despite the evidence concerning the health of the older population, the policy concern about the tsunami of elders bankrupting the health care system remains (but see Evans, McGrail, Morgan, Barer, & Hertzman, 2001 for empirical refutation of this myth). Valid policy concerns, however, about health and aging in 2011 include the challenge posed by the fact that many older people live in (sometimes rural) areas with insufficient health care services (McDonald & Conde, 2010; Wilson & Rosenberg, 2004).

Housing, too, has become a policy issue in recent years as populations age. The issue encompasses not only aging in place or moving into a long-term care facility, but shared housing, granny flats, adapted housing for older people with mobility limitations, and importantly, evictions and homelessness (McDonald, Donahue, Janes, & Cleghorn, 2009), the latter a topic previously unconsidered in research on population aging. Place (rural vs. urban, province, etc.) also matters to the policy implications of aging population (Northcott, 1988, in the Butterworths Series; Moore & Rosenberg, 1997). As Table 5 indicates, the Territories are the youngest population regions in Canada, and the Maritimes the oldest. As we have mentioned, dif-

ferences in population ages create policy challenges at the provincial (or territorial) and municipal levels.

Family in aging populations has become a research focus in the past 25 years. This is an area where researchers have extensively considered context. The structure and nature of families over generations matters to the demand and supply of family care (e.g., Connidis, 2001, 2002; McDaniel, 2002; Tindale, Norris, & Abbott, 2002). Families-and-aging challenges are far more complex and contextual than indicated by simple ratios of those individuals above a certain age to those in midlife. Research by Connidis (2002), for example, broadened the focus on family beyond the household to include adult siblings, non-traditional family-like relationships, gay and lesbian relationships (including some marriages), friends, and chosen families.

Education as a policy issue in an aging Canada has shifted to some extent, from a focus on school enrolments, which was the research interest in the mid-1980s, to the growing notion of lifelong learning, a subject of miniscule focus 25 years ago. In 1986, small initiatives such as “elder hostels” were said to involve older adults in educational pursuits. Although not transforming research on education and aging, there is renewed interest in learning that continues across life courses (e.g., see Bélanger & Federighi, 2009). If current trends continue, we might anticipate that universities, colleges, and online courses will be increasingly populated by learners of all ages.

In 1986, the future of demographic aging in Canada was not easy to project, in part because the processes involved – fertility, mortality, and immigration – were all in flux. Fertility, for example, seemed to be on the brink of an echo-boom as the baby boomers had children of their own, or so we thought at the time. We looked at the converse of mortality by considering life expectancy and speculated, based on the best mid-1980s arguments, that ceilings had been reached. This, it turns out, was not the case, with life expectancies continuing to rise in the subsequent 25 years. International migration was, and is, something of a wild card, despite the reality that it is more under policy control than is fertility or mortality. In 1986, immigration was considered a possible means to “fill in” the labour force population as it ages towards retirement, and also a means to help support the growing retired population. It is now well understood that the immigration levels needed to serve this purpose would be too high to be acceptable to Canadians. We now have much-enhanced population projection techniques, as we will discuss (see Denis, 2010).

Table 6 updates the population aging projections for Canada from the 1986 book. It is no surprise that the percentages aged 65 and over are expected to rise by

Table 5: Percentage of the population 65 years and over for Canada and provinces, 1981, 1991, 2001, 2008 (low-growth scenario)

	1981	Change %	1991	Change %	New 2011	2006	New 2008
Canada	9.7	9.6	11.9	11.5	12.6	14.7	13.7
Newfoundland	8.1	7.7	9.3	9.6	12.1	11.3	14.4
Prince Edward Island	12.2	12.1	13.1	13.1	13.7	14.3	15.1
Nova Scotia	10.9	10.9	12.7	12.5	13.7	14.4	15.4
New Brunswick	10.3	10	11.8	12	13.3	13.4	15.2
Quebec	8.8	8.8	11.3	11.1	13	14.7	14.6
Ontario	10.1	9.9	12.4	11.5	12.5	15.5	13.5
Manitoba	11.9	11.8	13.5	13.3	13.6	15.3	13.8
Saskatchewan	12.0	11.9	13.3	14.1	14.8	13.8	14.9
Alberta	7.3	7.2	9.3	8.8	10.2	12.1	10.4
British Columbia	10.9	10.7	13.2	12.7	13.2	15.8	14.5
Yukon	2.7	3.2	5.9	3.9	5.9	8.9	7.5
Northwest Territories	2.9	2.9	4.7	3.1	4.1	9.1	5.0
Nunavut		2.0		2.1	2.1		2.8

Source: Statistics Canada, *Population Projections for Canada, Provinces, and Territories, 1984-2006* (catalogue No. 91-520), Table 051-00011,2,6; *Estimates of population, by age group and sex for July 1, Canada, provinces and territories; annual (persons unless otherwise noted)*; <http://0-estate.statcan.gc.ca/darius.uleth.ca/Results/OMNF3B6.CSV> (this is the total population data).

2021 from 16.4 (high growth) to 21.0 (low growth), and to 24.8 to 28.5 by 2051.

Significant Work Done Since 1986

In the 25 years since the publication of *Canada's Aging Population*, there has been nothing short of an explosion of research in aging and gerontology in Canada and beyond. Understanding of Canada's aging population and its implications has increased exponentially. Infrastructure developments that support research on aging in various ways have also been enhanced, most notably through implementation of the Canadian Longitudinal Survey of Aging by Statistics Canada. Yet, despite sound empirical research, Evans' compelling outlook (Evans et al., 2001) that describes the dire implications of population aging, particularly for health care, recurs with disturbing frequency.

Significant Programmatic Steps Forward

A major infrastructural development in social science research generally, and also in the study of population aging, occurred in 1998 with the advent of Statistics Canada's Research Data Centres Program. The Research Data Centres (RDC) are part of an initiative by Statistics Canada, the Social Sciences and Humanities Research Council (SSHRC), and university consortia to help strengthen Canada's social research capacity and to support the policy research community. The network is also supported by the Canadian Foundation for Innovation (CFI) and the Canadian Institutes of Health Research (CIHR). The RDCs are located throughout the country at (or near) various universities and are operated under the Statistics Act to ensure the confidentiality of micro-level data.

An abundance of research has been spawned by the RDCs on aging over the life course. A list of ongoing current projects is provided, and updated monthly, at http://www.statcan.gc.ca/rdc-cdr/proje_nphs-ensp-eng.htm. In addition, a full searchable bibliography of studies done in the RDCs is available from the Canadian Research Data Centre Network at <http://www.rdc-cdr.ca/database>. Searching by the keyword "aging" reveals 34 articles emanating from research done with micro-data in the RDCs, all published in good journals. For example, one study – which relied on two separate longitudinal surveys, the Survey of Labour and Income Dynamics (SLID) and the National Population Health Survey (NPHS) – sought to learn whether changes in health status over the life course after age 50 were related to prior socioeconomic status (Buckley et al., 2006). Buckley found that the probabilities of remaining in good health were better for those with a higher socioeconomic status, and that the gap doubled from age 50 to age 80. Another study examined older adults' health needs in terms of geography – those living in rural and urban areas in Canada (McDonald & Conde, 2010). The researchers found that differences existed in basic health service use, such as visits to a general practitioner, which could mean lack of timely access to preventive health care. The outcomes of both studies are in accord with other research showing how vital it is for policy to look at population aging geographically since area determines service need and placement (e.g., see Wilson & Rosenberg, 2004).

The Population Change and Lifecourse Strategic Knowledge Cluster (see <http://sociology.uwo.ca/cluster/>) was created in 2007 and funded by the Social Sciences and Humanities Research Council. The Strategic Knowledge Clusters were created and funded, not to

Table 6: Percentage of population 65 years and over in Canada, 1981, and projected to 2056 (low- and high-growth scenarios)

Year	Low-Growth Scenario (%)	High-Growth Scenario (%)
1981	9.7	9.7
1986	10.7	10.6
1991	11.9	11.7
1996	13.1	12.4
2001	14.0	12.8
2006	14.7	13.0
2011	16.1	13.6
2016	18.4	15.0
2021	21.0	16.4
2026	23.9	17.9
2031	26.6	18.9
2036	25.8	23.3
2041	26.7	23.8
2046	27.6	24.3
2051	28.5	24.8
2056	29.5	25.3

Source: Statistics Canada: CANSIM Database, Table 052-0041 (Projected population, by projection scenario, sex and age group as of July 1, Canada, provinces, and territories (66612 series))

do research per se, but to build needed research capacity and infrastructure in several specific areas of Canada. In making the case for the cluster's importance, policy makers argued that population issues provide an important part of the context within which significant social policy choices are made. Canada is experiencing low fertility, profound changes in family life, slow population growth, population aging, and important regional differences in the pace of both population growth and population aging. Although the significance of demography is widely acknowledged, understanding of the determinants and consequences of demographic change (central to which is demographic aging) for individuals and communities is limited. The Cluster made a strong case for the need to build our research capacity in linking population change with life course issues.

The Cluster's website summarizes the multiple areas in which the Cluster has been working to mobilize knowledge, to create and promote data development and use, to encourage the work and dissemination of the work of young researchers, and to develop connections with policy makers and with national and international partners. Central to the mission of the Population Change and Lifecourse Cluster is the promotion of broad public discussion of research through symposia, workshops, and briefings to the media. The Cluster has spawned six thematic committees on (a) aging and paid work, (b) caregiving and social participation, (c) health over the life course, (d) families,

(e) immigrants and migrants, and (f) aging, lifelong learning, and life course flexibility. The work of each of these committees has a (sometimes central) population aging component. This work adds immeasurably to our research capabilities in population aging, beyond what could have been imagined in the late 1980s.

Another major programmatic step forward is the Social and Economic Dimensions of an Aging Population (SEDAP) Research Program, centred at McMaster University (see <http://socserv.mcmaster.ca/sedap/>). Now in the second five years (2005–2011) of funding from the Social Sciences and Humanities Research Council of Canada, SEDAP II is concerned with (a) how population aging will affect the labour force and the economy; (b) differences across ethnic groups; (c) internal and external migration patterns; (d) and the viability of pension plans, residential choice, marital transitions, health, retirement, standards of living. As well, the program is interested in a range of other topics that will help to inform us about what lies ahead.

SEDAP II involves 46 researchers from 14 universities in Canada and three abroad. Graduate and undergraduate students have been trained along with postdoctoral fellows. More than 250 research papers have been produced, all of which are available on the SEDAP website. A wealth of excellent research is now available on demographic aging in Canada and its implications for society and for policy that simply was non-existent 25 years ago. In 2010, the first issue of *The Canadian Journal on Aging* was devoted to the SEDAP work (Denton & Zeytinoglu, 2010).

In 2000, the Canadian Institutes of Health Research (CIHR) was created to succeed the former Medical Research Council of Canada. CIHR, the major funder of health research in Canada, comprises 13 virtual institutes including the Institute of Aging. The charter of each institute is to bring together the four pillars of health research: (a) biomedical, (b) clinical, (c) health systems, and (d) the sociocultural and environmental dimensions of health. The Institute of Aging has a "mandate to support research and build research capacity in the field of aging" (see <http://www.cihr-irsc.gc.ca/e/8643.html>).

The CIHR Institute of Aging has been instrumental in initiating the Canadian Longitudinal Study on Aging (CLSA), one of the most comprehensive longitudinal studies of aging ever undertaken. Funded with CAN\$30 million of support from the federal government, CLSA is following approximately 50,000 Canadian men and women between the ages of 45 and 85 for at least 20 years (see <http://www.clsa-elcv.ca>). The study is collecting information on the changing biological, medical, psychological, social, and economic aspects of people's lives. These factors are being studied

in order to understand how they, individually and in combination, have an impact on both the maintenance of health and on the development of disease and disability as people age. The CLSA will be a rich source of research detail on population aging over the life course, providing information never previously available.

Other Steps Forward

One welcome recent development is enhanced capacity to make population projections (Denis, 2010; Statistics Canada, 2010b), as we have noted. This new capacity is helpful in adding to the repertoire of population projection approaches that include the cohort-component model – which uses assumptions derived from administrative data – applied for national, provincial, and territorial projections by age and sex. The administrative data consists of vital statistics, immigration records, and taxation records for internal migration. The DEMOSIM micro-simulation model, developed by the Demography Division at Statistics Canada, is an additional approach that permits researchers to project many population characteristics while also considering differentials in demographic behaviours from one sub-group to another (Statistics Canada, 2010b).

To project the future of demographic aging, which was our focus in the last chapter of the 1986 book, we can now make more nuanced projections by, first, contemplating possible future trends in fertility, mortality, and immigration and, second, examining the ethnocultural and religious composition of the population. With respect to population aging, Statistics Canada (2010c) has projected that by 2031, the visible minority population will be over-represented in the younger age groups, with 36 per cent of the overall Canadian population being visible minorities. Only 18 per cent of those aged 65 and over are expected to be visible minorities in 2031, compared to about 9 per cent in 2006. This will vary, of course, by region and by Census Metropolitan Area (CMA), given the concentration of visible minorities particularly in the CMAs of Toronto and Vancouver. The DEMOSIM projections indicate five additional CMAs (i.e., Abbotsford, Calgary, Ottawa, Windsor, and Montreal) where at least one in three residents would be members of a visible minority by 2031.

The Trends Project was undertaken in 1996 by the Policy Research Initiative (PRI), a federal government body created by the Clerk of the Privy Council and the Secretary to the Cabinet, to help Canada prepare for the public policy challenges in coming years. To this end, eight teams of academic researchers were brought together to synthesize existing research on key policy topics, one of which was demographic

aging. The papers produced by our team, led first by Verena Haldeman (Université de Moncton) and then by David Cheal (University of Winnipeg), resulted in a book (Cheal, 2002) and a summary article (Cheal, 2000). The findings led to three conclusions: (a) multidimensional demographic analyses are needed; (b) the policy significance of older populations in the future may differ from those that exist today; and (c) factors other than demographic ones must be included in the analyses to make realistic policy decisions.

Identification of Key Policy and Research Questions in the 21st century

Canada's Aging Population (1986) concluded with a number of “unanswered questions”. All these fell under the rubric of the links between demographic aging and socioeconomic institutions, structures, and systems. A central unanswered (and essentially age-old) question noted in the 1986 book is not fully answered 25 years later, namely, What is the relationship between personal experience and wider socio-demographic forces? Demographers are still seeking to understand how individuals change their childbearing in response to lower mortality during the first demographic transition. With respect to demographic aging, it seems intuitive, as was observed in 1986, to stipulate that shifting age structures influence individual and familial behaviours. Exactly how and through what processes that occurs, however, is still not understood. One key conceptual framework that has received considerably more attention in recent decades is the life course perspective (e.g., see Marshall et al., 2001, and McDaniel & Bernard, 2011). Integrating life course questions with now-available longitudinal data is proving to have many payoffs in terms of new insights (e.g., see Wister, 2005). We are optimistic that many more insights will derive from the demography of aging increasingly infused with theory, particularly life course theory.

One encouraging example of this infusion is the linking of various dimensions of inequality, including aging, in a single theoretical framework. McMullin (2010) integrated life course stages (youth, adulthood, parenthood, etc.) with cohorts (birth periods) along with various dimensions of inequality (income, gender, race/ethnicity). McMullin found that conceptualizing age within a broader theory of inequality reveals how age structure is part of power and class relations, serving, as she said, “the interests of the dominant social classes” (McMullin, 2010, p. 100). Age, she argued, is a relational system in that people of any age define their social positions in relation to people of other ages. Age, too, is relational in that rights and privileges are assigned by society on the basis of age-group location.

This observation is consonant with the concept of generation, expressed by McDaniel (2002, 2008) and others, as a relational concept distinct from the concept of cohort.

In his recent book, *The incomplete revolution: Adapting to women's new roles*, Esping-Andersen (2009) tackled the relation of individual and familial actions to demographic structures. He argued that demographic change (i.e., population aging) is one factor that may challenge welfare states as they continue to spend even while experiencing reduced economic growth. He suggested, as we have here, that although population aging is as old as humankind, new dimensions of aging have emerged, including (a) the rapid acceleration of the demographic process, (b) the reality that we are aging largely in good health, and (c) the fact that old age is supported by public pensions. He noted that the flow of money typically goes from the old to the young, contrary to what many policy makers admit. Esping-Andersen evoked a life course perspective to rethink both pensions and familial relations across generations, concluding that we need a new generational contract with a long-term outlook. We need to focus, for example, on old-age security as welfare policy for the young, on education as old-age security for the future. Instead of dividing the interests of children from those of elders, he compellingly argued that old-age policies begin with children, and that a new generational contract begins with inter- and intra-generational risk-sharing. This viewpoint is one that challenges researchers and policy makers as the 21st century continues to unfold.

Although Canadian society becomes ever more multicultural, little is known about the relationship, on the one hand, between increasing ethnic and racial diversity among older Canadians and, on the other hand, experiences of social exclusion and "othering" of some vulnerable categories of older immigrants. In Europe, researchers have begun to address these experiences (Giarchi, 2006), pointing to the social segregation, discrimination, and exclusion from social services, and to the exclusion from meaningful social participation, of non-white older immigrant adults living in relatively affluent communities. Canadian researchers and policy makers might pay closer attention to the risks for social exclusion of, and their implications for, aging adults born outside of Canada.

A second unanswered question noted in the *Canada's Aging Population* (1986) is the changing meaning of "old age" over time. Demographic measures typically rely on age 65 as the beginning of old age. With mandatory retirement now largely a thing of the past in Canada, and pension schemes increasingly flexible with respect to age at retirement and even work status, it may be time for research to rethink its measures of

population aging. There may also be an opportunity to reconsider ways in which old age is associated with structural "dependencies", wherein individuals of a certain age with considerable personal resources are not viewed as old relative to their age peers having fewer resources and shorter life expectancies. Media that both reflect and shape the meaning of old age and aging require closer attention from researchers as what it means to be old changes.

Although studies have addressed media stereotypes about aging, including the stigma associated with decline in older years (Rozanova, Northcott, & McDaniel, 2006), further research is needed into how societal values about aging change as older adults constitute an ever more significant active proportion of the population. Especially important to consider are the differences in how society regards the most frail and vulnerable elders such as those of the fourth age residing in nursing homes, in contrast to older adults who are physically and economically well. Research should also focus on the preoccupation with independence and reducing the costs, dictated by the market economy, of population aging. It is important to develop public forums that support and enable debates about aging and the life course from a variety of perspectives.

A third unanswered question in the 1986 book relates to the potential effects of planning based on projections. We have seen how projections, even with new technological innovations, can be notoriously unreliable. Nonetheless, it is crucial for local policy makers to plan services in the future for older people (Denton & Zeytinoglu, 2010). How exactly to do this well is an open research question. The 21st century is often described as the era of the E-government, "new economy", and E-society. In planning future services for older adults, there is an increasing need for research and policy attention to the role of technologies, such as the Internet, in bringing services to seniors who cannot currently access them due to inadequate infrastructure or lack of supports (Buse, 2009).

A last unanswered question raised in the 1986 book is the need for research on political and social power as the proportion of older adults in the population increases. The myth that older people are dependent has now been shattered for the most part. What is not known well is the flip side of dependence. How exactly are active and persuasive seniors integrated into society? Can their vital contributions be more fully recognized? How does the existence of ageism prevent acknowledgement of the productive roles that older adults play? While overt ageism in the workplace is illegal, covert ageism persists to the disadvantage of older workers. On the other hand, while volunteering of older adults should continue to be supported by

policies, there should also be protections against exploitation of older volunteers who may be pressed into service even as formal supports for vulnerable populations, including frail elders, diminish (Martinson, 2007). Well-being is known to be associated with engagement in valued activities, yet there are few evidence-based policies to facilitate engagement of older adults that remove barriers to meaningful participation. For governments to develop relevant policies, we need further research into the challenges of maintaining independence when a person ages with physical and cognitive disabilities.

Not all older adults age in a healthy state, nor do they age into their last years while remaining active. But the needs of older adults are not only health-based as policy often presumes, but also premised on social connectedness. One largely unexplored challenge of the 21st century in Canada is the relatively higher numbers of frail elders in need of support compared to their counterparts in many European countries, if consideration is given simultaneously to health, family, and living arrangements (Légaré et al., 2010). This situation is, in large measure, a function of rapidly changing families in Canada and an increased preference for living alone. Family sizes have shrunk dramatically, the central contributor to population aging, and dispersed geographically to a greater extent. This means that older people are less often without family or without family in geographic proximity. Their own increased longevity means a greater likelihood of experiencing a chronic health problem, and experiencing it for a longer period of time. All told, the net result is a significantly larger number of very old elders in need of support in Canada than by many of their European counterparts.

The challenges confronting researchers remain, less with the specifics of demographic aging which is a future certainty, but with what underlies the overall trends of population aging in terms of inequalities, lost opportunities, outdated concepts and thinking, and particularly the interpretation of trends for policy relevance.

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