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The Demography of Canada and the United States from the 1980s to the 2000s A Summary of Changes and a Statistical Assessment

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Abstract

Canada and the United States have enjoyed vigorous population growth since the early 1980s. Although mortality is slightly higher in the United States than in Canada, this is largely offset by much higher fertility, with a total fertility rate at replacement level, compared with just 1.5 children per woman in Canada. The United States is also the world's largest immigrant receiving country, although its immigration rate is only half that of Canada, where today one person in five is foreign-born, versus one in eight in the United States. Based on recent trends in fertility, mortality and international migration, the populations of these two North American countries will continue to grow over the next five decades, but at a progressively slower pace. The most acute demographic issue today is not, as in Europe, that of imminent population decline, but rather of the geographic and social inequalities which have increased steadily since the early 1980s and which are reflected in major fertility and health differentials between regions and social groups.

Keywords

North America; United States; Canada; mortality; fertility; nuptiality; migration; demographic projections; demographic history; demographic ageing; demographic situation

I. Sources of demographic data

Most of the data used in this chronicle were provided by national statistical offices. Both in Canada and the United States, territorial administrations (at the level of the provinces and territories in Canada, and the states in the United States) are responsible for collecting vital statistics data. These administrations exist for each of the 10 provinces and 3 territories([1]) which make up the 6 regions of Canada and for all 50 states, as well as the District of Columbia, which form the 9 regions of the United States (Figure 1 and Table 1). The corresponding data, however, are centralized, published, and analysed at national level by Statistics Canada (in Canada) and the National Center for Health Statistics (in the United States). Statistics Canada is also responsible for organizing the census. This role is played by the Census Bureau in the United States.

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[1]The territory of Nunavut has only existed since 1999. Previously it was included in the Northwest Territories for statistical purposes.

Our knowledge of demographic developments in Canada and their components before the mid- nineteenth century is highly fragmentary, and is based on relatively local historical studies (such as those focusing on Quebec, which are the most numerous).([2]) The first modern census covering the entire national territory took place in 1851, after a series of local enumerations, the first of which, covering only the population of New France, took place in 1666. The census was then held every ten years until five-year intervals were instituted in 1956. The Federal Bureau of Statistics was created in 1918, taking the place of the various ministries successively tasked with organizing and collecting census data. This federal body became Statistics Canada in 1971.

The most recent census took place in 2011 and, like that of 2006, it could be completed over the Internet, an option that was chosen by 18.5% of households in 2006 and 54.4% in 2011. Furthermore, the compulsory long form questionnaire sent to a representative sample of households at the same time as the (shorter and compulsory) census form was abandoned and replaced by the National Household Survey, whose content is the same, but which is now completed on a voluntary basis. This ministerial decision provoked a massive outcry from the political opposition as well as from researchers and personnel of Statistics Canada, whose director even resigned in protest. The survey questionnaire was sent to one out of every three households, and although the data from the 2011 census are not yet fully available, the response rate to the survey at the national level is known to have been 69%.

In the United States, the Constitution (1787) required from the outset that a census be held every ten years. The first one took place in 1790 and the series has never been interrupted since. The census was organized by district judges until the creation of a central census bureau in 1840, which became permanent in 1902. Since 1940, besides the very short questionnaire sent to all households (which addresses a series of questions to the head of household on household composition by age, sex, and race), a representative sample has received a more detailed (compulsory) questionnaire, intended to collect more precise information on the economic and social situation of household members. In 2010, this sample represented 15% of the total population.

Also in the United States, the American Community Survey (or ACS), designed to track population changes during inter-census periods and initially intended to replace the detailed census form over the long term, is administered every month to 250,000 households, thus covering 2.5% of the population every year and 12.5% every five years. The survey includes all the questions from the detailed census form, plus a number of other questions on living conditions in the dwelling and the economic and social situation of household members. The American Community Survey is representative at all administrative levels down to the census block (for every five-year cycle). However, the future of the ACS is now threatened by the severe budgetary restrictions imposed by the U.S. Congress.

Another periodic survey sometimes used by demographers, the Current Population Survey (or CPS), serves a different purpose. Rather than complementing the general population census, the CPS is a monthly survey of 60,000 households, jointly performed by the Census Bureau and the Bureau of Labor Statistics, designed to track employment trends and measure levels of income and poverty in the American population. No surveys of either type (ACS or CPS) exist in Canada.

[2]Research on Quebec's demographic history owes much to the family reconstitution programme implemented by researchers at the Université de Montréal. Data and results from this work are available at the following web address: http://www.genealogie.umontreal.ca/ (accessed on 21 June 2012).

Since the early days of colonization, censuses have made it possible to publish regular demographic statistics on the state of the population. This information is supplemented with statistics on population movements derived from vital statistics data. However, vital records were established relatively late in both countries compared with the census. Until 1921 in Canada (outside of Quebec, where recording of births and deaths was instituted in 1926, and the territories, whose statistics remained of questionable quality until around 1950) and 1933 in the United States, vital records were incomplete, with certain states and provinces remaining incapable of proving that they covered the minimum of 90% of vital events required for inclusion in national statistics.

Concerning the entry of international migrants, the administrative files of the Department of Homeland Security in the United States and those of Citizenship and Immigration Canada are key additional sources of statistical information in the two countries. Before 1 March 2003, in the United States, these administrative data were managed by the Immigration and Naturalization Service. As elsewhere, estimates of the number of migrants (the “stock” of migrants) and their composition by sex, age and origin are based on census data.

Besides regularly published official statistics, a range of occasional representative surveys on various topics are organized by the federal administrations of the two countries. This is notably the case for fertility surveys. In the United States, the National Survey on Family Growth, first organized in 1973 by the Centers for Disease Control and Prevention, includes detailed information on respondents’ reproductive histories, marital histories, and contraceptive use. The survey took place in 1973, 1976, 1982, 1988, 1995, 2002 and 2006–2010. The next one, which, like the last, will be spread out over several years, is currently ongoing (2011–2015). Initially the survey only included women of reproductive age (15–44 years), but has included men as well since 2002. The reproductive situation of women is less well documented in Canada, where no surveys are performed at such regular intervals as in the United States. It is nonetheless worth mentioning the Canadian National Fertility Survey of 1984, and the occasional surveys on contraceptive use of 1988, 2002 and 2006.

II. Demographic history

Knowledge about early demographic developments before the first censuses (in 1790 in the United States and in 1851 in Canada, Quebec excepted) is limited. Archaeologists have nevertheless attempted to estimate the size of indigenous populations before the arrival of Europeans, and historians have managed to produce relatively precise estimates of population trends in the seventeenth and eighteenth centuries based on a variety of sources.

The first inhabitants

The first inhabitants of America came from Asia at the end of the last glacial period. The date of their arrival is a subject of debate among specialists; for some it took place only between 10,000 and 12,000 years ago, while for others it dates back more than 40,000 years. These first pioneers probably arrived by land: sea levels at the time in the Bering Strait were low enough to allow movement over land between Siberia and Alaska. Climate warming in the tenth century BCE led to a rise in sea levels between the two land masses and the isolation of the American continent which, apart from a brief incursion by the Vikings around the year 1000 CE, lasted until the arrival of the first European explorers in the fifteenth century (Magocsi, 1999).

Specialists have been unable to agree on the number of Native Americans([3]) who were living on the territories of the United States and Canada, or elsewhere in the Americas, when Columbus arrived in 1492. Estimates vary between a few hundred thousand and around ten million. All agree, however, on the dramatic demographic consequences of the first contacts.

The Native American population was decimated by the European conquest, not so much due to clashes between indigenous people and conquistadors as to the disorganization of the traditional economic system and the introduction of infectious diseases (notably influenza, measles, smallpox, plague, typhus fever and whooping cough) which had never previously reached the American continent, so its inhabitants lacked any natural immunity. Archaeological studies have demonstrated that certain groups lost up to 95% of their population over just a few decades, but depopulation continued for three centuries.

In the early nineteenth century, a period for which more reliable estimates are available, the Native American population totalled an estimated 600,000 individuals in the current territory of the United States, and 150,000 in that of Canada. For both epidemiological and socioeconomic reasons, however, numbers continued to fall, reaching a low point around 1900. Censuses for that year counted only approximately 237,000 Native Americans in the United States and 100,000 in Canada (Hamelin, 1965; Thornton, 2000). A decrease in mortality combined with an increase in fertility then led to a rebound and subsequent steady growth. However, figures from the latest censuses show that the current Native American population (5.2 million in the United States and 1.2 million in Canada) corresponds to no more than their estimated numbers when Europeans first arrived on the continent.

Progressive European colonization of Canada

Demographic growth in Canada was initially very slow (Hamelin, 1965; Charbonneau et al., 2000). The first European colonists settled in the Saint-Laurent valley (present-day Quebec) starting in 1608, but their numbers remained very small until the 1660s. Fewer than 10,000 immigrants settled in the country over the first 150 years of European colonization. These pioneers included twenty times more British than French colonists, a fact that would prove decisive for the political destiny of the country (Henripin, 2003, p. 269).

Beginning in the 1660s, natural growth became more vigorous, and by the early eighteenth century immigration accounted for only 20% of population growth. High fertility rates, due in part to early and universal first marriage and in part to very high reproduction rates among married women, explain the Canadian demographic vigour beginning in this period. Women in Canada bore 11–12 children on average up to the end of the eighteenth century.

In 1763, France ceded its sovereignty over Canada (as well as Ohio, Mississippi and Florida) to the British crown. This closed the chapter of its colonization of the American continent, and French migration rapidly declined thereafter. In that year Canada still had only 70,000 inhabitants of European origin, only 40% of whom were native-born. This period marked a renewal, and then a progressive acceleration, of migration flows, first from the United States, and then, increasingly over time, from the British Isles (initially Scotland, later England and Wales, but most of all Ireland). However, large-scale emigration towards the United States([4]) meant that net migration rates were only marginally positive; the main explanation for the doubling of the Canadian population in less than thirty, or even twenty years, in the final decades of the eighteenth century (Table 2) was the colonists' high fertility rates. This rapid growth showed no signs of slowing at the turn of the nineteenth century, and the mean annual rate reached a record level of 40 to 50 per 1,000 (including 30

[3]The specific term used by the United States Census Bureau to designate "a person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment" is "American Indian and Alaska Native". The equivalent term used by Statistics Canada is "Aboriginal". For the sake of simplicity, we will use the term "Native American" throughout this article.

[4]This emigration was only very partially offset by movements in the opposite direction. Some 100,000 loyalists to the British crown fled into Canada from the United States, mainly around 1780 (Walker, 2008).

per thousand through natural growth alone) between 1791 and 1801, slowing only in very relative terms over the five following decades (McInnis, 2000a).

The timing of the first Canadian population census (1851) coincided with a dwindling of the most intense immigration flows once all of the country's available arable land had been distributed. The following period was characterized by more massive emigration toward the United States. Fertility also began to drop (by a third in around forty years), falling to relatively low levels by the end of the nineteenth century, except among French-speaking populations where it remained very high (McInnis, 2000a). In 1901, the country had 5.3 million inhabitants, 57% of British origin and 30% of French origin([5]) (Figure 2).

The turn of the twentieth century also saw a shift in migratory trends, with a new and massive wave of immigrants arriving from Ireland and Great Britain as the country opened up towards the west. The annual number of new migrants to Canada rose to record levels of between 50,000 and 100,000, and stayed at these heights until the early 1930s. During this entire period, migration accounted for around a third of total demographic growth (McInnis, 2000b). The crisis of the 1930s led to a sharp drop in immigration which coincided with a rapid decrease in fertility: in this period the population grew by less than 10 per 1,000 per year instead of the 20–30 per 1,000 that was characteristic of the early years of the century. This was the end of the period of strongest demographic growth. While the country's population expanded by 35% between 1901 and 1911, and then by 22% and 18% in the two following decades, respectively, it increased by only 10% over the 1930s (McInnis, 2000b). However, a new wave of immigration from Europe after the Second World War, along with the postwar baby boom, led to a vigorous rebound in demographic growth. The population rose from 12 to 22 million between 1945 and 1971, reaching nearly 28 million in 1991, and more than 34 million in 2011 (Table 2 and Figure 2).

More rapid colonization of the United States

Despite an annual demographic growth rate estimated at around 72 per 1,000 in the seventeenth century, the population of the United States stood at just 200,000 in 1700 (Table 3). Growth was mostly due to sustained immigration, whose net rate remained well above the rate of natural increase throughout the century (Gemery, 2000). The population increased almost twenty-fold in the following century, reaching 3,929,600 at the time of the first census in 1790 (United States Census Bureau, 1975). This very rapid growth was fuelled by high fertility – the total fertility rate was between 8 and 10 children per woman, depending on the region, in the second half of the eighteenth century – and by continued mass immigration (Gemery, 2000).

These positive factors continued to influence demographic trends in the nineteenth century, taking the population to more than 76 million in 1900 (Table 3). This corresponds to a mean annual growth rate of around 27 per 1,000 over this whole period. The role of immigration lessened with respect to previous centuries, however. It accounted for no more than a third of total demographic growth by 1920 and much less after wards, notably bet ween 1924 and 1965 due to legislation that severely restricted the admission of new migrants (Anderton et al., 1997; Easterlin, 2000; Haines, 2000). However, a resumption of immigration after this date, following a large baby boom, ensured that demographic growth remained strongly positive, with the population increasing from slightly over 150 million in 1950 to 204 million in 1970, 250 million in 1990 and 310 million in 2010 (Figure 2).

[5]Ministry of Justice, Canada, http://www.justice.gc.ca/fra/pi/rs/rap-rep/2002/dr02_8-rp02_8/p2.html, accessed on 19 June 2012.

And more immigrant diversity

Starting before the twentieth century, the geographic origins of the United States population became more diverse than those of Canadians. Along with the first colonists came the first black slaves. Estimates of the number of Africans deported onto the current territory of the United States between 1620 and 1810 range between 430,000 and 650,000 (Walsh, 2000). Their geographical distribution was highly uneven, and strongly tied to the regionalization of production systems: up until the early twentieth century, 90% of the African American population lived in the southern states, making up between a third and half of the total population (versus only 3% to 8% in other regions of the country). Mortality rates were high and fertility rates relatively low, leading to limited natural growth in this population: its demographic growth in the seventeenth and, to a lesser extent, eighteenth centuries resulted principally from the continuous arrival of new slaves. At the time of the first census (1790), the African American population comprised an estimated 757,363 individuals, representing almost 20% of the country's total population.

Improved living conditions among the African American population from the end of the eighteenth century, giving rise to better survival probabilities, combined with high fertility rates (estimated at around 6–7 children per woman throughout the nineteenth century; Farley, 1965) led to rapid demographic growth, at an annual rate of between 25 and 32 per 1,000 throughout the first half of the nineteenth century. The African American population reached one million in 1800, more than 3.5 million in 1850, and almost 9 million in 1900 (Steckel, 2000), but represented just 12% of the total population in that year.

Native Americans and Americans of European or African origin made up more than 95% of the population of the United States until 1950, despite the absence of restrictions on the number and origin of immigrants up until the end of the nineteenth century. The first law limiting the admission of new migrants was passed in 1882 and targeted Chinese migrants only (the Chinese Exclusion Act). Legislative restrictions on migration increased over the first two decades of the twentieth century, notably with the establishment of a quota system in 1921. This system limited the number of immigrants to 3% of the population of each nationality present on the territory of the United States in the 1910 census. The proportion was further reduced to 2% in 1924, thus instituting a de facto preference for immigrants from northern and western Europe (Haines, 2000). Immigration remained very strictly controlled until 1965, a year that heralded a new period of migration and a much broader diversity of inflows, with rapid growth in migration from Asia and Latin America in particular.

III. Spatial distribution and population diversity

Canada and the United States have surface areas of 10 and 9.6 million square kilometres, respectively. They are the two largest countries in the world after Russia. Their combined surface areas represent 13% of the Earth's total landmass, but they are inhabited by only 5% of the global population. Mean density is 3.4 inhabitants per square kilometre in Canada and 32.5 inhabitants per square kilometre in the United States, but populations are very unequally distributed on each of the two territories.

A highly unequal geographical distribution

In Canada, a narrow but very dense band of settlement runs along the border with the United States, interrupted only by a cordillera of mountains in the West. Nearly 80% of the country's population lives less than 150 kilometres from the southern border. It is particularly concentrated along the Saint Lawrence river and around Lakes Erie and Ontario in the east, in the cities of Vancouver and Victoria in British Columbia, and along an axis between Calgary and Edmonton in Alberta. The territories of the Canadian north are

virtually uninhabited. This configuration results from both historical and geographic factors: the European colonists arrived by way of the country's eastern ports or from the United States, moving progressively westwards to occupy new land while avoiding the northern regions with their challenging climatic conditions and mountainous terrain. The population is essentially concentrated in urban areas, and notably in the largest cities, while rural areas, currently home to fewer than one in five Canadians, are very sparsely populated. Four urban agglomerations make up more than a third of the country's total population: Toronto (5.6 million in 2011), Montreal (3.8 million), Vancouver (2.3 million) and Ottawa (1.2 million).

As in the past, demographic growth and migration (both internal and international) over the last 30 years have mostly favoured the provinces situated along the southern border, and particularly Ontario and British Columbia. With 51% population growth between 1980 and 2010, the first of these two provinces today includes nearly 40% of the country's population on a territory that represents less than 10% of its total surface area (Appendix Table A.1 and Figure 3). Growth in British Columbia has been even greater (+65% over the same period) but starting from a much smaller initial population, so the inhabitants of this province still represent a relatively small proportion (13%) of the total population. By contrast, the demographic weight of the eastern provinces, namely the Atlantic region and Quebec, has decreased in the last three decades, from 9% to 7% for the Atlantic provinces and from 27% to 23% for Quebec.

Contrary to Canada, a new change of pattern has been observed in the geographical distribution of the U.S. population over the period 1980–2010. The country's demographic centre of gravity shifted through the centuries from the south toward the east, and then to the centre (the Midwest) and finally, beginning in the nineteenth century, to the west. The country's population has historically been concentrated in the eastern third of the country and along the Pacific coast, while the Rocky Mountains and particularly Alaska have remained relatively uninhabited. A quarter of the country's population (27%) resides in only three states: California (the most populous since 1970, with 37 million inhabitants as of the most recent census), Texas (25 million inhabitants) and the state of New York (19 million). Apart from Ohio (109 inhabitants per square kilometre), the ten states with the highest population densities are all situated along the Atlantic coast (from New Jersey, with 460 inhabitants/km^2, to Pennsylvania, with 110 inhabitants/km^2, after excluding the city-state of the District of Columbia, with its 3,900 inhabitants/km^2). The least populous state, Alaska, has only 0.5 inhabitants/km^2, and most states located in the Rocky Mountains have no more than 3 or 4.

In the recent period, growth has once again favoured the southern states (those of the south-east in particular), while remaining high in states to the west of the Great Central Plains (Appendix Table A.1 and Figure 3). But while the warm climate of the southern states, Florida foremost but also Texas and Arizona, has primarily attracted older people, the dynamic economies of the western states (California in particular) and the Mountain region have mainly drawn a working-age population, including migrants from outside the country.

Finally, as in Canada and other developed countries, the population of the United States is very predominantly urban. Fewer than one in five Americans live in a rural area, whereas one in two live in a city of more than a million inhabitants, albeit more in the periphery than in the centre, reflecting the phenomenon of rurbanization that has developed over the last thirty years.

A mosaic of cultural origins

North America is distinguished by its extreme diversity of cultural and ethnic origins and by large economic and social disparities. This phenomenon is particularly marked in the United States.

From the outset, American censuses distinguished Blacks from Whites, initially because the two groups had a different legal status (Humes et al., 2011). Other categories were then introduced progressively, and four large population groups can be distinguished in each census from 1900 to 1950: namely Whites, Blacks, Asians or Pacific Islanders, and Native Americans. Since 1950, the number of categories has further increased, some of which distinguish groups on the basis of country of origin or nationality, notably for people of Asian origin, who can choose between categories such as Japanese, Vietnamese, Chinese or Korean. In 1980, the entire population (rather than a 5% sample as in the previous census) was also asked about possible Hispanic origins, Hispanic being considered as an ethnic group independently of the question of race. For all of these questions, respondents self-report their ethnic identity on the basis of their own criteria, be it cultural heritage, nationality, lineage, their own country of birth or those of their parents or more distant ancestors. Consequently, the demographic changes observed between the various groups partly reflect transformations in terminology, changes in preferences with regard to ethno-racial identification, and/or changes in behaviour. Since the 2000 census, respondents can now give multiple answers to the question on race. The Census Bureau considers that all Americans other than non-Hispanic Whites (i.e., Blacks, Hispanics, Asians and Native Americans) belong to minorities.

Table 4([6]) below shows the distribution of the American population by major racial categories and by Hispanic origin for the censuses of 1980 and 2010. The overwhelming majority of the population – 98% in 2000 and 97% in 2010 – reported only one race. The most strongly represented group is Whites. This is followed by Blacks, the majority of whom live in the south of the country, and then Other races, Asians, and finally Native Americans, the latter two being mainly concentrated in the Pacific coastal states. This distribution has changed since 1980, with the proportion of Whites decreasing and those of Asians and Other races increasing. The change between the two dates is smaller than it seems, however, given that most respondents who reported two or more races (and who are thus excluded from the Whites category in Table 4 for 2010) also defined themselves as White. In 2010, three-quarters of these people placed themselves in a category corresponding to one of the four following combinations: White and Black (20%), White and Other race (19%), White and Asian (18%), White and Native American (16%).

Furthermore, an ethnic criterion was superimposed on these racial categories. The census distinguishes the three following groups: Hispanic (16% of total population in 2010), non-Hispanic White (64%), and Other race, non-Hispanic (20%). The Hispanic population has grown considerably over the last thirty years, increasing from 14.6 to 50.5 million, with fairly steady growth of around +50% over each intercensal period. While most Hispanics live in the states of the American south-west, close to the border with Latin America, a flow of Hispanics toward north-eastern states has been observed in recent years. Among all possible categories combining race and ethnicity, the fastest growing group over the last thirty years has been that of Hispanic Whites, while that of non-Hispanic Whites has grown the least over the same period. Between 1980 and 2010, the population belonging to the latter group grew by 9%, 15 times less than all other groups combined.

[6]The notions of “race” and “ethnicity” presented here correspond to the categories used in the American census and do not reflect the authors’ position on their use.

In Canada the situation is very different, and the notions used reflect another way of defining minority populations. First of all, because of the historical and political context, linguistic differences (English vs. French) are a key issue in official statistical classifications. On the 2006 census, 21% of the population reported French as the "language spoken most often at home," as opposed to 67% for English and 12% for another language (Table 5). The statistics show a decline in the French language since 1981 and increasing use of "non-official" languages, whereas the use of English has remained relatively stable. The erosion of French has been particularly marked in the provinces other than Quebec: outside this final bastion where 82% of census respondents reported speaking French at home, (and to a lesser extent New Brunswick, with 30%), this is true for only 2.5% of Canadians in the rest of the country.([7])

As the notion of origin is used in Canada rather than race and ethnic group, it is impossible to compare the ethnic compositions of the two countries. For example, the category of Whites does not exist in Canada, where the question of origins is implicitly defined in terms of nationality (current or previous) as well as respondent's country of birth and that of his/her parents or ancestors. Indeed, the notion of "ethnic origin" used in the census corresponds to categories based on ties with specific countries or territories (British Isles origins, Canadian, English, French, Scottish, Irish, German or Italian, Chinese, East Indian, Russian, or Arab origins). However, Canadian statistics do make use of a specific concept, that of "visible minorities," which clearly expresses the aim of defining individuals on the basis of their physical appearance (although based on self-reporting, as in the United States). According to Statistics Canada:

> Visible minorities are defined based on the Employment Equity Act definition as persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour and include Chinese, South Asian, Black, Filipino, Latin American, Southeast Asian, Arab, West Asian, Japanese, Korean, other visible minorities and multiple visible minorities. (Statistics Canada, http://www.statcan.gc.ca/pub/81-004-x/def/4068739-eng.htm, definition retrieved on 28 July 2012).

The proportion of individuals who report belonging to a visible minority has progressively increased over time. Whereas in 1981, this group included just over a million individuals, or 4.7% of the total population, in 2006 it had grown to more than 5 million, or 16.2% of the total. More than 65% report having origins in an East Asian, South Asian, or Southeast Asian country (Table 6). Blacks represent 15% of individuals who belong to a visible minority. They are predominantly located in Ontario (where 60% of them live), like the majority of other individuals belonging to a visible minority, and, to a lesser extent, in Quebec (24%), whereas Asians tend to live in British Columbia (26% of this group), and again most of all in Ontario (53%). Ontario's economic dynamism also explains why it is the only province in the country whose population comprises a majority of visible minorities, well ahead of British Columbia (20% minorities) and Quebec (13%), the provinces which rank second and third in this respect.

Sizeable social disparities

Canada and the United States are rich countries, with similar mean per capita incomes, at USD 43,270 and USD 47,390,([8]) respectively, in 2010. They are near the top of the international income ranking, after the Scandinavian countries and a few other small countries in the west and north of Europe (Luxembourg, Switzerland and the Netherlands).

[7]Statistics Canada, http://www12.statcan.gc.ca/census-recensement/2006/as-sa/97-555/table/A6-eng.cfm, accessed on 19 June 2012.
[8]In constant 2010 US dollars. *Source:* World Bank database, accessed on 2 March 2012.

The two countries are also characterized by large income inequalities, especially in the United States. According to OECD([9]) estimates, disposable household income in the two countries stood at USD 31,111 in the United States and USD 25,363 in Canada in 2007. The Gini coefficient, the indicator most commonly used to measure income inequalities within countries, is particularly high in the United States (0.38). Among OECD countries, only Chile, Mexico and Turkey have a more imbalanced income structure. While the mean income of the richest 10% of Americans was USD 93,000 in 2008, that of the poorest 10% was USD 5,800. Wealth inequalities are even more marked, with the richest 10% owning 71% of national assets (and the richest 1% owning between 25% and 33%, depending on how it is measured).

With a Gini coefficient of 0.32, Canada is closer to the OECD mean (0.31), but contrary to most OECD countries, and notably the European countries, the situation has considerably worsened over the last ten years, and a growing proportion of the population lives under the poverty line. In the United States, the income gap started widening in the early 1970s and is still doing so. Population poverty rates now stand at 15.4% in Canada and 18.7% in the United States.([10]) As in most countries around the world, ethnic minorities are most affected by poverty, alongside the youngest and oldest individuals. The proportion of children living under the poverty line (as defined by the OECD) is 15% in Canada([11]) and 20% in the United States,([12]) and among persons aged 65 or older, the rates are 6% and 23%, respectively.

IV. Demographic growth

Relatively rapid population growth in the United States and Canada

In 2010, the population of the United States was 309 million and that of Canada 34 million, in both cases corresponding to more than double the level in 1950 (152 million in the United States and 14 million in Canada). The rate of population increase has slowed substantially since the mid-twentieth century, however (Tables 2 and 3, Figure 4). In the 1950s, the two countries saw explosive demographic growth on the strength of a very marked post-war baby boom and a massive influx of new immigrants. Total annual growth rates in this period were generally above 3% in Canada and 1.5% in the United States. In the early 1960s, the Canadian population surpassed 18 million, while that of the United States was ten times larger. But population growth had already started to slow drastically, in Canada more than in the United States, as the baby boom ended and a baby bust followed. Since 1980, annual growth rates in the two countries have not exceeded 1%, with that of Canada being slightly above that of the United States in most years. Over the period 2007–2010, average annual growth rates were 1.2% for Canada and 0.9% for its southern neighbour. These rates are nonetheless higher than those of France (0.5%) and of most other European countries (Adveev et al., 2011).

Canadian population growth now driven mainly by migration

The natural and migratory components of population change have evolved differently in Canada and the United States over the three last decades. Up until the early 1990s, more than half of Canadian population growth was due to a surplus of births over deaths rather than to the contribution of international migration, with the exception of a handful of years. Since the mid-1990s, however, the trend has reversed. Between 1 July 2008 and 30 June 2009, almost two thirds of total growth resulted from migratory increase, with the natural

[9]Database at http://www.oecd-ilibrary.org/social-issues-migration-health/society-at-a-glance_19991290, accessed on 2 March 2012
[10]Luxembourg Income Study, http://www.lisdatacenter.org/data-access/, accessed on 2 March 2012.
[11]Country Note: Canada, OECD, 2008, in *Growing Unequal? Income Distribution and Poverty in OECD Countries*.
[12]Country Note: United States, OECD, 2008, in *Growing Unequal? Income Distribution and Poverty in OECD Countries*.

surplus contributing only one-third (Appendix Tables A.2 and A.3). In the United States, by contrast, population growth is still due mainly to natural surplus, which accounted for more than two thirds of total growth in 2008–2009.

It is therefore not surprising to observe that Canada's rate of natural increase has almost halved over the last thirty years, declining from 0.8% (or 8.0 per 1,000) in 1981–1982 to 4.1 per 1,000 in 2008–2009. Its slowdown over this period was not uniform, however (Appendix Table A.2). The natural surplus decreased, first slowly during the 1980s, and then much more quickly over the 1990s, before increasing slightly during the 2000s. At a finer geographical level, natural growth evolved in a similar fashion in the Prairie provinces, Quebec, Prince Edward Island and the Northwest Territories. Elsewhere in Canada, the natural surplus either continued to decrease after 2000–2001 (Atlantic provinces apart from Prince Edward Island, and Yukon) or stabilized (British Columbia, Ontario, Nunavut). Since 2006–2007, the province of Newfoundland and Labrador has differed from the other Canadian provinces and territories in having a natural deficit rather than a surplus, and this pattern may soon extend to Nova Scotia and New Brunswick.

In the United States, the rate of natural increase in 2008–2009 was also lower than that of 1981–1982 (5.8 per 1,000 versus 7.4 per 1,000), but the slowdown over this period was markedly smaller than in Canada (Appendix Table A.2). Detailed time series show that the decrease in the natural surplus mostly occurred between 1990–1991 and 2000–2001, at both state and national levels. Despite fluctuations since then, the rate of natural increase in 2008– 2009 was identical to that of 2000–2001, except in the East North Central states, where a slight increase was observed (5.5 per 1,000 versus 4.5 per 1,000).

Contrary to the rate of natural increase, the rate of net international migration for Canada as a whole is considerably higher today than in the early 1980s (8.0 per 1,000 in 2008–2009 versus 4.7 per 1,000 in 1981–1982). The general uptrend over this period was marked by several peaks, corresponding to years where exceptional numbers of refugees arrived in the country (Appendix Table A.3). In the United States, the rate of net international migration barely increased between 1981–1982 and 2008–2009, rising from 2.2 per 1,000 to 2.8 per 1,000. In the early 2000s it reached a peak of 4.5 per 1,000 but the general trend since then has been downward. These figures remain relatively modest compared to those of Canada.

At the level of Canadian provinces and territories and the American states, migratory growth results not only from a net surplus of international immigration over emigration, but also, and often to an even greater extent, from internal migration. In 2008–2009, only the territories lost out in these total migratory exchanges within Canada (Appendex Table A.3). The same was generally true, until very recently, for the Atlantic provinces, but their net migration has become positive thanks to the arrival of greater numbers of international immigrants. More American regions now receive a positive net inflow of international and internal migrants than was the case thirty years ago. The West South Central region (Texas in particular) and the Mountain region (Colorado, Wyoming and Arizona) still have the highest net migration in the United States.

After examining the two components of natural increase (fertility and mortality), we will return in more detail to the question of international migration, before looking, in the final section, at how the trends in these three fundamental phenomena are likely to shape the demographic future.

V. Fertility

High fertility in the United States

In 2007, the last year for which final data are available, the total fertility rate (TFR) was measured at 2.1 children per woman in the United States and 1.7 in Canada. This large gap between the two countries is relatively recent (Figure 5). Until the 1970s, Canada's TFR was higher than that of the United States. During the baby boom, which occurred earlier in these two countries than in most other developed countries, fertility peaked at 3.7 children per woman in the United States (in 1957) and 3.9 in Canada (in 1959), whereas few European countries surpassed 3 children per woman. Over the following period, which corresponds to the rapid drop in fertility rates from the mid-1960s to the end of the 1970s, rates were very similar in both countries. The divergence which led to the current situation can be dated to 1978. Starting in that year, the TFR continued to drop in Canada, reaching a minimum of 1.5 in 2000 before climbing back up to 1.7 in 2007, whereas in the United States it rose progressively to a level of 2.1 children in 2007. While current fertility rates in Canada have remained below two children per woman since 1972, they rebounded above this threshold in the United States in the years 1990–1994 and again from 1998. According to provisional vital statistics, the TFR appears to have decreased since 2007 in the two countries, with estimated levels of 2.0 in the United States and 1.6 in Canada in 2009.

American fertility rates are particularly high compared to European levels([13]) (Table 7). In 1980, the TFR of the United States was scarcely higher than in northern and western Europe, and lower than in central, southern and eastern Europe. But between 1980 and 2000, whereas the number of children per woman in the U.S. grew steadily, in Europe it fell drastically (apart from the North, where it was already very low). Today, fertility in the United States is higher than in all the regions of Europe, and notably with respect to the regions (central, southern and eastern Europe) where fertility was traditionally high. Canadian fertility rates, on the other hand, have evolved in much the same way as those of Europe, and remain at around the mean European level, i.e. between the relatively higher levels of northern and western Europe and the lower levels of central, southern and eastern Europe.

Ever later fertility

As in Europe, mean age at childbearing (calculated on the basis of period fertility rates) in North America has increased steadily since the mid-1970s, with a minimum of 25.7 years recorded in the United States in 1974, and 26.7 years in Canada in 1975. By 2007, the corresponding figures for the two countries were 27.9 and 29.7 years. The rise in mean age at childbearing is due mainly to an increase in age at first birth, from 22.8 to 25.6 years in the United States and from 24.2 to 28.1 years in Canada between 1975 and 2007. This change in timing explains the discrepancy between the total fertility rate (TFR) and completed fertility (Figure 6).

These two indicators have evolved in a parallel fashion, but with much larger fluctuations in the TFR than in completed fertility. Completed fertility reached a maximum of 3.4 children per woman in the 1930 birth cohort in Canada and 3.3 in the 1933 birth cohort in the United States. At its lowest point, it stood at 1.9 children per woman in the 1956 cohort in Canada and 2.0 in the 1953 cohort in the United States. The decline in total fertility rate over the 1960s and 1970s resulted in part from the above-mentioned change in fertility timing, which was characterized by progressive postponement of childbearing (Morgan, 1996). The

[13]For more information on fertility levels and trends in Europe, see last year's chronicle on these countries in *Population, English Edition* (Adveev et al., 2011). For consistency, the definition of European regions used here follows that of Adveev et al.

durable gap between the two curves suggests that the fertility rebound observed in the United States can be explained by a slowing of the trend, or even a recent stabilization in the timing of childbearing at a higher mean age. In Canada, by contrast, age at childbearing has continued to increase, a fact which partly explains the divergence between the two countries observed here (Bélanger and Ouellet, 2002).

Increase in fertility above age 30

In the United States, the increase in period fertility that began at the end of the 1970s appears to be entirely due to increased rates above age 30 (Figure 7). Below this age, fertility followed a downtrend between the immediate post-war generations (1945 and 1950). This same phenomenon is observed in Canada, where the trend continued from one cohort to the next, right up to the most recent cohort. This is consistent with the delay in age at first childbirth discussed above. But whereas in the United States the fertility decline among women under 30 has been partly offset by an increase above this age, this is not the case in Canada, where only a small rise above age 30 has been observed.

Fertility below age 30 is the characteristic that today most clearly distinguishes the American fertility regime from that of Canada. A comparison of cohort and period fertility rates in the two countries illustrates this phenomenon very clearly (Figure 8). Until the late 1970s, the only age group where U.S. fertility was substantially higher (by 70%) than that of its Canadian neighbour was among adolescents. Indeed, U.S. adolescent fertility at that time was much higher than in the industrialized world as a whole, with the exception of Bulgaria (Barbieri, 2012). U.S. fertility at 20–24 years, on the other hand, was comparable overall to that of Canada, and among women over 30 it was much lower. Since that period, the lead among the over-30s in Canada has progressively decreased. With stronger growth in fertility rates at all ages, the United States has now surpassed Canada, except in the 30–34 age group whose fertility rates have been very similar in the two countries over the last 20 years.

Towards the predominance of two-child families

In both Canada and the United States, a downward trend has been observed in recent years for all parity progression ratios up to the cohorts of women born in 1950 or thereabouts (Figure 9). The proportion of permanently childless women (the complement of probability a_0) rose from 5% to 14% in Canada and from 9% to 15% in the United States between the 1930 and 1950 birth cohorts. Among women with one child, the proportion who progressed to a second birth decreased from 86% to 78% and from 90% to 79% in the two countries, respectively. But it is the probability of having three or more children that fell most dramatically, a fact which explains the continuous decrease in completed fertility observed between these two cohorts of women, and the growing statistical concentration of two-child families. Whereas three quarters of women with two children in the 1930 cohorts had at least one further child, the proportion is only 40% in Canada and 47% in the United States in the 1950s cohorts. Similarly, the probability of having a fourth child among mothers of three has fallen from around 65% to 29% in Canada and to 38% in the United States. Thus, among women in general, the proportion who have at least three children has fallen from 60% in the two countries in the 1930 cohort to only 27% in Canada and 31% in the United States in the 1960 cohort.

The relative stabilization of completed fertility in the two countries beginning with the cohort born in 1950 is due to the stabilization of all parity progression ratios, with a very slight increase in the progression from second to third birth (a_2) in the United States. However, the stabilization occurred at a higher level in the United States for parity progression ratios beyond two children. While the proportions of childless women and of women with one child are very similar in the two countries given the similar levels of their

ratios a_0 and a_1, the proportion of women who go on to bear further children after the second is currently much higher in the United States: 47% after a second child and 37% after a third in the 1957 cohort, versus 40% and 29%, respectively, in Canada. Two-child families are thus less common in the United States than in Canada, and those with three or more children more so, which explains the higher U.S. completed fertility.

Major geographic and cultural disparities

Fertility in North America exhibits large geographic disparities. These are as marked in Canada, whose total fertility rates varied in 2008 from 1.5 children per woman in British Columbia to 2.2 in the territories, as in the United States, where they ranged from 1.7 in Vermont to 2.6 in Utah (home to the Mormon population). In 2008, total fertility rates were above replacement level in around half of the American states (28 out of 51), but in none of the Canadian provinces (apart from the territories) (Figure 10 and Annex Table A.4). The regions with the lowest fertility (TFR below 1.8) are located in the extreme north-east of the United States (Vermont, New Hampshire, Rhode Island, Maine and Massachusetts) and in the south-east of Canada (Nova Scotia, Newfoundland and Labrador, Ontario, New Brunswick, Prince Edward Island and Quebec) as well as on the country's west coast (the Yukon and British Columbia).

Geographic disparities in fertility are partly linked to differences between ethnic groups. In the United States, individuals reporting Hispanic ethnicity have much higher fertility levels than the others (Figure 11). After hovering around 2.8–2.9 children per woman since 1989, ([14]) their fertility reached 3.0 in 2006 before dropping to 2.7 according to the provisional data currently available for 2009. Between the mid-1980s and the mid-2000s, fertility rates were also high among individuals reporting as Black or, from 1989, non-Hispanic Black. In 1990, when the United States' total fertility rate reached its highest level since 1980, it was 2.5 for this category versus "only" 1.9 for non-Hispanic whites. The last twenty years, however, have seen a general convergence among all ethnic groups apart from Hispanics, and the total fertility rate in 2009 for non-Hispanic Blacks was only 10% higher than that of non-Hispanic Whites (2.0 and 1.8, respectively). Among Natives Americans and Asians, the two groups with intermediate fertility levels, the fertility of the former dropped from 2.2 in 1989 to 1.8 in 2009, while that of the latter increased in the most recent period, from 1.7 at the end of the 1990s to 2.0 in 2009.

The Canadian statistical office does not systematically publish fertility rates by ethnic origin. The literature does, however, provide useful indicators on internal disparities. We know, for example, that Aboriginal fertility rates, traditionally the highest, are moving closer to the general level. In the mid-1970s, this group's total fertility rate attained nearly 4.5 children per woman versus 1.9 in the general population. In 1996–2001, the rate had decreased somewhat in the country as a whole to 1.6, but the rate among Aboriginal women had plummeted to 2.8. The maximum level observed in this period was that of the Inuit (3.2), a group that lives in the Canadian Arctic (Trovato, 2009). Even the "visible minorities" – either immigrants or natives of Canada – with the highest fertility levels did not attain this level. Among these minorities, total fertility rates varied from 1.3 children per woman among Koreans over the same period (1995–1996 to 2000–2001) to 2.3 among people reporting Middle Eastern origins. The total fertility rate observed for visible minorities as a whole was 1.8 (Caron-Malenfant and Bélanger, 2006). It should be noted, however, that the classification of births by race or ethnic origin, in both Canada and the United States, is based on that reported by the parents, so the trends described here could have resulted as much from a shift in self-identification as from a real change in reproductive behaviour.

[14]The categories Hispanic, non-Hispanic White, and non-Hispanic Black were introduced into official statistics in 1989.

Furthermore, in the cases of Hispanics and Asians, changes also depend on compositional factors, as some studies on Latin American migrants and their descendants have shown (Parrado and Morgan, 2008), since the geographic and social origins of people belonging to these groups have varied over time.

VI. Nuptiality and divorce

Stronger nuptiality in the United States than in Canada

The differences between fertility patterns in the United States and Canada are partly associated with observed differences in nuptiality. Like fertility rates, marriage rates in the United States are higher than in Canada.

The higher nuptiality in United States is explained by a historically greater tendency to marry as well as a later and slower decrease in marriage rates compared with its neighbour. The last marriage peak occurred in both countries in 1972 (Figure 12). The crude marriage rate in that year was 10.9 per 1,000 population in the United States and 9.2 per 1,000 in Canada, which represents a relative difference of 16%. A continuous decrease began in Canada the following year, whereas rates in the United States fluctuated around 10 per 1,000 until the mid-1980s. By 2005, it had fallen to 7.6 per 1,000 in the United States but only 4.6 per 1,000 in Canada, a 40% relative difference between the two.

The crude marriage rate is an imperfect indicator of first marriage propensity because it is influenced by the effects of age structure and does not distinguish between first marriages and remarriages. Total first marriage rates, or cumulated first marriage frequencies, would be more useful, but the data required to calculate them are not available for the United States. In Canada, various publications indicate a drop in first marriage propensity between 1980 and 1990, when the total first marriage rate at age 50 fell from 0.71 to 0.65 in women and from 0.71 to 0.62 in men, a decrease that accelerated over the following years, reaching 0.47 for women and 0.44 for men in 2008 (Wadhera and Strachan, 1992; Institut de la Statistique du Québec, 2011). Timing effects aside, this evolution suggests that more than half of the population is never-married at age 50. It is associated with a progressive delay in age at first marriage, however.

Ongoing increase in age at first marriage

The increase in age at first marriage observed over the last 30 years in North America is the continuation of a long-term trend that began before 1960 in the United States but only in the early 1970s in Canada. It is impossible to compare the two countries, however, as the only long-term indicator available is median age at first marriage in the United States and mean age at first marriage in Canada.([15]) Trends in the two countries can nonetheless be compared as both indicators move in the same direction (Figure 13).

The trend for both sexes has been very regular since the mid-1970s. In 2003, the latest year for which Canadian statistics are available, median age at first marriage was 27.1 years for men and 25.3 years for women in the United States, while mean age was 30.2 years and 28.2 years, respectively, in Canada. Since 1975, the increase in age at first marriage has been more pronounced for women than for men, and more marked in Canada than in the United States (Figure 13). The gender difference in mean age at first marriage narrowed from 2.4 to 2.0 years over this period in Canada, while in the United States the difference between median ages fell from 2.3 to 1.8 years.

[15]The difference between mean age and median age at first marriage was 1.5 years in Canada over the period 2000–2004, the only years for which they are available simultaneously (mean age being higher than median age).

More frequent and earlier marriage in the United States

The higher marriage intensity in the United States, combined with a more pronounced increase in age at marriage in Canada over the last 40 years, have led to particularly large differences between the two countries in marital status at all ages. Table 8 provides information on the marital status of women over the course of their reproductive life. The available data show a marked increase in the proportion of single people in the two countries between 1980 and 2007/2010. This evolution is particularly striking for those in the 20–24 and 25–29 age ranges. They also show strong similarities between the two countries. Note that these figures correspond to reported status, which must be distinguished from legal status, as women in consensual unions do not necessarily report being single even if they have not formalized their union.

And a higher propensity to divorce in the United States

Crude divorce rates increased progressively from the 1960s to the 1980s. The peak observed in Canada after 1985 is linked to new legislation adopted in that year which facilitated divorce by mutual consent (Figure 14). The rate thus reached a maximum of 3.6 per 1,000 population in Canada, compared with a maximum of 5.3 per 1,000 reached in the United States in 1979–1981 before the onset of a decline that was slower than the previous upward trend. In Canada, the rate seems to have levelled off at 2.2–2.3 per 1,000, but it has continued to decrease in the United States, where it stood at 3.5 per 1,000 in 2009. The gap between the two countries has persisted throughout this period, however. It is reflected in the proportion of divorced women at each age, which is 30% to 40% higher in the United States, depending on the age group.

Because divorce can only occur after a marriage, and divorce rates are expressed as the ratio of divorces to total population (and not to the number of marriages), the higher U.S. rate is not surprising and does not necessarily indicate that marriages are more stable in Canada, nor that the frequency of divorces among married couples has decreased in the two countries, since marriages themselves have decreased in number.

A few scattered statistical sources do suggest, however, that marriages celebrated in the United States are less stable than those celebrated in Canada. In the most recent cohort of marriages celebrated long enough ago for this evaluation (that of 1975–1979), nearly half (46%) ([16]) ended before their 25th anniversary in the United States versus just over a third (35%)([17]) in Canada. This gap may reflect a stronger selection effect in favour of the most stable unions in Canada, where marriage has been becoming increasingly rare, while in the United States the majority of the population continues to choose this form of union.

Continuous growth in consensual unions

Because the published data based on the most recent censuses in Canada and the United States do not distinguish couples who are legally married from cohabiting couples, it is difficult to find quantitative information on the frequency of consensual unions. The available data, however, suggest that this frequency is higher in Canada than in the United States. For example, the 2001 Canadian census (which still distinguished between formal and informal unions) showed that 23% of the 25–29 year age group and 19% of the 30–34 year age group were in a consensual union, as opposed to only 15% and 9% in the United States in 2002 in the same age groups.([18]) However, the province of Quebec in Canada stands out very clearly from the others, with a very high frequency of consensual unions. In

[16]Table 131 of the *Statistical Abstract of the United States 2012*, United States Census Bureau.
[17]Statistics Canada, http://www.statcan.gc.ca/pub/91-209-x/2004000/part1/t/ta6-5-eng.htm, accessed on 29 June 2012.
[18]Canada: Statistics Canada (2008); United States: Goodwin et al. (2010).

the 2006 census, the proportion of cohabiting couples in the province was 35%, versus only 13% in the other provinces and territories taken together (Trovato, 2009, Chapter 5).

These figures represent an increase in cohabitation at the end of the 1990s in Canada, where the proportion of women in consensual unions among all women aged 25–29 with partners (the age group in which this proportion is highest) rose from 28% to 33% between the censuses of 1996 and 2001 (Trovato, 2009, Chapter 5). In the United States, the data from the 1995 and 2002 National Surveys of Family Growth indicate an increase from 9% to 13% in the proportion of women who report being in a consensual union among all women in this age group (and not only among those with a partner, as in Canada).([19]) The latest survey (2006–2010) showed that this phenomenon is still increasing, as is the proportion of non–marital births (Copen et al., 2012), which rose from 18% to 41% in the United States between 1980 and 2008–2009 and from 13% to 40% in Canada over the same period (Appendix Table A.5).

VII. Contraception and induced abortions

Despite speculation and analysis on the part of various authors, it is difficult to find statistical data demonstrating that the current gap between fertility in the United States and Canada is explained by differences in contraceptive use and abortion (Bélanger and Ouellet, 2002; Sardon, 2006; McDonald, 2010).

High prevalence of contraception

As in Europe, the use of contraception is very widespread in North America. According to United Nations data (2011), 74% of women in a union and of reproductive age in Canada report using a contraceptive method and 79% in the United States, versus 73% in Europe (Table 9).([20]) When three quarters of women who are in a union use a contraceptive method within a population, contraceptive coverage is considered to be maximal, given that around a quarter of women are either not at risk of pregnancy (because they are either sterile or already pregnant) or wish to conceive.

We note, however, that the use of modern methods is higher in North America (72–73%) than in southern Europe (46%), eastern Europe (54%), or western Europe (69%), but slightly lower than in northern Europe (77%). Use of traditional methods (9% of women in Canada and less than 6% in the United States) is lower than in southern Europe (18%) and eastern Europe (21%), but higher than in western and northern Europe (3% in both regions).

As in Europe, use of contraception varies considerably by age and marital status. For example, according to a representative survey performed in 2006–2008 in the United States, the proportion of women using contraception (all methods combined) varied from 28% in the 15–19 age group to more than 70% at age 30 or above (Mosher and Jones, 2010). These proportions are practically identical to those observed in a survey carried out using the same methodology in 1982 (Mosher and Jones, 2010). The 2006–2008 survey indicated, furthermore, that the proportion of women using contraception ranged from 40% among single women (ages 15–44), to 61% among separated or divorced women, 71% among

[19]Bramlett and Mosher (2002) for the 1995 survey and Goodwin et al. (2010) for the 2002 survey.

[20]The data presented by the United Nations are based on national surveys of very variable design, notably in terms of representativeness and question formulation. While for the United States the figures presented are representative of the national population and are based on a survey of 38,000 women, the data for Canada are drawn from a telephone survey of unknown representativeness. In addition, Canadians could give several answers to the question on contraceptive use, while the Americans were asked only to indicate the main method used (one answer possible). For these reasons, it is difficult to establish the comparability of the data given in Table 9 and they are difficult to interpret, especially since the reference periods in the two countries are not the same.

cohabiting women, and 79% among married women. Unfortunately, data of this kind are not available for Canada.

Wide use of sterilization

North Americans make much greater use of sterilization than Europeans (Table 9). Combining the percentages of women and men who have been sterilized, more than a third of couples are permanently protected in Canada (33%) and the United States (36%) versus fewer than 20% in Europe. In the United States, it is women who are more likely to be sterilized – a quarter of all women in a union, versus only one in ten in Canada – and the reverse in Canada, with 22% of men sterilized, versus 13% in the United States.

With regard to other modern methods of contraception, the percentage of women in the two countries who report using the pill (21% in Canada and 16% in the United States) is very similar to the proportion in Europe, with the exception of western Europe where this method is used massively (45% of women). The use of male condoms, in contrast, seems to be less widespread (15% reported use in Canada and 12% in the United States). Intrauterine devices (IUD) are also less favoured in North America than in Europe, with only 1% of women reporting using them in Canada and 5% in the United States. Among traditional methods, withdrawal predominates in all regions, with 6% of women reporting use of this method in Canada and below 5% in the United States.

When abortion is counted alongside intrauterine devices and sterilization (30% of women in the United States who responded to the 2002 survey reported having aborted at least once in their life; Mosher et al., 2004), the prevalence of medical birth control methods in North America becomes very striking in comparison with Europe.

Legal framework for abortion

Until 1969 in Canada and 1970 in the United States, induced abortion was illegal under all circumstances.

In 1969, it was legalized in Canada in cases of rape or incest, and where the mother's mental or physical health was under threat (as determined by a committee of three hospital physicians in an accredited establishment). The law was interpreted in different ways in different regions and hospitals. These divergences became a major political issue beginning in the 1970s, with the pro-choice movement arguing for abortion rights to be granted to all women, including for non-medical reasons, while opponents demanded stricter enforcement of the law. The conflict moved into the courts, and the 1969 law was finally abrogated in 1988 by the Supreme Court of Canada. The failure of the two sides to agree on new legislation led to a surprising legal void with regard to abortion (probably unique in the world), and since then, induced abortion has been authorized de facto in all circumstances and at any gestational age. In practice, access to the procedure is limited by the availability of hospital facilities and information. In certain regions, notably in rural areas and in the province of New Brunswick, access is very limited. No abortion services are available on Prince Edward Island (Rodgers and Downie, 2006).

In the United States, the abortion rights movement met with its first successes in 1970, when abortion became legal under certain circumstances in 11 states and anti- abortion laws were repealed in four. In 1973, the Supreme Court of the United States legalized abortion, including for non-medical reasons, throughout the country, but only in the first trimester of pregnancy, while allowing the states to authorize later abortions under circumstances that they were left to define themselves. Ten states impose no restrictions on gestational age and allow abortion under any circumstances, whereas 40 states allow abortion beyond 20 or 24 weeks of amenorrhea only when the mother's health is at risk (Guttmacher Institute, 2012).

The question of parental consent for minors was also left to the discretion of the states, with 37 of them (the number has grown in recent times) currently requiring such consent. Medical abortion on prescription from a health professional became legal from September 2000.

In the United States, more than in most other industrialized countries, induced abortion remains under continuous attack from conservative political and religious groups, and features very consistently as an electoral issue. This unfavourable cultural context has increased the difficulty of accessing abortion since the 1990s, with, among other measures, the wider enforcement of obligatory parental consent for minors, reduced insurance coverage of the costs of the procedure, and the progressive closure of hospitals and services that perform induced abortions in an ever-growing number of counties (87% of American counties in 2008, representing 35% of women of reproductive age; Jones and Kooistra, 2011). These growing restrictions on access to abortion are partly responsible for the current abortion trends, and have had proven effects on fertility in general and on unplanned fertility in particular (Morgan and Parnel, 2002).

Fewer abortions in both countries

The statistical reporting of induced abortions is not obligatory in either Canada or the United States, so the available data are incomplete.([21]) Certain American states, including the most populous (California), only occasionally transmit information to the national organization charged with collecting such data (National Center for Health Statistics). In Canada, certain establishments only send partial information to the national statistics office, notably on the characteristics of women who undergo abortions. The available data, although known to be underestimated, reveal the general pattern of change in abortion indicators, with a rapid increase in the 1970s, fluctuations at a high level in the 1980s, and a reduction over the following period.

In the United States, the annual number of induced abortions peaked at 1,590,750 in 1988. It then decreased steadily, and has stood at around 1.2 million since 2005 (1,212,350 in 2008, according to the Guttmacher Institute database).([22]) In Canada, abortion trends have been less regular, with a first peak reached in 1982 at 75,071 abortions, and then, after a period of relative stability in the range of 70,000–75,000, a new period of increase beginning in 1988, culminating in a second peak at 117,709 in 1997. The number then decreased progressively from 2005, falling to 93,755 in 2009 (CIHI, 2010).

Rapid convergence of rates, notably among younger people

The number of induced abortions per 1,000 women aged 15–49 has evolved in a parallel fashion in the two countries. The rate peaked in the United States in 1980–1981 (29 per 1,000) and in Canada in 1996–1997 (16 per 1,000). In 2006 the figure for the United States was 15 per 1,000 and for Canada, 13 per 1,000 (Table 7.2). These figures include medical abortions insofar as they are in fact reported. For the reasons mentioned above, caution is necessary in examining long-term trends or comparing the two countries. It seems, however, that the large disparity in abortion rates observed in 1980, with the rate in the U.S. two and a half times higher than in Canada, narrowed very rapidly over the following decades, until

[21]United States: National Center for Health Statistics (Annual Abortion Surveillance Reports, http://www.cdc.gov/reproductivehealth/Data_Stats/Abortion.htm), Guttmacher Institute database (http://www.guttmacher.org/datacenter/index.jsp); Canada: Statistics Canada up to 1994 (CANSIM database) and the Canadian Institute for Health Information (CIHI), after 1994.

[22]This database combines reports to the National Center for Health Statistics and the results of a continuous survey of all establishments which practice induced abortions. It is considered as the most complete and reliable current source of data at national level (www.guttmacher.org, accessed on 30 January 2012).

2006 (the last year for which comparable data are available), when the frequency of induced abortions among women of reproductive age was similar in both countries.

In 1980, the difference was particularly marked for young women, and decreased with age (Table 10). The rate was almost three times higher in the United States than in Canada before age 15, two and a half times higher at ages 15–30, two times higher at ages 30–40, and one and a half times higher after age 40. Some 25 years later, rates in the two countries had become practically identical at all ages, although slightly higher (by 20%) in the United States for women aged 20–29. The closing of the gap between the two countries reflects the divergence in their abortion trends. With the exception of the under-20s, whose abortion rates have decreased in both countries, the frequency of abortion has greatly increased in Canada, particularly for women aged 30–40, whereas in the United States abortion at ages 20–30 has markedly declined.

A high and stable proportion of unplanned births

The remarkable drop in abortion rates in the United States does not seem to reflect more systematic use of contraceptives or other avoidance strategies, insofar as the proportion of unplanned pregnancies([23]) has remained stable at a very high and even increasing level over the last 25 years. The proportion of such births rose from 46% in 1982 to 49% in 1994, and has remained at this level ever since (Henshaw, 1998; Finer and Henshaw, 2006; Finer and Zolna, 2011). It is particularly high for women under age 20, among whom 80% of all pregnancies are unplanned.

Statistics on unplanned births in Canada are not available, but the country's abortion ratio (number of induced abortions per 100 live births; Table 10) also indicates a birth control problem in the youngest age group. This ratio rose from 19% in 1980 to 26% in 2006 for all ages combined, a shift that is mainly explained by the increase in abortion among women under 30, with a doubling of the ratio in the 15–29 age groups.

VIII. Life expectancy, infant mortality and mortality structure

A high life expectancy at birth in Canada

Since the beginning of the last century, the American and Canadian populations have made remarkable progress in terms of life expectancy at birth (Figure 15). Gains over the last 30 years remain substantial (5.0 and 7.7 years for women and men, respectively, in Canada between 1977 and 2007; 3.4 and 6.1 years in the United States between 1979 and 2009), due mainly to mortality reductions at advanced ages rather than among the young.

In 2007, female life expectancy at birth reached 80.7 years in the United States and 83.0 years in Canada. The corresponding figures for males were 75.6 and 78.4 years. The large gap between the two countries first appeared in the mid-1950s, when the rate of increase in life expectancy for both sexes in the United States began to slow down in comparison to Canada (setting aside temporary episodes of convergence in the early 1970s). Since 1980, the advantage of Canadian men and women over their American counterparts has grown almost continuously, with the gap now reaching 2.3 years for women and 2.8 years for men (Figure 15).

Canadians also compare favourably with Europeans in terms of life expectancy at birth (Table 11).([24]) For nearly three decades, male and female life expectancies in Canada have been higher than those observed in the five European regions. Canada holds a striking

[23]Defined in the wide sense, i.e. including not only induced abortions and pregnancies carried to term by women who did not wish to have a child, but also poorly planned pregnancies (occurring earlier than intended).

advantage over eastern and central Europe, affected by a profound health crisis (Meslé and Vallin, 2002), but levels are much more similar with respect to the other European regions. For males, the advantage of Canada over northern Europe increased between 1980 and 2007, while female levels converged with those of western and southern Europe over the same period. In the United States, by contrast, although life expectancies at birth between 1980 and 2007 were higher than those of eastern and central Europe for both sexes, they were in general lower than those of northern, western and southern Europe.

The gender gap in life expectancy at birth continues to narrow

The remarkable increase in male and female life expectancy at birth in the United States and Canada over the twentieth century was accompanied by a widening of the gender gap (Figure 16). Up until the 1970s, the gap grew substantially in North America, as women's life expectancy increased more than that of men. At its highest level, the gap was 7.7 years in the United States (in 1975) and 7.4 years in Canada (in 1978). For the last three decades, however, life expectancy has been rising faster for men, and the female advantage has been progressively shrinking.([25]) The gender gap in life expectancy had narrowed to 4.9 years in the United States in 2009 and 4.6 years in Canada in 2007.

The increasing gender gap in life expectancy at birth in North America between the 1950s and the 1970s was mainly due to less favourable trends in male mortality from cardiovascular diseases (heart diseases in particular) and cancer (mainly bronchopulmonary cancers) (Waldron, 1993; Meslé, 2004). The surge in male tobacco consumption in the two countries contributed significantly to these trends (Peto et al., 2005; Bongaarts, 2006; Preston et al., 2011).([26]) The narrowing of the gap since the end of the 1970s has been due in large part to the reduction of gender inequalities in cardiovascular diseases, often associated with women's progressive adoption of social behaviours (employment, smoking, alcohol consumption) more similar to those of men (Waldron, 1993; Trovato and Lalu, 1995; Pampel, 2002; Meslé, 2004; Trovato and Heyen, 2006). While cardiovascular mortality has decreased substantially for both sexes, men, who started at a higher level, have enjoyed greater gains. The gender difference in mortality from bronchopulmonary cancers has also narrowed over the last 25 years, with a continuous increase in female lung cancer deaths (but slowing since the early 1990s) and a rapid decrease among males due to differentiated patterns of tobacco consumption over this period.

Infant mortality is now very low

Mortality among children under one year of age plummeted spectacularly in North America over the twentieth century (Figure 17). Between 1940 and 1980, Canada's infant mortality rate was divided by more than five, falling from 57.6 per 1,000 to 10.4 per 1,000. In the United States, it was almost four times lower in 1980 than in 1940 (12.6 per 1,000 versus 47.0 per 1,000). In both countries, it has halved again since 1980, reaching 4.9 per 1,000 in Canada and 6.4 per 1,000 in the United States in 2009. Canada thus maintains its lead with respect to its neighbour, which began in the mid-1960s, with infant mortality rates falling at roughly the same rate in both countries for the last 30 years (Table 12).([27])

[24]For more information on mortality levels and trends in Europe, see last year's chronicle on European countries published in *Population, English Edition* (Adveev et al., 2011).
[25]Although most industrialized countries have seen a similar change, it first occurred in English-speaking countries (Meslé, 2004).
[26]By taking a cohort approach (birth year) rather than a period approach (calendar year), Preston and Wang (2006) demonstrated the close relationship between changes in the life expectancy gap and in differences in tobacco consumption between men and women.
[27]See Appendix Table A.7 for more detailed information on infant mortality levels and trends since 1980 in the Canadian provinces and territories, and in the American states.

Over time, and as elsewhere, infant deaths have become increasingly concentrated in the first days following birth (Figure 17). The proportion of deaths among children under one year of age occurring during the neonatal period (the first four weeks) increased substantially between 1940 and 2008 in Canada (from 52% to 76%), and the proportion during the early neonatal period (first week) even more so (from 38% to 60%). In the United States, 61% of infant deaths occurred during the neonatal period in 1940 and 65% in 2009. The latter level is very similar to that of the early 1980s, as is the case for the proportion of deaths during the first week which, at 53% in 2009, was again practically the same as in 1980. Behaviours in the United States with a negative impact on child health (laying infants on their stomachs, which is linked to Sudden Infant Death Syndrome, for example) and unintentional injuries, at least in the most socioeconomically disadvantaged subpopulations, have slowed the decrease in post-neonatal mortality (from the second month to the first birthday), and may explain the differences between the two countries (Ananth et al., 2009).

Although current levels of infant mortality in North America are very low compared to those of the 1950s, comparison with northern, western and southern Europe suggests that further gains are possible (Table 12). In 2009, the infant mortality rate in northern Europe was 43% lower than that of Canada and 56% lower than that of the United States. In western and southern Europe, rates were lower by around 20% and nearly 40%, respectively. The slow relative progress observed in North America compared with Europe suggests that these gaps will not be closed in the short term.([28])

Slower adult mortality decline in the United States

Since 1980, progress in adult mortality has been relatively slow in the United States compared to Canada, particularly among women (Table 13).([29]) The probability of dying for women aged 15–65 years in Canada, which was 85 per 1,000 in 2007, has fallen by 35% since 1980. In the United States the decrease is only 22%, even though mortality at these ages was initially higher for American than for Canadian women in 1980. The trend among men is identical: the risk of dying at ages 15–65 years fell by 44% in Canada and only 30% in the United States over the same period. Consequently, the widening of the relative gap between the two countries is remarkable: 15% in 1980 and 28% in 2007 for women, and 13% and 30%, respectively, for men.

More broadly, the slow decline observed in the United States has lowered the country's position in the world adult mortality rankings (at ages 15–59) (Rajaratnam et al., 2010; Wilmoth et al., 2011), from 34th to 49th position between 1990 and 2010 for women, and from 41st to 45th position for men. Canada, on the other hand, is well ahead of the United States, although it is far from the top of international rankings (15th position in 1990 and 19th in 2010 for women; 13th position in 1990 and 10th in 2010 for men).

Renewed rapid progress in female life expectancy at age 65

The pace of increase in life expectancy at age 65 in North America has varied greatly by sex, country, and period (Figure 18 and Appendix Table A.9). Women were the first to make progress at advanced ages, and the life expectancies of both American and Canadian women at age 65 were already rising steadily during the 1940s and 1950s. At the turn of the 1960s, the pace of increase accelerated in Canada and slowed in the United States. Toward the middle of the 1970s, however, American women caught up with Canadian women thanks to

[28]MacDorman and Mathews (2008) have documented the United States' descent in the world infant mortality rankings over recent decades: from 12th in 1960 to 23rd in 1990 and 29th in 2004.

[29]See Appendix Table 8 for more information on adult mortality levels and trends in the Canadian provinces and territories and in the American states.

an acceleration in their life expectancy increase beginning in 1968, i.e. shortly after the creation of the national health insurance system, Medicare,([30]) whose existence explains only part of this acceleration (Card et al., 2004; Vallin and Meslé, 2006; Ho and Preston, 2010). At the start of the 1980s, progress began to slow markedly in both countries, a tendency that lasted longer and was more pronounced in the United States than in Canada, thereby giving Canadian women a gradually increasing advantage. Since the end of the 1990s, however, life expectancy has been increasing for women in both countries. American women aged 65 could expect to live to age 85.5 in 2009, and Canadian women to age 86.3 in 2007.

North American women were not the only ones to experience a slowdown of progress in mortality rates at advanced ages during the 1980s and 1990s. In the Netherlands and Denmark, among other countries, gains in women's life expectancy at age 65 slowed considerably, as in the United States, but they remained very high in France and Japan, taking these two latter countries to the top of the international ranking (Meslé and Vallin, 2006; Staetsky, 2009). This momentary divergence in the trajectories of women's life expectancies at higher ages seems to be due in large part to the differential impact of smoking-related mortality on female populations of the various countries (Staetsky, 2009).

Although noteworthy reductions in mortality at advanced ages occurred much later for men than for women, male life expectancy at age 65 has been increasing faster than that of women since the early 1980s (Figure 18), so the gender gap has been progressively narrowing. In 1980, male life expectancy at age 65 was 14.1 years in the United States and 14.5 in Canada, respectively 4.2 and 4.3 years below that of women. Today, men aged 65 can expect to live to age 82.8 in the United States (2009) and age 83.2 in Canada (2007), just 2.6 and 3.1 years less than women. This trend is set to continue over the next two decades in North America, notably because of differentials in men's and women's earlier smoking behaviours. Indeed, since tobacco consumption has dropped more rapidly among men than women, mortality projections that take smoking histories into account yield a faster decline of the gender gap in life expectancy in future years than those which exclude the smoking variable (Wang and Preston, 2009).

The growing role of mortality decline at advanced ages

In North America as in most industrialized countries, gains in life expectancy at birth are now largely due to mortality decline at advanced ages. A simple decomposition exercise to measure the contribution of different age groups to the increase in life expectancy at birth for each sex illustrates the growing role of mortality at advanced ages in the United States and Canada over the last two decades (Table 14). While 40% of the years of life gained by American and Canadian women between 1987 and 1997 resulted from decreasing mortality trends at ages 65 and above, this contribution climbed to 66% in the United States and 72% in Canada over the most recent ten-year period (a growing share was due to mortality reduction beyond age 80: almost half in Canada and slightly more than a third in the United States). Among men, around 65% of the years of life gained between 1997 and 2007 in both countries resulted from progress achieved at ages 65 and above (progress after age 80 representing almost a third of this contribution), versus 35% over the preceding decade.

[30]The Medicare program, created in 1965 (Title XIX of the Social Security Act) and implemented the following year, is a health insurance system for people aged 65 and above or who meet other criteria (for example, disabled people or those suffering from end-stage renal disease) that is managed by the American government (Centers for Medicare & Medicaid Services, 2011; Social Security Administration, 2011). A portion of health care costs are covered by the program, but it does not cover all medical fees, nor does it pay costs associated with long-term care. The Medicaid program, created at the same time as Medicare, provides medical coverage to individuals and families with low incomes or limited resources. Unlike Medicare, Medicaid is managed at the state level.

IX. Causes of death

Since 1980, cardiovascular diseases and cancers have accounted for at least 60% of the all-causes standardized mortality rate for both men and women in the United States and Canada (Appendix Table A.11). The spectacular decline in mortality from cardiovascular diseases (−55% for men and −53% for women in the United States, −62% for men and −61% for women in Canada) has substantially reduced their contribution to overall mortality. While slightly more than half of the all-causes standardized rate was due to cardiovascular diseases in 1980, this proportion had fallen to a third by 2007. Cancer mortality is also lower today than in 1980 (−20% for men and −10% for women in the United States, −14% for men and −4% for women in Canada), but has followed a very different trend from that of cardiovascular mortality (Figures 19.A and 19.B). In the two countries, the standardized cancer mortality rate increased up to the early 1990s for men and until around 1995 for women. The decrease that followed was more regular and rapid in the United States than in Canada, possibly due to wider screening and more effective treatment of breast and cervical cancer in women and prostate and colorectal cancer in men (O'Neill and O'Neill, 2007; Preston and Ho, 2011).

In 2007, "other diseases" was the third largest group of causes of death, accounting for 20% of the all-causes standardized mortality among men and 24% among women in both countries. These other diseases are particularly frequent among the under-15s (between 67% and 74% of the all-causes standardized rate for each sex in the two countries) and, to a lesser extent, among the over-80s (between 22% and 29% for each sex in the two countries) (Table 15). Deaths before age 15 are mainly clustered close to birth and typically result from congenital malformations or delivery trauma.

Over the last 30 years, deaths from external causes, which occur mainly at ages 15–24 (around 80% of the standardized mortality rate for all causes at these ages for men and 65% for women in 2007) and ages 25–44 (52% in men and 32% in women), have decreased considerably in North America, although there has been a slight increase in such deaths over the last decade in the United States.([31]) Homicides, which represented nearly a quarter of deaths from external causes among men aged 15–24 in the United States in 2007 and 13% among women of the same ages, make a much smaller contribution in Canada (around two and a half times less). Similarly, in the 25–44 age group, the share of homicides among deaths from external causes was three times higher in the United States than in Canada for men, and nearly twice as high for women. However, the homicide death rate has been relatively stable or decreasing at these ages since 2000 in the United States.

Finally, the recent decline (in around 2000) in the standardized mortality rate for respiratory diseases has continued for both sexes in the two countries. However, because these diseases are more common among elderly people, who represent a growing proportion of the population, their share of overall mortality remained at around 9–10% in 2007.

X. Geographic and social disparities in mortality

Considerable geographic disparities in the United States

The national trends described thus far conceal large mortality differentials between American states and between Canadian provinces and territories. This can be seen in the map of life expectancies at birth for the American states and Canadian provinces and territories, which is very similar for both sexes (Figure 20). In the United States, relatively low values of life expectancy are observed in the District of Columbia and all the southern

[31]The increase in deaths by accidental poisoning since the late 1990s (Miech et al., 2011) has clearly contributed to this trend.

states (apart from Florida), along with certain states of the Middle West (those located more to the south as well as Michigan). By contrast, life expectancies in a number of East North Central states, the Mountain region, the Pacific and New England are relatively high. In Canada, the lowest average lengths of life are found in the territories, located in the north of the country, and in Newfoundland and Labrador, in the extreme east. Canada's highest life expectancies are found in the provinces of British Columbia and Alberta, in the west, and in Ontario and Quebec (for women only in the latter province), in the centre of the country.

In 1999–2001, life expectancy at birth for males in the United States ranged from 68.0 years in the District of Columbia to 76.9 years in Hawaii, a difference of 8.9 years (Appendix Table A.6). Female life expectancies in the same two states also represented the most extreme values, at 76.5 and 82.6 years, a difference of 6.1 years.([32]) Geographic disparities among the Canadian provinces are considerably smaller. In British Columbia, the province with the highest life expectancy in 2007, men and women could expect to live 2.8 and 2.7 years more than men and women in Newfoundland and Labrador, where life expectancy was the lowest (76.2 versus 79.0 years for men and 80.8 versus 83.5 for women).

Comparing the male and female life expectancies at birth in different states between 1979–1981 and 1999–2001, we first note that geographic disparities have recently grown in the United States for both sexes (Appendix Table A.6). The (weighted) standard deviation of U.S. male life expectancies, which expresses the degree of variability within the set of observed values, increased from 1.2 to 1.4 years, and the corresponding figure for females from 0.9 to 1.1 years. This widening of disparities is worrisome, especially as it occurs after two decades (the 1960s and 1970s) of narrowing disparities (Ezzati et al., 2008).([33]) Moreover, we note very few changes in the spatial distribution of mean length of life since 1979–1981. Indeed, apart from the Middle Atlantic states (mainly New York and New Jersey), which have climbed in the national ranking, the hierarchy of regions has essentially remained the same. The states of Hawaii and the District of Columbia, at the two extremes of the geographic distribution of life expectancy, continue to stand out, although the gap between them has narrowed slightly since 1979–1981.

In Canada, geographic disparities in mortality have evolved differently for males and females (Appendix Table A.6). For males, the (weighted) standard deviation in life expectancies at birth for the provinces increased between 1980 and 2000 (0.7 versus 0.9 years), whereas for females it decreased (0.6 versus 0.5 years). By 2007, however, it had returned to the 1980 level for both sexes. Compared to the remarkable and sustained reduction of life expectancy differentials between provinces from the beginning of the twentieth century to the end of the 1970s([34]) (Adams, 1990; Manuel and Hockin, 2000), these changes are relatively small in magnitude. Still, the early 1980s did mark the end of a long period of convergence for life expectancies across Canadian provinces, particularly for men. Several noteworthy changes in the provincial ranking have also occurred since 1980. First of all, British Columbia now occupies the top position for both sexes, with a considerable lead over the rest of the country. Quebec ranked much more favourably with respect to the other provinces in 2007 than in 1980.([35]) The situation in Newfoundland and Labrador, by contrast, deteriorated over these two decades, not only with respect to the

[32]At the level of American counties, which are the finest geographic units for which mortality data are systematically available in the United States, the differential in life expectancy at birth is even more marked. In 1999, it stood at 18.2 years for men and 12.7 years for women (Ezzati et al., 2008).

[33]In the authors' view, this trend reversal is explained by continuing mortality decline in the most advantaged regions of the country, combined with stagnation or even increase in mortality in the most disadvantaged regions.

[34]In the early 1920s, the absolute difference between the Canadian provinces with the lowest and highest life expectancies was around 10 years for each sex. Toward the end of the 1970s, it had narrowed to around 2 years (Canadian Human Mortality Database, 2012).

[35]Before 1980, Quebec almost always occupied last place in the ranking of provincial life expectancies at birth (Canadian Human Mortality Database, 2012).

Canadian provinces in general but also compared to the other Atlantic provinces. Finally, among the Canadian territories, Yukon, contrary to the Northwest Territories and Nunavut, partly caught up with the rest of Canada in 2000–2004 compared to 1980–1984.

A much higher mortality among black Americans

As far back as (reliable) data are available for the United States, substantial differences in mortality between Black and White Americans can be observed, always favouring the latter. However, changes in the absolute difference in life expectancy at birth since the beginning of the twentieth century can be divided into three very distinct periods. Between 1900 and 1982, the gap narrowed substantially, falling from 14.6 to 5.7 years for the two sexes combined (Arias, 2011). Over the following ten years, by contrast, disparities increased, largely due to a rise in mortality linked to HIV/AIDS and to homicides among Black men (Harper et al., 2007) (Figure 21). In 1993, the gap stood at 7.1 years for the two sexes (8.5 years for men and 5.8 years for women). Since then the situation has improved: in 2007, the average length of life of men and women reporting their race as White was higher than that of men and women reporting their race as Black by 5.9 and 4.0 years, respectively. Although these are the smallest differentials recorded since 1900 for both sexes, they remain considerable, and are only slightly lower (by less than a year) than in the early 1980s.

If both race and various sociodemographic characteristics of the county of residence are used to divide the American population into more homogeneous groups, differentials in life expectancy at birth are even more marked (Murray et al., 2006). In 2001, among the “eight Americas” distinguished by these authors, the difference between the extremes was 15.4 years for men (Asians versus Blacks living in high-risk urban areas) and 12.8 years for women (Asians versus low-income Blacks living in the southern United States).

In Canada, comparisons involving the “Whites” category are impossible, since, as discussed earlier, this category does not exist in the country (section III). It is, however, possible to compare mortality among visible minorities with that of Canadians who do not belong to this group. For example, between 1991 and 2001, standardized mortality rates for all visible minorities were lower than those of other Canadians (Wilkins et al., 2008). This result, which at first seems surprising, seems to be related to the “healthy immigrant” effect,([36]) as members of a visible minority born in Canada generally do not benefit from this mortality advantage. Another way to examine social inequalities in mortality in Canada is to divide the population into sub-groups using an index based on socioeconomic information collected at the micro-geographic level (Pampalon et al., 2009c).([37]) For the period 1991–2001, the life expectancy at age 25 of the most economically advantaged men was 4.4 years longer([38]) than that of the most disadvantaged men (Pampalon et al., 2009b). For women, the gap was 2.9 years.

Growing socioeconomic mortality disparities in North America

Like geographic disparities in mortality, social and material inequalities in mortality have recently worsened in North America. In the United States, between 1980–1982 and 1998–

[36]In Canada as in several other developed countries, immigrants seem to benefit from a survival advantage at almost all ages compared to native-born residents (Sharma et al., 1990; Trovato, 1993; Chen et al., 1996; Bourbeau, 2002). Beyond the fact that the immigration process is selective in nature and tends to select young and healthy individuals, all immigrants are required to undergo a medical examination before admission to Canada (the same is true in the United States). Individuals presenting serious health problems are sent back to their home countries. In terms of health, then, this reinforces selectivity. Another possible explanation for the immigrant survival advantage relates to their long-term smoking habits: immigrants tend to have smoked less than natives. This hypothesis is well-supported for the United States, and could be similarly so for Canada (Blue and Fenelon, 2011).

[37]To construct their “deprivation index”, the authors drew on Townsend’s (1987) proposals regarding the concept of deprivation and the corresponding index that he developed.

[38]Life expectancy data by quintile of deprivation are not available for Canada.

2000, for example, the difference in life expectancy at birth between the extreme deciles of the American population([39]) rose from 3.8 to 5.4 years for men and from 1.3 to 3.3 years for women (Sing and Siahpush, 2006). This growth in inequalities is not limited to groups at the two extremes of the distribution: the difference in life expectancy at birth between the least-deprived decile and each of the seven most-deprived deciles for both sexes also increased. In Canada, the ratio of standardized mortality rates before age 75 between the extreme quintiles of material and social disadvantage rose from 2.0 in 1989–1993 to 2.6 in 1999–2003 (both sexes combined), an increase of 30% (Pampalon et al., 2009a).

XI. International migration and migration policy

Large migrant inflows to the United States

In 2010, the United States admitted 1,043,000 international immigrants, 3.7 times more than Canada, which received a total of 281,000. These figures reflect a long-standing observation: throughout the twentieth century, the United States admitted a larger number of immigrants than Canada. Even during the long period of extreme restrictions on migration to the United States, from the end of the First World War until the mid-1960s,([40]) the number of immigrants remained slightly above those of Canada. Since 1965, the faster increase in the number of immigrants entering the United States has steadily widened the gap between the two countries (Figure 22), although annual immigrant inflows over the last 30 years have almost doubled in both. In 1980, the United States admitted 531,000 new immigrants and Canada 143,000. In the United States, a sudden spike was observed following the 1986 Immigration Reform and Control Act which led to the regularization of some 3 million undocumented immigrants in the early 1990s.([41]) In 1991, 1,827,000 legal immigrants entered the country, the largest annual total in the country's history, almost two-thirds of whom (1,123,000 or 62%) were included in this regularization programme.

Although the gap between the number of new immigrants to the United States and Canada is steadily widening (in absolute terms), the immigration rate, i.e. the annual number of immigrants admitted into a host country as a percentage of its national population, has been higher in Canada than in the United States since 1945 (Figure 23). In 2010, the rate was 0.8% in Canada, more than double the American rate of 0.3%. While the number of immigrants admitted in 2010 represents only a small fraction of the Canadian population, recall that the rate of net international migration has represented almost two-thirds of the total population growth rate of Canada since the mid-1990s (Section IV). In the United States, the share is below one-third, for a total population growth rate almost identical to that of Canada throughout the period.

The immigrant population thus represents a non-negligible share of the total population in both countries, but in Canada especially, thanks to successive immigration waves throughout the twentieth century. According to the 2006 Canadian census, almost one person in five (19.8 %) was born abroad. This corresponds to around 6.2 million individuals (Chui et al., 2007). This is the highest level recorded in the country over the last 75 years. In the United States, the proportion of foreign-born persons is much lower, at 12.5% or 38.0 million persons([42]) in 2006. Among western countries that admit large numbers of immigrants, only Australia has a slightly higher proportion of foreign-born residents than Canada (22.2% in

[39] A deprivation index developed by Singh and Siahpush (2006), which incorporates 11 socioeconomic indicators (Pampalon et al. (2009c) used 6) was used to divide the American population into deciles.

[40] As already indicated in Section II (Demographic history), a system of quotas by nationality (National Origins Formula) was enforced from 1924 to 1965 in the United States. This limited the annual number of European immigrants to United States to 150,000, denied entry to Asian immigrants and strongly favoured northern and western Europeans (Daniel, 2003b). This system was abolished by the 1965 Act (Immigration and Nationality Act of 1965, also known as the Hart-Celler Act).

[41] For further information on this act, see Daniel (2003b).

2006).([43]) By comparison, immigrants represented 12.7% of the population of Germany and 11.2% of the population of France in 2006 (OECD, 2012).

Family reunification is the main admission category in the United States, but not in Canada

Current immigration policy in the United States is based on the Immigration and Nationality Act of 1965. Under this Act, the system of quotas based on the National Origins Formula, in force since the early 1920s, was abolished and replaced by immigration "ceilings" aiming to limit both the total annual number of visas granted and the number of new immigrants from any single given country (Daniel, 2003b). In addition, a system of "preferential categories" was established to regulate admission through immigration channels. Since the Immigration Act of 1990 came into force in 1995, an annual ceiling of 675,000 visas has been imposed. Moreover, the annual number of immigrants admitted from any single country many not exceed 47,250 (7% of the annual total). A preference system is applied for the granting of visas, with 71% of entrants admitted under the "family-sponsored preferences" category, 21% under the "employment-based preferences"([44]) category and 8% under the "diversity/ green card lottery"([45]) category. However, there is no numerical limitation on immediate relatives (spouses and under-age children of United States citizens born abroad) or on refugees, whose admission is governed by the Refugee Act of 1980.

In 2010, two-thirds of new immigrants to the United States entered under the family-sponsored preferences category, compared with 69% ten years earlier and 73% in 1986 (Table 16). With respect to total immigrant inflows (and not just those admitted under a preference category) the relative share of immigrants in the employment-based preferences category was much lower for each of these three years (between 9% and 14%). The relative share of immigrants admitted for humanitarian reasons varies substantially from year to year depending on the international geopolitical situation (between 7% and 17% since 1986). Other immigrants, notably those admitted through the Green Card Lottery since 1992 (a preference category that favours diversity) represented 6% of entrants in 2010, 11% in 2000, but less than 1% in 1986.

In Canada, since the Immigration and Refugee Protection Act of June 2002, immigrants are now admitted under one of the following four categories: family reunification, economic immigration, refugees and other immigrants. This Act follows on from the Immigration Act of 1976, which came into force in 1978, and which created three admission categories: family class, humanitarian class and independent class. Although there are no immigration quotas or ceilings by nationality or country of origin, a target range for each of these categories is established annually based on the needs to be satisfied in each province and territory, on the labour market situation and on immigrant integration. In addition, new economic immigrants as well as extended family members (excluding spouses, common-law partners, dependent children, parents and grandparents) are selected on a points-based system, in place since 1967, based on criteria such as educational credentials, proficiency in

[42]The number of undocumented immigrants (mainly comprising immigrants who enter the United States illegally, those who overstay their visa, and those who breach their entry conditions) was estimated at 11.3 million in 2006, i.e. almost one-third of the total U.S. immigrant population (Passel and Cohn, 2010). There is no precise estimate for the number of undocumented immigrants in Canada, but they are thought to total around 0.5 million, corresponding to 8% of the foreign-born population (Magalhaes et al., 2010).

[43]Luxembourg and Switzerland admit far fewer immigrants than Canada in absolute terms, but have higher proportions of foreign-born residents (Pison, 2010).

[44]Most of the immigrants admitted in this category are sponsored by a U.S. employer.

[45]Each year, 55,000 visas (among which, since 1999, 5,000 are temporarily reserved for certain asylum seekers concerned by the Nicaraguan Adjustment and Central American Relief Act of 1997), are granted to citizens of countries with a low immigration rate to the United States via a lottery system (random selection of applicants deemed eligible) (Wasem and Ester, 2004). The lottery was launched in 1995 after a transition period from 1992 to 1994.

French or English, ability to become economically established, and family relationships in Canada (Daniel, 2003a; Milan, 2011).

For Canada as a whole in 2010, the government's published target range for the various admission categories strongly favoured economic immigrants (between 63% and 65%), followed by those admitted for family reunification (around 24%), refugees (between 8% and 10%) and other immigrants (around 3%) (Milan, 2011).([46]) The proportions of immigrants in each category actually admitted to Canada in 2010 correspond closely to these targets and are an accurate reflection of the proportions observed in the last ten years (Table 16). They contrast with those of 1986, however, a year in which the relative share of immigrants admitted for family reunification exceeded that of economic immigrants (43% versus 36%). This difference can be explained by the difficult economic conditions of the early 1980s, when only immigrants who already had a job in Canada were admitted to the country under the economic category.

A broader diversity of immigrant origins

Both in the United States and Canada, immigrants who were admitted before the 1960s came mostly from Europe, then from Canada (for the United States) and from the United States (for Canada). Since then, changes to migration policies in both countries have led to a much broader diversity of national origins among incoming migrants.

The most remarkable example is certainly that of Asian immigration (including from the Middle East), which has increased spectacularly, in Canada especially. For a decade now, Asians have accounted for around 60% of all immigrants admitted to Canada each year (Table 17), versus just 6% in the 1960s (Statistics Canada, 2008). In the United States, the relative share of Asian immigrants rose from 7% in 1960 to more than 40% between 1978 and 1988 (notably with the inflow of boat people after the Vietnam war), before levelling off at around 35% over the last ten years (United States Immigration and Naturalization Service, 2002; Carter et al., 2006; United States Department of Homeland Security, 2011).

Currently, the relative proportions of immigrants to the United States from Asia and from North America (including Central America) are practically equivalent (Table 17), notably because inflows from Mexico are still very large (United States Department of Homeland Security, 2011). Migration to Canada from other North American countries has fallen sharply since the 1960s, with Mexican immigrants representing no more than 1% of total migrant inflows since 2000 (Milan, 2011). Migration from Europe to Canada is also much lower than 40 years ago, although Europeans still represented 16% of new arrivals in 2009 (Table 17). African immigration to Canada and the United States is still increasing, and now represents 14% and 11% of total inflows, respectively.

XII. Age structure and demographic ageing

The American and Canadian populations are ageing

Since 1980, under the combined effects of changes in fertility and mortality discussed previously, the age structure of Canadian and American populations has undergone significant transformations. The ageing process of these populations over the past thirty years is clearly reflected in their population pyramids, which have become increasingly rectangular with time (Figure 24). Among the main differences between the two countries, the base of the pyramid is narrower in Canada than in the United States for this period, essentially because of Canada's weaker fertility (Section V). Furthermore, the bulge that

[46]These objectives contrast with the U.S. immigration policy, which gives overwhelming priority to family reunification.

progressively moves up the pyramid as the baby-boomers advance in age is far more pronounced in Canada than in the United States, indicating Canada's more significant imbalance between the size of the baby-boom generation and contiguous generations.

In 2010 in the United States, the population aged under 15 stood at 61.3 million, the population aged 15–64 at 207.6 million, and the population aged 65 and over at 40.4 million. Since 1980, this last group has increased the most in relative terms, clearly illustrating the ongoing ageing process (Figure 25). The rates of change for the young, adult, and elderly populations are even more strongly differentiated in Canada: while the under-15 population has remained practically stable,([47]) the 15–64 age group has increased by 43% and the over-65s more than doubled. In 2010, these populations totalled 5.6, 23.9, and 5.0 million, respectively. The number of very elderly persons (80 years or older) is also increasing rapidly in North America, showing that the elderly population is itself ageing. In 1980, there were 5.2 million octogenarians in the United States and 0.4 million in Canada, versus 11.3 million and 1.3 million, respectively, in 2010. The proportion of octogenarians among the over-65s thus rose from 20% to 28% in the United States and from 19% to 28% in Canada.

Median age and proportion of persons aged 65 or older are the most commonly used indicators for measuring demographic ageing. Thirty years ago, the median age of the United States population was slightly higher than that of Canada (30.0 years versus 29.1 years in 1980), but the situation has progressively reversed, with the indicator reaching 37.2 years and 39.7 years, respectively, in 2010 (Appendix Table A.12). While only 7 out of 51 American states (almost all of the New England states as well as West Virginia, Florida, and Pennsylvania) have a median age over 40, this is the case for more than half of the Canadian provinces (all of the Atlantic Provinces as well as Quebec and British Columbia). The median age remains low in the Canadian territories, mainly because of the high fertility of the Aboriginal peoples living there and the unfavourable mortality rates in these areas compared with the rest of the country. In the United States, the state of Utah has by far the lowest median age (29.2 years). Maine, on the other hand, has the highest (42.7 years),([48]) very similar to that of Canada's Atlantic Provinces (42.8 years).

Between 1980 and 2010, the proportion of over-65s rose from 11% to 13% in the United States and from 9% to 14% in Canada. This increase is all the more striking given that in 1980, less than half of the American states (21 out of 51) and less than a third of the Canadian provinces (3 out of 10) had a proportion equal to or higher than 11%, while in 2010, only four American states (Georgia, Texas, Utah, and Alaska) and one Canadian province (Alberta) were not yet in this situation.

There are considerable geographical differences in demographic ageing within the two countries, however. The proportion of persons aged 65 or over in 2010 varies within the United States, from 8% in Alaska to 17% in Florida, where the warm climate tends to attract retirees. The American ageing map reveals that all of the Central Northwest states (with the exception of Minnesota and Kansas) and several neighbouring states (Montana, Arizona, and Oklahoma) display relatively high proportions (above 13.3%) of persons aged 65 or over (Figure 26). Similarly, the Appalachian corridor in the eastern part of the country links together states with the highest proportions of over-65s (particularly Maine, Pennsylvania, and West Virginia, where the proportion surpasses 15%). By contrast, several western states have relatively low proportions of elderly persons. In Canada, Nova Scotia currently has the

[47]The under-15 population decreased in absolute terms between 1980 and 2010 in several Canadian provinces, notably in Quebec, Saskatchewan, and the Atlantic Provinces (Appendix Tables A.1 and A.12). This is the case for only six states in the United States (North Dakota, District of Columbia, Louisiana, Maine, Michigan, and West Virginia).

[48]West Virginia and Florida had the highest median ages in the United States in 1990 and 2000, but since then have been overtaken by Maine, Vermont and (in the case of Florida) New Hampshire (Howden and Meyer, 2011).

highest proportion of persons aged 65 or over (16%), while Alberta, whose dynamic economy attracts large numbers of immigrants, has the lowest (10.6%). More generally, the populations of the Atlantic Provinces and Quebec are the oldest, while those of the three Canadian territories are the youngest, even compared with Alberta.

Populations still younger than those of Europe

Despite the growth recorded over the past thirty years, the current proportion of persons aged 65 or over in the United States (13%) and in Canada (14%) remains lower than in the regions of Europe, with the exception of eastern Europe (13%) (Table 18). Already in 1980, the proportions of over-65s in northern and western Europe were higher than the proportions in North America today. By 2010, the difference between southern, western, and northern Europe and the United States and Canada had grown extremely marked, suggesting that these latter countries are likely to remain younger than the former for many years to come. However, as the baby boom was more intense in Canada than in Europe, and was followed by a baby bust that brought fertility down to European levels, population ageing in Canada should be faster in the decades to come, as the many baby-boomers progressively join the over-65 age group.

XIII. The demographic future

As in most countries of the world, population projections are published regularly by the national statistical offices of North America. The most recent national projections forecast trends up to 2050 for the United States and up to 2061 for Canada (United States Census Bureau, 2009b for national projections; 2004 for projections by state; Statistics Canada, 2010).

Method and hypotheses

The population projections presented here incorporate the 2000 census population adjustments for the United States and the 2006 census adjustments for Canada. A set of scenarios (5 for the United States and 6 for Canada) were established and applied to the reference population using the classic components method. The reference populations are the 2000 census population for the United States, and the estimated population in 2009 for Canada. Each scenario represents a different combination of assumptions concerning trends in fertility, mortality and migration. For finer projections at a more local level (states in the United States, provinces and territories in Canada), specific indicators and internal migration hypotheses were developed by the statistical offices. For Canada, projections by province and territory were published at the same time as the national projections, but for a shorter time horizon (2036). For the United States, the projections by state are older. The most recent were published in 2005 with a 2030 time horizon.([49])

At national level in Canada, under the medium scenario, the total fertility rate remains at a constant level of 1.7 children per woman from the first projected year and the secular mortality decline continues to a level of life expectancy at birth of 84.0 years for men and 87.3 years for women in 2036 (a gain of 5.8 years for men and 4.4 years for women). Annual net migration of 252,500 persons is also projected. At provincial level, under the medium scenario, interprovincial migration follows the trend observed from 1981 to 2008 (Statistics Canada, 2010).

[49]To permit comparisons between the two countries, only the projection results for the periods 2010–2050 at national level and 2010–2030 at regional level are presented here.

For the United States, the assumptions are more complex as they were established separately for three main ethnic groups (Hispanics, non-Hispanic Blacks, others). Table 19 presents the assumptions used to establish the medium projection for the national population. At state level, the assumptions also incorporate migration trends over the period 1995–2000 (United States Census Bureau, 2005 and 2009b).

Population growth will remain vigorous for many years

Under the medium scenario of the national projections, Canada will have 48.6 million inhabitants in 2050 and the United States 439.0 million, i.e. 14.5 million and 128.8 million more, respectively, than in 2010 (Appendix Tables A.13A and A.13B). In both countries, these figures represent a 42% increase with respect to the baseline population. The population will continue to grow throughout the projection period, but more and more slowly: while the annual growth rate in 2010 was 10 per 1,000 in the United States and 12 per 1,000 in Canada, it should fall to 8 and 7 per 1,000, respectively, in the two countries in 2050 (by which time rates will be negative in many European countries, including France). The contribution of migration to the growth rate will increase progressively over time, rising from 44% at present to 60% in 2050 in the United States, and from 60% to 72% in Canada.

Regional population projections are determined by an additional component with respect to national projections – that of internal migration flows. The projection results (Table 20) suggest that between 2010 and 2030, population growth will be strongest in the southern and western states of the United States. The population of the Mountain region is forecast to increase by more than 37% over these two decades, and that of the South Atlantic region by 30%, continuing the trend observed since the 1980s. By contrast, none of the north-eastern regions will increase by more than 10% before 2030 (below 4% in the Atlantic Central and Northeast Central regions). In Canada, future growth will be highest in British Columbia, with an increase of 31%, and Ontario, with 26%. Growth will be slowest in the Atlantic provinces, notably Newfoundland and Labrador, where the population will increase by just 1% between 2010 and 2030.

Inevitable population ageing

The American and Canadian populations will continue to age over the coming decades, pursuing a process which was initiated by the fertility decline and which will accelerate over time. Ageing will be especially rapid over the coming two decades as growing numbers of baby-boomers reach their 65th birthday. This is clearly illustrated by the population pyramids based on the projections discussed above, which will become increasingly bell-shaped over time (Figure 27). The narrowing at the base of the 2030 and 2050 pyramids for Canada reflects the very low fertility observed in Canada since the late 1970s.

Canada

In 2010, persons aged 65 and over represented 14% of the total Canadian population, and 13% of the US population (Appendix Tables A.13A and A.13B). By 2030, the proportions will be 23% and 19%, respectively, and in 2050, 25% and 20%. The populations of North America will remain relatively young with respect to those of Europe, where more than one person in four will be over 65 by 2040 (31% in Italy and in Germany) (Adveev et al., 2011). In 2010, there were 4.8 million persons aged over 65 in Canada, and 40.2 million in the United States. These figures will more than double by 2050, to reach 12.0 million and 88.5 million. The number of older adults will exceed the number of under-15s by 2017 in Canada, but not until 2032 in the United States, where fertility has remained at higher levels over the last 30 years.

A massive increase in centenarians

The advancing age of the baby-boom cohorts, combined with progress in medicine and health will lead to an explosion in the number of very old adults (aged 80 or over) and centenarians. There are 1.3 million persons aged over 80 and 6,000 centenarians in Canada today, and in the United States the numbers are 9.3 million and 53,000, respectively. By 2050, the number of over-80s is forecast to increase 3.5-fold in Canada and 2.9-fold in the United States, while the numbers of centenarians will be multiplied by 8 and 7, respectively.

A large majority of very old persons will be women. In 2050 the sex ratio will be 78 men per 100 women at ages 80 and above in Canada, but only 29 men per 100 women among centenarians. These ratios in the United States will be 73 and 41 men per 100 women, respectively. However, given that male mortality has improved more rapidly than female mortality in recent years, these figures reflect a progressive narrowing of the gender gap over future decades. At present, there are just 60 men per 100 women aged 80 and over in both countries, and 24 centenarian men per 100 centenarian women.

A less favourable dependency ratio

Under the medium scenario of the demographic projections, the share of children aged under 15 in the total population will increase very slowly up to 2025 in Canada, rising from 16.5% in 2010 to 16.8% in that year. It will then fall very gradually down to 15.6% in 2050. In the United States, more than one person in five is currently below age 15, and this proportion will fall only marginally, but steadily, up to 2050 (from 20.1% to 19.3%). The declining share of young people in the total population and the rapid increase in numbers of older adults will increase the dependency ratio, i.e. the ratio of persons aged below 15 or over 65 to the number of persons aged 15–64.

This ratio, which stood at 44 per 100 in Canada in 2010 and 49 in the United States, will rise to 67 and 65, respectively, in the two countries in 2050. This trend will be particularly marked for the old-age dependency ratio, i.e. the ratio of persons aged 65 and over to those aged 15– 64, which will rise from 20 per 100 in Canada and 19 in the United States today, to 41 and 33, respectively, in 2050. These changes in the population age structure will have a massive impact on the economic and social structures of these two countries. Demographic projections provide a means for governments to anticipate these changes by adopting policies to attenuate their negative effects.

Overview—Canada and the United States have enjoyed vigorous population growth since the early 1980s. In Canada, demographic growth is driven mainly by strongly positive net migration. Over the last 30 years, fertility has stabilized at a level slightly above 1.5 children per woman, while mortality continues to decline, with a life expectancy at birth of 78 years for men and 83 years for women in 2007. These levels of fertility and mortality will lead to progressive population ageing: between 1980 and 2007 median age increased by 7 years, and around one person in seven is currently aged 65 or over. Natural increase is limited, although still above zero (4 per 1,000 in 2008–2009), but thanks to net migration of 9 per thousand, total population growth is still strong (almost 1.3% per year), especially compared with European countries.

Growth is slightly slower in the United States (0.9%), but with fertility close to replacement level in 2007, a larger share of this growth is due to natural increase. The fertility difference between the two countries is due mainly to much higher fertility rates among women under 30 in the United States than in Canada. Mortality is also higher in the United States, where life expectancy at birth stood at 76 years for men and 81 years for women in 2009. The United States is the world’s largest immigrant receiving country, with around one million

entries each year. However, with respect to total population, its immigration rate is only half that of Canada, where one person in five was born abroad, compared with one in eight in the United States.

Recent trends in fertility, mortality and international migration in these two North American countries hold promise of a more auspicious demographic future than in the vast majority of other high-income countries, with a population that will continue to grow, albeit more slowly, over the next 40 years, and a demographic ageing process that will take place in the United States more slowly than elsewhere. The most acute demographic issue today is not, as in Europe, that of imminent population decline, but rather of the geographic and social inequalities which have increased steadily since the early 1980s and which are reflected in major health and mortality differentials between regions and social groups.

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Figure 1.
Maps of the Canadian regions, provinces and territories and the American regions and states

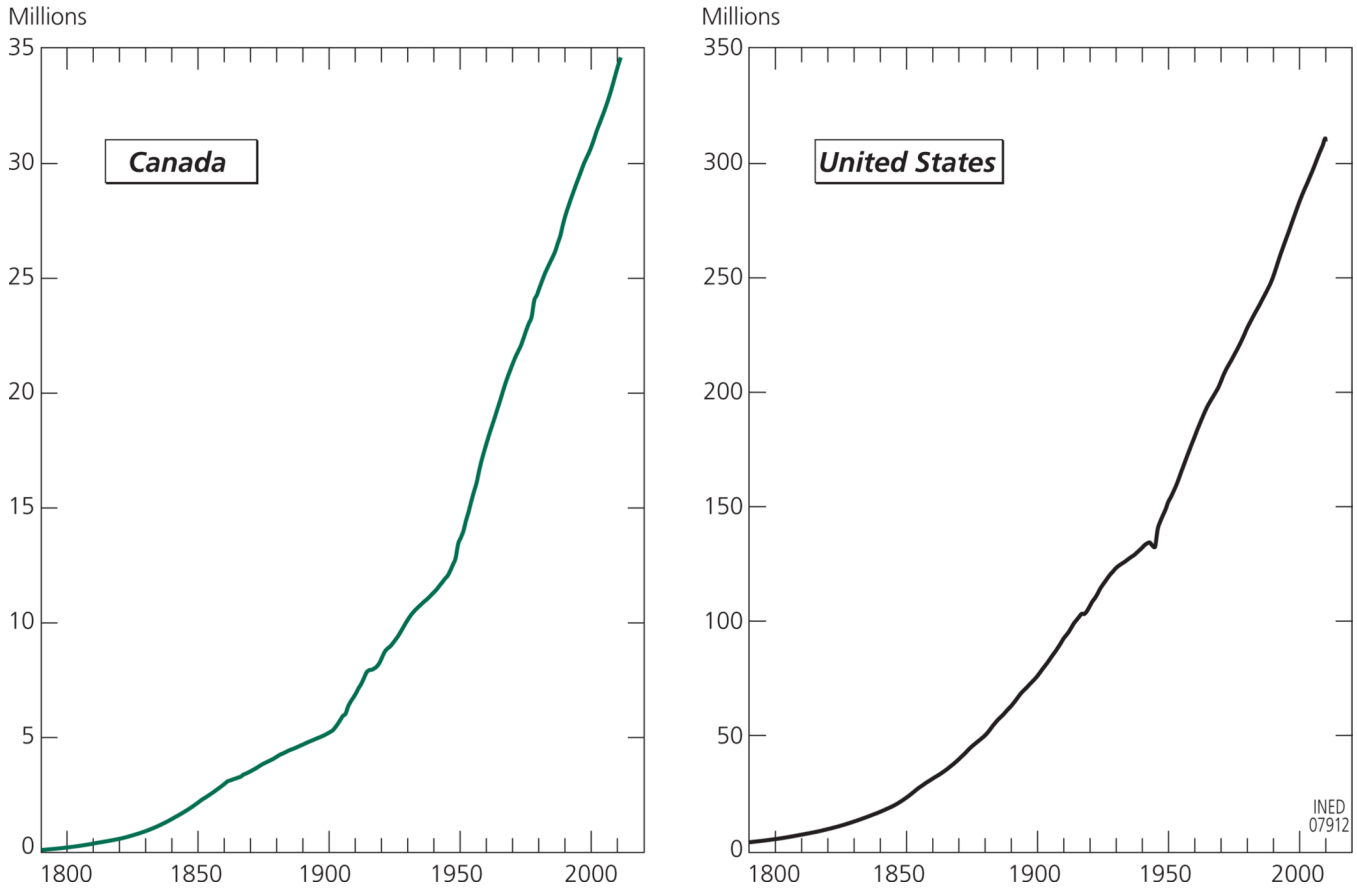


Figure 2.

Population of Canada and the United States from 1790 to 2010 (millions)

Sources: Canada: 1790–1866: Gemery (2000), Table 9.1; 1867–1977: Statistics Canada (1983), Table A1; 1978–2010: Statistics Canada, CANSIM database, Table 051–0001. United States: 1790–1970: United States Census Bureau (1975), Series A 6–8, Annual Population Estimates for the United States: 1790 to 1970 (in thousands); 1971–2010: United States Census Bureau, National Population Estimates, at http://www.census.gov/popest/data/historical/index.html, accessed on 2 March 2012.

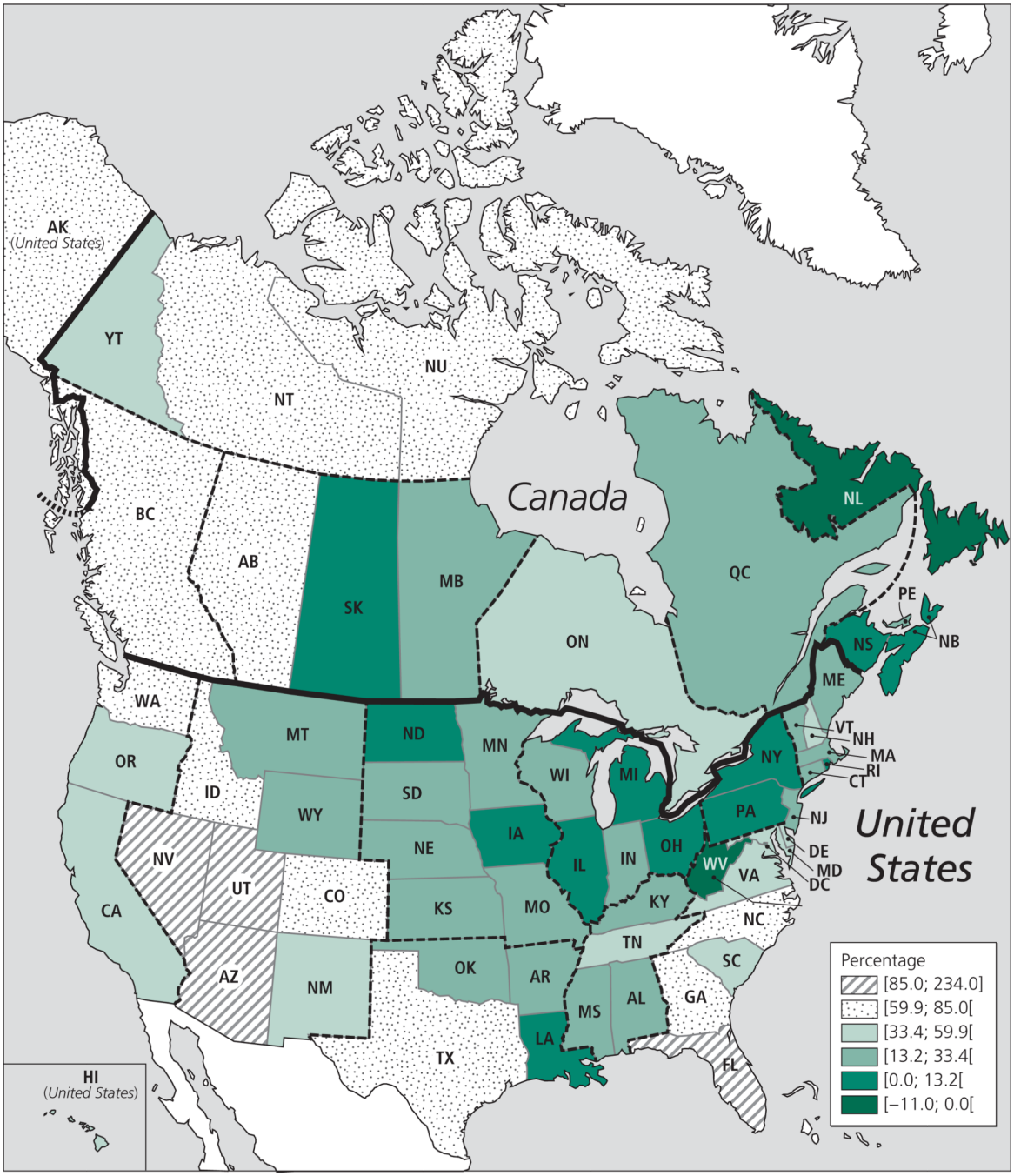


Figure 3.
Relative population growth (%) of Canadian provinces and territories and American states from 1980 to 2010*

Note: On this map and the following ones, the class intervals were determined using the classification method developed by Fisher (1958) and applied in the R software environment. Inflection points are identified in order to group data in a way which minimizes differences between values within each class while maximizing the variation between classes.

* Period from 1 July 1980 to 30 June 2010.

Sources: Canada: Statistics Canada, CANSIM database, Table 051-0001. United States: 1980: United States Census Bureau, Table for “Resident Population of States” published in August 1995; 2010: United States Census Bureau, Table ST-EST00INT-ALLDATA published in September 2011.

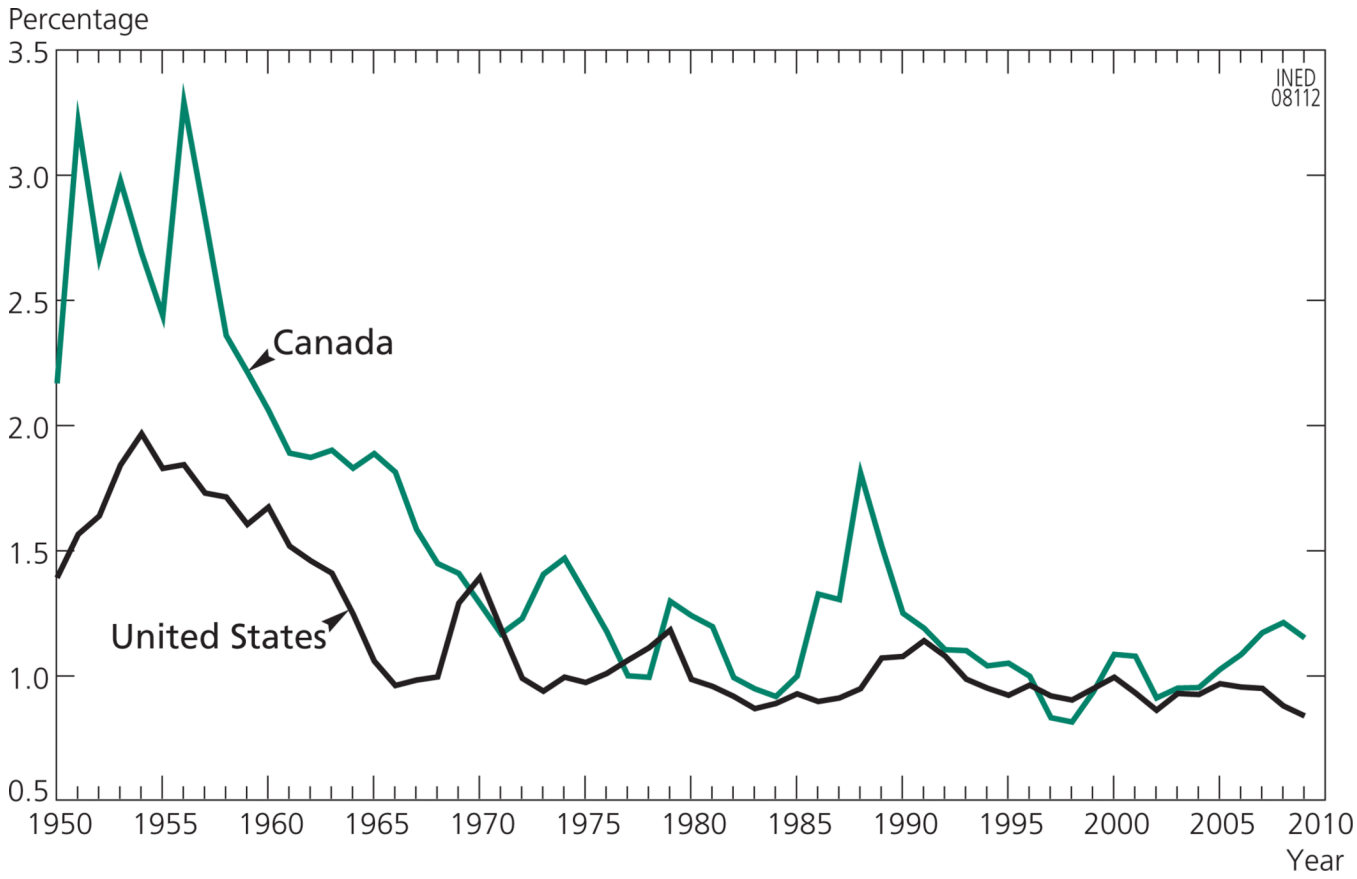


Figure 4.
Annual population growth rates in Canada and the United States, 1950–2009
Sources: United States: 1950–1979: authors' calculations based on data from the United States Census Bureau (2011), Table HS-1. For the years 1980–2009 in the United States and for the entire period in Canada: same sources as in Appendix Table A.1.

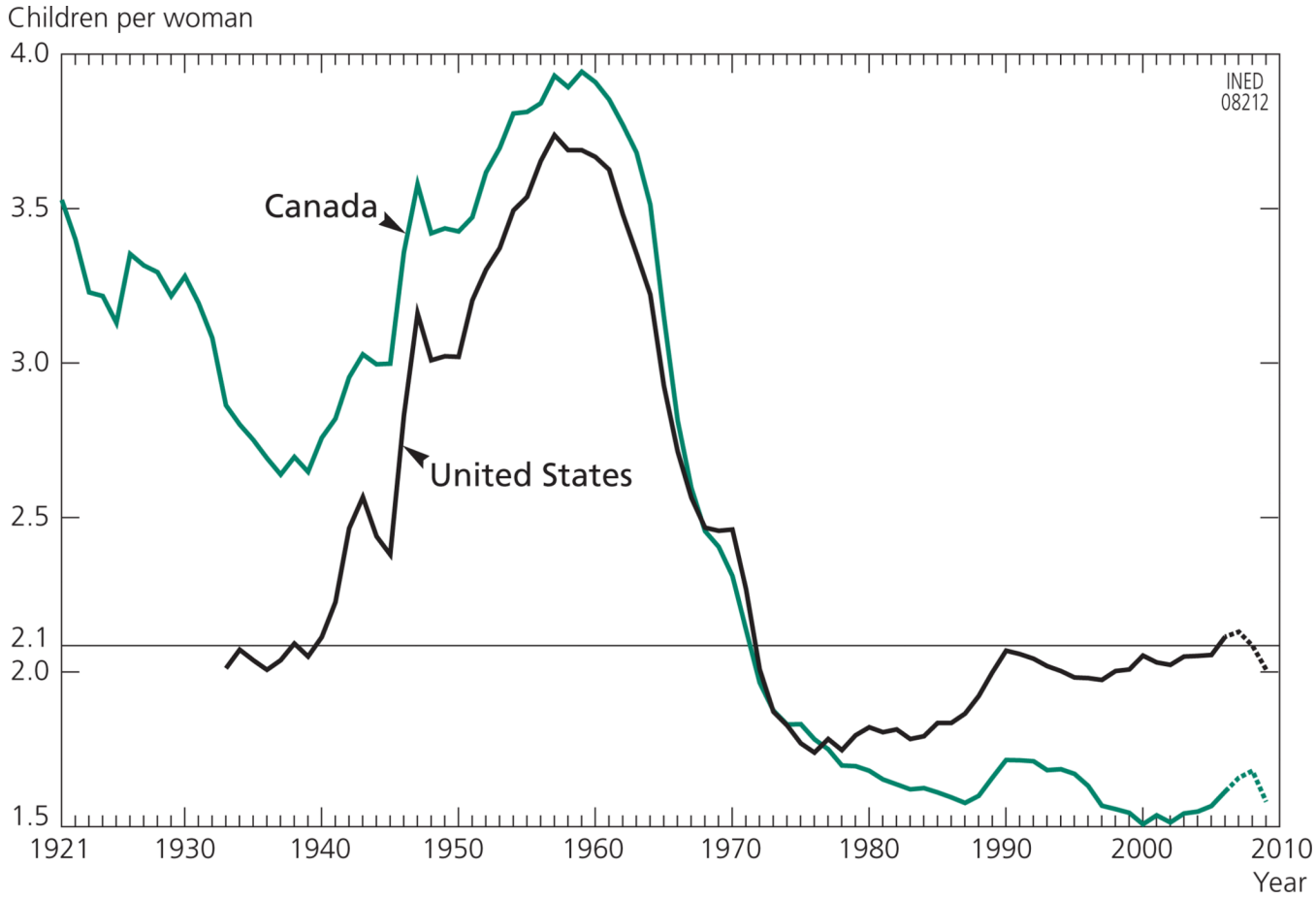


Figure 5.
Total fertility rate in Canada and the United States, 1921/1933–2009
Sources: Up to 2007: Human Fertility Database (2012); provisional data for 2008 and 2009: Statistics Canada (http://www.statcan.gc.ca/concepts/definitions/fertility-fecondite03-eng.htm) and Hamilton et al. (2010a and 2010b).

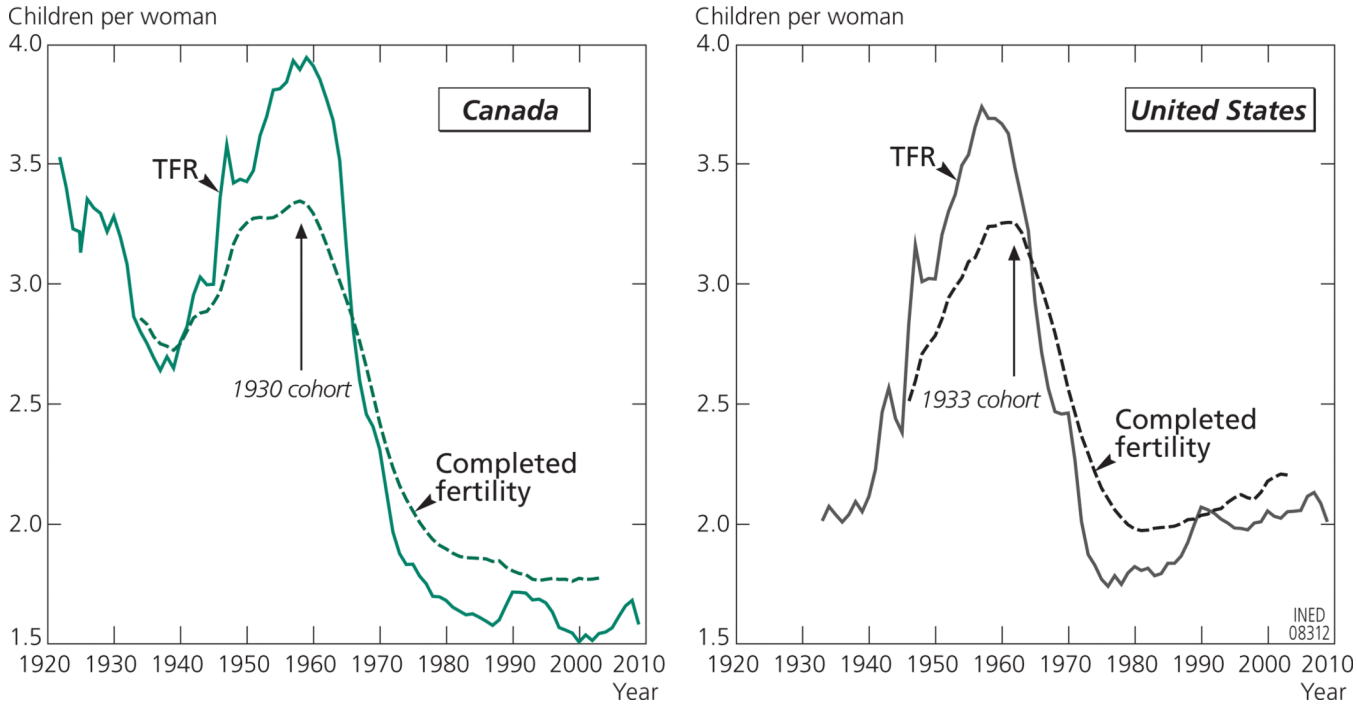


Figure 6.
Total fertility rate and completed fertility (lagged by 28 years) in Canada and the United States, 1921/1933–2009

Note: Because data are incomplete from the 1958 cohort, we estimated completed fertility for the 1958 to 1975 cohorts by applying, for the ages not yet reached in each cohort, the age-specific fertility rates of women belonging to the most recent cohort for which these rates are known. For example, completed fertility for the 1975 cohort was calculated by aggregating the age-specific fertility rates observed at ages 12–32 years (the age reached by this cohort in 2007), to which we added the rate at age 33 for the 1974 cohort, at age 34 for the 1973 cohort, etc. It may seem rather perilous to proceed in this manner, but given that the bulk of fertility is concentrated before the age of 32 years (at which age the women of the 1967 cohort, who reached 40 in 2007, had already achieved 80% of their completed fertility), the margin of uncertainty is relatively small.

Sources: Up to 2007: Human Fertility Database (2012); provisional data for 2008 and 2009: Statistics Canada (http://www.statcan.gc.ca/concepts/definitions/fertility-fecondite03-eng.htm) and Hamilton et al. (2010a and 2010b).

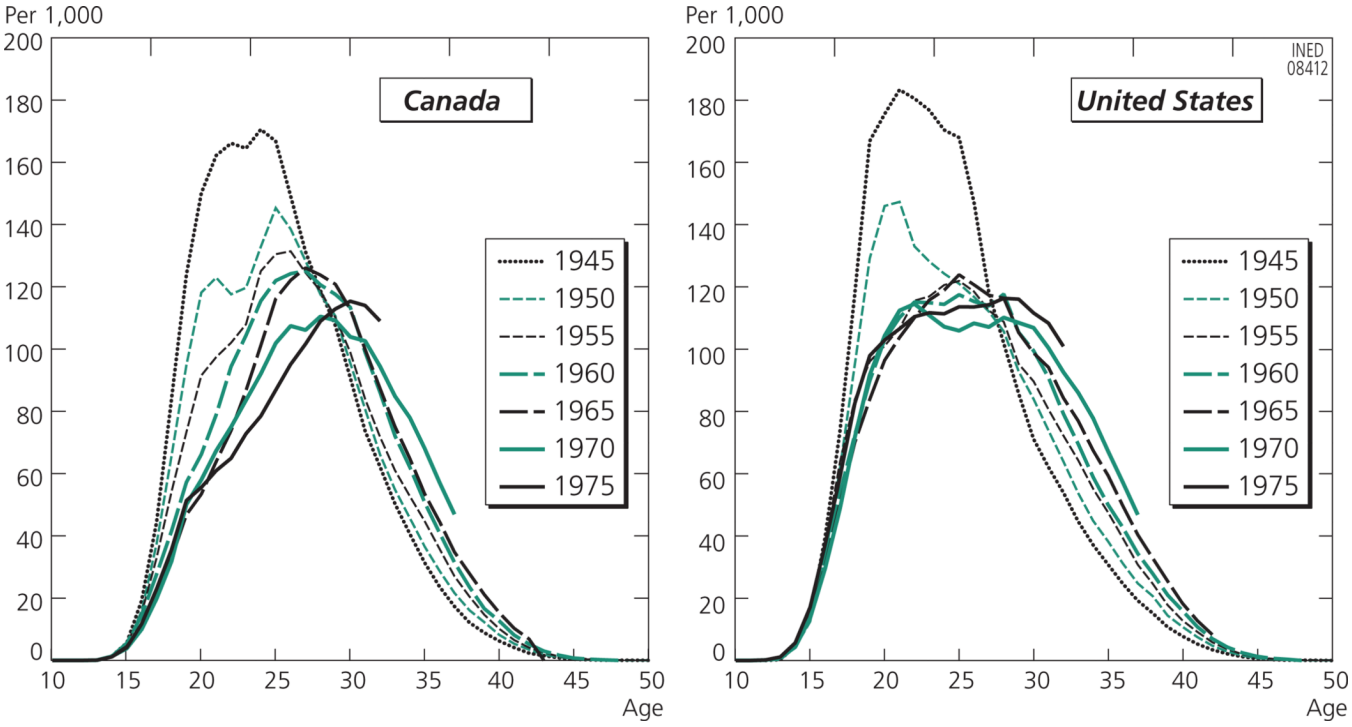


Figure 7.
Age-specific fertility rates by cohort, Canada and the United States
Source: Human Fertility Database (2012).

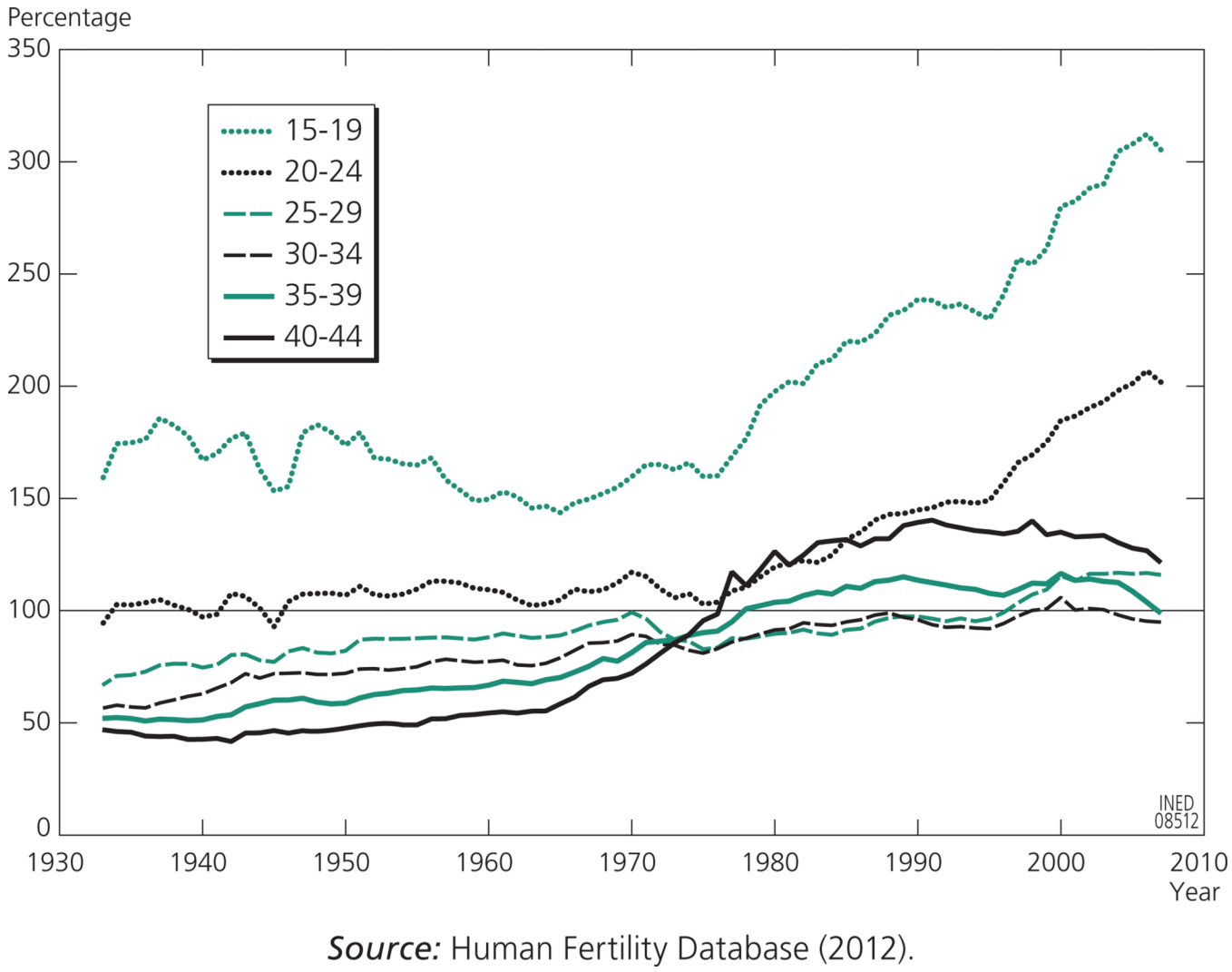


Figure 8.
Ratios of cohort and period fertility rates (%), United States/Canada, 1933–2007
Source: Human Fertility Database (2012).

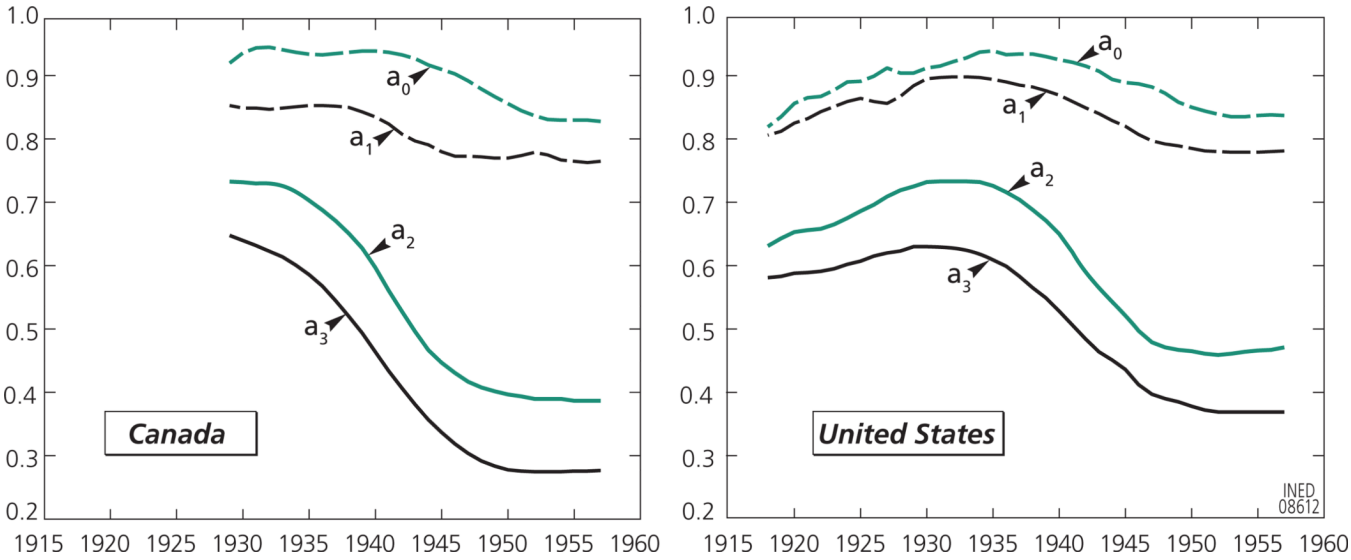


Figure 9.
Parity progression ratios by cohort, Canada and the United States
Source: Human Fertility Database (2012).

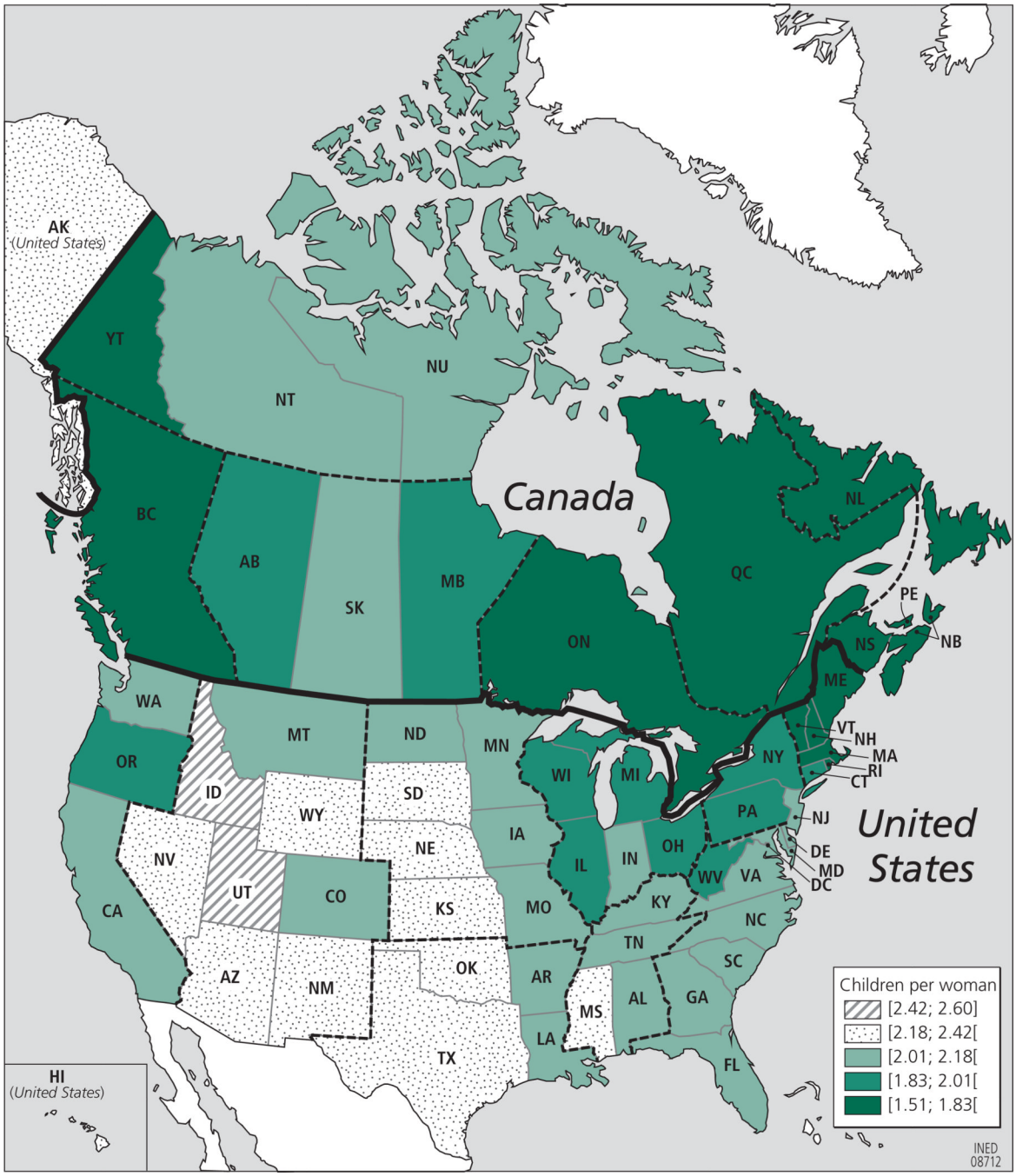


Figure 10.
Total fertility rate in 2008 in the Canadian provinces and territories and the American states
Sources: Canada: Statistics Canada, CANSIM database, Table 102–4505. United States: National Center for Health Statistics, at http://www.cdc.gov/nchs/vitalstats.htm, data downloaded 1 November 2011.

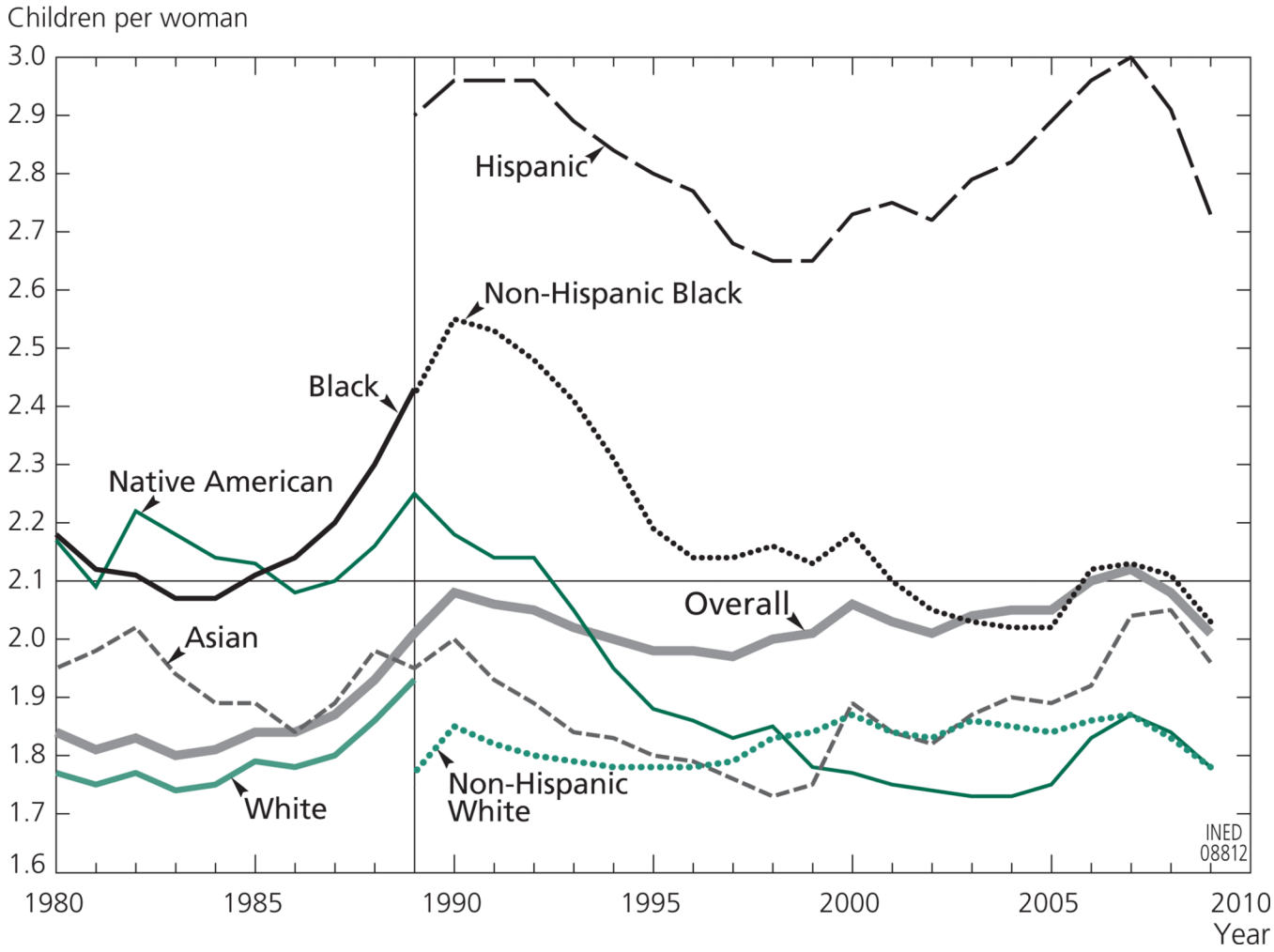


Figure 11.
Total fertility rate by race and ethnic group, United States, 1980–2009
Note: The vertical line indicates a change in the classification of presented data, with a new distinction between Hispanic and non-Hispanic from 1989. Unlike the curves corresponding to White or non-Hispanic White women (who represented 90% of all White women in the 1990 census), there is no break in the fertility curves corresponding to Black and non-Hispanic Black women on this figure as the proportion of Hispanics reporting as Black is very low (4% in the 1990 census).
Sources: Martin et al. (2011), Tables 4 and 8.

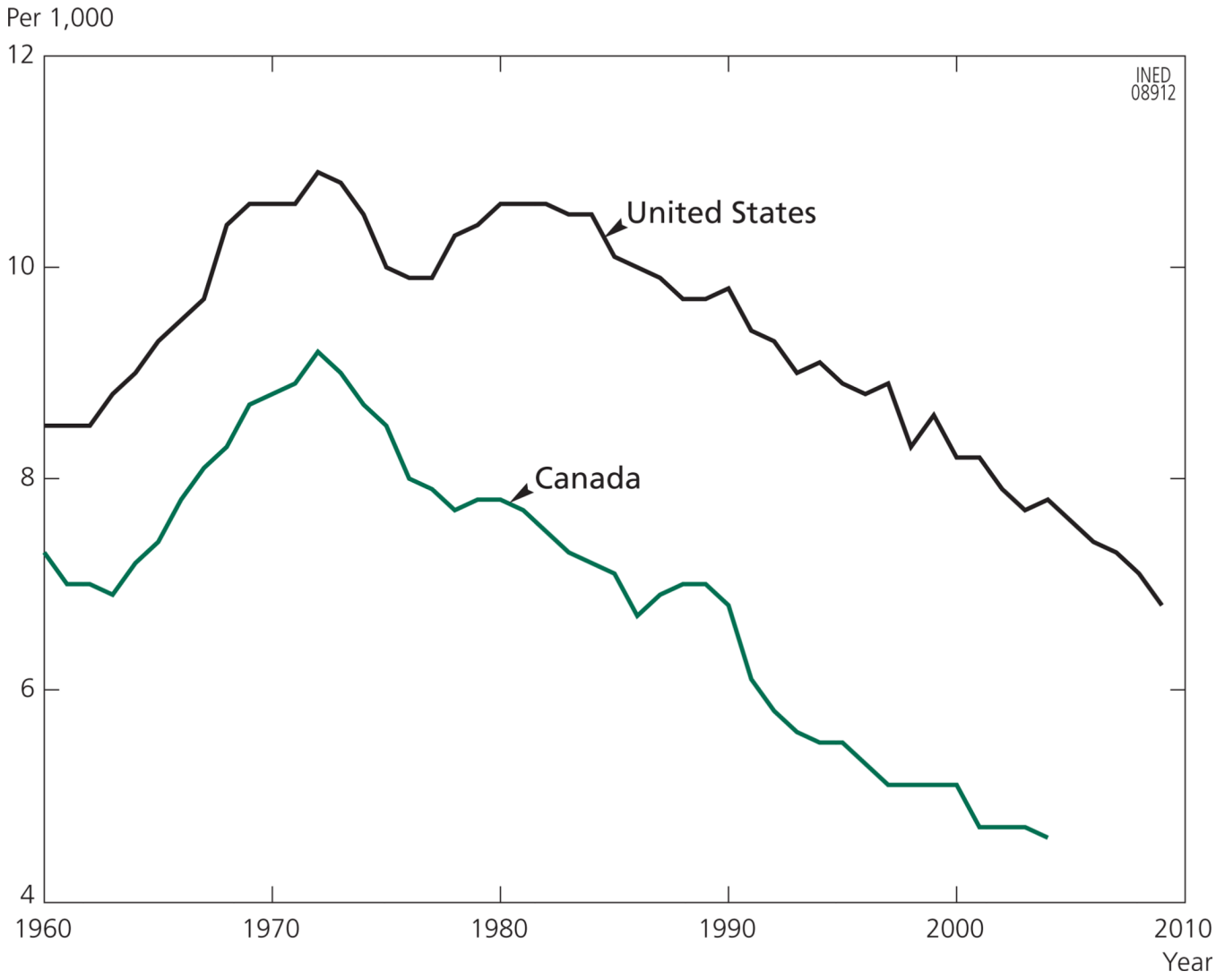


Figure 12.
Crude marriage rate in Canada and the United States, 1960–2009
Note: The crude marriage rate corresponds to the annual number of marriages per 1,000 population.
Source: Canada: 1960–1970: Statistics Canada (1983); 1971–2002: Statistics Canada (2005); 2003– 2004: Statistics Canada, CANSIM database, Table 101–1004. United States: 1960–1995: Haines (2006); 1996–2009: National Vital Statistics Report, Center for Disease Control.

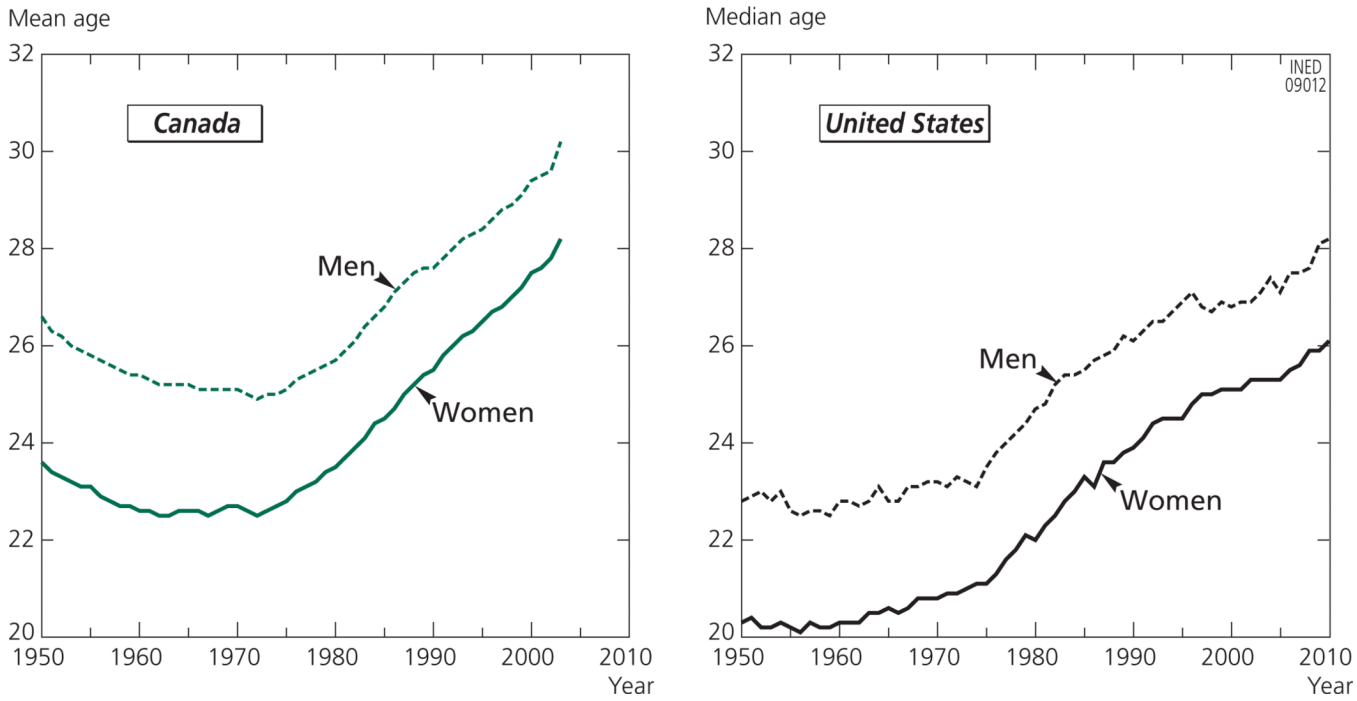


Figure 13.
Mean/median age at first marriage by sex, Canada and the United States, 1950–2011
Sources: For Canada: Human Resources and Skills Development Canada, at http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-fra.jsp?iid=75, accessed on 14 January 2012. For the United States: 1950–1999: Fitch and Haines (2006); 2000–2011: United States Census Bureau, Current Population Survey, at www.census.gov/population/socdemo/hh-fam/ms2.xls, data downloaded on 12 January 2012.

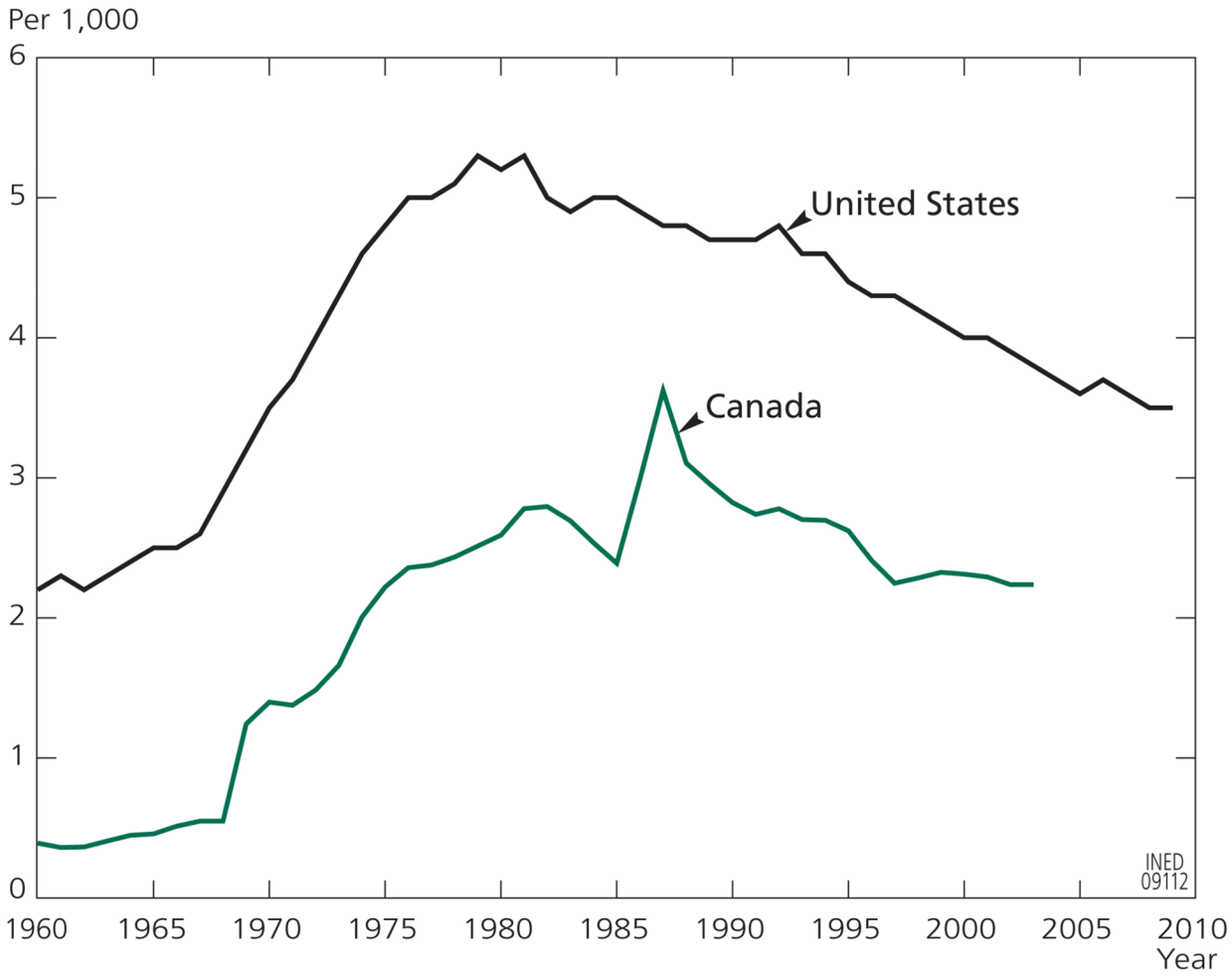


Figure 14.
Crude divorce rate in Canada and the United States, 1960–2009
Note: The crude divorce rate corresponds to the annual number of divorces per 1,000 population.
Source: Canada: 1960–1970: Statistics Canada (1983); 1971–2002: Statistics Canada (2005); 2003– 2004: Statistics Canada, CANSIM database, Table 101–1004. United States: 1960–1995: Haines (2006); 1996–2009: National Vital Statistics Report, Center for Disease Control.

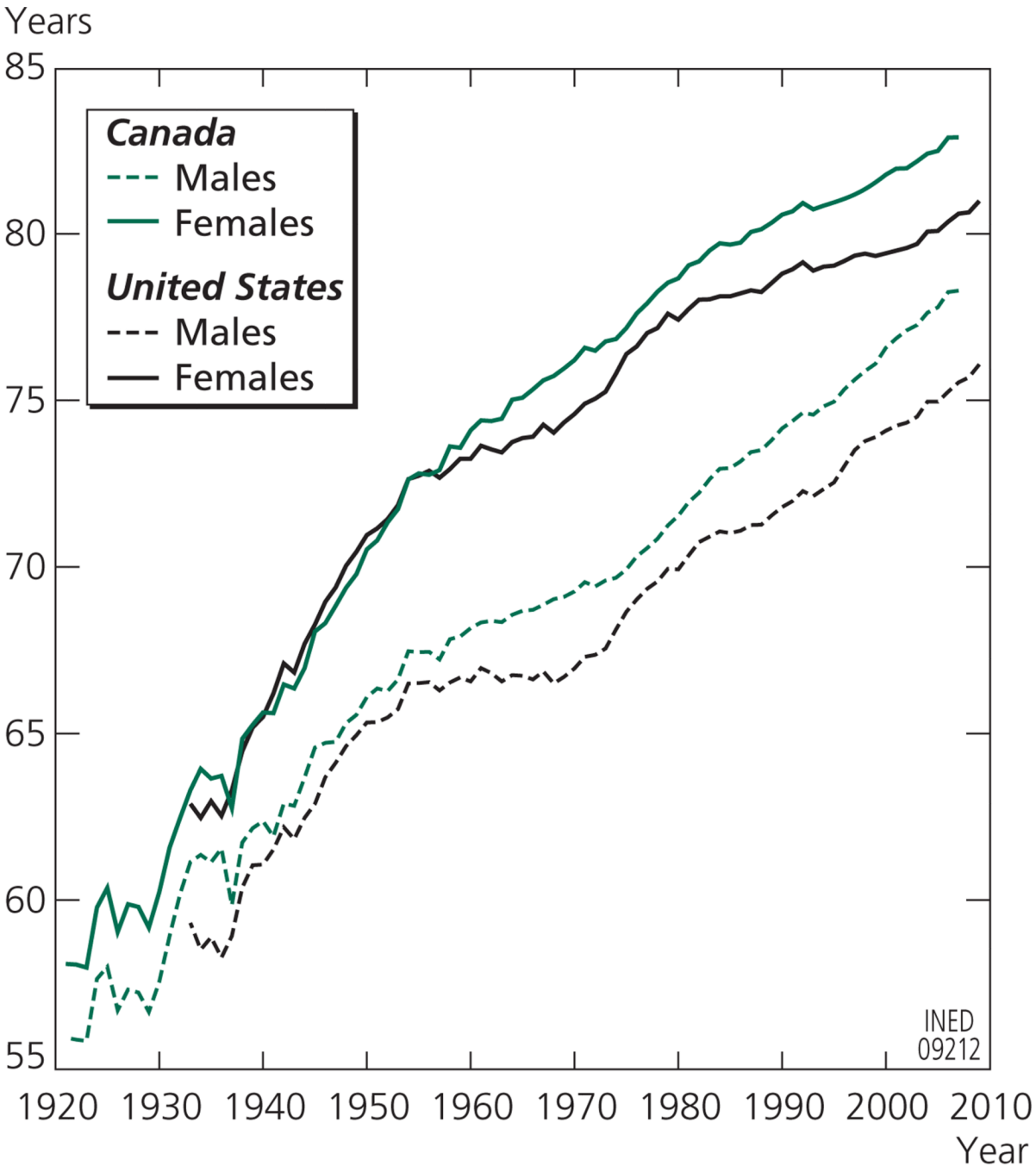


Figure 15.
Life expectancy at birth by sex in Canada and the United States, 1920–2009
Source: Human Mortality Database (2012).

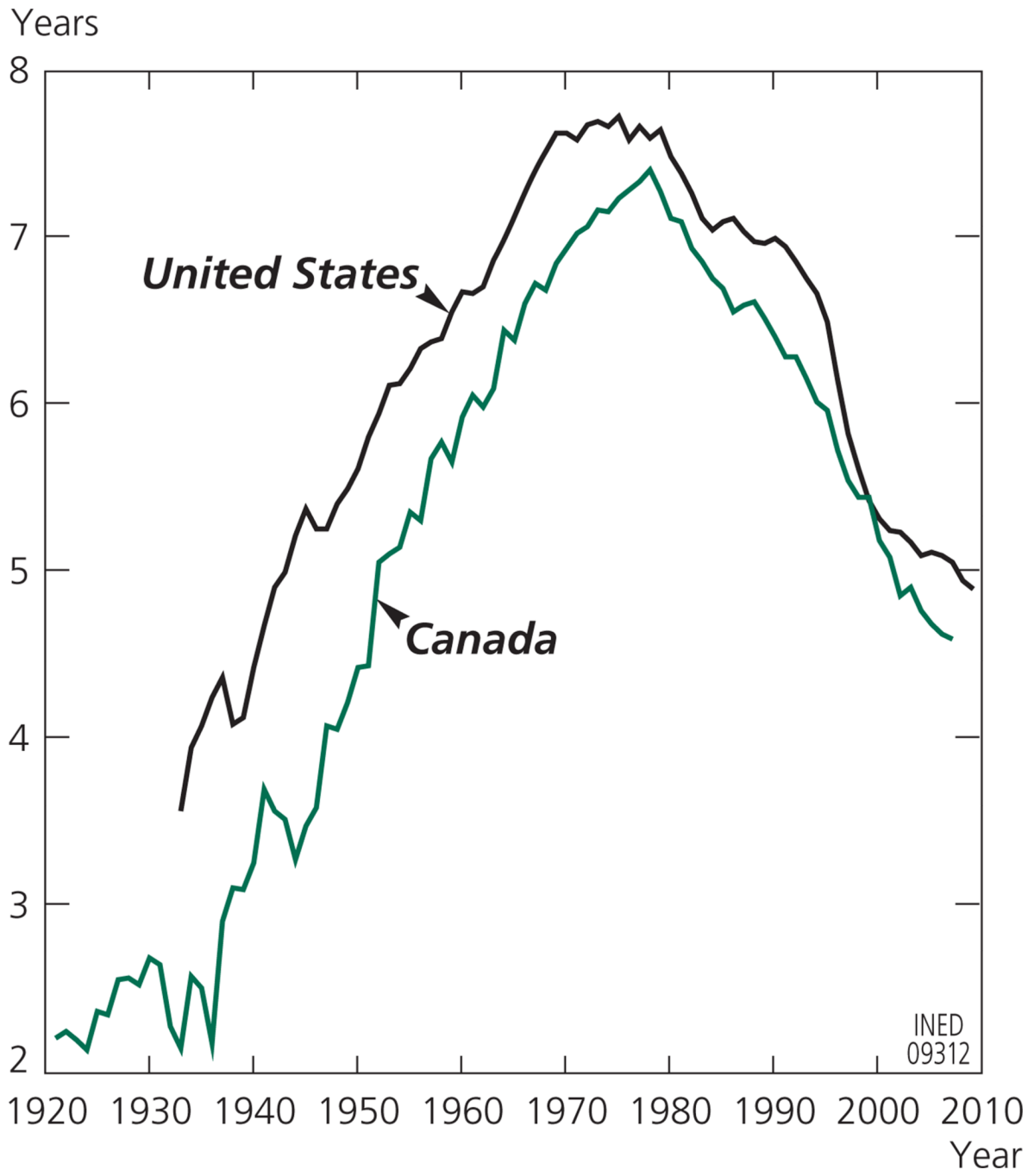


Figure 16.
Gender gap in life expectancy at birth in Canada and the United States, 1920–2009
Source: Authors' calculations based on data from the Human Mortality Database (2012).

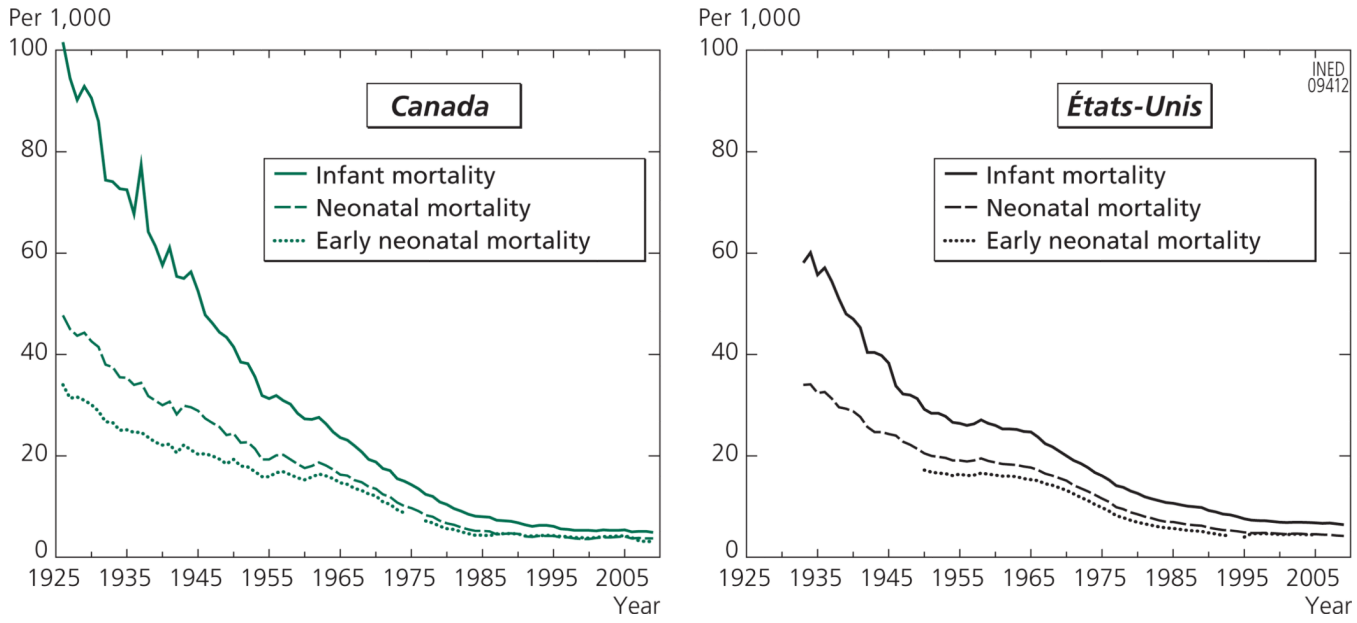


Figure 17.

Infant, neonatal and early neonatal mortality rates since the 1920s (per 1,000 live births), both sexes combined, in Canada and the United States

Sources: Canada: for infant and neonatal mortality, 1926–1990: Wadhera and Strachan (1993a), Tables 2b and 6; 1991–2009: Statistics Canada, CANSIM database, Table 102–0507; for early neonatal mortality, authors' calculations based on Statistics Canada, CANSIM database, Table 102–0508 and the Canadian Human Mortality Database (2012). United States: for infant and neonatal mortality, 1933–1974: National Center for Health Statistics (2002), Table 2–2: 1975–2009: Xu et al. (2010), Table 30; for early neonatal mortality, authors' calculations based on MacDorman and Kirmeyer (2009), Table B, on National Center for Health Statistics (2002), Tables 3–2 and 4–1, and on the Human Mortality Database (2012).

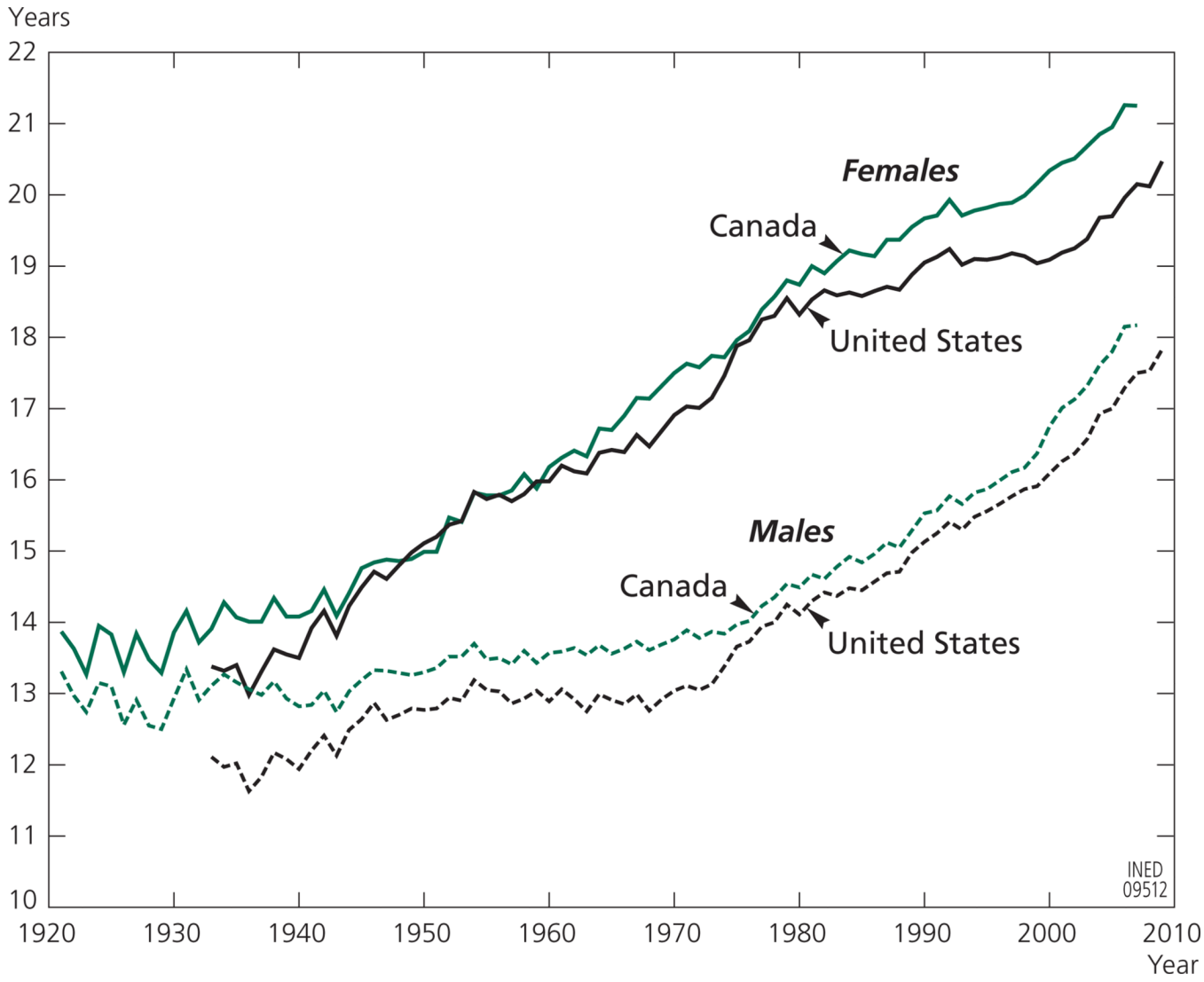


Figure 18.
Life expectancy at age 65 by sex in Canada and the United States, 1921–2009
Source: Human Mortality Database (2012).

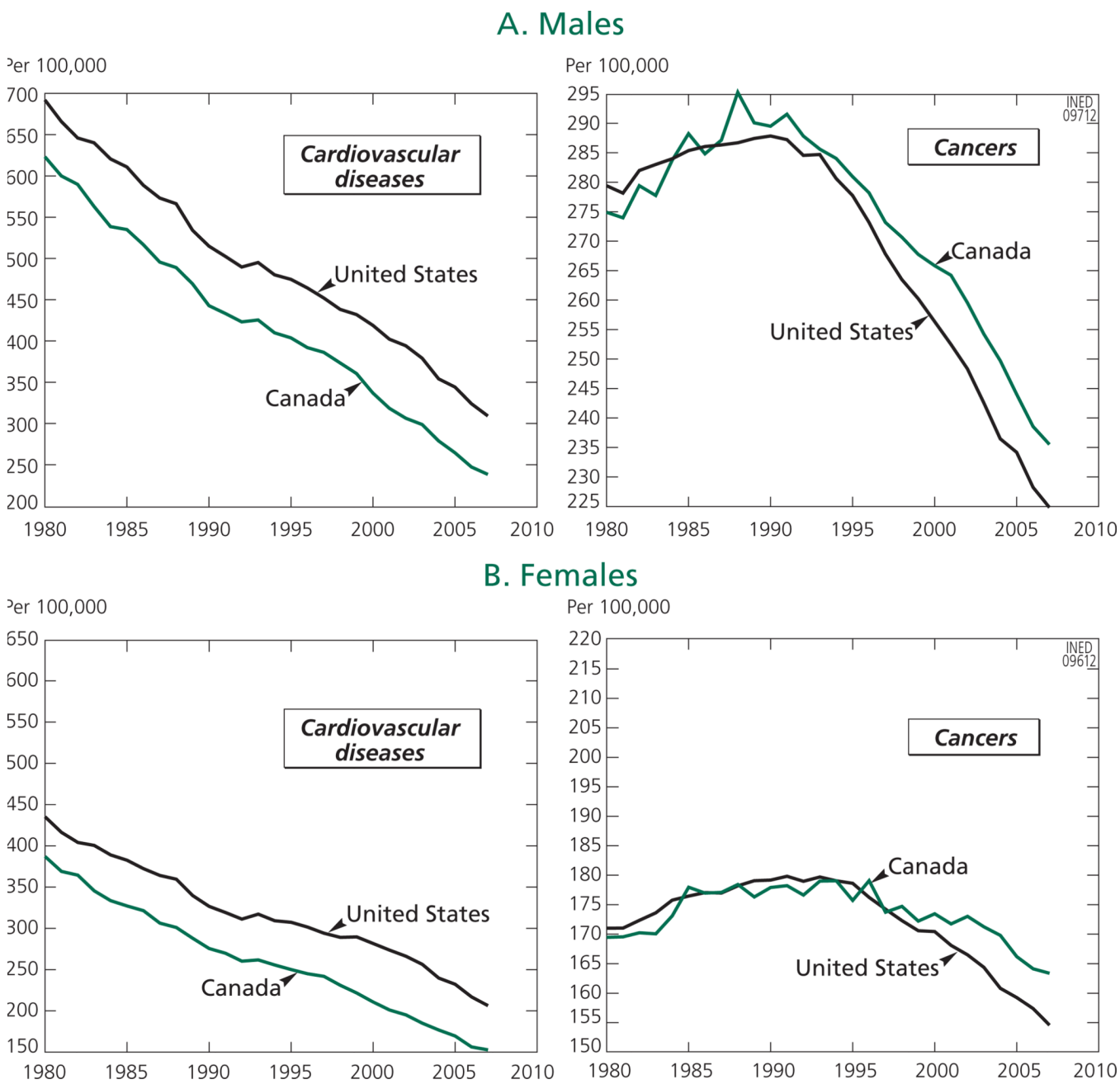
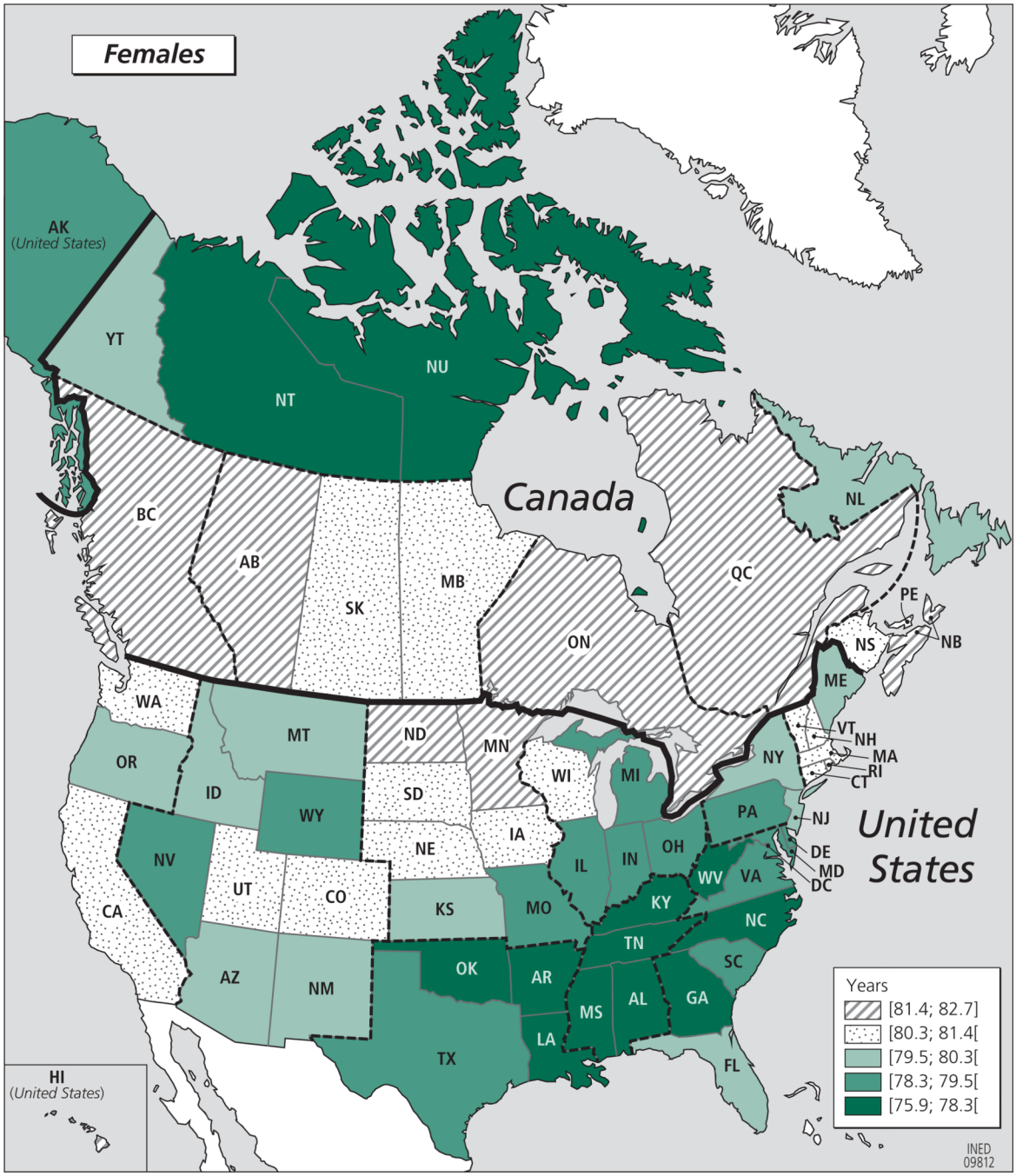


Figure 19.
Trends in the leading causes of death by sex in Canada and the United States, 1980–2007
Sources: Canada: authors' calculations based on data from Statistics Canada. United States: authors' calculations based on data from the National Center for Health Statistics.



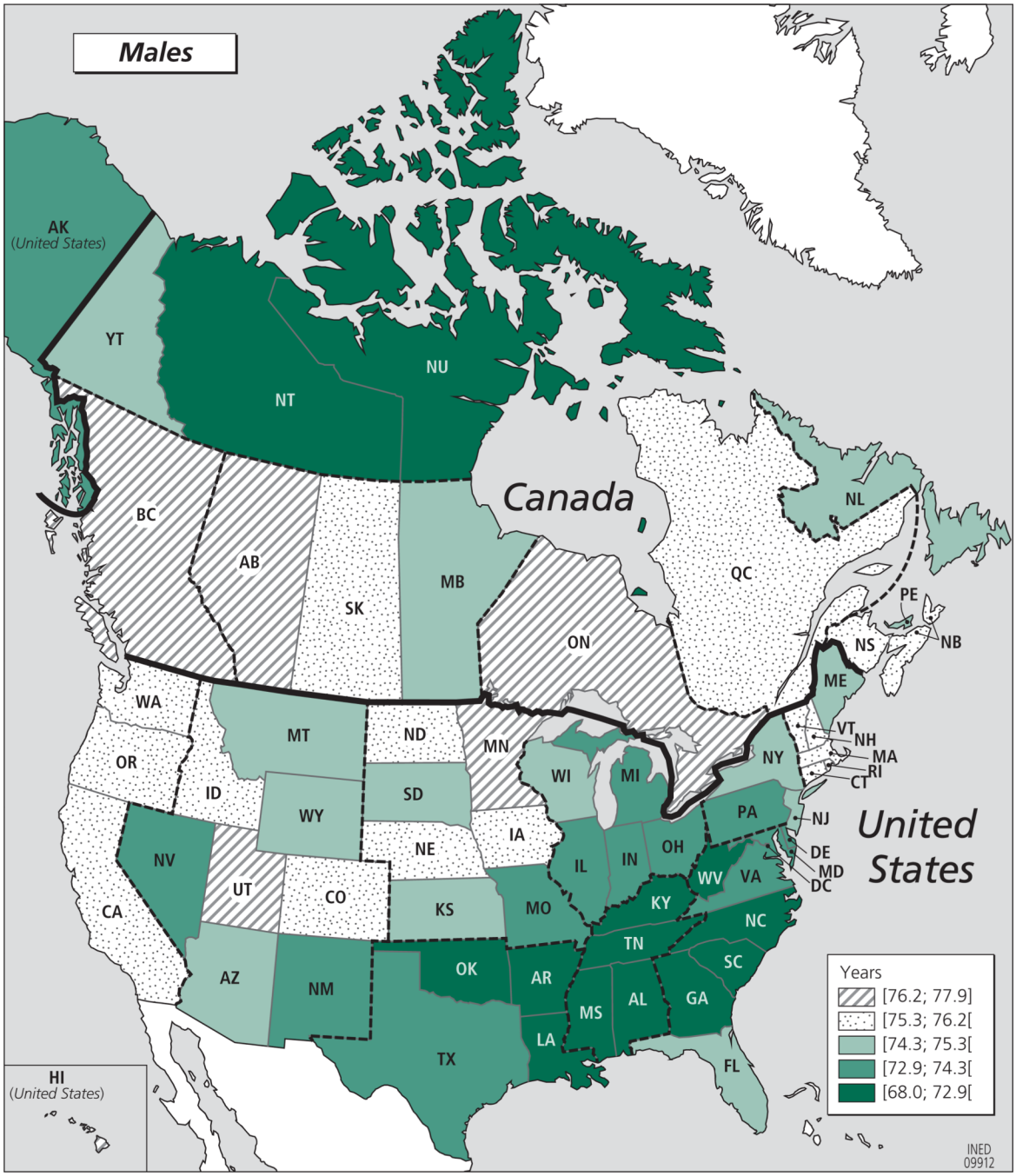


Figure 20.

A. Female life expectancy at birth in the Canadian provinces (2000) and territories (2000–2004) and the American states (1999–2001)

B. Male life expectancy at birth in the Canadian provinces (2000) and territories (2000–2004) and the American states (1999–2001)

Note: For consistency, we have presented life expectancies in the last year for which we have data for both countries, although the most recent data are for 2007 in Canada.

Sources: Canada: Canadian Human Mortality Database (2012).

United States: data prepared by Wilmoth et al. (2011).

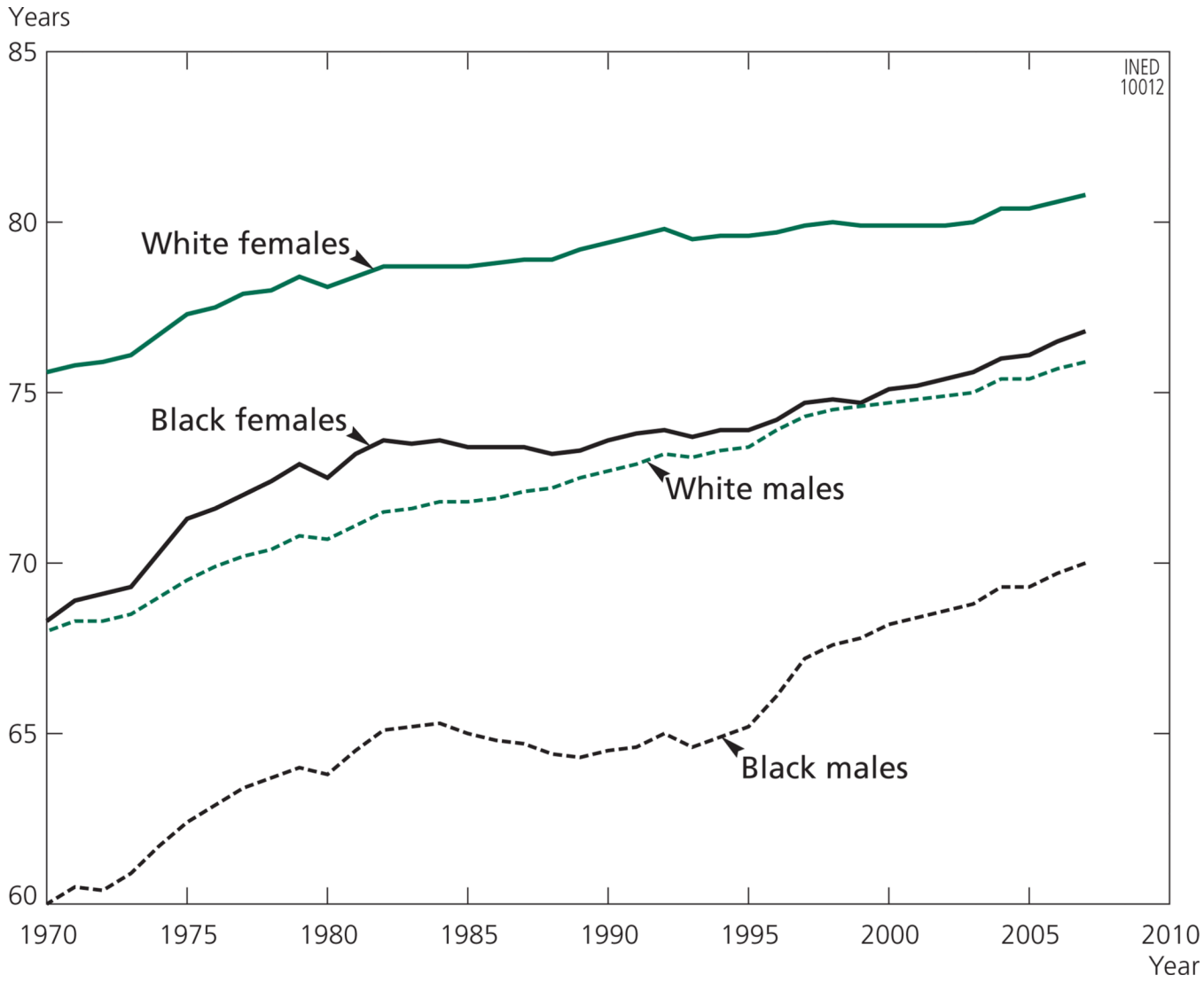


Figure 21.
Life expectancy at birth by race and sex in the United States, 1970–2007
Source: Arias (2011).

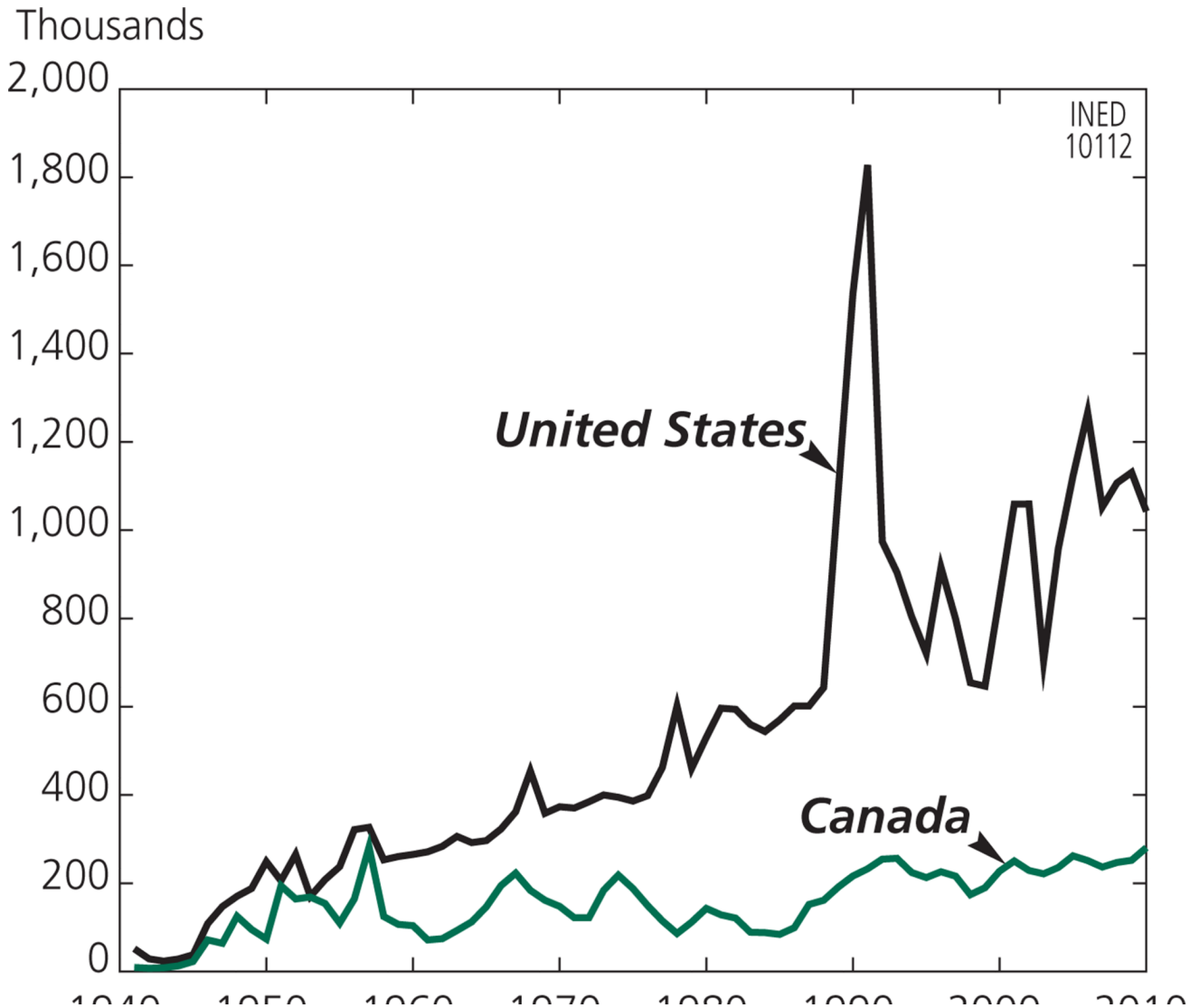


Figure 22.
Immigrants (in thousands) to Canada and the United States, 1940–2010
Sources (for both figures): Canada: 1940–1979: Employment and Immigration Canada (1982); 1980–1985: Citizenship and Immigration Canada (2004); 1986–2010: Citizenship and Immigration Canada (2011). United States, 1941–1988: Carter et al. (2006); 1989–2000: United States Immigration and Naturalization Service (2002); 2001–2010: United States Department of Homeland Security (2011).

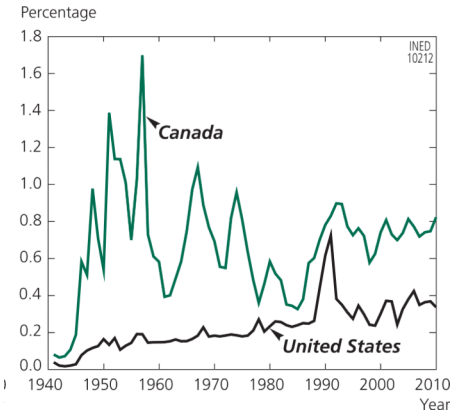


Figure 23.
Canada and the United States, 1940–2010
Sources (for both figures): Canada: 1940–1979: Employment and Immigration Canada (1982); 1980–1985: Citizenship and Immigration Canada (2004); 1986–2010: Citizenship and Immigration Canada (2011). United States, 1941–1988: Carter et al. (2006); 1989–2000: United States Immigration and Naturalization Service (2002); 2001–2010: United States Department of Homeland Security (2011).

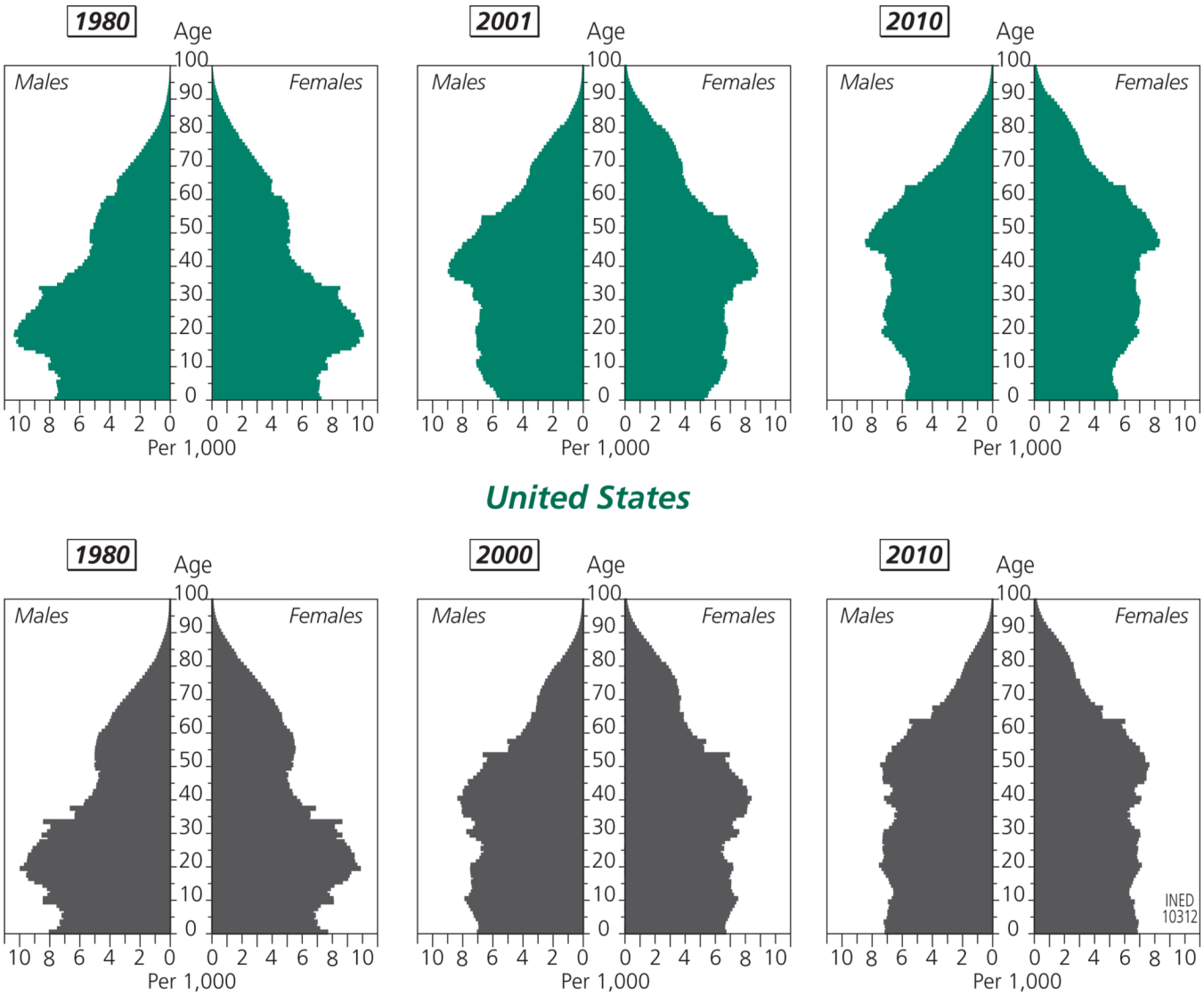


Figure 24.
Population pyramids of Canada and the United States, 1980, 2001/2000 and 2010
Sources: Canada: Statistics Canada, CANSIM database, Table 051–0001. United States: 1980: United States Census Bureau, on website. www.census.gov/popest/data/national/asrh/1980s/80s_nat_detail.html; 2000: www.census.gov/popest/data/national/asrh/2009/files/NC-EST2009-ALLDATA-R-File02.csv; 2010: www.census.gov/popest/data/national/asrh/2009/files/NC-EST2009-ALLDATA-R-File22.csv.

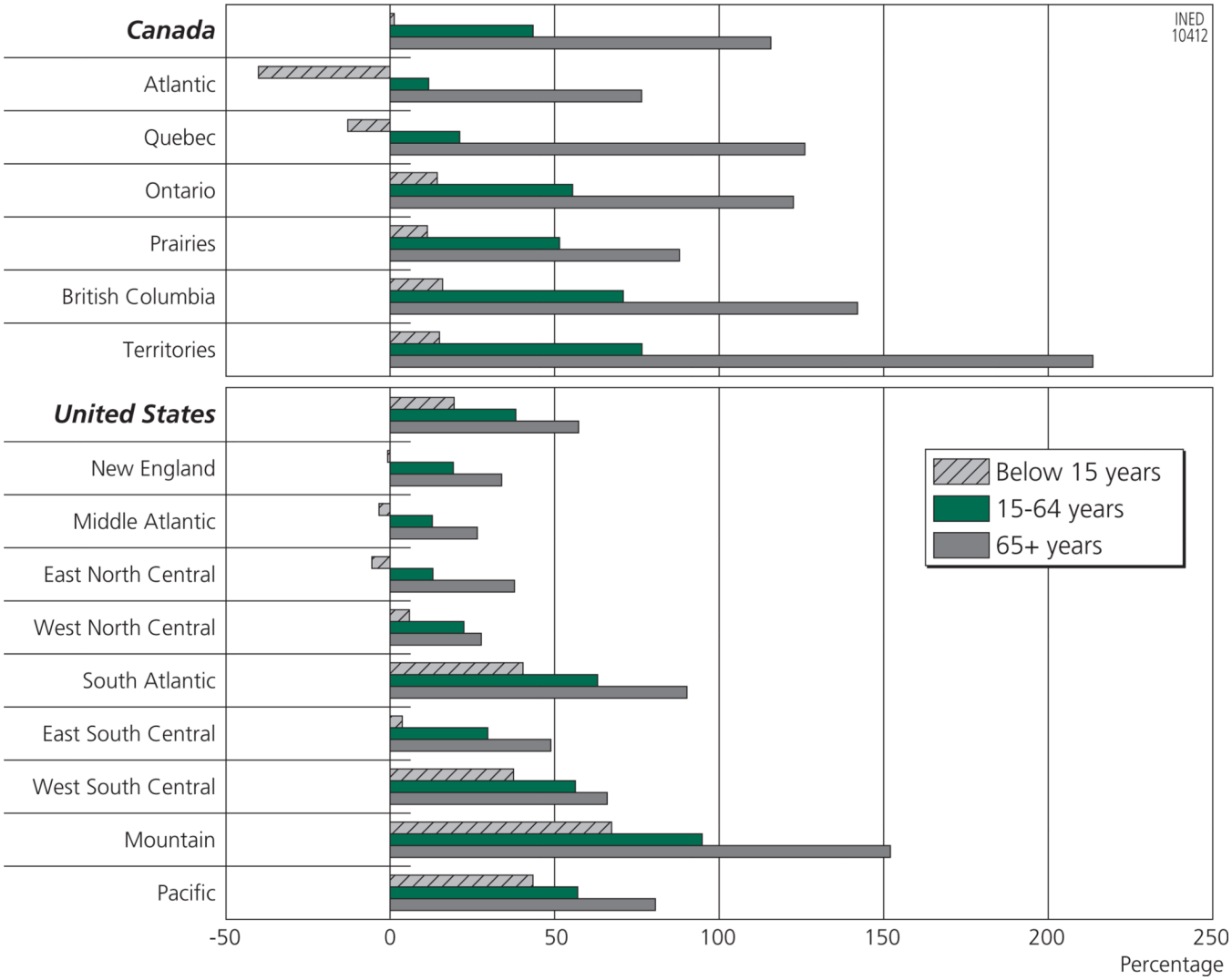


Figure 25.
Population growth rate by age group between 1980 and 2010 in Canada and the United States, by region
Sources: Canada: Statistics Canada, CANSIM database, Table 051–0001. United States: 1980: United States Census Bureau, "Resident Population of States" table published in August 1995; 2010: United States Census Bureau, Table ST-EST00INT-ALLDATA published in September 2011.

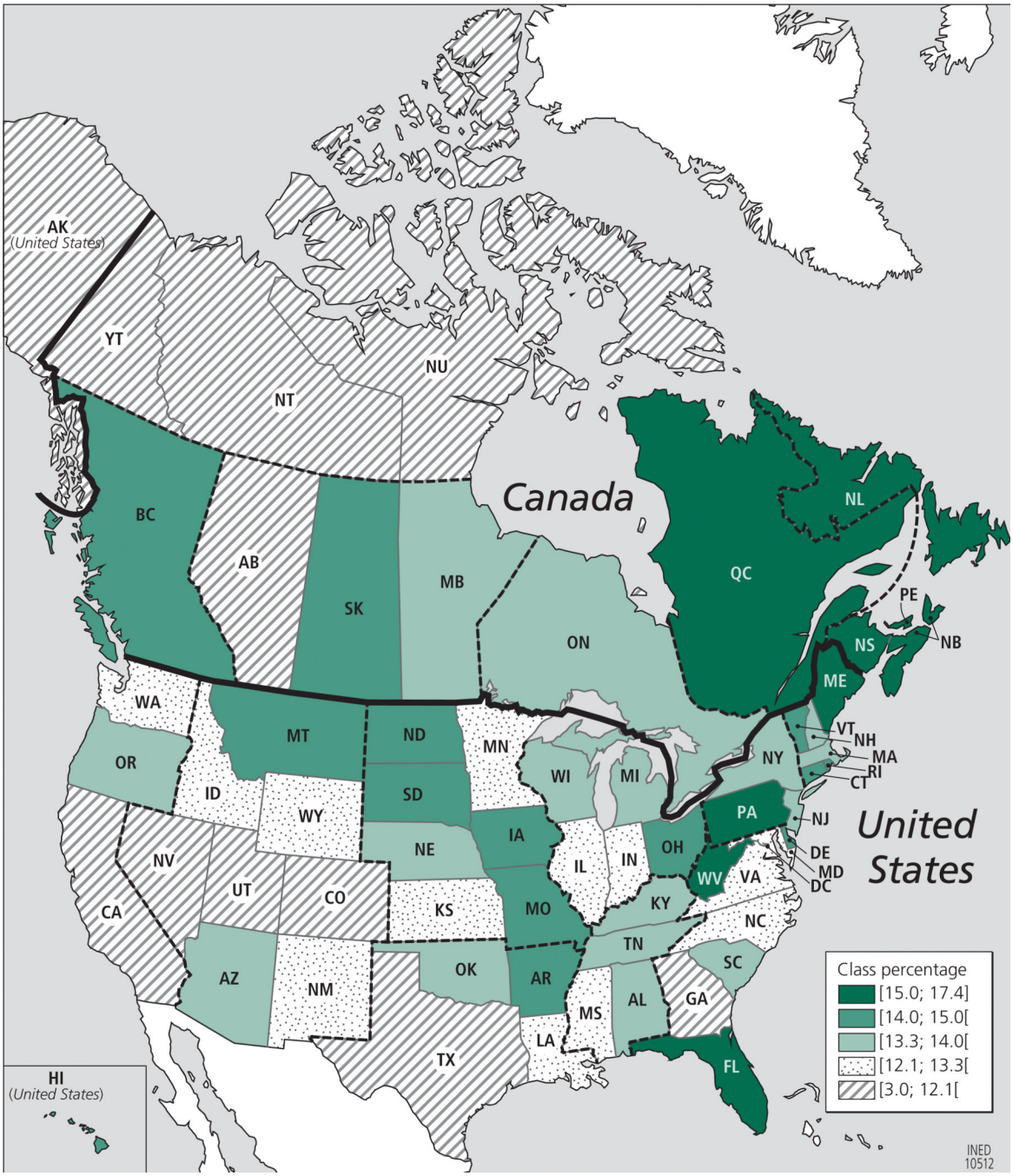


Figure 26.

Percentage of the population aged 65 and over in the Canadian provinces and territories and the American states in 2010

Sources: Canada: Statistics Canada, CANSIM database, Table 051–000. United States: United States Census Bureau, table ST-EST00INT-ALLDATA published in September 2011.

Figure 27.
Population pyramids in Canada and the United States, 2010, 2030 and 2050
Sources: Canada: Statistics Canada (2010). United States: United States Census Bureau (2009a).

Table 1

Names and corresponding abbreviations of Canadian regions, provinces, and territories and U.S. states

Administrative unit	Abbreviation	Administrative unit	Abbreviation
Canada			
Atlantic		Territories	
Prince Edward Island	PE	Nunavut	NU
New Brunswick	NB	Northwest Territories	NT
Nova Scotia	NS	Yukon	YT
Newfoundland and Labrador	NL		
Quebec	QC		
Ontario	ON		
Prairies			
Alberta	AB		
Manitoba	MB		
Saskatchewan	SK		
British Columbia	BC		
United States			
New England		**East South Central**	
Connecticut	CT	Alabama	AL
Maine	ME	Kentucky	KY
Massachusetts	MA	Mississippi	MS
New Hampshire	NH	Tennessee	TN
Rhode Island	RI	**West South Central**	
Vermont	VT	Arkansas	AR
Middle Atlantic		Louisiana	LA
New Jersey	NJ	Oklahoma	OK
New York	NY	Texas	TX
Pennsylvania	PA	**Mountain**	
East North Central		Arizona	AZ
Illinois	IL	Colorado	CO
Indiana	IN	Idaho	ID
Michigan	MI	Montana	MT
Ohio	OH	Nevada	NV
Wisconsin	WI	New Mexico	NM
West North Central		Utah	UT
North Dakota	ND	Wyoming	WY
South Dakota	SD	**Pacific**	
Iowa	IA	Alaska	AK
Kansas	KS	California	CA
Minnesota	MN	Hawaii	HI
Missouri	MO	Oregon	OR
Nebraska	NE	Washington	WA

Administrative unit	Abbreviation	Administrative unit	Abbreviation
South Atlantic			
North Carolina	NC		
South Carolina	SC		
Delaware	DE		
District of Columbia	DC		
Florida	FL		
Georgia	GA		
Maryland	MD		
Virginia	VA		
West Virginia	WV		

Table 2

Population of Canada from 1761 to 2011 and mean annual growth rate by ten-year period

Year	Population (thousands)	Mean annual growth rate (%)	Year	Population (thousands)	Mean annual growth rate (%)
1761	75.9		1891	4,740.0	1.17
1771	102.4	2.99	1901	5,278.0	1.08
1781	133.7	2.67	1911	7,207.0	3.12
1791	216.5	4.82	1921	8,788.0	1.98
1801	332.5	4.29	1931	10,377.0	1.66
1811	511.2	4.30	1941	11,507.0	1.03
1821	722.0	3.45	1951	14,009.0	1.97
1831	1,076.4	3.99	1961	18,238.0	2.64
1841	1,629.8	4.15	1971	21,568.0	1.68
1851	2,367.0	3.73	1981	24,819.9	1.40
1861	3,175.0	2.94	1991	28,037.4	1.22
1871	3,583.8	1.21	2001	31,019.0	1.01
1881	4,216.0	1.62	2011	34,482.8	1.06

Sources: For the years 1761 to 1901: Gemery (2000), Table 9.1; for the years 1911 to 2011: Statistics Canada (1983) and CANSIM Table 051–0001.

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Table 3

White population of the United States from 1610 to 1790, total census population from 1790 to 2010 and mean annual growth rate

White population in mid-period			Total census population		
	Number (thousands)	Mean annual growth rate (%)		Number (thousands)	Mean annual growth rate (%)
1610–1620	0.3		1790	3,929	
1620–1630	1.0	12.04	1800	5,297	2.99
1630–1640	4.6	15.26	1810	7,224	3.10
1640–1650	23.2	16.18	1820	9,618	2.86
1650–1660	38.7	5.12	1830	12,901	2.94
1660–1670	62.4	4.78	1840	17,120	2.83
1670–1680	100.5	4.77	1850	23,261	3.07
1680–1690	143.2	3.54	1860	31,513	3.04
1690–1700	196.3	3.15	1870	39,905	2.36
1700–1710	239.8	2.00	1880	50,262	2.31
1710–1720	296.0	2.11	1890	63,056	2.27
1720–1730	412.0	3.31	1900	76,094	1.88
1730–1740	551.9	2.92	1910	92,407	1.94
1740–1750	755.6	3.14	1920	106,461	1.42
1750–1760	934.3	2.12	1930	123,077	1.45
1760–1770	1,267.8	3.05	1940	131,954	0.70
1770–1780	1,674.3	2.78	1950	151,868	1.41
1780–1790	2,158.7	2.54	1960	179,979	1.70
			1970	203,984	1.25
			1980	227,225	1.08
			1990	249,623	0.94
			2000	282,172	1.23
			2010	309,629	0.93

Sources: for the years 1610–1620 to 1780–1790: Gemery (2000), Table 5.1; for the years 1790 to 2010: see Figure 2.

Table 4

Distribution of the United States population by race and ethnicity in 1980 and 2010, and growth from 1980 to 2010

Race and ethnic group	Population (thousands)		Percentage		Growth between 1980 and 2010		Distribution of growth between 1980 and 2010 (%)
	1980	2010	1980	2010	Thousands	%	
Total	226,546	308,746	100.0	100.0	82,200	36.3	100.0
White	188,372	223,553	83.2	72.4	35,182	18.7	42.8
Black	26,495	38,929	11.7	12.6	12,434	46.9	15.1
Native American	1,420	2,932	0.6	1.0	1,512	106.4	1.8
Asian	3,500	15,214	1.6	4.9	11,714	334.6	14.3
Other single race	6,758	19,107	3.0	6.2	12,349	182.7	15.0
Several races	–	9,009	–	2.9	9,009	–	11.0
Hispanic	14,609	50,478	6.5	16.4	35,869	245.5	43.6
Non-hispanic	211,937	258,268	93.6	83.7	46,331	21.9	56.4
o/w White	180,256	196,818	79.6	63.8	16,561	9.2	20.2

Note: Dashes indicate that the category did not exist in the statistics for the corresponding year.

Source: Authors calculations based on census data, available from http://www.census.gov/popest/data/index.html, accessed on 29 February 2012.

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Table 5

Distribution of the population by language spoken most often at home in the regions, provinces and territories of Canada, 1981 and 2006

Region, province or territory	Language spoken most often at home (%)					
	French		English		Other language	
	1981	2006	1981	2006	1981	2006
Canada	24.6	21.4	68.0	66.7	7.4	11.9
Atlantic	11.1	10.4	88.1	88.2	0.7	1.4
Prince Edward Island	3.1	2.1	96.5	97.1	0.4	0.9
New Brunswick	31.4	29.7	67.9	69.0	0.7	1.2
Nova Scotia	2.9	2.0	96.0	96.2	1.1	1.9
Newfoundland and Labrador	0.3	0.1	99.2	98.8	0.4	1.0
Quebec	82.5	81.8	12.7	10.6	4.9	7.6
Ontario	3.9	2.5	85.7	81.4	10.4	16.1
Prairies	1.7	0.9	90.3	90.1	8.0	9.1
Alberta	1.3	0.7	91.4	89.5	7.2	9.8
Manitoba	3.1	1.8	85.7	88.0	11.3	10.2
Saskatchewan	1.1	0.5	92.5	94.4	6.4	5.2
British Columbia	0.6	0.4	91.4	83.0	8.1	16.6
Territories	1.3	1.3	74.0	78.2	24.8	20.5
Nunavut	} 1.4	0.8	} 63.0	44.7	} 35.7	54.5
Northwest Territories		1.1		89.9		9.0
Yukon	1.0	1.9	95.7	94.8	3.3	3.3

Source: Statistics Canada, Population censuses of 1981 and 2006.

Table 6

Population of visible minorities in Canada in 2006 by origin

Ethnic origin	Number (thousands)	%
Population as a whole	31,241	100.0
Population of visible minorities	5,068	16.2
of which: South Asian origins	1,263	24.9
Chinese	1,217	24.0
Black	784	15.5
Filipino	411	8.1
Latin American origins	304	6.0
Arab origins	266	5.2
Southeast Asian origins	240	4.7
West Asian	157	3.1
Korean	142	2.8
Multiple visible minorities	133	2.6
Japanese	81	1.6
Other visible minority	71	1.4

Source: Statistics Canada, 2006 Census, at http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo52a–eng.htm, accessed on 1 March 2012.

Table 7

Total fertility rate (children per woman), Canada, United States and Europe, 1980–2009

Country/Region[a]	Total fertility rate (children per woman)						Percentage change 1980–2009
	1980	1990	2000	2007	2008	2009	
Canada	1.75	1.86	1.49	1.66	1.68	1.58	–9.5
United States	1.84	2.08	2.06	2.12	2.08	2.01	9.3
Northern Europe	1.66	1.92	1.70	1.87	1.91	1.91	15.4
Western Europe	1.77	1.65	1.61	1.70	1.73	1.72	–2.7
Southern Europe	2.00	1.51	1.32	1.38	1.43	1.41	–29.3
Central Europe	2.21	1.92	1.31	1.33	1.39	1.41	–36.0
Eastern Europe	1.90	1.89	1.18	1.39	1.48	1.52	–20.0

(a) For consistency, the European regions used here are defined as in Adveev et al. (2011).

Sources: Canada and the United States: same sources as in Appendix Table A.4. Europe: developed countriesdatabase (INED, 2012).

Table 8

Percentage of single women by age, Canada and the United States, 1980 and 2007/2010

Age group	Canada		United States	
	1980	2007	1980	2010
15–19	93.1	97.3	–	–
18–19	–	–	82.8	95.3
20–24	50.5	75.7	50.2	79.3
25–29	19.4	45.5	20.8	47.8
30–34	10.4	26.6	9.5	27.1
35–39	7.2	18.1	6.2	17.7
40–44	6.1	14.6	4.8	13.8
45–54	5.9	12.5	4.7	11.0

Sources: Canada: Statistics Canada, CANSIM database, Table 051–0010. United States: United States Census Bureau, Current Population Survey, at http://www.census.gov/population/www/socdemo/hh-fam/, Table A1 downloaded on 4 December 2011.

Table 9

Percentage of contraceptive users among women in a union aged 15–49, by method used

	North America			Europe				
	Canada([a])	United States	Overall	Eastern Europe	Northern Europe	Southern Europe	Western Europe	Overall
	2002	2006/2008	2009	2009	2009	2009	2009	2009
Number of respondents	4,460	38,147	42,569	45,333	12,693	21,451	22,915	102,392
All contraceptive methods	74.0	78.6	78.1	74.9	80.1	63.8	71.9	72.6
All modern methods	72.0	73.0	72.9	54.3	77.2	46.3	68.6	58.7
Female sterilization	11.0	23.6	22.3	0.9	6.1	4.6	4.6	3.1
Male sterilization	22.0	12.7	13.7	0.2	12.3	2.4	1.7	2.5
Pill	21.0	16.3	16.8	11.6	22.0	16.1	45.5	21.4
Injectable	1.0	1.4	1.4	0.3	1.2	0.1	0.0	0.3
Implant	0.0	0.7	0.6	0.0	0.7	0.0	0.0	0.1
IUD	1.0	5.3	4.8	16.3	11.9	5.7	11.4	12.4
Male condom	15.0	11.7	12.0	22.2	20.9	17.0	4.8	17.1
Other modern method	1.0	1.3	1.3	2.8	2.1	0.2	0.6	1.6
All traditional methods	9.0	5.6	5.2	20.7	2.9	17.6	3.2	13.9
Periodic abstinence	3.0	1.2	1.1	9.1	1.2	2.5	2.1	5.2
Withdrawal	6.0	4.5	4.2	10.4	1.5	14.4	0.8	8.0
Other traditional method	0.0	0.0	0.0	1.2	0.1	0.7	0.3	0.7

[(a)] Several answers possible.

Sources: United Nations (2011) except for Canada (Fisher, Boroditsky and Morris, 2004) and the United States (Mosher, 2010).

Table 10

Abortion rate and abortion ratio per 100 births in Canada and the United States by age group in 1980 and 2006

Age group	Abortion rate per 1,000 women aged 15–49				Abortions per 100 births			
	Canada		United States		Canada		United States	
	1980	2006	1980	2006	1980	2006	1980	2006
Below 15	2.9	1.2	8.4	1.2	203.7	230.2	139.7	75.4
15–19	17.5	14.2	42.9	14.8	63.7	105.4	71.4	35.1
20–24	19.1	25.8	51.4	29.9	19.8	50.2	39.5	28.0
25–29	12.8	18.7	30.8	22.2	10.3	18.6	23.7	18.8
30–34	8.4	12.6	17.1	13.6	12.5	12.2	23.7	14.0
35–39	4.9	8.2	9.3	7.8	25.6	18.0	41.0	17.0
40+	2.3	2.9	3.5	2.6	69.2	37.9	80.7	27.6
Overall	11.8	13.0	29.3	14.9	19.4	25.7	37.5	21.9

Sources: Canada: Statistics Canada, CANSIM database, Table 106–9034. United States in 1980: Henshaw and O'Reilly (1983), in 2006: Pazol et al. (2008).

Table 11

Life expectancy at birth (years) by sex in Canada, the United States and Europe in 1980, 1990, 2000 and 2007

Country/Region([a])	1980		1990		2000		2007([b])	
	M	F	M	F	M	F	M	F
Canada	71.6	78.7	74.2	80.6	76.6	81.8	78.4	83.0
United States	70.0	77.5	71.9	78.9	74.2	79.5	75.6	80.7
Northern Europe	71.6	78.4	73.1	79.4	75.8	81.1	77.5	82.4
Western Europe	70.3	77.1	72.6	79.3	75.3	81.3	77.4	82.8
Southern Europe	70.6	76.8	72.9	79.4	75.0	81.2	77.1	82.8
Central Europe	66.5	73.7	66.5	74.5	69.0	76.7	70.6	78.4
Eastern Europe	62.6	73.3	64.3	74.5	60.4	72.9	62.0	74.2

(a) For consistency, the European regions used here are defined as in Adveev et al. (2011).

(b) 2007 is the last year for which we have data for both Canada and the United States.

Sources: Canada and the United States: Human Mortality Database (2012); Europe: Developed Countries Database (INED, 2012).

Table 12

Infant mortality rate (per 1,000 live births), both sexes combined, in Canada, the United States and Europe, 1980, 1990, 2000 and 2009

Country/Region([a])	1980	1990	2000	2009	Change (%)	
					1980–2009	1990–2009
Canada	10.4	6.8	5.3	4.9	–52.9	–27.9
United States	12.6	9.2	6.9	6.4	–49.2	–30.4
Northern Europe	7.6	6.4	4.0	2.8	–63.8	–57.1
Western Europe	11.5	7.4	4.8	3.9	–66.0	–47.2
Southern Europe	18.0	10.4	5.4	4.0	–77.6	–61.2
Central Europe	24.3	18.7	10.7	6.6	–73.0	–64.9
Eastern Europe	20.5	16.0	14.1	8.2	–59.9	–48.6

(a) For consistency, the European regions used here are defined as in Adveev et al. (2011).

Sources: Canada and the United States: same sources as in Appendix Table A.7. Europe: Developed Countries Database (INED, 2012).

Table 13

Probability of dying at ages 15–65 (per 1,000) by sex in Canada and the United States, 1980–2007

Year	Sex	Probability of dying (per 1,000)		Relative difference (%) United States – Canada
		Canada	United States	United States
1980	Male	244	280	13.0
	Female	130	152	15.0
1990	Male	195	247	20.9
	Female	107	138	22.5
2000	Male	155	207	25.0
	Female	94	127	25.6
2007([a])	Male	137	195	29.5
	Female	85	118	27.9

[(a)] 2007 is the last year for which we have data for both Canada and the United States.

Sources: Canada: Canadian Human Mortality Database (2012). United States: Human Mortality Database (2012).

Table 14

Contribution of age groups to gains in life expectancy at birth (years) in Canada and the United States

Age group	Males		Females	
	1987–1997	1997–2007	1987–1997	1997–2007
Canada				
0–14	0.29	0.09	0.16	0.07
15–24	0.15	0.10	0.04	0.03
25–44	0.16	0.21	0.07	0.10
45–64	0.80	0.57	0.39	0.31
65–79	0.71	1.15	0.36	0.64
80+	0.06	0.55	0.09	0.59
Total	2.17	2.67	1.12	1.72
United States				
0–14	0.35	0.10	0.25	0.07
15–24	0.10	0.05	0.03	0.03
25–44	0.29	0.13	0.04	0.03
45–64	0.71	0.42	0.31	0.30
65–79	0.68	0.96	0.29	0.54
80+	0.11	0.38	0.11	0.29
Total	2.24	2.04	1.03	1.26

Note: 2007 is the last year for which we have data for both Canada and the United States.

Source: Authors' calculations based on data from the Human Mortality Database (2012).

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Table 15

Standardized mortality rate by age group in 2007 (per 10,000) and distribution by cause of death (%) in Canada and the United States

Cause of death	Age group													
	0–14		15–24		25–44		45–64		65–79		80+		All ages	
	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.
Males														
Standardized rate, all causes (per 10,000)	5.0	6.7	7.0	11.5	11.4	19.1	52.4	75.8	279.4	314.8	1121.3	1156.5	78.5	91.4
Infectious and parasitic diseases	2.2	2.3	0.9	1.0	3.9	5.6	2.6	4.5	1.6	2.3	2.0	2.0	2.1	2.9
Cancer	6.0	4.1	6.2	4.1	14.9	9.8	39.0	29.2	40.3	33.6	23.8	20.4	31.7	25.2
Cardiovascular diseases	2.0	3.2	2.8	3.6	13.5	16.5	26.4	30.6	29.1	32.9	35.2	40.4	29.5	32.8
Respiratory diseases	2.7	3.6	1.6	1.3	2.2	2.2	4.0	5.4	8.5	10.9	12.9	12.4	8.8	9.2
Other diseases	73.4	67.3	8.7	6.6	13.3	13.9	16.2	17.8	17.4	16.7	23.0	21.8	19.6	19.2
Deaths from external causes	13.8	19.6	79.7	83.4	52.3	52.1	11.8	12.6	3.1	3.5	3.2	2.9	8.2	10.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females														
Standardized rate, all causes (per 10,000)	4.3	5.4	2.8	4.2	6.0	10.3	33.0	45.6	174.0	211.9	822.5	875.5	52.7	62.4
Infectious and parasitic diseases	1.8	2.3	1.2	2.4	3.2	6.0	1.8	3.9	2.0	2.7	1.9	2.1	1.9	2.7
Cancer	7.1	4.9	10.2	8.3	35.5	23.0	55.4	39.7	42.5	33.5	17.6	14.1	29.3	23.1
Cardiovascular diseases	2.5	3.5	4.1	6.1	10.5	15.3	14.9	22.5	24.8	29.7	38.3	43.5	30.5	35.0
Respiratory diseases	2.0	3.3	2.7	2.4	2.7	3.5	4.8	6.9	9.2	11.9	10.0	10.3	8.8	9.8
Other diseases	74.2	69.2	16.9	15.8	16.7	19.7	16.3	18.6	19.1	20.0	29.1	27.7	24.9	24.6
Deaths from external causes	12.4	16.8	64.9	65.0	31.4	32.5	6.9	8.4	2.5	2.3	3.2	2.2	4.6	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: The content of each group of causes of death is given in Appendix Table A.10 (ICD-10 categories). Deaths from ill-defined or unreported causes were distributed proportionally across the six groups of well-defined causes.

Sources: Canada: authors' calculations based on data from Statistics Canada. United States: authors' calculations based on data from the National Center for Health Statistics.

Table 16

Distribution (%) of immigrants to Canada and the United States by admission category, 1986, 2000 and 2010

Category	Canada			United States		
	1986	2000	2010	1986	2000	2010
Family	42.7	26.6	21.5	72.5	69.1	66.3
Employment	36.1	59.9	66.6	9.4	12.7	14.2
Humanitarian	19.3	13.2	8.8	17.3	7.5	13.1
Other	1.8	0.2	3.2	0.7	10.7	6.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: For Canada, “family” corresponds to the family reunification category in official statistics, “employment” to that of economic migrants and “humanitarian” to that of refugees. For the United States, “family” corresponds to the “Family-sponsored preferences” and “Immediate relatives of U.S. citizens” categories in official statistics, “employment” to “Employment-based preferences” and “humanitarian” to “Refugees and asylees”.

Sources: Canada : Citizenship and Immigration Canada (2011). United States: 1986: United States Department of Homeland Security (2006a); 2000: United States Department of Homeland Security (2006b); 2010: United States Department of Homeland Security (2011).

Table 17

Distribution (%) of immigrants to Canada and the United States by origin in 1986, 2001 and 2009

Region	Canada			United States		
	1986	2001	2009	1986	2001	2009
Europe	24.8	17.6	16.0	10.4	15.6	9.3
Asia	46.7	64.5	58.4	44.6	33.7	36.5
Africa	5.7	10.0	13.7	2.9	5.1	11.2
Oceania	0.9	0.6	0.6	0.6	0.6	0.5
North America	13.7	3.5	5.3	34.5	38.3	33.2
South America	7.2	3.5	5.5	7.0	6.5	9.1
Other or unknown	0.9	0.2	0.4	0.0	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Asia includes the Middle East. North America includes Central America.

Sources: Canada: Milan (2011). United States: 1986: Carter et al. (2006); 2001 and 2009: United States Department of Homeland Security (2011).

Table 18

Percentage of persons aged 65 and over, Canada, United States and Europe, 1980 and 2010

Country/Region[a]	Percentage of over-65s		Change 1980–2010 (%)
	1980	2010	
Canada	9.4	14.1	50.2
United States	11.3	13.1	15.5
Northern Europe	14.5	16.8	15.6
Western Europe	14.7	17.8	21.3
Southern Europe	12.0	18.4	53.0
Central Europe	11.2	14.6	30.9
Eastern Europe	10.3	13.0	26.1

(a) For consistency, the European regions here follow the definition adopted by Adveev et al. (2011).

Sources: Canada: 1940–1979: Employment and Immigration Canada (1982); 1980–1985: Citizenship and Immigration Canada (2004); 1986–2010: Citizenship and Immigration Canada (2011). United States, 1941–1988: Carter et al. (2006); 1989–2000: United States Immigration and Naturalization Service (2002); 2001–2010: United States Department of Homeland Security (2011). Europe: Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/main_tables, data downloaded 24 February 2012.

Table 19

United States population projection to 2050, components of the medium scenario

	2001	2010	2025	2050
Life expectancy at birth (years)				
Hispanics				
Males	77.2	78.4	79.7	81.9
Females	82.7	83.7	84.7	86.3
Non-Hispanic Blacks				
Males	68.3	70.1	73.6	79.0
Females	75.2	77.1	80.0	84.3
Other races				
Males	75.1	76.4	78.1	81.0
Females	80.1	81.1	82.7	85.3
Total fertility rate (children per woman)				
Overall	2.02	2.06	2.06	2.03
Hispanics	2.73	2.70	2.53	2.29
Non-Hispanic Blacks	2.10	1.93	1.91	1.88
Other races	1.84	1.90	1.90	1.89
Net migration (thousands)	1,173	1,338	1,569	2,047

Source: United States Census Bureau (2009b).

Table 20

Regional projection results, medium scenario, Canada and United States: total population (thousands), both sexes, 2010–2030

Regions	Population (thousands)		Population growth	
	2010	2030	Thousands	Percentage
Canada				
Atlantic	2,347.1	2,528.6	0, 181.5	7.7
British Columbia	4,528.0	5,946.9	1,418.9	31.3
Ontario	13,247.8	16,743.8	3,496.0	26.4
Prairies	6,010.0	7,372.3	1,362.3	22.7
Quebec	7,895.1	9,021.5	1,126.4	14.3
Territories	0,111.4	0, 126.7	0, 15.3	13.7
Overall	34,138.2	41,740.0	7,601.8	22.3
United States				
Middle Atlantic	41,046.4	42,048.1	1,001.7	2.4
South Atlantic	59,791.8	78,093.2	18,301.4	30.6
East North Central	47,041.3	48,638.5	1,597.1	3.4
West North Central	20,350.1	21,858.8	1,508.7	7.4
East South Central	18,063.7	19,902.3	1,838.6	10.2
West South Central	35,728.1	45,273.8	9,545.7	26.7
Mountain	21,740.5	29,909.4	8,169.0	37.6
New England	14,738.8	15,623.0	0, 884.2	6.0
Pacific	50,434.9	62,237.3	11,802.4	23.4
Overall	308,935.6	363,584.4	54,648.9	17.7

Note: These figures differ from those shown in Appendix Table A.1 because the demographic projections were made in both countries before the most recent population estimates for 2010. They are given here because they were used by the statistical institutes to construct the projections.

Sources: See Appendix Tables A.13A and A.13B.

Table A.1

Population on 1 January (thousands)

Country, province or territory/state	1980	1990	2000	2007	2008	2009	2010
Canada	**24,516**	**27,691**	**30,686**	**32,930**	**33,316**	**33,720**	**34,109**
Atlantic	**2,255**	**2,358**	**2,349**	**2,326**	**2,329**	**2,338**	**2,346**
New Brunswick	706	740	751	746	747	749	752
Newfoundland and Labrador	573	577	528	506	506	508	510
Nova Scotia	853	910	934	936	937	939	943
Prince Edward Island	124	130	136	138	140	141	142
Quebec	**6,506**	**6,997**	**7,357**	**7,687**	**7,751**	**7,828**	**7,907**
Ontario	**8,746**	**10,296**	**11,683**	**12,793**	**12,932**	**13,065**	**13,211**
Prairies	**4,193**	**4,661**	**5,159**	**5,707**	**5,811**	**5,919**	**6,002**
Alberta	2,191	2,548	3,004	3,513	3,591	3,671	3,721
Manitoba	1,034	1,105	1,147	1,194	1,206	1,220	1,235
Saskatchewan	968	1,008	1,008	1,000	1,014	1,029	1,046
British Columbia	**2,746**	**3,292**	**4,039**	**4,310**	**4,384**	**4,460**	**4,531**
Territories	69	87	98	107	108	110	112
Northwest Territories	} 46	} 59	40	44	44	44	44
Nunavut			27	31	32	32	33
Yukon	23	28	30	33	33	34	35
United States	**227,225**	**249,464**	**282,162**	**301,231**	**304,094**	**306,772**	**309,350**
New England	**12,372**	**13,220**	**13,950**	**14,279**	**14,340**	**14,404**	**14,457**
Connecticut	3,113	3,289	3,412	3,527	3,546	3,562	3,577
Maine	1,127	1,231	1,277	1,327	1,331	1,330	1,328
Massachusetts	5,746	6,019	6,361	6,432	6,469	6,518	6,557
New Hampshire	924	1,112	1,240	1,313	1,316	1,316	1,317
Rhode Island	949	1,005	1,050	1,057	1,055	1,054	1,053

Country, province or territory/state	1980	1990	2000	2007	2008	2009	2010
Vermont	513	565	610	623	624	625	626
Middle Atlantic	**36,811**	**37,656**	**39,717**	**40,374**	**40,536**	**40,730**	**40,904**
New Jersey	7,376	7,757	8,431	8,678	8,711	8,756	8,802
New York	17,567	18,003	19,002	19,132	19,212	19,307	19,392
Pennsylvania	11,868	11,896	12,284	12,564	12,612	12,667	12,710
East North Central	**41,694**	**42,077**	**45,216**	**46,188**	**46,275**	**46,356**	**46,439**
Illinois	11,435	11,447	12,434	12,696	12,747	12,797	12,843
Indiana	5,491	5,555	6,092	6,380	6,425	6,459	6,491
Michigan	9,256	9,310	9,952	10,001	9,947	9,902	9,878
Ohio	10,801	10,862	11,364	11,500	11,515	11,529	11,536
Wisconsin	4,712	4,902	5,374	5,611	5,641	5,669	5,691
West North Central	**17,208**	**17,689**	**19,275**	**20,106**	**20,249**	**20,393**	**20,537**
Iowa	2,914	2,780	2,929	2,999	3,017	3,033	3,050
Kansas	2,369	2,481	2,694	2,784	2,808	2,833	2,859
Minnesota	4,085	4,387	4,934	5,207	5,247	5,281	5,311
Missouri	4,922	5,126	5,607	5,888	5,924	5,961	5,996
Nebraska	1,572	1,581	1,714	1,783	1,796	1,813	1,830
North Dakota	654	637	642	653	658	665	674
South Dakota	691	697	756	792	799	807	816
South Atlantic	**37,140**	**43,757**	**51,963**	**57,965**	**58,693**	**59,301**	**59,923**
Delaware	595	669	786	872	884	892	900
District of Columbia	638	604	572	574	580	592	604
Florida	9,840	13,018	16,048	18,368	18,527	18,653	18,843
Georgia	5,486	6,507	8,227	9,350	9,505	9,621	9,713
Maryland	4,228	4,797	5,311	5,653	5,685	5,730	5,786
North Carolina	5,899	6,657	8,082	9,118	9,309	9,450	9,562
South Carolina	3,135	3,499	4,024	4,444	4,529	4,590	4,636
Virginia	5,368	6,214	7,106	7,751	7,833	7,926	8,025

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Country, province or territory/state	1980	1990	2000	2007	2008	2009	2010
West Virginia	1,951	1,792	1,807	1,834	1,840	1,848	1,854
East South Central	**14,690**	**15,209**	**17,053**	**18,034**	**18,203**	**18,340**	**18,458**
Alabama	3,900	4,049	4,452	4,673	4,718	4,758	4,785
Kentucky	3,664	3,693	4,049	4,257	4,290	4,317	4,346
Mississippi	2,525	2,577	2,848	2,928	2,948	2,959	2,970
Tennessee	4,600	4,891	5,704	6,176	6,247	6,306	6,357
West South Central	**23,891**	**26,765**	**31,549**	**34,691**	**35,288**	**35,908**	**36,485**
Arkansas	2,289	2,354	2,679	2,849	2,875	2,897	2,922
Louisiana	4,223	4,219	4,472	4,376	4,436	4,492	4,544
Oklahoma	3,041	3,147	3,454	3,634	3,669	3,718	3,762
Texas	14,338	17,045	20,944	23,832	24,309	24,802	25,257
Mountain	**11,450**	**13,716**	**18,269**	**21,165**	**21,554**	**21,859**	**22,137**
Arizona	2,738	3,679	5,161	6,168	6,280	6,343	6,414
Colorado	2,909	3,304	4,327	4,804	4,890	4,972	5,049
Idaho	948	1,012	1,299	1,505	1,534	1,554	1,571
Montana	789	800	904	965	976	984	991
Nevada	810	1,219	2,019	2,601	2,654	2,685	2,705
New Mexico	1,309	1,520	1,821	1,990	2,011	2,037	2,066
Utah	1,473	1,730	2,245	2,598	2,663	2,723	2,776
Wyoming	474	453	494	535	546	560	564
Pacific	**31,970**	**39,375**	**45,170**	**48,430**	**48,955**	**49,483**	**50,010**
Alaska	405	553	628	680	687	699	714
California	23,801	29,950	33,988	36,250	36,604	36,961	37,349
Hawaii	968	1,113	1,214	1,316	1,332	1,347	1,364
Oregon	2,641	2,859	3,430	3,722	3,769	3,809	3,839
Washington	4,155	4,901	5,911	6,462	6,562	6,667	6,744

Sources: Canada : Statistics Canada, CANSIM database, Table 051–0001. United States: 1980: United States Census Bureau, “Resident Population of States” table published in August 1995; Table ST-99-8 published on 9 March 2000; 2000s: Table ST-EST00INT-ALLDATA published in September 2011.

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Table A.2

Rate of natural increase (per thousand)

Country, province or territory/state	1981–1982	1990–1991	2000–2001	2005–2006	2006–2007	2007–2008	2008–2009
Canada	**8.0**	**7.6**	**3.5**	**3.7**	**3.9**	**4.0**	**4.1**
Atlantic	**7.8**	**5.8**	**1.3**	**0.7**	**0.6**	**0.5**	**0.3**
New Brunswick	7.4	5.8	1.6	1.2	1.3	0.9	0.7
Newfoundland and Labrador	10.9	6.1	0.9	0.3	–0.4	–0.1	–0.4
Nova Scotia	6.1	5.7	1.2	0.5	0.3	0.4	0.2
Prince Edward Island	7.4	5.7	1.3	1.2	2.1	1.6	1.5
Quebec	**7.7**	**7.1**	**2.4**	**3.3**	**3.5**	**3.8**	**4.1**
Ontario	**6.8**	**7.6**	**4.0**	**4.0**	**3.9**	**3.9**	**3.7**
Prairies	**10.9**	**9.5**	**5.2**	**5.7**	**6.4**	**6.7**	**6.8**
Alberta	13.3	11.0	6.5	7.0	8.0	8.2	8.3
Manitoba	7.0	7.7	3.5	3.9	4.1	4.4	4.5
Saskatchewan	9.7	7.7	3.1	3.3	3.6	4.2	4.4
British Columbia	**7.9**	**6.4**	**3.1**	**2.6**	**2.7**	**2.8**	**3.0**
Territories	**20.5**	**21.1**	**12.9**	**12.5**	**12.3**	**12.8**	**12.7**
Northwest Territories	} 22.4	} 23.8	11.8	12.4	11.9	12.7	12.7
Nunavut			21.0	19.9	20.6	21.2	20.9
Yukon	16.7	15.5	7.1	5.5	4.9	4.9	4.8
United States	**7.4**	**8.0**	**5.7**	**5.7**	**6.1**	**6.2**	**5.8**
New England	**4.5**	**6.3**	**3.3**	**2.6**	**3.3**	**3.5**	**3.0**
Connecticut	4.5	6.6	3.6	1.8	3.6	4.2	3.5
Maine	5.6	4.8	0.9	0.9	1.5	1.6	0.6
Massachusetts	3.9	6.4	3.9	3.5	3.5	3.8	3.4
New Hampshire	6.6	7.7	3.6	2.7	3.3	3.3	2.7
Rhode Island	3.6	5.5	2.4	2.8	2.7	3.4	2.7

Country, province or territory/state	1981–1982	1990–1991	2000–2001	2005–2006	2006–2007	2007–2008	2008–2009
Vermont	7.0	6.5	2.0	2.1	2.5	2.5	1.9
Middle Atlantic	**4.1**	**6.1**	**4.0**	**3.6**	**3.8**	**4.1**	**3.8**
New Jersey	4.1	6.8	4.8	4.5	4.7	5.3	4.5
New York	4.5	7.2	5.5	4.7	4.9	5.0	4.9
Pennsylvania	3.6	4.1	1.1	1.2	1.5	1.8	1.6
East North Central	**7.0**	**7.1**	**4.9**	**4.4**	**4.9**	**5.1**	**4.7**
Illinois	7.4	8.0	6.3	5.7	6.4	6.5	6.2
Indiana	6.9	6.5	5.2	5.0	5.3	5.4	5.1
Michigan	7.0	7.8	4.7	3.6	4.2	4.5	3.9
Ohio	6.6	6.3	3.9	3.5	3.6	4.0	3.5
Wisconsin	7.3	6.0	3.9	4.1	4.9	5.2	4.7
West North Central	**7.5**	**6.1**	**4.5**	**5.0**	**5.8**	**6.0**	**5.5**
Iowa	6.4	4.3	3.3	3.6	4.5	4.9	4.3
Kansas	8.2	6.5	5.2	5.6	6	6.9	6.2
Minnesota	8.7	7.3	5.9	6.1	7.2	6.9	6.6
Missouri	5.8	5.7	3.6	4.0	4.7	5.1	4.3
Nebraska	8.0	6.0	5.4	6.4	6.8	7.1	7.0
North Dakota	10.8	5.7	2.5	3.9	4.7	5.7	5.3
South Dakota	9.2	6.4	4.4	5.4	6.7	7.4	6.5
South Atlantic	**5.9**	**6.9**	**4.9**	**4.9**	**5.4**	**5.3**	**5.0**
Delaware	6.9	8.0	4.9	4.8	5.7	6.0	4.8
District of Columbia	4.3	7.7	3.4	4.2	4.5	5.0.0	5.0
Florida	3.2	4.8	2.6	3.3	3.8	3.2	3.1
Georgia	8.2	9.0	8.5	8.0	8.3	8.3	7.8
Maryland	6.8	8.7	5.7	5.4	6.2	5.7	5.8
North Carolina	6.1	6.9	5.9	5.5	6.1	6.5	5.7
South Carolina	8.3	8.1	4.8	4.4	4.2	4.4	4.1
Virginia	7.0	8.0	5.9	5.9	6.2	6.3	6.1

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Country, province or territory/state	1981–1982	1990–1991	2000–2001	2005–2006	2006–2007	2007–2008	2008–2009
West Virginia	4.4	1.8	–0.6	–0.3	0.1	0.2	–0.1
East South Central	**6.8**	**5.9**	**4.2**	**3.9**	**4.0**	**4.3**	**3.9**
Alabama	6.6	5.8	3.9	3.0	3.2	3.4	3.2
Kentucky	6.6	5.3	3.6	4.3	3.6	3.9	3.5
Mississippi	9.0	6.9	5.4	5.2	5.6	6.1	5.2
Tennessee	5.8	5.9	4.1	3.8	4.1	4.3	4.1
West South Central	**10.8**	**9.5**	**8.2**	**8.4**	**8.7**	**8.9**	**8.4**
Arkansas	5.8	4.8	3.3	4.1	4.8	5.2	4.4
Louisiana	11.1	8.1	5.7	5.0	4.4	5.3	4.9
Oklahoma	8.7	5.6	4.1	4.5	5.7	5.8	5.3
Texas	12.0	11.2	10.1	10.1	10.4	10.4	10.0
Mountain	**12.9**	**10.5**	**8.7**	**8.6**	**9.3**	**9.5**	**8.9**
Arizona	10.8	10.7	8.5	8.7	9.0	9.5	8.3
Colorado	11.3	9.5	8.8	8.2	9.0	9.0	8.2
Idaho	13.1	9.1	8.1	8.3	9.6	9.2	9.3
Montana	9.8	5.6	2.8	3.0	4.5	4.7	4.2
Nevada	9.6	10.0	7.4	7.5	8.2	8.1	7.8
New Mexico	13.6	11.0	7.4	7.4	7.5	7.6	7.3
Utah	21.6	15.4	15.3	14.0	15.7	16.0	15.4
Wyoming	15.7	8.2	4.3	5.4	6.1	7.2	6.9
Pacific	**9.8**	**12.1**	**7.9**	**8.0**	**8.4**	**8.3**	**8.0**
Alaska	20.8	17.2	10.9	10.4	12.2	12.3	11.8
California	9.8	13.2	8.6	9.0	9.0	8.9	8.6
Hawaii	13.7	11.8	7.8	6.7	7.8	7.7	7.2
Oregon	7.7	6.2	4.3	3.8	4.8	5.3	4.6
Washington	8.9	8.5	5.9	5.4	6.4	6.2	6.0

Note: Periods from 1 July to 30 June.

Sources: Canada: authors' calculations based on Statistics Canada, CANSIM database, Tables 051-0004 and 051-0005. United States: 1981–1982: authors' calculations based on data from the United States Census Bureau, Table "1981 to 1989 Intercensal Estimates of the Resident Population of States, and Year-to-Year Components of Change" published in September 1995; 1990–1991: Table ST-99–7

published on 29 December 1999; 2000–2001: Table NST-EST2003-compchg2001 published on 11 May 2004; 2005–2006: Table NST-EST2006-06 published on 22 December 2006; 2006–2007: Table NST-EST2007-06 published on 27 December 2007; 2007–2008: Table NST-EST2008–06 published on 22 December 2008; 2008–2009: Table NST-EST2009–06 published in December 2009.

Table A.3

Rate of net international migration (per thousand)

Country, province or territory/state	1981–1982([a])	1990–1991	2000–2001	2005–2006	2006–2007	2007–2008	2008–2009
Canada	**4.7**	**5.0**	**7.7**	**7.1**	**6.9**	**7.6**	**8.0**
Atlantic	**–4.1**	**0.3**	**–2.7**	**–3.5**	**–3.2**	**1.0**	**3.3**
New Brunswick	–3.9	1.2	–1.4	–3.4	–1.5	0.9	2.6
Newfoundland and Labrador	–9.7	0.0	–8.5	–8.6	–7.4	–0.3	4.2
Nova Scotia	–0.4	0.1	–1.0	–1.0	–2.7	0.6	2.4
Prince Edward Island	–6.0	–1.9	2.1	–2.1	–0.3	8.3	9.6
Quebec	**–1.0**	**3.1**	**3.0**	**3.8**	**3.8**	**4.5**	**5.8**
Ontario	**5.4**	**5.3**	**14.4**	**7.6**	**6.1**	**6.9**	**6.5**
Prairies	**12.8**	**0.9**	**4.8**	**11.2**	**12.9**	**11.4**	**11.7**
Alberta	22.8	6.7	11.0	19.9	18.3	14.0	13.5
Manitoba	2.0	–2.2	–0.2	0.1	3.9	5.5	7.1
Saskatchewan	1.6	–10.5	–7.7	–5.3	4.6	9.2	10.6
British Columbia	**9.9**	**17.4**	**6.4**	**12.2**	**12.8**	**14.3**	**14.3**
Territories	**9.6**	**2.5**	**–6.0**	**–10.1**	**–1.8**	**–3.3**	**–2.4**
Northwest Territories	} 11.8	} −0.7	–1.3	–20.5	–3.8	–9.2	–13.3
Nunavut			1.8	–6.9	–5.3	–10.9	–2.0
Yukon	5.3	9.4	–19.1	0.8	4.2	11.8	11.3
United States	**2.2**	**2.8**	**4.5**	**4.0**	**3.5**	**2.9**	**2.8**
New England	**–1.9**	**–7.3**	**3.8**	**–1.7**	**–1.6**	**–0.5**	**1.7**
Connecticut	–1.2	–6.2	2.8	–0.8	–1.9	–0.9	1.0
Maine	–2.4	–0.8	5.1	1.5	0.0	–1.1	–1.6
Massachusetts	–3.4	–9.3	2.4	–3.0	–1.3	0.8	4.3
New Hampshire	5.2	–11.5	11.2	3.3	–0.4	–0.7	–0.6
Rhode Island	–2.4	–5.6	5.9	–8.4	–6.5	–5.7	–2.9

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Country, province or territory/state	1981–1982([a])	1990–1991	2000–2001	2005–2006	2006–2007	2007–2008	2008–2009
Vermont	–0.2	–1.2	3.2	0.2	–1.8	–1.9	–0.9
Middle Atlantic	**–3.3**	**–3.1**	**0.2**	**–2.5**	**–2.2**	**–1.0**	**0.1**
New Jersey	–0.9	–3.1	4.0	–2.1	–2.3	–1.7	0.7
New York	–3.2	–5.3	–1.5	–5.3	–4.1	–1.6	–1.2
Pennsylvania	–4.7	0.3	0.2	1.5	0.8	0.3	1.6
East North Central	**–10.8**	**0.0**	**0.0**	**–1.4**	**–2.4**	**–2.9**	**–2.3**
Illinois	–9.1	–1.7	–0.2	–0.6	–0.5	–0.5	–1.0
Indiana	–9.2	2.3	0.8	2.5	1.3	0.9	0.4
Michigan	–17.3	–1.4	0.4	–4.2	–7.4	–9.2	–7.2
Ohio	–9.5	0.1	–1.7	–3.0	–3.4	–3.4	–2.1
Wisconsin	–6.7	3.4	2.2	1.0	0.1	–0.1	0.2
West North Central	**−5.9**	**0.2**	**0.6**	**1.8**	**1.2**	**1.0**	**0.9**
Iowa	–13.3	0.2	–1.8	1.9	0.6	1.4	0.4
Kansas	–1.3	–1.9	–2.1	0.0	1.3	2.0	1.3
Minnesota	–4.0	2.1	4.6	1.7	1.1	0.4	0.2
Missouri	–6.4	0.4	1.9	3.7	2.2	0.6	1
Nebraska	–5.9	0.9	–1.9	–0.8	–0.7	0.8	1.2
North Dakota	3.5	–10.7	–10.1	–2.0	–1.1	0.2	2.9
South Dakota	–7.7	1.2	–1.0	3.5	3.2	3.4	2.9
South Atlantic	**7.5**	**8.7**	**9.9**	**11.5**	**8.0**	**5.9**	**5.0**
Delaware	–1.6	8.5	7.0	9.0	8.2	6.6	5.2
District of Columbia	–8.6	–24.4	–0.7	–5.1	0.4	2.1	11.0
Florida	23.7	16.1	16.0	14.8	6.8	3.7	3.0
Georgia	6.3	9.0	10.8	17.1	13.3	8.7	5.5
Maryland	–1.9	3.9	6.7	–0.8	–3.3	–3.0	1.5
North Carolina	4.4	7.1	8.6	15.5	15.2	13.2	8.6
South Carolina	0.5	8.2	4.5	13.0	13.6	12.3	8.5
Virginia	1.9	3.9	6.4	4.5	3.2	2.9	5.0

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Country, province or territory/state	1981–1982([a])	1990–1991	2000–2001	2005–2006	2006–2007	2007–2008	2008–2009
West Virginia	–6.8	2.0	–2.5	2.6	1.7	2.3	2.8
East South Central	**–3.0**	**3.1**	**1.0**	**5.7**	**5.8**	**4.1**	**3.0**
Alabama	–4.9	3.8	–0.5	8.0	4.9	4.0	3.5
Kentucky	–3.0	1.0	1.2	3.7	5.1	3.6	2.5
Mississippi	–2.1	–1.0	–2.1	–4.3	1.3	0.2	–1.2
Tennessee	–1.9	6.2	3.5	10.0	9.3	6.2	4.8
West South Central	**19.9**	**4.0**	**4.8**	**4.7**	**9.1**	**7.8**	**7.9**
Arkansas	–5.4	2.6	1.9	8.5	4.2	3.5	3.1
Louisiana	5.0	–2.4	–6.3	–53.9	7.5	3.7	4.1
Oklahoma	26.2	1.1	–0.2	5.5	5.3	3.6	6.5
Texas	26.9	6.4	8.3	14.8	10.6	9.7	9.4
Mountain	**12.8**	**11.5**	**11.5**	**17.1**	**14.4**	**10.2**	**6.1**
Arizona	17.2	8.0	16.7	26.7	18.9	13.4	6.4
Colorado	16.4	10.0	14.3	10.9	10.8	10.7	9.8
Idaho	–1.2	17.0	7.6	17.5	14.7	9.7	2.4
Montana	1.0	4.8	0.1	7.5	7.1	6.5	2.8
Nevada	29.6	43.2	29.2	26.7	20.7	9.9	2.7
New Mexico	9.5	7.2	–3.1	7.3	6.6	2.5	4.1
Utah	6.3	5.9	0.3	9.6	12.6	9.0	5.3
Wyoming	13.8	1.7	–4.7	6.7	13.4	10.8	14.0
Pacific	**9.0**	**5.1**	**7.0**	**2.1**	**1.1**	**2.9**	**3.1**
Alaska	50.8	12.1	–2.7	–0.2	–3.2	–4.3	2.9
California	12.0	2.5	7.0	–0.6	–0.8	1.4	1.8
Hawaii	2.1	5.1	2.8	2.8	–4.3	0.3	–1.0
Oregon	–8.8	15.2	8.1	13.0	10.4	9.2	6.5
Washington	0.7	14.8	7.8	10.9	8.2	9.1	8.8

[(a)] Includes the residual for the United States.

Note: Periods from 1 July to 30 June.

Sources: see Table A.2.

Table A.4

Total fertility rate (children per woman)

Country, province or territory/state	1980	1990	2000	2005	2006	2007	2008	2009
Canada	**1.75([a])**	**1.86([a])**	**1.49**	**1.54**	**1.59**	**1.66**	**1.68**	**1.67**
Atlantic	**1.69**	**1.66**	**1.36**	**1.39**	**1.42**	**1.50**	**1.58**	**1.56**
New Brunswick	1.68	1.63	1.39	1.41	1.46	1.52	1.59	1.59
Newfoundland and Labrador	NA	1.44([b])	1.25	1.34	1.38	1.46	1.58	1.59
Nova Scotia	1.67	1.73	1.37	1.40	1.40	1.48	1.54	1.50
Prince Edward Island	1.94	1.92	1.52	1.48	1.56	1.63	1.73	1.69
Quebec	**1.70**	**1.72**	**1.43**	**1.52**	**1.62**	**1.69**	**1.74**	**1.74**
Ontario	**1.66**	**1.83**	**1.48**	**1.51**	**1.52**	**1.57**	**1.58**	**1.56**
Prairies	**2.00**	**2.00**	**1.70**	**1.79**	**1.85**	**1.94**	**1.95**	**1.94**
Alberta	2.01	1.98	1.64	1.75	1.82	1.90	1.92	1.89
Manitoba	1.84	1.98	1.80	1.82	1.87	1.96	1.96	1.98
Saskatchewan	2.14	2.09	1.76	1.87	1.92	2.03	2.05	2.06
British Columbia	**1.73**	**1.82**	**1.38**	**1.39**	**1.41**	**1.52**	**1.51**	**1.50**
Territories	**2.94**	**2.88**	**2.20**	**2.10**	**2.18**	**2.20**	**2.21**	**2.28**
Northwest Territories	} 3.37	} 3.14	2.00	2.11	2.07	2.11	2.08	2.06
Nunavut			3.16	2.74	2.84	2.97	2.98	3.24
Yukon	2.09	2.34	1.60	1.48	1.69	1.58	1.64	1.66
United States	**1.84**	**2.08**	**2.06**	**2.05**	**2.10**	**2.12**	**2.08**	**2.01**
New England	**1.53**	**1.81**	**1.76**	**1.77**	**1.80**	**1.82**	**1.78**	**1.72**
Connecticut	1.51	1.85	1.87	1.91	1.90	1.92	1.88	1.80
Maine	1.74	1.82	1.70	1.78	1.77	1.79	1.74	1.73
Massachusetts	1.45	1.77	1.73	1.71	1.78	1.80	1.77	1.71
New Hampshire	1.70	1.85	1.78	1.78	1.75	1.76	1.71	1.67

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Country, province or territory/state	1980	1990	2000	2005	2006	2007	2008	2009
Rhode Island	1.52	1.82	1.69	1.73	1.72	1.76	1.73	1.67
Vermont	1.72	1.79	1.64	1.62	1.69	1.72	1.67	1.62
Middle Atlantic	**1.63**	**1.95**	**1.88**	**1.90**	**1.94**	**1.97**	**1.94**	**1.89**
New Jersey	1.62	1.94	1.97	2.05	2.05	2.10	2.06	2.00
New York	1.63	2.00	1.87	1.86	1.89	1.92	1.89	1.87
Pennsylvania	1.64	1.88	1.83	1.86	1.93	1.96	1.94	1.86
East North Central	**1.84**	**2.01**	**2.03**	**1.98**	**2.00**	**2.01**	**1.98**	**1.93**
Illinois	1.93	2.13	2.08	2.03	2.03	2.04	2.00	1.94
Indiana	1.84	1.96	2.08	2.06	2.08	2.12	2.09	2.03
Michigan	1.77	2.04	2.00	1.91	1.93	1.91	1.87	1.85
Ohio	1.81	1.95	2.02	1.96	1.99	2.01	1.99	1.94
Wisconsin	1.85	1.88	1.92	1.94	2.01	2.01	2.00	1.95
West North Central	**1.97**	**1.98**	**2.04**	**2.05**	**2.15**	**2.17**	**2.14**	**2.08**
Iowa	1.96	1.92	2.01	2.01	2.14	2.15	2.11	2.07
Kansas	2.02	2.07	2.19	2.14	2.23	2.27	2.25	2.19
Minnesota	1.89	1.90	1.99	2.02	2.14	2.15	2.11	2.04
Missouri	1.91	2.00	2.01	1.99	2.07	2.08	2.05	1.97
Nebraska	2.05	2.03	2.13	2.19	2.29	2.30	2.29	2.27
North Dakota	2.13	1.91	1.85	1.98	2.15	2.12	2.13	2.12
South Dakota	2.35	2.16	2.12	2.26	2.40	2.41	2.35	2.29
South Atlantic	**1.71**	**2.01**	**2.02**	**2.05**	**2.10**	**2.12**	**2.08**	**1.97**
Delaware	1.76	1.98	2.00	2.01	2.09	2.13	2.11	2.00
District of Columbia	1.46	2.08	1.56	1.79	1.70	1.75	1.79	1.74
Florida	1.74	2.11	2.02	2.06	2.09	2.12	2.05	1.93
Georgia	1.87	2.06	2.15	2.14	2.23	2.25	2.17	2.05
Maryland	1.58	1.96	1.97	2.00	2.01	2.06	2.03	1.96
North Carolina	1.63	1.93	2.08	2.06	2.13	2.15	2.12	2.02
South Carolina	1.84	2.05	1.97	1.97	2.14	2.14	2.13	1.99

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Country, province or territory/state	1980	1990	2000	2005	2006	2007	2008	2009
Virginia	1.63	1.89	1.94	2.03	2.05	2.07	2.02	1.95
West Virginia	1.81	1.73	1.76	1.80	1.82	1.93	1.90	1.86
East South Central	**1.89**	**1.96**	**2.02**	**1.98**	**2.09**	**2.12**	**2.09**	**1.98**
Alabama	1.89	1.99	2.03	1.93	2.03	2.07	2.06	1.96
Kentucky	1.87	1.87	1.97	1.99	2.05	2.09	2.06	2.00
Mississippi	2.22	2.11	2.11	2.02	2.26	2.28	2.20	2.07
Tennessee	1.73	1.94	1.99	2.00	2.07	2.11	2.07	1.95
West South Central	**2.12**	**2.19**	**2.26**	**2.23**	**2.30**	**2.33**	**2.29**	**2.23**
Arkansas	1.99	2.09	2.08	2.09	2.18	2.20	2.16	2.08
Louisiana	2.16	2.11	2.09	1.87	2.11	2.16	2.08	2.02
Oklahoma	2.02	2.02	2.11	2.11	2.20	2.22	2.21	2.16
Texas	2.14	2.25	2.34	2.34	2.36	2.40	2.36	2.30
Mountain	**2.22**	**2.28**	**2.28**	**2.26**	**2.34**	**2.35**	**2.28**	**2.14**
Arizona	2.13	2.40	2.40	2.37	2.44	2.43	2.31	2.12
Colorado	1.78	1.98	2.11	2.08	2.11	2.10	2.05	1.98
Idaho	2.52	2.29	2.31	2.32	2.42	2.49	2.47	2.27
Montana	2.07	2.06	1.97	1.98	2.13	2.08	2.08	1.98
Nevada	1.85	2.31	2.25	2.27	2.36	2.42	2.31	2.13
New Mexico	2.25	2.33	2.19	2.21	2.23	2.27	2.23	2.14
Utah	3.22	2.65	2.63	2.47	2.63	2.63	2.60	2.47
Wyoming	2.42	2.12	1.96	2.16	2.24	2.28	2.28	2.14
Pacific	**1.90**	**2.39**	**2.11**	**2.13**	**2.14**	**2.17**	**2.13**	**2.04**
Alaska	2.35	2.62	2.32	2.44	2.32	2.32	2.41	2.28
California	1.90	2.47	2.15	2.18	2.19	2.20	2.15	2.06
Hawaii	2.10	2.33	2.14	2.28	2.23	2.29	2.34	2.23
Oregon	1.83	2.06	1.98	1.85	1.96	1.98	1.95	1.85
Washington	1.83	2.07	1.97	1.91	1.98	2.03	2.04	1.97

(a) Excluding Newfoundland and Labrador as the data required to calculate this indicator were not available until 1991 for this province.

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(b) 1991 and not 1990 for Newfoundland and Labrador.

Sources: Canada, 1980 and 1990: Wadhera and Strachan (1993b), Table 10; 1991 (Newfoundland and Labrador only): Statistics Canada (1997); 2000s: Statistics Canada, CANSIM database, Table 102–4505. United States: National Center for Health Statistics, at http://www.cdc.gov/nchs/vitalstats.htm accessed 20 June 2012.

Table A.5

Proportion of non-marital births (per 100 live births)

Country, province or territory/state	1980	1990/ 1991([a])	2000	2005	2006	2007	2008	2009([b])
Canada	**13.2([c])**	**28.6**	**38.4**	**36.7**	**37.7**	**38.4**	**39.5**	**39.4**
Atlantic	**16.9**	**29.2**	**38.8**	**42.7**	**43.8**	**45.5**	**48.1**	**47.4**
New Brunswick	16.4	29.9	41.3	44.8	46.8	48.4	49.3	48.8
Newfoundland and Labrador	NA	31.8	40.1	43.7	44.7	47.5	49.2	49.0
Nova Scotia	17.8	27.9	36.7	41.0	42.0	43.4	45.0	46.0
Prince Edward Island	13.0	23.6	34.8	39.3	35.9	36.1	58.1	44.1
Quebec	**18.1**	**41.4**	**58.5**	**58.9**	**61.5**	**62.0**	**63.0**	**63.4**
Ontario	**11.4**	**21.8**	**32.7**	**26.1**	**25.9**	**26.5**	**27.8**	**28.4**
Prairies	**17.5**	**26.5**	**32.3**	**34.1**	**35.1**	**35.7**	**35.8**	**35.3**
Alberta	16.2	24.2	27.5	28.6	29.6	30.1	30.3	30.1
Manitoba	18.6	28.3	36.5	39.3	41.0	42.4	42.5	41.5
Saskatchewan	19.2	30.5	41.7	46.3	46.9	47.6	47.5	46.4
British Columbia	**15.7**	**25.1**	**28.5**	**30.0**	**29.9**	**30.9**	**31.7**	**29.7**
Territories	**40.6**	**52.9**	**61.0**	**63.0**	**62.5**	**63.2**	**63.4**	**71.3**
Northwest Territories	} 43.5	} 58.9	59.9	63.5	59.5	62.3	58.8	58.3
Nunavut			75.4	75.8	80.2	80.5	83.9	80.8
Yukon	34.7	40.1	49.5	50.3	49.5	47.9	49.9	79.2
United States	**18.4**	**28.0**	**33.2**	**36.9**	**38.5**	**39.7**	**40.6**	**41.0**
New England	**15.6**	**24.2**	**28.2**	**31.6**	**33.6**	**35.1**	**35.9**	**36.8**
Connecticut	17.9	26.6	29.3	32.2	34.0	35.1	36.4	37.6
Maine	13.9	22.6	31.0	35.0	37.1	39.1	39.7	40.6
Massachusetts	15.7	24.7	26.5	30.2	32.2	33.4	34.0	34.7
New Hampshire	11.0	16.9	24.7	27.3	29.4	31.4	32.9	33.4
Rhode Island	15.7	26.3	35.5	38.5	40.5	44.0	43.9	44.8
Vermont	13.7	20.1	28.1	32.3	34.5	36.6	38.8	39.5
Middle Atlantic	**21.3**	**29.8**	**33.8**	**36.5**	**38.0**	**39.1**	**39.9**	**40.0**
New Jersey	21.1	24.3	28.9	31.4	33.0	34.4	35.0	35.3
New York	23.8	33.0	36.6	38.7	40.0	40.7	41.4	41.5
Pennsylvania	17.7	28.6	32.7	36.5	38.3	39.7	40.8	41.0
East North Central	**18.0**	**28.2**	**33.7**	**37.3**	**38.9**	**40.2**	**41.1**	**41.7**
Illinois	22.5	31.7	34.5	37.1	38.7	40.1	40.7	40.8
Indiana	15.5	26.2	34.7	40.2	41.4	42.4	43.3	43.8
Michigan	16.2	26.2	33.3	36.6	38.3	39.4	40.2	41.3

Country, province or territory/state	1980	1990/ 1991([a])	2000	2005	2006	2007	2008	2009([b])
Ohio	17.8	28.9	34.6	38.9	40.5	42.2	43.4	44.2
Wisconsin	13.9	24.2	29.3	32.5	34.1	35.4	36.3	37.0
West North Central	**13.1**	**23.2**	**29.7**	**33.6**	**35.0**	**36.0**	**36.7**	**36.8**
Iowa	10.3	21.0	28.0	32.5	33.8	34.3	35.2	35.2
Kansas	12.3	21.5	29.0	34.2	35.2	36.5	37.8	37.9
Minnesota	11.4	20.9	25.8	29.8	31.7	32.7	33.3	33.5
Missouri	17.6	28.6	34.6	37.8	39.3	40.5	40.9	40.9
Nebraska	11.6	20.7	27.2	30.9	32.3	33.4	33.9	34.5
North Dakota	9.2	18.4	28.3	32.2	31.7	32.6	33.6	32.7
South Dakota	13.4	22.9	33.5	36.2	37.1	38.4	38.4	38.4
South Atlantic	**22.2**	**30.7**	**35.9**	**39.8**	**41.6**	**43.0**	**44.0**	**44.4**
Delaware	24.2	29.0	37.9	44.3	45.5	46.8	48.0	47.7
District of Columbia	56.5	64.9	60.3	56.0	57.6	58.5	57.8	55.8
Florida	23.0	31.7	38.2	42.8	44.4	46.1	46.9	47.7
Georgia	23.2	32.8	37.0	40.6	42.4	43.6	45.4	45.5
Maryland	25.2	29.6	34.6	37.1	39.7	40.9	42.4	42.7
North Carolina	19.0	29.4	33.3	38.4	40.1	41.2	42.0	42.3
South Carolina	23.0	32.7	39.8	43.3	45.6	46.6	47.8	47.6
Virginia	19.2	26.0	29.9	32.2	33.8	35.2	35.8	35.8
West Virginia	13.1	25.4	31.7	36.5	37.9	40.3	42.0	43.6
East South Central	**20.7**	**30.3**	**35.5**	**39.4**	**40.6**	**42.6**	**43.9**	**44.6**
Alabama	22.2	30.1	34.3	35.7	36.6	38.3	39.9	41.0
Kentucky	15.1	23.6	31.0	35.5	35.3	39.3	40.7	41.3
Mississippi	28.0	40.5	46.0	49.4	52.8	53.7	54.5	55.3
Tennessee	19.9	30.2	34.5	40.2	41.4	42.8	44.1	44.5
West South Central	**15.9**	**22.5**	**33.5**	**39.4**	**41.1**	**42.3**	**43.4**	**44.0**
Arkansas	20.5	29.4	35.7	40.2	41.8	43.4	44.6	45.5
Louisiana	23.4	36.8	45.6	48.0	49.8	51.4	53.0	53.6
Oklahoma	14.0	25.2	34.3	39.1	40.9	41.3	42.3	42.0
Texas	13.3	17.5	30.5	37.6	39.4	40.7	41.7	42.4
Mountain	**13.2**	**25.0**	**31.6**	**34.7**	**35.5**	**35.7**	**35.9**	**35.9**
Arizona	18.7	32.7	39.3	43.1	44.0	45.2	45.3	45.4
Colorado	13.0	21.2	25.0	27.1	27.6	25.4	24.9	24.9
Idaho	7.9	16.7	21.6	22.9	24.3	25.5	25.3	25.6
Montana	12.5	23.7	30.8	34.6	36.0	35.9	36.7	36.3
Nevada	13.5	25.4	36.4	40.9	41.3	42.0	42.5	43.5
New Mexico	16.1	35.4	45.6	50.8	51.2	51.8	52.9	53.5
Utah	6.2	13.5	17.3	17.7	18.8	19.7	20.4	19.4
Wyoming	8.2	19.8	28.8	32.8	33.0	34.7	34.6	34.0

Country, province or territory/state	1980	1990/ 1991([a])	2000	2005	2006	2007	2008	2009([b])
Pacific	**19.6**	**29.9**	**31.9**	**34.9**	**36.5**	**37.8**	**39.0**	**39.1**
Alaska	15.6	26.2	33.0	36.0	36.8	37.3	37.6	38.0
California	21.4	31.6	32.7	35.7	37.6	38.9	40.2	40.6
Hawaii	17.6	24.8	32.2	36.3	36.0	36.9	37.9	37.9
Oregon	14.8	25.7	30.1	33.3	34.3	35.1	36.1	35.5
Washington	13.6	23.7	28.2	30.9	31.9	33.2	34.0	33.5

(a) 1991 for Canada, 1990 for the United States.

(b) Provisional data.

(c) Excluding Newfoundland and Labrador as the data required to calculate this indicator were not available until 1991 for this province.

Source: Canada: 1980: Romaniuc (1984); 1991 and 2000s: Statistics Canada, CANSIM database, Table 102–4506. United States, 1980: Ventura (1995); 1990 and 2000: Sutton and Mathews (2004); 2005: Martin et al. (2007); 2006: Martin et al. (2009); 2007: Martin et al. (2010); 2008 and 2009: National Center for Health Statistics, Table 1–2, at http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_03_tables.pdf.

Table A.6

Life expectancy at birth (years)

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009([a])	
	M	F	M	F	M	F	M	F	M	F	M	F
Canada	**71.6**	**78.7**	**74.2**	**80.6**	**76.6**	**81.8**	**77.9**	**82.5**	**78.3**	**82.9**	**78.4**	**83.0**
Atlantic	**71.1**	**78.2**	**73.5**	**80.0**	**75.5**	**81.1**	**76.6**	**81.8**	**77.0**	**82.0**	**77.0**	**82.0**
New Brunswick	70.8	78.5	73.9	80.6	75.9	81.6	77.1	82.3	77.8	82.3	77.2	82.6
Newfoundland and Labrador	71.8	77.9	73.1	79.2	74.6	80.1	75.4	80.7	75.6	80.8	76.2	80.8
Nova Scotia	70.7	78.1	73.4	79.8	75.9	81.2	76.6	81.9	77.0	82.3	77.3	82.0
Prince Edward Island	72.4	79.7	73.0	80.5	75.0	81.4	77.9	82.3	77.4	82.4	77.3	83.2
Quebec	**70.7**	**78.1**	**73.2**	**80.4**	**76.0**	**82.0**	**77.6**	**82.6**	**78.3**	**83.0**	**78.4**	**83.1**
Ontario	**72.0**	**78.8**	**74.7**	**80.7**	**77.0**	**81.8**	**78.4**	**82.6**	**78.8**	**83.2**	**78.8**	**83.2**
Prairies	**72.0**	**79.0**	**74.6**	**80.9**	**76.4**	**81.5**	**77.2**	**82.2**	**77.7**	**82.5**	**77.7**	**82.4**
Alberta	71.7	78.8	74.7	81.1	77.0	81.8	77.6	82.6	78.1	82.9	78.2	82.8
Manitoba	72.2	78.7	74.4	80.4	75.2	80.8	76.7	81.3	76.9	81.9	76.7	81.8
Saskatchewan	72.5	79.7	74.8	81.1	75.9	81.1	76.5	81.9	76.9	81.9	77.2	81.9
British Columbia	**72.3**	**79.8**	**74.9**	**80.9**	**77.9**	**82.7**	**78.5**	**83.2**	**78.9**	**83.3**	**79.0**	**83.5**
Territories	**67.6**	**73.8**	**70.7**	**76.5**	**72.1**	**77.2**						
Northwest Territories Nunavut }	67.5	73.7	69.8	75.8	71.1	75.9						
Yukon	67.8	74.1	72.5	78.0	74.5	80.0						
United States	**70.0**	**77.5**	**71.9**	**78.9**	**74.2**	**79.5**	**75.0**	**80.1**	**75.3**	**80.4**	**76.1**	**81.0**
New England	**71.3**	**78.5**	**73.4**	**79.8**	**75.7**	**80.6**						
Connecticut	71.5	78.6	73.6	80.0	75.9	80.9						
Maine	70.8	78.4	73.0	79.6	75.1	80.0						
Massachusetts	71.3	78.5	73.3	79.8	75.7	80.7						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/2009([a])	
	M	F	M	F	M	F	M	F	M	F	M	F
New Hampshire	71.5	78.4	73.5	79.8	75.9	80.7						
Rhode Island	71.0	78.3	73.0	79.8	75.4	80.4						
Vermont	71.1	78.5	73.3	79.7	75.8	80.3						
Middle Atlantic	**70.1**	**77.2**	**71.5**	**78.5**	**74.6**	**79.9**						
New Jersey	70.5	77.4	72.2	78.5	74.7	79.9						
New York	70.0	77.2	70.9	78.3	75.0	80.2						
Pennsylvania	69.9	77.2	71.9	78.7	73.9	79.4						
East North Central	**70.1**	**77.4**	**71.9**	**78.6**	**73.9**	**79.2**						
Illinois	69.6	77.1	71.3	78.3	73.8	79.3						
Indiana	70.2	77.5	72.0	78.6	73.4	78.8						
Michigan	70.1	77.3	71.7	78.2	73.8	78.9						
Ohio	69.9	77.1	72.0	78.5	73.7	78.8						
Wisconsin	71.9	78.9	73.6	80.0	75.3	80.6						
West North Central	**71.4**	**79.0**	**73.3**	**80.0**	**75.0**	**80.3**						
Iowa	72.0	79.6	73.9	80.5	75.8	81.0						
Kansas	71.6	79.0	73.4	80.0	74.7	79.9						
Minnesota	72.5	79.8	74.5	80.9	76.4	81.5						
Missouri	69.9	77.7	71.5	78.8	73.2	78.8						
Nebraska	71.7	79.3	73.6	80.2	75.5	80.6						
North Dakota	72.1	79.7	74.4	81.0	75.7	81.4						
South Dakota	71.0	79.2	73.2	80.8	74.8	81.1						
South Atlantic	**69.0**	**77.1**	**71.0**	**78.4**	**73.3**	**79.0**						
Delaware	69.6	76.8	71.6	77.7	73.7	78.9						
District of Columbia	64.6	73.7	62.0	74.2	68.0	76.5						
Florida	70.1	78.0	72.1	79.6	74.4	80.2						
Georgia	68.0	76.4	69.7	77.5	72.2	78.0						
Maryland	69.7	76.8	71.3	78.1	73.4	78.9						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009([a])	
	M	F	M	F	M	F	M	F	M	F	M	F
North Carolina	68.6	77.4	70.6	78.3	72.7	78.6						
South Carolina	67.6	76.1	69.6	77.3	71.6	78.0						
Virginia	69.6	77.3	71.8	78.6	74.2	79.3						
West Virginia	68.9	76.9	70.5	77.9	72.3	77.8						
East South Central	**68.7**	**77.0**	**70.0**	**77.8**	**71.5**	**77.7**						
Alabama	68.3	76.8	69.6	77.6	71.2	77.6						
Kentucky	69.1	77.1	70.7	78.0	72.2	78.0						
Mississippi	67.6	76.4	68.9	77.1	70.3	76.9						
Tennessee	69.2	77.5	70.4	78.2	71.9	77.9						
West South Central	**69.3**	**77.4**	**71.0**	**78.4**	**73.2**	**78.7**						
Arkansas	69.7	77.8	70.5	78.1	72.0	78.2						
Louisiana	67.6	75.9	69.1	76.9	71.1	77.3						
Oklahoma	69.6	77.8	71.6	78.5	72.5	77.9						
Texas	69.7	77.7	71.4	78.9	73.9	79.2						
Mountain	**71.0**	**78.5**	**73.1**	**79.6**	**75.0**	**80.1**						
Arizona	70.5	78.3	72.7	79.6	74.5	80.2						
Colorado	71.8	78.8	73.8	80.0	75.9	80.4						
Idaho	71.5	79.2	73.9	79.9	75.6	80.2						
Montana	70.5	77.7	73.1	79.5	74.6	80.0						
Nevada	69.3	76.5	71.0	77.8	73.2	78.4						
New Mexico	69.9	78.3	72.2	79.3	74.1	80.1						
Utah	72.4	79.2	74.9	80.4	76.4	80.7						
Wyoming	70.0	78.2	73.2	79.3	74.6	79.3						
Pacific	**71.3**	**78.2**	**72.8**	**79.3**	**75.7**	**80.5**						
Alaska	68.7	76.9	71.6	78.6	74.1	79.1						
California	71.1	78.0	72.5	79.2	75.7	80.6						
Hawaii	74.1	80.3	75.4	81.3	76.9	82.6						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009([a])	
	M	F	M	F	M	F	M	F	M	F	M	F
Oregon	71.4	78.8	73.2	79.7	75.4	80.0						
Washington	71.7	78.6	73.8	79.7	75.8	80.4						

[(a)] 2007 for Canada, 2009 for the United States.

Note: The data for the Canadian territories (Yukon and Northwest Territories including Nunavut) concern five-year periods (1980–1984, 1990–1994 and 2000–2004) because of their small size. The data for the US states concern three-year periods centred on the census years (1980, 1990 and 2000).

Sources: Canada: Canadian Human Mortality Database (2012). United States, whole country: Human Mortality Database; individual US states: data prepared by Wilmoth et al. (2011).

Table A.7

Infant mortality rate (per 1,000 live births)

Country, province or territory/state	1980	1990	2000	2007	2008	2009	
Canada	**10,4**	**6,8**	**5,3**	**5,1**	**5,1**	**4,9**	
Atlantic	**10,8**	**7,3**	**4,4**	**4,6**	**3,7**	**4,8**	
New Brunswick	10,9	7,2	3,5	4,3	3,2	5,8	
Newfoundland and Labrador	10,6	9,2	4,9	7,5	5,1	6,3	
Nova Scotia	10,9	6,3	4,9	3,3	3,5	3,4	
Prince Edward Island	11,2	6,0	3,5	5,0	2,0	3,4	
Quebec	**9,8**	**6,2**	**4,7**	**4,5**	**4,3**	**4,4**	
Ontario	**9,5**	**6,3**	**5,6**	**5,2**	**5,3**	**5,0**	
Prairies	**12,0**	**7,9**	**6,6**	**6,2**	**6,3**	**5,9**	
Alberta	12,6	8,0	6,6	6,0	6,2	5,5	
Manitoba	11,5	8,0	6,5	7,3	6,5	6,3	
Saskatchewan	11,3	7,6	6,8	5,8	6,2	6,7	
British Columbia	**11,0**	**7,5**	**3,7**	**4,0**	**3,7**	**3,6**	
Territories	**21,2**	**10,5**	**8,0**	**8,6**	**10,3**	**12,9**	
Northwest Territories	} 22,3	} 12,0	8,9	4,1	9,7	15,5	
Nunavut				12,4	15,1	16,1	14,8
Yukon	18,9	7,2	2,7	8,5	5,4	7,8	
United States	**12,6**	**9,2**	**6,9**	**6,8**	**6,6**	**3,4**	
New England	**10,6**	**7,2**	**5,4**	**5,7**	**5,3**	**5,3**	
Connecticut	11,2	7,9	6,6	6,6	6,0	5,5	
Maine	9,2	6,2	4,9	6,3	5,5	5,6	
Massachusetts	10,5	7,0	4,6	4,9	5,1	5,1	
New Hampshire	9,9	7,1	5,7	5,4	4,0	4,9	
Rhode Island	11,0	8,1	6,3	7,4	5,9	6,2	

Country, province or territory/state	1980	1990	2000	2007	2008	2009
Vermont	10,7	6,4	6,0	5,1	4,6	6,2
Middle Atlantic	**12,7**	**9,5**	**6,6**	**6,1**	**6,1**	**5,9**
New Jersey	12,5	9,0	6,3	5,2	5,6	5,1
New York	12,5	9,6	6,4	5,6	5,5	5,3
Pennsylvania	13,2	9,6	7,1	7,6	7,4	7,2
East North Central	**12,9**	**10,0**	**7,9**	**7,3**	**7,3**	**7,2**
Illinois	14,8	10,7	8,5	6,7	7,1	6,9
Indiana	11,9	9,6	7,8	7,6	6,9	7,8
Michigan	12,8	10,7	8,2	7,9	7,4	7,5
Ohio	12,8	9,8	7,6	7,7	7,7	7,7
Wisconsin	10,3	8,2	6,6	6,5	7,0	6,1
West North Central	**11,3**	**8,4**	**6,6**	**6,6**	**6,5**	**5,9**
Iowa	11,8	8,1	6,5	5,5	5,7	4,6
Kansas	10,4	8,4	6,8	7,9	7,3	7,0
Minnesota	10,0	7,3	5,6	5,6	6,0	4,6
Missouri	12,4	9,4	7,2	7,5	7,2	7,2
Nebraska	11,5	8,3	7,3	6,8	5,4	5,4
North Dakota	10,9	10,1	5,5	6,4	5,8	6,1
South Dakota	12,1	8,0	8,1	7,5	8,4	6,7
South Atlantic	**14.5**	**10.6**	**7.8**	**7.8**	**7.7**	**7.3**
Delaware	13.9	10.1	9.2	7.5	8.4	7.9
District of Columbia	25.0	20.7	12.0	13.1	10.8	9.9
Florida	14.6	9.6	7.0	7.1	7.2	6.9
Georgia	14.5	12.4	8.5	8.0	8.1	7.4
Maryland	14.0	9.5	7.6	8.0	8.0	7.3
North Carolina	14.5	10.6	8.6	8.5	8.2	7.9
South Carolina	15.6	11.7	8.7	8.6	8.0	7.1
Virginia	13.6	10.2	6.9	7.8	6.9	7.2

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Country, province or territory/state	1980	1990	2000	2007	2008	2009
West Virginia	11.8	9.9	7.6	7.5	7.7	7.8
East South Central	**14.4**	**10.3**	**9.0**	**8.6**	**8.5**	**8.1**
Alabama	15.1	10.8	9.4	9.9	9.5	8.3
Kentucky	12.9	8.5	7.2	6.7	6.9	6.9
Mississippi	17.0	12.1	10.7	10.0	10.0	10.1
Tennessee	13.5	10.3	9.1	8.3	8.1	8.0
West South Central	**12.7**	**8.8**	**6.7**	**7.0**	**6.7**	**6.7**
Arkansas	12.7	9.2	8.4	7.7	7.4	7.7
Louisiana	14.3	11.1	9.0	9.2	9.1	8.7
Oklahoma	12.7	9.2	8.5	8.5	7.3	7.9
Texas	12.2	8.1	5.7	6.3	6.2	6.0
Mountain	**11.1**	**8.6**	**6.4**	**6.3**	**6.0**	**5.8**
Arizona	12.4	8.8	6.7	6.9	6.4	6.0
Colorado	10.1	8.8	6.2	6.1	6.2	6.3
Idaho	10.7	8.7	7.5	6.8	5.9	5.4
Montana	12.4	9.0	6.1	6.4	6.8	5.9
Nevada	10.7	8.4	6.5	6.4	5.3	5.9
New Mexico	11.5	9.0	6.6	6.3	5.6	5.3
Utah	10.4	7.5	5.2	5.1	4.8	5.3
Wyoming	9.8	8.6	6.7	7.4	7.0	6.0
Pacific	**11.3**	**7.9**	**5.5**	**5.2**	**5.2**	**5.0**
Alaska	12.3	10.5	6.8	6.5	5.9	6.8
California	11.1	7.9	5.4	5.2	5.1	4.9
Hawaii	10.3	6.7	8.1	6.5	5.5	6.1
Oregon	12.2	8.3	5.6	5.8	5.2	4.8
Washington	11.8	7.8	5.2	4.8	5.4	4.9

Sources: Canada: 1980 and 1990: Wadhera and Strachan (1993a), Table 2b; 2000s: Statistics Canada, CANSIM database, Table 102–0504. United States: 1980, 1990 and 2000: United States Census Bureau (2009a), Table 111; 2007: Xu et al. (2010), Table 32; 2008: Minino et al. (2011), Table 22; 2009: National Center for Health Statistics, Table 22, at http://www.cdc.gov/nchs/data/dvs/deaths_2009_release.pdf accessed on 26 June 2012.

Table A.8

Probability of dying at ages 15–65 (per thousand)

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009[1]	
	M	F	M	F	M	F	M	F	M	F	M	F
Canada	**243.7**	**129.6**	**195.4**	**107.1**	**155.2**	**94.3**	**141.9**	**88.5**	**138.2**	**85.6**	**137.5**	**85.0**
Atlantic	**253.2**	**129.6**	**207.1**	**113.6**	**168.7**	**99.1**	**156.7**	**93.7**	**156.4**	**90.3**	**153.5**	**92.6**
New Brunswick	258.5	128.8	197.7	109.4	163.0	95.8	150.8	87.8	143.6	90.6	150.1	87.5
Newfoundland and Labrador	230.6	131.5	198.4	110.7	175.7	100.9	165.9	102.1	172.1	97.3	156.7	95.5
Nova Scotia	270.9	133.1	218.5	120.3	169.2	100.0	157.7	93.9	158.0	85.3	154.2	97.4
Prince Edward Island	207.3	100.7	220.1	103.3	168.9	103.2	147.0	92.7	156.3	96.1	155.3	76.4
Quebec	**263.7**	**134.0**	**211.8**	**108.5**	**163.6**	**95.5**	**145.1**	**89.2**	**135.0**	**85.7**	**136.1**	**84.2**
Ontario	**234.8**	**128.9**	**189.2**	**104.8**	**148.0**	**90.3**	**132.4**	**84.9**	**131.6**	**82.7**	**130.8**	**80.7**
Prairies	**234.9**	**128.0**	**185.4**	**107.8**	**160.9**	**103.6**	**149.8**	**95.7**	**148.6**	**93.6**	**145.2**	**94.3**
Alberta	242.2	132.2	184.2	105.4	149.9	98.8	144.7	90.1	140.2	89.9	136.1	90.3
Manitoba	231.6	129.8	188.6	116.5	188.0	112.3	153.2	107.2	162.7	97.7	159.2	105.9
Saskatchewan	221.6	116.9	185.3	104.5	163.4	107.7	163.2	100.7	161.1	101.4	161.2	94.1
British Columbia	**229.0**	**123.0**	**182.3**	**104.6**	**142.2**	**88.5**	**142.2**	**85.0**	**137.5**	**80.1**	**136.8**	**81.6**
Territories	**301.3**	**229.7**	**261.5**	**164.0**	**222.0**	**138.2**						
Northwest Territories Nunavut }	306.8	241.8	264.3	180.9	230.9	149.2						
Yukon	290.2	205.6	255.6	129.5	200.8	113.2						
United States	**280.0**	**152.4**	**247.2**	**138.1**	**207.1**	**126.8**	**200.0**	**121.2**	**197.3**	**119.6**	**188.9**	**115.3**
New England	**252.6**	**138.3**	**218.1**	**123.7**	**177.3**	**110.7**						
Connecticut	241.4	135.4	211.1	121.8	178.5	110.6						
Maine	268.6	141.4	221.3	124.4	183.1	115.4						
Massachusetts	254.1	139.0	221.8	124.4	177.4	110.3						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009[1]	
	M	F	M	F	M	F	M	F	M	F	M	F
New Hampshire	250.7	140.4	209.5	122.1	169.2	103.1						
Rhode Island	260.8	136.7	224.1	128.5	180.7	117.8						
Vermont	255.8	141.2	219.6	120.9	168.2	109.5						
Middle Atlantic	277.9	154.2	256.3	143.0	202.3	124.0						
New Jersey	267.7	149.3	240.8	141.5	197.1	121.9						
New York	280.2	157.4	272.1	147.3	199.6	121.7						
Pennsylvania	280.9	152.6	242.6	137.4	210.1	129.1						
East North Central	274.9	152.9	239.8	140.3	207.3	130.5						
Illinois	285.7	154.8	254.1	145.4	211.0	130.1						
Indiana	273.4	152.0	237.3	138.3	213.6	135.9						
Michigan	275.9	154.8	244.3	145.8	211.2	135.0						
Ohio	279.4	159.6	238.2	141.7	209.9	133.6						
Wisconsin	238.4	130.3	204.2	117.4	179.6	109.6						
West North Central	248.2	130.6	214.8	122.6	187.4	117.3						
Iowa	232.9	120.4	200.5	113.5	170.0	109.9						
Kansas	244.8	133.3	213.0	124.5	193.3	124.0						
Minnesota	225.1	117.9	188.0	110.2	160.1	99.7						
Missouri	280.4	149.6	250.8	140.4	221.6	137.7						
Nebraska	242.4	125.6	208.7	119.8	176.5	110.0						
North Dakota	235.9	113.7	200.6	113.1	176.5	105.7						
South Dakota	258.7	129.1	213.3	112.2	195.1	110.9						
South Atlantic	**308.5**	**162.2**	**269.8**	**146.5**	**228.7**	**135.9**						
Delaware	274.7	167.6	248.3	148.2	213.0	135.7						
District of Columbia	417.5	222.8	455.8	225.4	351.1	192.2						
Florida	288.8	151.6	259.6	135.4	222.8	126.9						
Georgia	331.5	174.8	291.0	158.7	242.5	147.9						
Maryland	283.6	163.7	255.6	145.1	219.1	132.8						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009[1]	
	M	F	M	F	M	F	M	F	M	F	M	F
North Carolina	321.9	156.4	272.7	146.3	231.4	137.9						
South Carolina	344.6	177.6	298.3	162.3	261.8	152.6						
Virginia	294.7	155.6	245.9	139.5	200.5	125.6						
West Virginia	312.2	165.7	270.9	152.3	240.4	148.1						
East South Central	**316.9**	**160.3**	**285.2**	**155.1**	**257.0**	**154.6**						
Alabama	324.7	163.6	293.6	157.1	262.8	155.8						
Kentucky	308.6	158.9	270.8	153.0	242.5	148.2						
Mississippi	335.0	167.7	309.6	167.7	281.5	171.1						
Tennessee	307.2	154.4	276.4	148.4	250.7	149.8						
West South Central	**297.3**	**156.2**	**267.1**	**145.7**	**228.3**	**139.5**						
Arkansas	293.4	143.8	278.9	148.2	250.1	149.0						
Louisiana	335.1	180.6	306.1	171.4	270.5	165.1						
Oklahoma	289.8	150.8	251.6	144.8	240.0	151.6						
Texas	288.5	152.2	258.9	139.0	214.9	130.6						
Mountain	**256.8**	**140.0**	**220.6**	**125.5**	**195.4**	**119.0**						
Arizona	272.0	144.8	239.4	130.6	213.7	121.8						
Colorado	240.0	135.1	203.6	116.6	169.3	110.7						
Idaho	237.6	128.3	197.6	120.1	173.5	114.2						
Montana	266.3	151.5	212.1	127.3	192.9	118.0						
Nevada	292.2	172.1	265.6	147.8	232.5	140.6						
New Mexico	280.8	141.3	240.6	130.3	214.4	121.0						
Utah	225.2	122.1	182.7	113.8	168.5	109.3						
Wyoming	266.2	146.3	214.5	129.9	194.6	125.9						
Pacific	**252.9**	**145.5**	**232.1**	**130.9**	**184.1**	**114.7**						
Alaska	289.3	156.5	235.4	132.9	197.5	131.3						
California	256.7	149.0	239.1	133.4	185.8	114.7						
Hawaii	209.1	114.6	193.1	110.1	175.6	105.5						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009[1]	
	M	F	M	F	M	F	M	F	M	F	M	F
Oregon	250.9	135.1	218.3	123.9	184.2	119.2						
Washington	239.0	138.4	205.4	124.1	174.7	112.1						

[a]2007 for Canada, 2009 for the United States.

Note: The data for the Canadian territories (Yukon and Northwest Territories including Nunavut) concern five-year periods (1980–1984, 1990–1994 and 2000–2004) because of their small size. The data for the US states concern three-year periods centred on the census years (1980, 1990 and 2000).

Sources: see Table A.6.

Table A.9

Life expectancy at age 65 (years)

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009[a]	
	M	F	M	F	M	F	M	F	M	F	M	F
Canada	**14.5**	**18.7**	**15.5**	**19.7**	**16.8**	**20.3**	**17.8**	**21.0**	**18.2**	**21.3**	**18.2**	**21.3**
Atlantic	**14.3**	**18.1**	**15.0**	**19.1**	**15.8**	**19.6**	**16.7**	**20.3**	**17.2**	**20.3**	**17.2**	**20.5**
New Brunswick	14.3	18.4	15.4	19.8	16.0	19.9	17.2	20.7	17.8	20.8	17.5	20.9
Newfoundland and Labrador	14.3	17.9	14.3	18.3	15.0	18.8	15.8	19.5	16.2	19.3	16.3	19.5
Nova Scotia	14.1	18.0	15.0	19.1	16.2	19.8	16.7	20.3	17.1	20.5	17.3	20.5
Prince Edward Island	15.1	18.6	15.4	19.4	15.5	19.8	17.6	20.4	17.2	20.9	17.6	21.2
Quebec	**13.8**	**18.1**	**14.8**	**19.4**	**16.3**	**20.4**	**17.5**	**20.9**	**18.0**	**21.3**	**18.0**	**21.2**
Ontario	**14.3**	**18.7**	**15.6**	**19.6**	**16.8**	**20.2**	**18.0**	**20.9**	**18.3**	**21.4**	**18.3**	**21.3**
Prairies	**15.1**	**19.3**	**16.0**	**20.2**	**16.9**	**20.5**	**17.7**	**21.1**	**18.0**	**21.2**	**18.0**	**21.3**
Alberta	15.1	19.3	16.1	20.3	17.2	20.7	18.0	21.2	18.2	21.4	18.2	21.4
Manitoba	14.9	18.9	15.7	19.8	16.4	20.2	17.3	20.7	17.8	20.8	17.5	21.1
Saskatchewan	15.6	19.7	16.3	20.4	16.8	20.4	17.6	21.2	17.7	21.1	18.0	20.9
British Columbia	**15.5**	**19.8**	**16.4**	**20.0**	**17.8**	**21.0**	**18.6**	**21.5**	**18.8**	**21.5**	**18.9**	**21.7**
Territories	**14.1**	**17.5**	**14.7**	**17.5**	**15.4**	**17.1**						
Northwest Territories Nunavut }	14.5	17.7	14.3	17.4	14.9	16.3						
Yukon	13.2	17.3	15.8	17.6	16.5	18.9						
United States	**14.1**	**18.3**	**15.1**	**19.1**	**16.1**	**19.1**	**17.0**	**19.7**	**17.3**	**20.0**	**17.8**	**20.5**
New England	**14.2**	**18.6**	**15.3**	**19.3**	**16.5**	**19.6**						
Connecticut	14.4	18.7	15.7	19.5	16.9	20.0						
Maine	14.2	18.6	14.9	19.0	16.0	19.0						
Massachusetts	14.2	18.5	15.3	19.2	16.4	19.6						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/2009[a]	
	M	F	M	F	M	F	M	F	M	F	M	F
New Hampshire	14.3	18.6	15.1	19.0	16.4	19.4						
Rhode Island	14.1	18.6	15.2	19.5	16.3	19.7						
Vermont	14.1	18.7	15.1	19.1	16.4	19.4						
Middle Atlantic	**13.9**	**18.0**	**15.0**	**18.8**	**16.3**	**19.4**						
New Jersey	14.0	17.9	15.1	18.7	16.3	19.3						
New York	14.1	18.1	15.2	18.9	16.6	19.7						
Pennsylvania	13.6	17.8	14.8	18.7	15.9	19.1						
East North Central	**13.9**	**18.2**	**14.8**	**18.8**	**15.8**	**18.9**						
Illinois	13.9	18.1	14.8	18.8	15.9	19.1						
Indiana	13.8	18.1	14.7	18.7	15.4	18.6						
Michigan	13.9	18.2	14.8	18.7	15.9	18.8						
Ohio	13.6	18.0	14.6	18.6	15.5	18.6						
Wisconsin	14.5	18.9	15.4	19.5	16.3	19.7						
West North Central	**14.6**	**19.2**	**15.4**	**19.7**	**16.4**	**19.7**						
Iowa	14.7	19.4	15.5	19.9	16.5	20.1						
Kansas	14.8	19.3	15.6	19.7	16.3	19.5						
Minnesota	15.0	19.5	15.8	20.0	16.9	20.2						
Missouri	14.0	18.5	14.9	19.1	15.6	18.8						
Nebraska	14.8	19.3	15.4	19.8	16.6	19.8						
North Dakota	15.2	19.4	15.9	20.5	16.7	20.6						
South Dakota	14.9	19.6	15.6	20.4	16.7	20.5						
South Atlantic	**14.1**	**18.4**	**15.0**	**19.0**	**16.0**	**19.1**						
Delaware	13.5	18.0	14.7	18.2	16.0	18.9						
District of Columbia	13.4	17.7	13.9	18.3	15.2	18.8						
Florida	15.3	19.3	16.3	20.1	17.3	20.2						
Georgia	13.5	18.1	14.1	18.5	15.1	18.3						
Maryland	13.6	17.9	14.7	18.4	16.0	18.8						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009[a]	
	M	F	M	F	M	F	M	F	M	F	M	F
North Carolina	13.8	18.5	14.4	18.8	15.4	18.7						
South Carolina	13.5	17.9	14.3	18.5	15.2	18.6						
Virginia	13.6	18.1	14.6	18.7	15.8	18.8						
West Virginia	13.7	18.1	14.0	18.4	15.0	18.0						
East South Central	**13.8**	**18.2**	**14.2**	**18.6**	**14.9**	**18.3**						
Alabama	13.7	18.2	14.2	18.6	15.0	18.4						
Kentucky	13.8	18.0	14.1	18.4	14.8	18.2						
Mississippi	13.9	18.1	14.0	18.5	14.7	18.3						
Tennessee	14.0	18.5	14.3	18.7	15.1	18.4						
West South Central	**14.2**	**18.5**	**14.8**	**18.8**	**15.8**	**18.7**						
Arkansas	14.4	18.6	14.8	18.9	15.4	18.7						
Louisiana	13.6	17.7	14.1	18.1	15.1	18.3						
Oklahoma	14.2	18.8	14.9	18.9	15.4	18.4						
Texas	14.3	18.6	15.0	19.0	16.0	18.9						
Mountain	**14.9**	**19.0**	**15.8**	**19.4**	**16.8**	**19.6**						
Arizona	15.1	19.2	16.0	19.6	17.2	19.9						
Colorado	14.8	19.1	15.8	19.5	16.9	19.6						
Idaho	15.0	19.2	15.9	19.7	16.7	19.6						
Montana	14.6	18.8	15.6	19.4	16.4	19.5						
Nevada	14.1	18.2	14.7	18.1	15.7	18.4						
New Mexico	15.1	19.1	16.0	19.4	16.9	19.8						
Utah	15.1	19.0	16.3	19.8	17.3	19.7						
Wyoming	14.4	18.8	15.5	19.4	16.4	19.1						
Pacific	**14.8**	**18.8**	**15.8**	**19.2**	**16.9**	**19.7**						
Alaska	13.8	18.1	15.1	18.5	16.3	19.1						
California	14.7	18.7	15.7	19.1	17.0	19.7						
Hawaii	16.6	20.1	17.3	20.7	18.2	21.8						

Country, province or territory/state	1980		1990		2000		2005		2006		2007/ 2009[a]	
	M	F	M	F	M	F	M	F	M	F	M	F
Oregon	14.7	19.1	15.6	19.3	16.6	19.2						
Washington	14.8	18.9	15.8	19.4	16.6	19.4						

[a] 2007 for Canada, 2009 for the United States.

Note: The data for the Canadian territories (Yukon and Northwest Territories including Nunavut) concern five-year periods (1980–1984, 1990–1994 and 2000–2004) because of their small size. The data for the US states concern three-year periods centred on the census years (1980, 1990 and 2000).

Sources: see Table A.6.

Table A.10

Groups of causes of death and corresponding items of the International Classification of Diseases (9th and 10th revisions)

Cause of death	ICD-9	ICD-10
Neoplasms	140 to 239	COO to D48
Cardiovascular diseases	390 to 459	I00 to I99
Infectious and parasitic diseases	000 to 139	A00 to B99
Respiratory diseases	460 to 519	J00 to J98
Other diseases	240 to 389; 520 to 779	D50 to D89; E00 to H95; K00 to Q99
Deaths from external causes	800 to 999	V01 to Y89
Unreported or ill-defined causes of death	780 to 799	R00 to R99

Table A.11

Standardized mortality rate (per 100,000) by sex and group of causes of death([a])

Causes of death	Meles															
	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Canada																
Neoplasms	275	288	290	281	278	273	271	268	266	264	260	254	250	244	239	236
Cardiovascular diseases	623	535	443	404	392	386	373	361	337	318	306	299	279	264	247	238
Infectious and parasitic diseases	5	7	14	19	16	12	12	11	14	12	13	14	15	15	15	16
Respiratory diseases	107	121	119	112	110	113	116	114	89	85	82	81	82	81	73	75
Other diseases	138	142	144	154	152	152	153	151	160	161	163	159	156	158	157	160
Deaths from external causes	99	81	74	70	69	66	65	68	63	63	63	64	60	63	59	60
All causes	1,248	1,175	1,083	1,039	1,017	1,003	990	973	928	904	887	871	841	825	790	785
United States																
Neoplasms	279	285	288	278	273	268	263	260	256	252	248	243	236	234	228	225
Cardiovascular diseases	692	611	515	475	464	452	438	432	419	402	394	379	354	344	324	309
Infectious and parasitic diseases	14	20	37	46	37	28	26	28	27	27	28	27	27	27	26	25
Respiratory diseases	99	113	110	106	105	107	108	111	109	105	105	102	96	98	91	89
Other diseases	151	158	154	158	159	160	162	166	168	171	174	177	173	178	180	178
Deaths from external causes	112	96	94	88	86	84	83	82	81	84	85	84	84	87	88	88
All causes	1,349	1,284	1,198	1,151	1,125	1,099	1,081	1,078	1,059	1,041	1,034	1,012	971	968	937	914
	Females															
	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Canada																
Neoplasms	169	178	178	176	179	174	175	172	173	172	173	171	170	166	164	163
Cardiovascular diseases	387	327	276	250	245	242	231	222	211	201	195	185	177	170	156	153
Infectious and parasitic diseases	4	4	5	7	6	6	7	7	8	8	8	9	10	10	10	10
Respiratory diseases	43	49	52	56	55	57	61	60	46	45	45	46	47	48	43	45
Other diseases	96	102	106	115	114	118	116	117	126	129	131	129	125	128	127	129
Deaths from external causes	41	33	30	29	29	28	27	28	27	26	28	28	27	27	27	27
All causes	740	693	647	632	628	625	617	605	591	581	579	568	555	550	527	527
United States																
Neoplasms	171	176	179	179	176	174	172	171	170	168	166	164	161	159	157	155
Cardiovascular diseases	435	383	327	307	302	294	289	290	282	274	266	256	240	232	217	206
Infectious and parasitic diseases	9	12	15	18	17	16	16	17	17	17	18	18	18	18	18	17
Respiratory diseases	42	52	58	62	63	64	67	69	69	69	69	68	65	67	62	61
Other diseases	107	111	114	121	122	125	128	134	138	142	145	146	144	149	151	149

Causes of death	Meles															
	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Deaths from external causes	39	34	32	31	31	31	31	31	31	32	33	33	34	34	35	35
All causes	803	768	724	718	712	704	703	712	707	701	696	686	660	660	640	624

[a]Standardized rate based on mortality rates by five-year age groups (in completed years) and on the total United States population for the year 2000 (standard population). The content of each group of causes of death is specified in Table A.10 (items of ICD-9 for 1980–1999 and of ICD-10 from 2000 for Canada, items of ICD-9 for 1980–1998 and of ICD-10 from 1999 for the United States).

Note:

Deaths from ill-defined or unreported causes were distributed proportionally across the six groups of well-defined causes. They represented less than 2.5% of total deaths in Canada (between 1.0% and 2.4% for each sex over the study period) and less than 2.0% in the United States (between 1.0% and 1.5% for each sex). Data for the United States were adjusted by the authors using the results of the study of dual coding of deaths for the 9th and 10th revisions of the International Classification of Diseases in order to improve the continuity of the statistical series of deaths by cause over the period 1980–2007. The data were not adjusted for Canada. The use of comparability coefficients (Geran et al., 2005) only marginally improved the continuity of the statistical series of deaths for the majority of groups of causes, and in some cases it had an adverse effect.

Sources: Canada: authors' calculations based on data from Statistics Canada. United States: authors' calculations based on data from the National Center for Health Statistics.

Table A.12

Population structure by age group, median age (years) and dependency ratio (%)

Country, province or territory/state	Below 15 (%)		65+ (%)		80+ (%)		Median age		Dependency ratio	
	1980	2010	1980	2010	1980	2010	1980	2010	1980	2010
Canada	**22.7**	**16.5**	**9.4**	**14.1**	**1.8**	**3.9**	**29.1**	**39.7**	**47.4**	**44.1**
Atlantic	**26.0**	**15.0**	**9.6**	**15.8**	**1.9**	**4.1**	**27.3**	**42.8**	**55.3**	**44.4**
New Brunswick	25.3	15.1	9.8	15.8	2.0	4.3	27.5	42.7	54.1	44.8
Newfoundland and Labrador	30.2	14.8	7.4	15.2	1.3	3.6	24.7	43.3	60.3	42.9
Nova Scotia	23.8	14.8	10.6	16.0	2.1	4.3	28.7	42.8	52.6	44.7
Prince Edward Island	25.2	16.2	11.9	15.6	2.9	4.2	28.2	42.1	58.7	46.7
Quebec	**21.9**	**15.6**	**8.5**	**15.3**	**1.4**	**4.1**	**29.2**	**41.2**	**43.7**	**44.8**
Ontario	**22.1**	**16.7**	**9.7**	**13.9**	**1.9**	**3.9**	**30.0**	**39.4**	**46.7**	**44.0**
Prairies	**24.2**	**18.5**	**9.4**	**12.0**	**1.9**	**3.5**	**27.7**	**36.5**	**50.7**	**44.0**
Alberta	24.3	18.3	7.3	10.6	1.4	2.9	26.7	35.8	46.3	40.7
Manitoba	23.5	18.8	11.5	13.8	2.4	4.3	29.4	37.7	53.9	48.5
Saskatchewan	24.8	18.9	11.7	14.6	2.5	4.7	28.3	37.5	57.5	50.5
British Columbia	**21.5**	**15.1**	**10.5**	**15.0**	**2.1**	**4.2**	**30.4**	**40.8**	**47.2**	**43.1**
Territories	**32.2**	**23.3**	**3.0**	**5.6**	**0.5**	**0.9**	**23.4**	**31.7**	**54.9**	**41.1**
Northwest Territories	} 35.0	21.8	} 2.9	5.4	} 0.4	1.1	} 21.9	31.5	} 61.1	37.3
Nunavut		31.5		3.0		0.3		24.6		52.8
Yukon	26.5	17.2	3.2	8.4	0.5	1.2	26.4	38.9	42.3	34.5
United States	**22.6**	**19.8**	**11.3**	**13.1**	**2.3**	**3.6**	**30.0**	**37.2**	**51.3**	**49.0**
New England	**20.9**	**17.7**	**12.4**	**14.2**	**2.8**	**4.4**	**31.2**	**40.0**	**49.8**	**46.8**
Connecticut	20.7	18.6	11.8	14.2	2.6	4.5	32.0	40.0	48.1	48.8
Maine	22.7	16.7	12.6	15.9	2.8	4.5	30.4	42.7	54.6	48.5
Massachusetts	20.3	17.7	12.7	13.8	2.9	4.3	31.2	39.1	49.3	46.0
New Hampshire	22.4	17.6	11.2	13.6	2.4	3.8	30.1	41.1	50.6	45.3
Rhode Island	20.2	17.3	13.4	14.4	2.9	4.9	31.8	39.4	50.7	46.4
Vermont	22.7	16.7	11.4	14.6	2.6	4.1	29.4	41.5	51.7	45.4
Middle Atlantic	**21.1**	**18.3**	**12.4**	**14.1**	**2.5**	**4.3**	**32.0**	**38.9**	**50.3**	**48.1**
New Jersey	21.3	19.2	11.7	13.5	2.3	4.1	32.2	39.0	49.3	48.7
New York	21.1	18.2	12.3	13.5	2.6	4.1	31.9	38.0	50.3	46.5
Pennsylvania	20.9	17.9	13.0	15.5	2.6	4.9	32.1	40.1	51.1	50.0
East North Central	**23.2**	**19.7**	**10.8**	**13.4**	**2.3**	**3.9**	**29.5**	**37.9**	**51.7**	**49.5**
Illinois	22.8	20.0	11.1	12.6	2.3	3.7	29.9	36.6	51.3	48.4
Indiana	23.7	20.5	10.7	13.0	2.3	3.7	29.2	37.0	52.6	50.4

Country, province or territory/state	Below 15 (%)		65+ (%)		80+ (%)		Median age		Dependency ratio	
	1980	2010	1980	2010	1980	2010	1980	2010	1980	2010
Michigan	23.9	19.3	9.9	13.8	2.0	4.0	28.9	38.9	51.0	49.5
Ohio	23.0	19.4	10.9	14.1	2.3	4.1	29.9	38.8	51.4	50.4
Wisconsin	23.0	19.4	12.0	13.7	2.7	4.1	29.4	38.5	53.8	49.4
West North Central	**22.7**	**20.1**	**12.8**	**13.7**	**3.0**	**4.1**	**29.9**	**37.3**	**55.1**	**51.2**
Iowa	22.8	19.8	13.4	14.9	3.4	4.8	30.0	38.1	56.5	53.1
Kansas	22.2	21.2	13.0	13.2	3.1	4.1	30.1	36.0	54.3	52.5
Minnesota	22.9	20.0	11.8	12.9	2.9	3.9	29.2	37.4	53.2	49.1
Missouri	22.2	19.6	13.2	14.0	2.9	3.9	30.9	37.9	54.8	50.7
Nebraska	23.0	21.0	13.1	13.5	3.3	4.2	29.7	36.2	56.6	52.7
North Dakota	23.7	18.5	12.4	14.5	2.8	4.8	28.3	37.0	56.4	49.3
South Dakota	24.0	20.8	13.2	14.3	3.3	4.6	28.9	36.9	59.2	54.1
South Atlantic	**21.8**	**19.0**	**11.9**	**14.0**	**2.2**	**3.7**	**30.9**	**38.3**	**50.9**	**49.3**
Delaware	22.1	18.8	10.0	14.4	2.0	3.7	29.7	38.8	47.3	49.8
District of Columbia	17.6	13.9	11.6	11.4	2.3	3.3	31.1	33.8	41.4	34.0
Florida	19.2	17.4	17.3	17.4	3.1	4.9	34.7	40.7	57.5	53.4
Georgia	24.3	21.4	9.5	10.7	1.7	2.5	28.7	35.3	51.0	47.1
Maryland	21.7	19.2	9.4	12.3	1.8	3.4	30.3	38.0	45.3	46.0
North Carolina	22.6	19.9	10.3	13.0	1.8	3.3	29.6	37.4	49.0	48.9
South Carolina	24.2	19.3	9.2	13.7	1.5	3.2	28.2	37.9	50.2	49.3
Virginia	21.9	19.1	9.5	12.2	1.8	3.2	29.8	37.5	45.8	45.7
West Virginia	23.3	17.2	12.2	16.1	2.4	4.3	30.4	41.3	55.2	49.9
East South Central	**23.9**	**19.7**	**11.3**	**13.4**	**2.2**	**3.4**	**29.2**	**37.7**	**54.5**	**49.6**
Alabama	24.0	19.5	11.3	13.8	2.0	3.4	29.3	37.9	54.7	49.9
Kentucky	23.8	19.5	11.2	13.4	2.3	3.4	29.1	38.1	53.9	49.0
Mississippi	26.1	21.0	11.5	12.8	2.2	3.2	27.7	36.0	60.4	51.2
Tennessee	22.7	19.5	11.3	13.5	2.1	3.3	30.1	38.0	51.6	49.2
West South Central	**24.5**	**22.1**	**10.4**	**11.3**	**2.0**	**2.9**	**28.5**	**34.4**	**53.6**	**50.1**
Arkansas	23.6	20.3	13.7	14.4	2.6	3.7	30.6	37.4	59.5	53.1
Louisiana	25.6	20.4	9.6	12.3	1.7	3.2	27.4	35.8	54.3	48.7
Oklahoma	22.9	20.7	12.4	13.5	2.6	3.5	30.1	36.2	54.6	52.0
Texas	24.7	22.8	9.6	10.4	1.9	2.6	28.2	33.6	52.3	49.7
Mountain	**24.9**	**21.6**	**9.4**	**12.2**	**1.8**	**3.1**	**28.0**	**35.3**	**52.5**	**51.1**
Arizona	23.6	21.2	11.4	13.8	1.9	3.5	29.2	35.9	53.8	54.0
Colorado	22.7	20.4	8.6	11.0	1.9	2.8	28.6	36.1	45.4	45.6
Idaho	27.1	22.9	10.0	12.4	2.0	3.2	27.6	34.6	58.9	54.7
Montana	23.8	18.6	10.8	14.9	2.3	4.1	29.0	39.8	52.9	50.3
Nevada	21.7	20.5	8.3	12.1	1.1	2.6	30.3	36.3	42.7	48.2

Country, province or territory/state	Below 15 (%)		65+ (%)		80+ (%)		Median age		Dependency ratio	
	1980	2010	1980	2010	1980	2010	1980	2010	1980	2010
New Mexico	25.9	20.9	8.9	13.2	1.6	3.3	27.4	36.7	53.6	51.8
Utah	31.7	26.8	7.5	9.0	1.5	2.4	24.2	29.2	64.6	55.8
Wyoming	25.9	20.1	7.9	12.4	1.6	3.2	27.1	36.8	51.1	48.3
Pacific	**22.0**	**20.2**	**10.2**	**11.8**	**2.1**	**3.3**	**29.8**	**35.8**	**47.5**	**46.9**
Alaska	26.9	21.9	2.9	7.7	0.4	1.5	26.1	33.8	42.5	42.1
California	21.7	20.5	10.2	11.4	2.1	3.2	29.9	35.2	47.0	46.8
Hawaii	23.3	18.5	8.0	14.5	1.4	4.5	28.4	38.6	45.6	49.3
Oregon	22.4	18.7	11.6	14.0	2.4	4.0	30.2	38.4	51.5	48.5
Washington	22.3	19.4	10.5	12.3	2.2	3.4	29.8	37.3	48.9	46.6

Sources: Canada: Statistics Canada, CANSIM database, table 051–0001. United States, 1980 : United States Census Bureau, “Resident Population of States” table published in August 1995; 2010: Table ST-EST00INT-ALLDATA published in September 2011; median age in 1980: United States Census Bureau, Table 31, at http://www2.census.gov/prod2/statcomp/documents/1981–02.pdf accessed on 21 February 2012; median age in 2010: United States Census Bureau, Table 3, at http://www.census.gov/prod/cen2010/briefs/c2010br-03.pdf accessed on 17 August 2011.

Table A.13

Projections based on the medium scenario, Canada, 2010–2061 Total population and population by age group and sex ratio

Year	Population (thousands)	Below 15 (%)	15–64 (%)	65+ (%)	80+ (%)	Centenarians (thousands)	Sex ratio
2010	34,138	16.5	69.4	14.1	3.9	6	98.4
2011	34,532	16.4	69.2	14.4	4.0	6	98.4
2012	34,922	16.3	68.8	14.8	4.1	6	98.4
2013	35318	16.4	68.4	15.2	4.1	6	98.5
2014	35,712	16.4	68.0	15.6	4.2	7	98.5
2015	36,104	16.4	67.6	15.9	4.2	8	98.5
2016	36,494	16.5	67.2	16.3	4.2	8	98.5
2017	36,881	16.6	66.7	16.7	4.3	8	98.5
2018	37,265	16.6	66.3	17.1	4.3	9	98.5
2019	37,645	16.7	65.7	17.5	4.4	9	98.4
2020	38,025	16.8	65.2	18.0	4.4	10	98.4
2021	38,406	16.8	64.7	18.5	4.5	11	98.4
2022	38,785	16.8	64.2	18.9	4.6	12	98.4
2023	39,164	16.8	63.8	19.4	4.8	13	98.4
2024	39,541	16.8	63.3	19.9	4.9	14	98.4
2025	39,916	16.8	62.9	20.3	5.0	14	98.3
2026	40,288	16.7	62.5	20.8	5.2	15	98.3
2027	40,656	16.6	62.1	21.3	5.5	15	98.3
2028	41,021	16.6	61.7	21.7	5.7	16	98.2
2029	41,382	16.5	61.4	22.2	5.9	16	98.2
2030	41,740	16.4	61.1	22.6	6.2	17	98.2
2031	42,094	16.3	60.9	22.8	6.4	18	98.1
2032	42,445	16.2	60.8	23.0	6.6	18	98.1
2033	42,792	16.0	60.7	23.2	6.8	19	98.1
2034	43,137	15.9	60.7	23.4	7.1	19	98.0
2035	43,480	15.8	60.6	23.5	7.4	20	98.0
2036	43,822	15.7	60.6	23.7	7.6	20	98.0
2037	44,162	15.7	60.6	23.8	7.9	21	97.9
2038	44,501	15.6	60.6	23.9	8.1	22	97.9
2039	44,841	15.5	60.6	23.9	8.4	23	97.9
2040	45,180	15.5	60.5	24.0	8.6	24	97.8
2041	45,519	15.4	60.5	24.0	8.8	25	97.8
2042	45,858	15.4	60.5	24.1	9.0	27	97.8
2043	46,199	15.4	60.5	24.1	9.3	29	97.8
2044	46,540	15.4	60.4	24.2	9.4	31	97.8
2045	46,881	15.4	60.3	24.2	9.6	33	97.8

Year	Population (thousands)	Below 15 (%)	15–64 (%)	65+ (%)	80+ (%)	Centenarians (thousands)	Sex ratio
2046	47,224	15.5	60.2	24.3	9.7	35	97.8
2047	47,568	15.5	60.1	24.4	9.7	40	97.8
2048	47,912	15.5	60.0	24.5	9.7	43	97.8
2049	48,258	15.6	59.9	24.5	9.7	45	97.8
2050	48,606	15.6	59.8	24.6	9.7	47	97.8
2051	48,955	15.7	59.7	24.7	9.7	49	97.8
2052	49,307	15.7	59.6	24.7	9.7	51	97.8
2053	49,660	15.7	59.5	24.8	9.6	54	97.8
2054	50,017	15.7	59.4	24.9	9.6	57	97.9
2055	50,376	15.7	59.3	25.0	9.6	61	97.9
2056	50,739	15.7	59.2	25.1	9.5	64	97.9
2057	51,106	15.7	59.1	25.2	9.5	67	97.9
2058	51,477	15.7	59.0	25.3	9.5	70	98.0
2059	51,853	15.7	58.9	25.3	9.6	72	98.0
2060	52,234	15.7	58.9	25.4	9.6	75	98.0
2061	52,621	15.7	58.9	25.5	9.7	78	98.0

Year	Population (thousands)	Below 15 (%)	15–64 (%)	65+ (%)	80+ (%)	Centenarians (thousands)	Sex ratio
2000	282,158	21.4	66.2	12.4	3.3	53	96.3
2001	284,915	21.2	66.3	12.4	3.4	53	96.4
2002	287,501	21.1	66.5	12.4	3.4	54	96.4
2003	289,986	21.0	66.6	12.4	3.5	56	96.4
2004	292,806	20.9	66.7	12.4	3.5	58	96.5
2005	295,583	20.7	66.9	12.4	3.6	61	96.6
2006	298,442	20.5	67.0	12.5	3.6	64	96.7
2007	301,280	20.4	67.1	12.6	3.6	67	96.8
2008	304,228	20.2	67.0	12.7	3.7	71	96.8
2009	307,212	20.2	67.0	12.8	3.7	75	96.9
2010	310,233	20.1	66.9	13.0	3.7	79	97.0
2011	313,232	20.1	66.8	13.1	3.7	84	97.0
2012	316,266	20.1	66.5	13.5	3.7	89	97.1
2013	319,330	20.1	66.1	13.8	3.7	94	97.1
2014	322,423	20.1	65.8	14.1	3.7	99	97.1
2015	325,540	20.1	65.5	14.4	3.7	105	97.2
2016	328,678	20.1	65.2	14.7	3.7	109	97.2
2017	331,833	20.0	65.0	15.0	3.7	114	97.2
2018	335,005	20.0	64.6	15.3	3.7	120	97.2
2019	338,190	20.0	64.3	15.7	3.7	127	97.2
2020	341,387	20.0	64.0	16.1	3.8	135	97.2

Year	Population (thousands)	Below 15 (%)	15–64 (%)	65+ (%)	80+ (%)	Centenarians (thousands)	Sex ratio
2021	344,592	19.9	63.7	16.4	3.8	143	97.2
2022	347,803	19.9	63.3	16.8	3.9	152	97.2
2023	351,018	19.9	63.0	17.2	4.0	159	97.1
2024	354,235	19.8	62.7	17.5	4.1	167	97.1
2025	357,452	19.8	62.3	17.9	4.2	175	97.1
2026	360,667	19.7	62.1	18.2	4.3	181	97.1
2027	363,880	19.7	61.8	18.5	4.5	188	97.1
2028	367,090	19.6	61.6	18.8	4.7	194	97.0
2029	370,298	19.6	61.3	19.1	4.9	200	97.0
2030	373,504	19.5	61.2	19.3	5.1	208	97.0
2031	376,708	19.5	61.1	19.5	5.2	214	96.9
2032	379,912	19.4	61.0	19.6	5.4	219	96.9
2033	383,117	19.4	60.9	19.7	5.6	224	96.9
2034	386,323	19.4	60.9	19.8	5.8	229	96.8
2035	389,531	19.3	60.8	19.9	6.0	239	96.8
2036	392,743	19.3	60.7	20.0	6.1	248	96.8
2037	395,961	19.3	60.6	20.1	6.3	258	96.8
2038	399,184	19.3	60.7	20.1	6.5	270	96.7
2039	402,415	19.3	60.7	20.0	6.6	283	96.7
2040	405,655	19.3	60.7	20.0	6.8	298	96.7
2041	408,906	19.3	60.8	20.0	6.9	314	96.7
2042	412,170	19.3	60.8	20.0	7.1	337	96.7
2043	415,448	19.3	60.8	20.0	7.2	365	96.7
2044	418,743	19.3	60.8	20.0	7.3	388	96.7
2045	422,059	19.3	60.7	20.0	7.3	409	96.7
2046	425,395	19.3	60.7	20.1	7.3	435	96.7
2047	428,756	19.3	60.6	20.1	7.3	485	96.7
2048	432,143	19.3	60.6	20.1	7.3	527	96.7
2049	435,560	19.3	60.6	20.1	7.4	563	96.7
2050	439,010	19.3	60.6	20.2	7.4	601	96.7

Source: Statistics Canada, CANSIM database, Table 052–0005.

Source: United States Census Bureau, http://www.census.gov/population/www/projections/stproj.html, data downloaded 1 February 2012.